HELIX Environmental Planning

Ramona-Indian Warehouse Project

Initial Study/ Mitigated Negative Declaration No. 2373

(DPR 21-00011; PVCC SPA 21-21-05193)

July 2022 | 04823.00001.001

Submitted to:

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ACRONYMS AND ABBREVIATIONS

ALUC	Airport Land Use Commission
ALUCP	Airport Land Use Compatibility Plan
amsl	above mean sea level
AOZ	Airport Overlay Zone
APZ	Accident Potential Zone
AQMP	Air Quality Management Plan
BMPs	best management practices
CAL FIRE	California Department of Forestry and Fire Protection
CalRecycle	California Department of Resources Recycling and Recovery
Caltrans	California Department of Transportation
CAP	Climate Action Plan
CAPCOA	California Air Pollution Control Officers Association
CBC	California Building Code
CO_2e	carbon dioxide equivalent
County	County of Riverside
CWA	Clean Water Act
CY	cubic yard
DOC	California Department of Conservation
DPM	diesel particulate matter
DTSC	California Department of Toxic Substances Control
DWR	California Department of Water Resources
EIC	Eastern Information Center
EMWD	Eastern Municipal Water District
FEMA	Federal Emergency Management Agency
FHSZ	Fire Hazard Severity Zone
FMMP	Farmland Mapping and Monitoring Program
GHG	greenhouse gas
GSA	Groundwater Sustainability Agency
GSP	Groundwater Sustainability Plan
HELIX	HELIX Environmental Planning, Inc.
IBC	International Building Code
ICC	International Code Council
IS/MND	Initial Study/Mitigated Negative Declaration
MARB/IPA	March Air Reserve Base/Inland Port Airport
mgd	million gallons per day

ACRONYMS AND ABBREVIATIONS (cont.)

MHFP	Multi-Hazard Functional Plan
MLD	Most Likely Descendant
MRZ	Mineral Resource Zone
MT	metric ton
NAHC	Native American Heritage Commission
NPDES	National Pollutant Discharge Elimination System
NRHP	National Register of Historic Places
OHP	Office of Historic Preservation
PVC	polyvinyl chloride
PVCCSP	Perris Valley Commerce Center Specific Plan
RCFC&WCD	Riverside County Flood Control and Water Conservation District
RWQCB	Regional Water Quality Control Board
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SDAB	San Diego Air Basin
sf	square foot/feet
SGMA	Sustainable Groundwater Management Act
SR	State Route
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TAC	Toxic Air Contaminant
TCR	Tribal Cultural Resource
UBC	Uniform Building Code
USACE	U.S. Army Corps of Engineers
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
VHFHSZ	Very High Fire Hazard Severity Zone
WQMP	Water Quality Management Plan

1.0 INTRODUCTION

This section includes a description of the proposed Ramona-Indian Warehouse Project (Project) pursuant to the Guidelines for Implementation of the California Environmental Quality Act (State CEQA Guidelines) Sections 15124 and 15125. Specifically, this section includes a description of the Project background, location, and environmental setting; a statement of objectives sought for the proposed Project; a description of the Project components; and a summary of related local and state agency approvals required to implement the Project. The Project description is used as the basis for analyzing the Project's impacts on the existing physical environment throughout this Initial Study/Mitigated Negative Declaration (IS/MND).

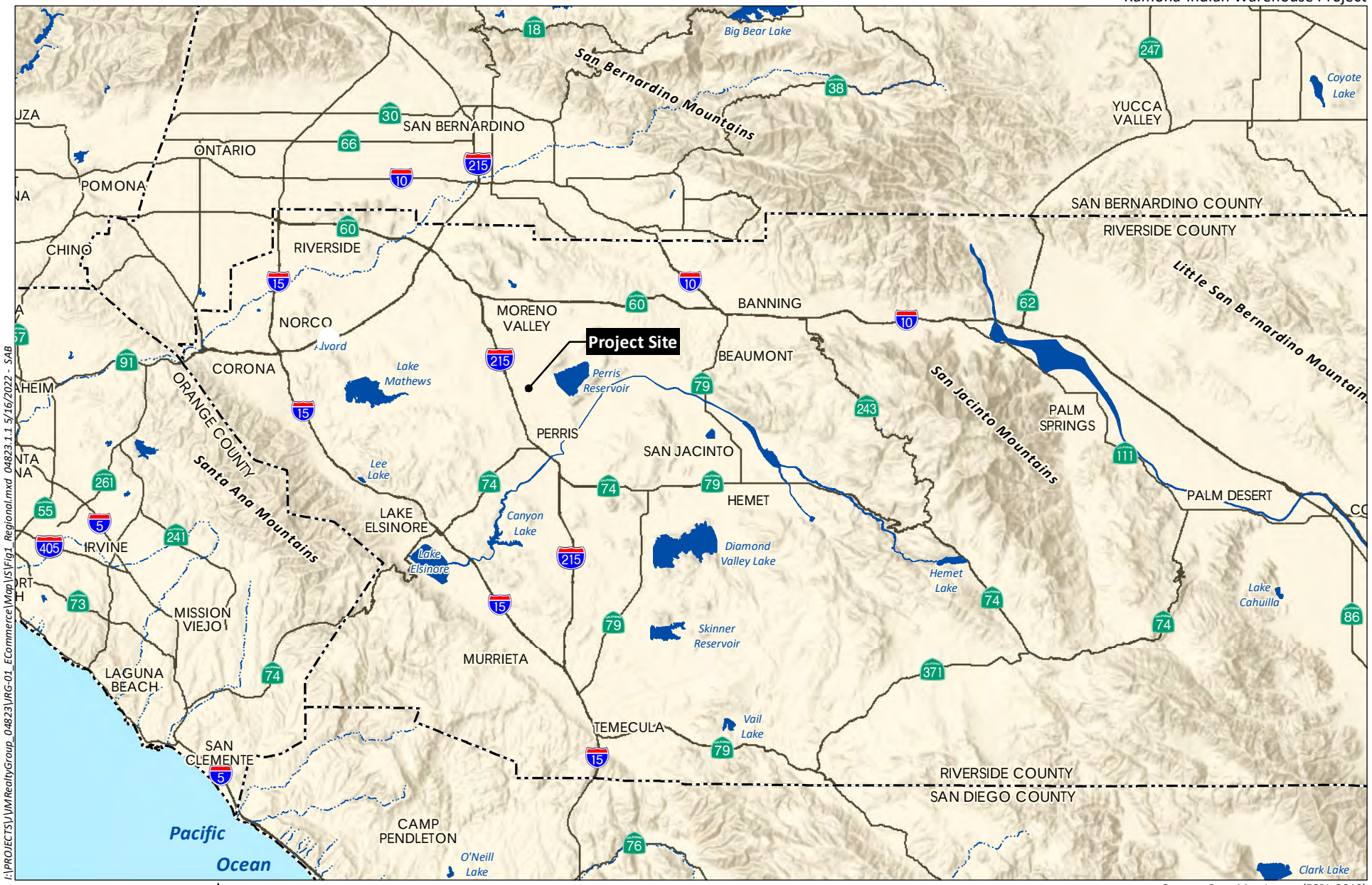
1.1 PROJECT BACKGROUND

On January 10, 2012, the City of Perris City Council adopted the Perris Valley Commerce Center Specific Plan (PVCCSP), which was prepared pursuant to the authority granted to the City of Perris (City/City of Perris) by California Government Code, Title 7, Division 1, Chapter 3, Article 8, Sections 65450 to 65457. On the same date, the City also adopted Ordinance No. 1284, adopting a Specific Plan Zoning for properties within the PVCCSP. The PVCCSP allows for the development of approximately 3,500 acres of industrial, commercial, and office uses, as well as public facilities. In conjunction with its approval of the PVCCSP, the City complied with the California Environmental Quality Act (CEQA) by preparing and certifying the PVCCSP Final Environmental Impact Report (PVCCSP EIR; State Clearinghouse No. 2009081086; City of Perris 2011), which is incorporated by reference in this IS/MND and is available for public review at the City of Perris Planning Division, 135 North D Street, Perris, California 92570 and online at https://www.cityofperris.org/departments/development-services/specific-plans.

The PVCCSP EIR is a program EIR, and project-specific evaluations in later-tier environmental documents for individual development projects within the PVCCP planning area was anticipated. The PVCCSP EIR analyzes the direct and indirect impacts resulting from implementation of the allowed development under the PVCCSP. Measures to mitigate, to the extent feasible, the significant adverse project and cumulative impacts resulting from that development are identified in the PVCCSP EIR. In conjunction with certification of the PVCCSP EIR, the City of Perris also adopted a Mitigation Monitoring and Reporting Program (MMRP). Additionally, the PVCCSP includes Standards and Guidelines to be applied to future development projects within the Specific Plan area. The City of Perris requires that future development projects within the Specific Plan area comply with the required PVCCSP Standards and Guidelines and applicable PVCCSP EIR mitigation measures as outlined in the MMRP, and that these requirements are to be implemented in a timely manner.

1.2 PROJECT LOCATION

The Project site (APN 302-060-041) is in the central portion of the PVCCSP planning area within the City of Perris and includes approximately 15 acres (14.93 acres). It is located approximately 1.4 miles east of Interstate (I-) 215, approximately 6.5 miles south of State Route (SR-) 60, and approximately 1.5 miles south of March Air Reserve Base/Inland Port Airport (MARB/IPA). Figure 1 depicts the Project site in relation to the region. Figure 2 depicts the Project site in relation to the surrounding area. Figure 3 shows an aerial photograph of the existing developed and undeveloped conditions at and surrounding the Project site. As shown, the Project site is located north of Ramona Expressway, east of Indian Avenue, and west of North Perris Boulevard.



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0 10 Miles

Source: Base Map Layers (ESRI, 2013)

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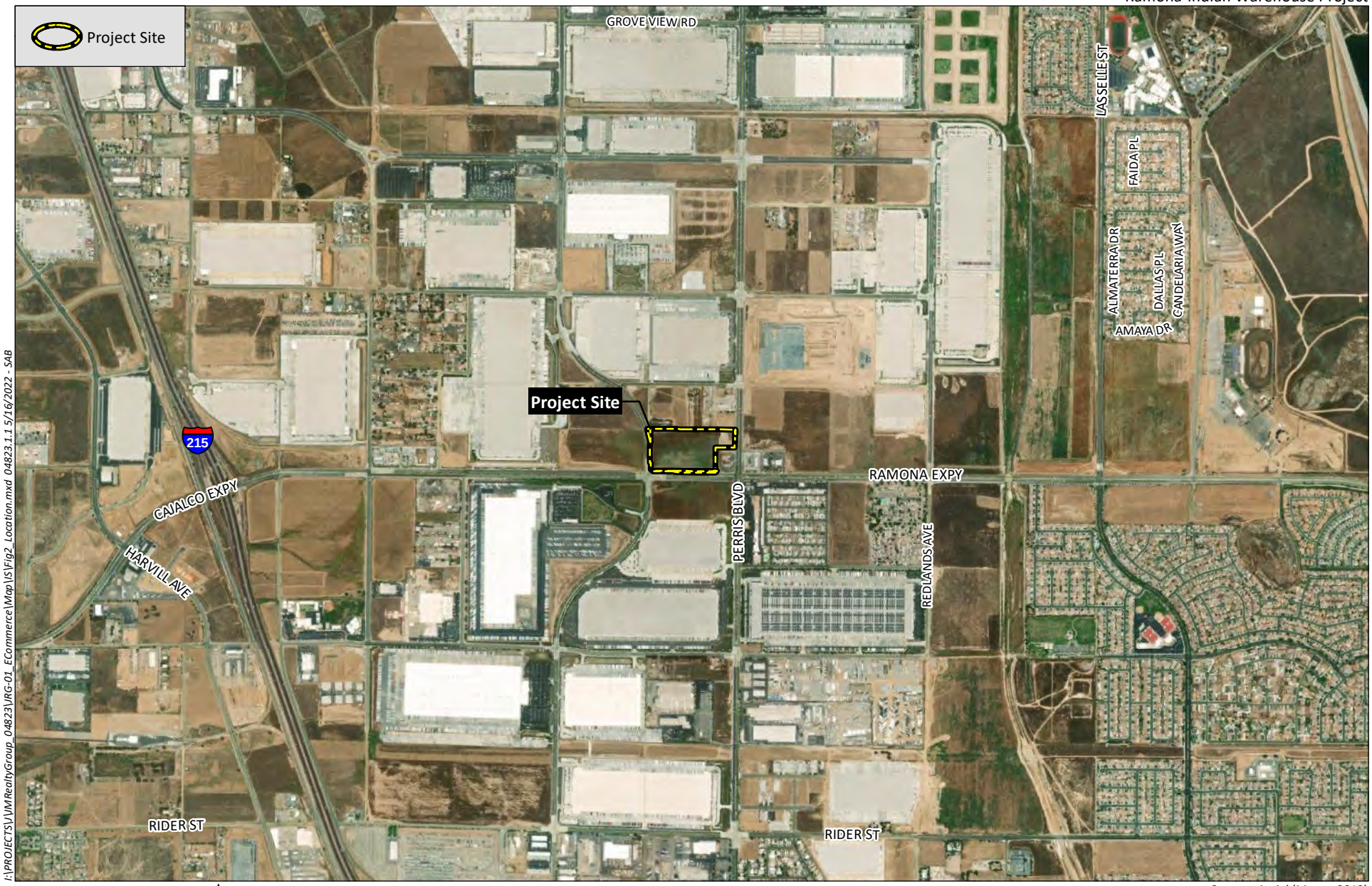
Regional Location

Figure 1



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Source: Aerial (Maxar, 2019)

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Project Location and Vicinity

Figure 2

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0 300 Feet

Source: Aerial (NearMap, 2021)

HELIX

Aerial Photo

Figure 3

1.3 ENVIRONMENTAL SETTING

The PVCCSP EIR provides a description of the environmental and regulatory setting for the entire PVCCSP planning area, including the Project site. Except for the termination of agricultural activities and the construction of development anticipated within the PVCCSP planning area, including the roadway realignment of Indian Avenue north of Ramona Expressway at the western Project boundary, the physical setting description for the Project site and adjacent areas has not notably changed since the PVCCSP EIR was certified in 2012.

Additional environmental setting or existing conditions descriptions are provided for each environmental topic analyzed in each section of this IS/MND. Additionally, updates to applicable local and regional regulatory programs have occurred since the PVCCSP EIR was certified and new regulatory programs have been adopted; these updated regulations are discussed for each topical issue, as appropriate.

The City is in the Perris Block geologic unit, which lies within the Peninsular Ranges Geomorphic Province of Southern California. The Peninsular Ranges Geomorphic Province is characterized by a series of northwesterly trending mountain ranges that extend from the coast of California eastward into the California desert and south to the tip of Baja California, Mexico. The Perris Block is bound on the northeast by the San Jacinto Fault, on the north by the Cucamonga Fault and the San Gabriel Mountains, and on the southwest by the Elsinore Fault and the Santa Ana Mountains. The City of Moreno Valley borders the City to the north and the City of Menifee borders the City to the south. Unincorporated areas of Riverside County border the City to the east and west.

The Project site can generally be characterized as disturbed vacant land that was previously used for agricultural purposes. The Project site is generally flat with an elevation between 1,450 and 1,460 feet above mean sea level (amsl). As the Project site is at a slightly lower elevation than surrounding roadways, stormwater runoff from surrounding areas collects at the Project site during the rainy season. The southern portion of the Project site includes a surface-level drainage swale that is owned and maintained by the Riverside County Flood Control and Water Conservation District (RCFC&WCD) and runs in an east-west direction, connecting to the Perris Valley Storm Drain about 0.75 mile east of the site near the intersection of Ramona Expressway and East Oleander Avenue.

The Project site is in an area characterized primarily by commercial, light industrial, and business professional office (BPO) land uses in varying states of development. As shown on Figure 3, the land uses surrounding the Project site include a mix of undeveloped and developed areas. Specifically, surrounding properties include undeveloped areas, and commercial development followed by industrial development to the north; a gas station and a car wash adjacent to and southeast of the Project site; undeveloped areas and commercial development to the east; and undeveloped areas followed by industrial development to the south and west. Two non-conforming single-family residences, a commercial use, and a commercial construction yard are located on a parcel adjacent to and northwest of the Project site. The closest non-conforming residential land use is located approximately 42 feet north of the Project site. These uses are in areas designated in the City of Perris General Plan 2030 and the PVCCSP for commercial and light industrial land uses, as described below. There are reports that the closest single-family residence to the Project site (adjacent to the project northwest corner) has been demolished. However, persons may still be residing at this location in recreational vehicles, so the area is considered to be occupied for the purposes of this analysis.

The existing General Plan land use designation and zoning for the Project site is Specific Plan (i.e., the PVCCSP). As shown on Figure 3, the PVCCSP land use designation for the Project site is Commercial. Commercial land use designations are also identified immediately to the northeast, east and south of the Project site. Light Industrial designations occur along the north-central property boundary and further to the north, as well as to the west. The small parcel northwest of the Project site boundary which currently contains residential uses is designated as Commercial in the PVCCSP, and the parcels north of the Project site containing residential uses are designated as Light Industrial in the PVCCSP. The existing residential land uses are non-conforming with the PVCCSP.

The Project site is located approximately 1.5 miles south of MARB/IPA and is located within the MARB/IPA Airport Influence Area Boundary, and the 2018 U.S. Air Force Final Air Installations Compatible Use Zone (AICUZ) Study. The PVCCSP includes an Airport Overlay Zone (AOZ) which defines specific land uses corresponding generally with the boundaries and provisions of the 2014 MARB/IPA Airport Land Use Compatibility Plan (ALUCP) and airport influence area. The Project site is within Airport Compatibility Zone B1 (Inner Approach/Departure Zone)/Accident Potential Zone (APZ) Zone II and C1 (Primary Approach/Departure Zone). Development within these airport compatibility zones is restricted by the basic compatibility criteria provided in Table MA-2 of the 2014 MARB/IPA ALUCP which is consistent with the safety and noise standards contained within the 2018 AICUZ Study. Airport Compatibility Zone B1 is a high noise zone. No new dwellings are allowed in this zone unless permitted by local land use regulations, and prohibited uses include noise sensitive land uses and other uses which would cause hazards to flight. Airport Compatibility Zone C1 is a primary approach/departure zone with limited residential land uses and prohibits noise sensitive land uses and other uses which would cause hazards to flight.

The Project site is within the Mead Valley Area Plan of the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) and is not within an MSHCP Criteria Cell, Core, or Linkage Area. The Project site is also not in a survey area for mammals, amphibians, Criteria Area Plant Species Survey Area, or Narrow Endemic Plant Species Survey Area. The Project site is within the burrowing owl (BUOW; *Athene cunicularia*) survey area. Vernal pool resources within the Project site consist of ephemeral pools in the northeast corner.

1.4 PROJECT OBJECTIVES

The applicant's goal for the proposed Project is to provide for the orderly development of a warehouse building in the northern portion of the City, near the designated truck route and within the MARB/IPA APZ Zone II, to increase employment opportunities in a housing-rich area, provide development compatible with the MARB/IPA ALUCP, and protect the MARB/IPA as outlined by the PVCCSP. This goal aligns with various aspects of the Southern California Association of Governments' (SCAG's) Connect SoCal 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS; 2020), primarily related to accommodating goods movement industries and balancing job and housing opportunities in local areas to reduce long commutes from home to work. SCAG identifies the Inland Empire as a housing-rich area and coastal communities as job-rich areas and is striving in its policies to achieve more equal balances locally. The Project applicant also seeks to help implement the City's Storm Water Protection Plan by constructing a portion of the Line E storm drain in addition to the Project's utility infrastructure.

1.5 PROJECT COMPONENTS

The proposed Project involves the adoption of a Specific Plan Amendment to the PVCCSP and approval of a parcel map and Development Plan to allow the construction and operation of a multi-tenant distribution building that allows for warehousing, showroom, and office uses. The components of the Project are further described below.

Specific Plan Amendment

It is the intent of the PVCCSP to facilitate development of the area in an orderly and consistent fashion that is coordinated with the provision of necessary infrastructure and public improvements. Land use categories in the PVCCSP include Industrial, Business/Professional Office, Commercial, Residential, and Public. Zoning categories in the PVCCSP include General Industrial, Light Industrial, Business/ Professional Office, Commercial, Residential, Multi-Family Residential, and Public. The majority of the PVCCSP planning area is designated for Light Industrial and General Industrial development and identifies areas along Ramona Expressway at the east and west ends of the PVCCSP boundary, including the Project site, for Commercial development. The section of the PVCCSP that would be amended by the proposed Specific Plan Amendment is described below.

Land Use Plan

Section 2.0 of the PVCCSP contains the Land Use Plan and defines land use categories and zones throughout the PVCCSP and details permitted, conditionally-permitted, accessory, and prohibited uses for each zone. The PVCCSP designates the Project site as a Commercial land use and zone; however, the proposed amendment to the PVCCSP would replace the existing Commercial land use and zoning designation at the Project site with a Light Industrial land use and zoning designation for approximately 13 acres. Land use and zoning designations for the remaining two acres in the northeastern portion of the Project site would not be modified as part of the Project and would continue to be designated Commercial.

The PVCCSP defines Light Industrial as the following: This zone provides for light industrial uses and related activities including manufacturing, research, warehouse and distribution, assembly of non-hazardous products/materials, and retail related to manufacturing. This zone correlates with the Light Industrial General Plan Land Use designation. The proposed Project falls within the category of warehouse and distribution services.

Development Plan

Light Industrial Use

The proposed Project involves the development of a light industrial multi-tenant distribution building on approximately 13 acres of the approximately 15-acre Project site. As shown on Figure 4, the Project includes the development of a rectangular 232,575-square-foot (sf) non-refrigerated warehouse building that includes 10,000 sf of ancillary office space, with 215 parking stalls, 52 trailer parking stalls and 39 dock positions that would support warehousing, showroom, and office uses within a single building.

NOTE: LINE OF SIGHT TAKEN FROM 6' 0" ABOVE FINISH GRADE

SHELL BUILDING
TYPE III-B FULLY SPRINKLERED
B / S1 / F1 OCCUPANCY
36'-0" CLEAR
59.30 F.F.
58.7 PAD

805'-0"
271'-0"
39 DOCK POSITIONS
961'-1 3/4"
NEW 8'-0" HIGH TUBE STEEL FENCE
N89°57'32"W 1240.67'
14'-0" HIGH CONCRETE SCREEN WALL
TRASH
GUARDSHACK
GATE
TRUCK TRAFFIC
NO TRUCK TRAFFIC
FULL ACCESS DRIVE-WAY
ELECTRICAL ROOM
PRIMARY OFFICE AREA
MONUMENT SIGNS
AUTO TRAFFIC
RIGHT-IN / RIGHT-OUT
RAMP UP
FH
GRADE BREAK
POSSIBLE AVIATION LINE LOCATION
AUC ZONE C1
AFZ II / AUC ZONE B2
INDIAN AVENUE
RAMONA EXPRESS WAY
PERRIS BOULEVARD
FUTURE COMMERCIAL 1.61 AC
NOT A PART
N00°03'00"E 264.24'
229'-9 1/2"
NEW 8'-0" HIGH TUBE STEEL FENCE
N89°56'40"W 280.10'
N00°43'42"E 348.24'
327'-1 1/2"
N89°57'32"W 810.70'
530'-2"
460'-6 7/8"
Δ 90°41'15"
R= 1,200.00'
L= 1,934.98'
595'-9"
136.5'
225'-0"
0' 10' 20' 50' 100'

Source: RGA 2022

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Site Plan

Figure 4

Primary office areas run along the southern part of the building facing Ramona Expressway. Buildings exceeding 100,000 sf are required to provide employee amenities such as, but not limited to, cafeterias, exercise rooms, locker rooms and shower, walking trails and recreational facilities. Inclusion of theses amenities in the Project would encourage employee trip reduction, reducing associated transportation pollutant emissions.

In general, the architectural style of the light industrial building consists of modern industrial design, as shown on Figure 5. The buildings would be constructed of painted concrete tilt-up panels and low-reflective materials, including low-reflective glass. The exterior color palette would be comprised of various shades of white, gray, and blue. The proposed buildings would be a maximum of 48 feet in height above the exterior finished grade. Visual relief from building form would be achieved through building articulation, variations in height and rooflines, and the incorporation of landscaping, including trees. The architectural elements and landscaping would avoid monotony and repetition in building elevations and would minimize glare. Rooftop equipment would be screened and not visible from the street.

A key objective of the PVCCSP is to promote sustainable development and to encourage the use of "green" technologies. In accordance with PVCCSP EIR mitigation measure MM Air 19, the Project would be constructed to implement, at a minimum, an increase in building energy efficiency 15 percent beyond California Title 24 Energy Efficiency Standards for Nonresidential Buildings and reduce water use by 25 percent. There is no rooftop solar proposed at this time as the project site is within the final approach area to MARB/IPA. Should solar be proposed in the future, Condition 10 of the ALUC approval of the project (Riverside County Airport Land Use Commission 2022) requires a separate solar glare study be submitted and reviewed by the Airport Land Use Commission and MARB/IPA.

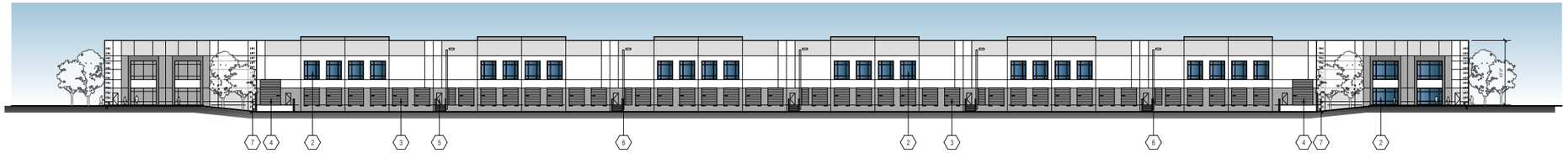
Commercial Pad

The 1.61 acres in the northeastern portion of the Project site designated for Commercial land use would continue to be available for future commercial use. This reserved commercial development pad is intended to improve and extend the commercial corridor along Perris Boulevard further north and south of the Project site. Development of the commercial pad is not proposed as part of the Project application; however, development of a 125-room hotel has been assumed as part of this environmental analysis. Until development of the commercial pad occurs, temporary staging activities may occur in this area to support construction of the light industrial uses described above.

Access, Circulation, and Parking

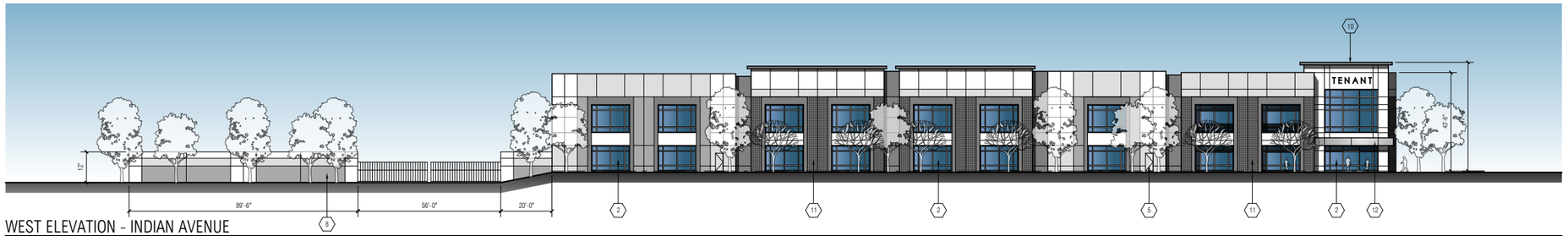
Vehicular Circulation

The Project has been designed to comply with applicable PVCCSP standards and guidelines to minimize vehicular conflict and to address shared access as well as large truck maneuverability. Site access would be provided for personal vehicles from Ramona Expressway. Truck traffic and commercial traffic would enter and exit the Project site from Indian Avenue. One driveway near the center of the Project site along Ramona Expressway would provide non-commercial truck access to the site. Commercial trucks would enter the site from a 56-foot-wide driveway in the northwestern part of the Project site. As commercial trucks enter the Project site, they would pass through a guarded entrance gate before parking to one of the proposed 39 dock positions on the north side of the proposed distribution building.



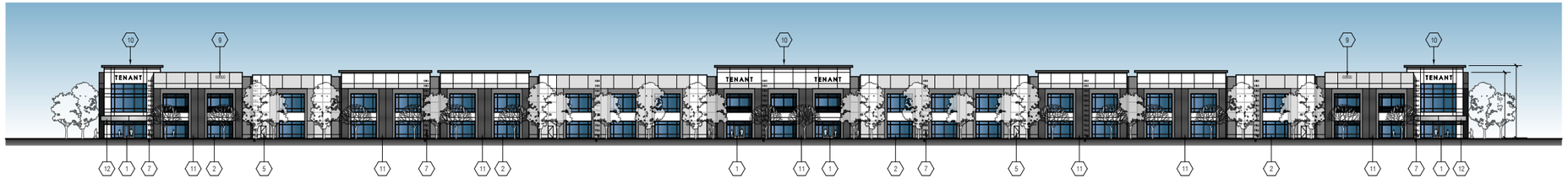
SOUTH ELEVATION

SCALE: 1" = 30'-0"



WEST ELEVATION - INDIAN AVENUE

SCALE: 1" = 20'-0"



SOUTH ELEVATION - RAMONA EXPRESSWAY

SCALE: 1" = 30'-0"

EAST ELEVATION

SCALE: 1" = 20'-0"

FINISH SCHEDULE

P-1

P-2

P-3

P-4

P-5

GL-1

M-1

FINISH SCHEDULE

CODE	MATERIAL	DESCRIPTION
P-1	BASE ACCENT COLOR	SW 7063 - NEBULOUS WHITE
P-2	ACCENT COLOR	SW 7650 - ELLIE GRAY
P-3	ACCENT COLOR	SW 7067 - CITYSCAPE
P-4	ACCENT COLOR - BASE COLOR	SW 7069 - GRIZZLE GRAY
P-5	STONE - BRICK MATERIAL	STONE - BRICK MATERIAL
GL-1	GLAZING	PPG SOLARCOOL PACIFICA
M-1	MULLIONS	CLEAR ANODIZED

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Source: RGA 2022

Truck access will be restricted to Indian Avenue. Trucks would enter the project site via left turn from Indian Avenue. Trucks would exit the project site via right turn out the west gate to Indian Avenue, Indian Avenue to Harley Knox Boulevard, and Harley Knox north to I-215. The proposed Project would include roadway improvements for Ramona Expressway, Indian Avenue, and Perris Boulevard. Ramona Expressway is an east-west oriented roadway located along the Project's southern boundary. Ramona Expressway is currently constructed at its ultimate half-section pavement width as an Expressway (184-foot right-of-way) between the western and eastern boundaries consistent with the PVCCSP and the City of Perris General Plan Circulation Element. In addition, per the City of Perris Bikeway Master Plan, a Class I Multipurpose Trail behind the curb with appropriate signage at the Ramona Expressway intersections will be installed.

Indian Avenue is a north-south oriented roadway located along the Project's western boundary. Indian Avenue is currently constructed at its ultimate half-section pavement width as a Secondary (94-foot right-of-way) between the Project's northern and southern boundaries consistent with the PVCCSP and the City of Perris General Plan Circulation Element. In addition, the project frontage will be improved to provide for a landscaped parkway and streetlights.

Perris Boulevard is a north-south oriented roadway located along the Project's eastern boundary. Perris Boulevard is currently constructed at its ultimate half-section pavement width as an Arterial (128-foot right-of-way) between the northern and southern boundaries consistent with the PVCCSP and the City of Perris General Plan Circulation Element. In addition, a Class I multipurpose trail, landscaped parkway, and streetlights will be installed per City of Perris, County of Riverside, and Caltrans standards.

The proposed Project would include site access improvements for Ramona Expressway, Indian Avenue, and Perris Boulevard.

Indian Avenue and Driveway 1 – Install a stop control on the westbound approach and construct the intersection with the following geometrics:

- Northbound Avenue: One through lane and one shared through-right turn lane.
- Southbound Approach: One left turn lane with a minimum of 200-feet of storage and two through lanes
- Eastbound Approach: Not Applicable (N/A)
- Westbound Approach (Project Driveway 1): One right turn only lane
- Due to the low traffic volumes making right turns into the driveway, a right turn deceleration lane is not required for traffic operations

Ramona Expressway and Driveway 2 – Install a stop control on the southbound approach and construct the intersection with the following geometrics:

- Northbound Approach: N/A
- Southbound Approach (Project Driveway 2): One right turn only lane
- Eastbound Approach: Three through lanes

- Westbound Approach: Three through lanes and one right turn only lane with a minimum of 100 feet of storage

- An acceleration/deceleration lane will be installed along the Ramona Expressway frontage. The right-of-way will accommodate a raised landscaped media, three travel lanes, and the acceleration/deceleration lane.

Perris Boulevard and Driveway 3 – Install a stop control on the eastbound approach and construct the intersection with the following geometrics:

- Northbound Approach: Three through lanes

- Southbound Approach: Two through lanes and one shared through-right turn lane

- Eastbound Approach (Project Driveway 3): One right turn only lane

- Westbound Approach: N/A

- Due to the low traffic volumes making right turns into the driveway, a right turn deceleration lane is not required for traffic operations

Wherever necessary, roadways adjacent to the Project site, site access points and site-adjacent intersections will be constructed to be consistent with the identified roadway classification and respective cross-sections in the PVCCSP or City of Perris General Plan Circulation Element.

Non-Vehicular Circulation

The Rider Street Bike Trail runs east to west from Ramona Expressway to East Frontage Road and would be accessible from the Project site (City of Perris 2021). Twenty bike stalls are proposed to be installed in several alcoves adjacent to the primary office area and main entrances. The buildings are proposed to be oriented so that entrances and entry access points are easily identified from a distance by pedestrians and/or vehicular traffic. Loading areas and employee parking lots would be located at the west, south, and east side of the warehouse building. The truck area at the north end of the property would be separated by a gate from passenger car parking. Furthermore, crosswalks would be installed at intersections to ensure pedestrian safety.

Parking

The Project has been designed to comply with Section 4.2.2.4 of the PVCCSP and Chapter 19.69 of the City's Zoning Ordinance related to parking requirements. Parking for employees and non-commercial trucks would be provided around most of the building, except for the north side where truck docks would be located, as well as along the northern-central boundary of the site. The Project would include a total of 215 automobile parking stalls on-site, which would exceed the requirements outlined in the City's Zoning Ordinance. Automobile parking would consist of standard spaces, van accessible spaces, clean air/vanpool/electric vehicle spaces and accessible spaces. A parking lot with 52 trailer parking stalls, 39 dock positions, and 2 garage doors would be located in the northern portion of the Project site. Pursuant to Section 5.106.5.2 of the CALGreen Code, 26 of the automobile parking spaces (12 percent of total) will be designated for low-emitting, fuel efficient, and carpool/vanpool vehicles. Pursuant to

Section 5.106.5.3.2 of the CALGreen Code, 22 of those designated parking spaces (10 percent of total) will provide infrastructure for the future charging of electric vehicles.

Landscape, Lighting, and Screen Walls

Landscape and Hardscape

The PVCCSP requires a minimum 12 percent landscape coverage for development in Light Industrial areas. The proposed Project landscape coverage includes 13.5 percent of the Project site. Landscape materials would include a variety of trees (e.g., for accent, screening, shade, and street), and shrubs (e.g., for accent, groundcover, screening). Proposed plant materials would have either low or moderate water needs and would be consistent with Section 6.1.3 of the PVCCSP, On-Site Plant Palette, or if approved by the City, plants that are consistent with California Friendly Landscape and that meet all minimum City of Perris Water Conservation Requirements, as defined in Chapter 19.70 of the City's Zoning Ordinance.

Screen Walls

A combination of screen walls and fencing would be provided at the Project site for screening, privacy, noise control, and security. Eight-foot-high wrought-iron fencing would be installed at the entrance and exit of the truck yard, adjacent to a pair of 14-foot-high concrete tilt-up screen walls. The eight-foot-high fence would extend around the perimeter of the Project site, with the exception of the interface with the car wash to the south, which already includes an existing wall directly along the property line, and a 13-foot wall along the project's northern boundary between the delivery area and the existing residential areas to the north.

Lighting

Section 4.2.4 of the PVCCSP addresses lighting standards and guidelines, including general lighting, decorative lighting, and parking lot lighting standards. The Project would comply with applicable lighting standards and guidelines, and with lighting standards established by the City, the CALGreen Code, and Title 24 Energy Efficiency Standards. The Project would include lighting elements for safety and security of the proposed development. New sources of light would primarily include parking lot lighting and outdoor security lighting for the proposed buildings. Lighting improvements on site would be shielded to avoid light pollution on neighboring properties and surrounding roadways, and to protect aircraft from glint and glare on final approach to MARB/IPA.

Utilities and Infrastructure

Utilities on the Project site would tie-into existing utility systems. A 10-inch fire water service and 3-inch domestic service connection to the existing 12-inch polyvinyl chloride (PVC) water main in Indian Ave is proposed with a manifold and single connection to the existing line. Two 2-inch irrigation connections, one off-site and one on-site, are proposed to also connect to the existing 12-inch PVC water main in Indian Ave with a single connection to the existing line. A second 10-inch fire water service connection is proposed to connect to the existing 39-inch water main in Perris Boulevard. A 6-inch sewer lateral is proposed to connect to the existing 10-inch vitrified clay sewer main in Perris Boulevard.

Natural Gas Service

Natural gas service will be provided to the Project by Southern California Gas (SoCal Gas). Existing natural gas transmission pipelines and local service pipelines run in the Perris Boulevard corridor along the eastern edge of the Property. The property owner will apply to SoCal Gas to establish an industrial and commercial customer connection through an approved industrial and approved commercial service connection at the northeast corner of the Property. The industrial connection will feed an industrial natural gas meter on the east side of the proposed building. The commercial connection will feed a commercial natural gas meter on the north side of the proposed commercial pad.

Electric Service

Electric Service will be provided to the Project by Southern California Edison (SoCal Edison). Existing local service electrical transmission lines run in the Perris Boulevard corridor along the eastern edge of the Property. The property owner will apply to SoCal Edison to establish and industrial and commercial customer connection through an approved industrial and commercial connection on the northeast corner of the Property. The industrial connection will feed an industrial electric transformer and meter on the east side of the proposed building. The commercial connection will feed a commercial electric transformer and meter on the north side of the proposed commercial pad.

Drainage

The Perris Valley Master Drainage Plan (MDP) includes future storm drain and detention basins to capture surface runoff and convey it into underground storm drains before continuing to the Perris Valley storm drain system. Runoff from the Project site will be collected via on-site private catch basins and conveyed via on-site private storm drain pipes to a proposed underground Best Management Practice (BMP) basin in the northeasterly portion of the Project site. As directed by the City, the Project applicant plans to construct a portion of the MDP Line E flood control facility as part of this project and also construct a 30-inch-diameter lateral pipe that can connect into the existing Perris Valley MDP Lateral Line E-11 in Perris Boulevard. The outlet pipe from the proposed on-site BMP basin will connect into the flood control facility and a proposed temporary low-flow pump will be used to direct the flows towards the existing Perris Valley MDP Lateral Line E-11 via the 30-inch diameter lateral pipe. This interim proposed connection of Line E would be in place until such time as the City constructs additional downstream sections of the Line E storm drain. Those future Line E extensions are not part of the Project and not required to meet the Project storm water or water quality requirements.

Project Operations

The proposed Project would involve the operation of warehouse and ancillary office uses within a single building consisting of 232,575 sf of development and the future operation of commercial uses on a separate building pad in the northeast corner of the Project site. At the time this IS/MND was prepared, the future occupants of the proposed buildings were unknown. For purposes of this evaluation, the warehouse building is assumed to be operational 24 hours per day, seven days per week, with exterior loading and parking areas illuminated at night.

The buildings are designed such that business operations would be conducted within the enclosed building, except for traffic movement, parking, and the loading, and unloading of truck trailers at designated loading bays. Infrastructure would be installed so that outdoor cargo handling equipment used during loading, and unloading of trailers (e.g., yard trucks, hostlers, yard goats, pallet jacks,

forklifts) can be non-diesel powered per contemporary industry standards. As a practical matter, dock doors on warehouse buildings are not occupied by a truck at all times of the day. There are typically many more dock door positions on warehouse buildings than are needed for receiving and shipping volumes. The dock doors that are in use at any given time are usually selected based on interior building operation efficiencies. In other words, trucks ideally dock in the position closest to where the goods carried by the truck are stored inside the warehouse. As a result, many dock door positions are frequently inactive throughout the day. Pursuant to State law, on-road diesel-fueled trucks are required to comply with various air quality and greenhouse gas emission standards, including but not limited to the type of fuel used, engine model year stipulations, aerodynamic features, and idling time restrictions. Compliance with State law is mandatory and inspections of on-road diesel trucks subject to applicable State laws are conducted by the California Air Resources Board (CARB).

Construction Activities

It is estimated that construction of the Project would occur in phases over an approximately 18-month period beginning in 2022. The estimated construction phase durations, which are also used throughout the environmental analysis in this IS/MND, are summarized in Table 1. This construction schedule represents a conservative analysis scenario should construction occur any time after the estimated dates since emission factors for construction decrease as time passes and the analysis year increases due to emission regulations becoming more stringent. Phase 1 would include the construction of the warehouse building, associated parking areas, storm drain line E, and roadway improvements. Phase 2 represents the construction of the commercial pad with a 125-room hotel. The duration of construction activity and associated equipment represents a reasonable approximation of the expected construction equipment known at the time this IS/MND was prepared.

Table 1
ESTIMATED CONSTRUCTION DURATION

Construction Activity	Construction Period Start	Construction Period End	Number of Working Days
Phase 1 Site Preparation	10/1/2022	10/14/2022	10
Phase 1 Grading	10/15/2022	11/14/2022	21
Phase 1 Underground Utilities/Line E	10/15/2022	2/14/2023	87
Phase 1 Building Construction	12/12/2022	2/2/2024	300
Phase 1 Paving	2/3/2024	3/1/2024	20
Phase 1 Architectural Coatings	3/2/2024	3/29/2024	20
Phase 2 Site Preparation	7/1/2025	7/2/2025	2
Phase 2 Grading	7/3/2025	7/8/2025	4
Phase 2 Building Construction	7/9/2025	4/14/2026	200
Phase 2 Architectural Coatings	2/15/2025	4/14/2025	42
Phase 2 Paving	4/15/2025	4/28/2025	10

Source: JM Realty

The Project would generate a total demand for 28,823 cubic yards (CY) of import and create 12,981 CY of fill, resulting in 15,842 CY of total import required.

Construction activity is regulated by the City's Municipal Code, Section 7.34.060, which allows construction activities during daytime hours (between the hours of 7:00 am and 7:00 pm), Monday through Saturday, except for legal holidays. Construction equipment is expected to operate on the

Project site up to eight hours per day during the allowed days and time period; however, the typical working hours for most construction contractors are 7:00 AM to 4:00 PM, and construction equipment is not in continual use; each piece of equipment is used only periodically during a typical construction workday. Should construction activities need to occur outside of the hours permitted by the Municipal Code, the Project Applicant would be required to obtain authorization from the City. Should on-site concrete pouring activities need to occur at night to facilitate proper concrete curing, pours would typically occur between the approximate hours of 2:00 am and 8:00 am.

Lights may be used within the construction areas, notably the construction staging areas, to provide security for construction equipment and construction materials. Further, in the event that construction-related activities occur during nighttime hours on the Project site, temporary, overhead artificial lighting would be provided to illuminate the work area.

Construction workers would travel to the Project site by passenger vehicle and materials deliveries would occur by medium- and heavy-duty trucks. Construction of the Project would require common construction equipment. The site-specific construction fleet may vary due to specific needs at the time of construction; however, a summary of construction equipment assumptions by construction phase used for purposes of analysis is provided in Table 2.

Table 2
CONSTRUCTION EQUIPMENT ASSUMPTIONS

Equipment	Horsepower	Number	Hours/Day
Phase 1 Site Preparation			
Rubber Tired Dozers	247	3	8
Tractors/Loaders/Backhoes	97	4	8
Water Trucks	402	1	8
Phase 1 Grading			
Excavators	158	2	8
Graders	187	1	8
Rubber Tired Dozers	247	1	8
Scrapers	367	2	8
Tractors/Loaders/Backhoes	97	2	8
Phase 1 Underground Utilities/Line E			
Cranes	231	1	2
Excavators	158	1	8
Rubber Tired Loaders	203	1	8
Tractors/Loaders/Backhoes	97	1	1
Water Trucks	402	1	8
Phase 1 Building Construction			
Cranes	231	1	7
Forklifts	89	3	8
Generator Sets	84	1	8
Tractors/Loaders/Backhoes	97	3	7
Welders	46	1	8
Water Trucks	402	1	8
Phase 1 Architectural Coating			
Air Compressors	78	1	6

Equipment	Horsepower	Number	Hours/Day
Phase 1 Paving			
Pavers	130	2	8
Paving Equipment	132	2	8
Rollers	80	2	8
Phase 2 Site Preparation			
Graders	187	1	8
Rubber Tired Dozers	247	1	8
Tractors/Loaders/Backhoes	97	1	8
Water Trucks	402	1	4
Phase 2 Grading			
Graders	187	1	8
Rubber Tired Dozers	247	1	8
Tractors/Loaders/Backhoes	97	2	7
Water Trucks	402	1	4
Phase 2 Building Construction			
Cranes	231	1	6
Forklifts	89	1	6
Generator Sets	84	1	8
Tractors/Loaders/Backhoes	97	1	6
Welders	46	3	8
Water Trucks	402	1	4
Phase 2 Architectural Coating			
Air Compressors	78	1	6
Phase 2 Paving			
Cement and Mortar Mixers	9	1	6
Pavers	130	1	6
Paving Equipment	132	1	8
Rollers	80	1	7
Tractors/Loaders/Backhoes	97	1	8

Source: CalEEMod; Appendix A

1.6 SUMMARY OF REQUESTED ACTIONS

The City has primary approval responsibility for the Project and is identified as the CEQA Lead Agency for the IS/MND, pursuant to State CEQA Guidelines Section 15050. As stated in PVCCSP Section 13.0, the City Council is the decision-making authority for the requested discretionary applications (e.g., the Specific Plan Amendment and Project Development Plan). The City's Planning Commission will consider the Specific Plan Amendment, Project Development Plan, and the Final IS/MND and make a recommendation to City Council whether the Project and Final IS/MND should be approved. The City Council will make the ultimate decision if the Final IS/MND should be approved and whether to approve, approve with changes, or deny the Project. In the event of approval of the Project, the City would subsequently conduct administrative reviews and issue ministerial permits and approvals to implement Project requirements and conditions of approval.

The Final IS/MND informs state, regional, and local government approvals needed for construction and/or operation of the Project, regardless of whether such actions are known at this time or explicitly listed. A list of the anticipated actions under City jurisdiction is provided in Table 3. In addition, other actions may be necessary from other government agencies to fully implement the Project. Table 3 also

lists the government agencies that may be required to use the IS/MND during their consultation and review of the Project and its implementing actions and provides a summary of the anticipated subsequent actions associated with the Project.

Table 3
PROJECT-RELATED APPROVALS/PERMITS

Agency	Approvals and Decisions
Discretionary Approvals	
City of Perris City Council	• Approval of the IS/MND (Case No. 21-00011) • Specific Plan Amendment (Case No. 21-05193) • Zoning Ordinance No. 1284 Amendment (Case No. 21-00011) • Tentative Map (Case No. 21-00011) • Development Plan Review (DPR) (Case No. 21-00011)
Riverside County Airport Land Use Commission	• Consistency Review
Non-Discretionary Approvals	
City of Perris Development Services	• All on-site plans, including grading, drainage, and utilities • Water Quality Management Plan (WQMP)
Regional Water Quality Control Board (RWQCB)	• Issuance of a Construction Activity General Construction Permit • Issuance of a National Pollutant Discharge Elimination System (NPDES) Permit
Riverside County Flood Control & Water Conservation District (RCFC&WCD)	• Encroachment permit for construction in RCFC&WCD right-of-way
South Coast Air Quality Management District (SCAQMD)	• Permits to construct and/or permits to operate new stationary sources of equipment that emit or control air contaminants, such as heating, ventilation, and air conditioning (HVAC) units
Other Utility Agencies	• Permits and associated approvals, as necessary for the installation of new utility infrastructure or connections to existing facilities

2.0 DETERMINATION

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

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

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

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 will be prepared.
☐	I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
☐	I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect (1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and (2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
☐	I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Signature

7.27.2022

Date

Matthew Evans

Printed name

City of Perris

For

3.0 ENVIRONMENTAL INITIAL STUDY CHECKLIST

The lead agency has defined the column headings in the environmental checklist as follows:

A. "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.

B. "Less Than Significant with Mitigation Incorporated" applies where the inclusion of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." All mitigation measures are described, including a brief explanation of how the measures reduce the effect to a less than significant level. Mitigation measures from earlier analyses may be cross-referenced.

C. "Less Than Significant Impact" applies where the project does not create an impact that exceeds a stated significance threshold.

D. "No Impact" applies where a project does not create an impact in that category. "No Impact" answers do not require an explanation if they are adequately supported by the information sources cited by the lead agency which 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).

I. Aesthetics

		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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?	☐	■	☐	☐

Applicable PVCCSP Standards and Guidelines

The PVCCSP includes Standards and Guidelines relevant to aesthetics/visual character and lighting. These Standards and Guidelines summarized below are incorporated as part of the proposed Project and are assumed in the analysis presented in this section. The chapters/section numbers provided correspond to the PVCCSP chapters/sections. There are no mitigation measures for aesthetics included in the PVCCSP EIR.

On-Site Design Standards and Guidelines (Chapter 4.0 of the PVCCSP)

4.1 Perris Valley Commerce Center On-Site Development Standards

In order to ensure the orderly, consistent, and sensible development of the PVCCSP land use standards and design criteria have been created for each land use category. A summary of the standards for industrial projects within the Specific Plan area is provided below.

4.2 On-Site Standards and Guidelines

4.2.1 General On-Site Project Development Standards and Guidelines

Properties within the PVCCSP shall be developed in general conformance with the Land Use Plan. Use and development standards will be in accordance with the City of Perris Municipal Code Chapter 19 (Zoning/Land Use Ordinance) as amended by the PVCCSP zoning ordinance, and further defined by the Specific Plan objectives, design guidelines, as well as future detailed development proposals include subdivisions, development plans, and conditional use permits.

Accident Potential Zones. All proposed projects that lie within APZs must comply with AOZ Standards.

4.2.2 Site Layout for Commerce Zones

Building Orientation/Placement. Accentuate public streets by locating building frontages and their entrances toward public right-of-way. Buildings should be orientated so that entrances and entry access points are easily identified from a distance by pedestrians and/or vehicular traffic. Reinforce entries with architectural material, and landscape features so they are clearly identifiable. Loading areas and employee parking lots should be located at the side and rear of buildings when possible. Promoting walkability and circulation is encouraged through placement of buildings and pedestrian circulation facilities. Buildings shall be designed to avoid placement within 100 feet of the extended runway and centerline of the airport. Utilize building placement, accented walls, or unique design to effectively screen views of loading docks, storage area, and/or outdoor work areas that would otherwise be visible to public view.

Vehicular Access and On-Site Circulation. Site design should address the intended functions of the facilities beginning with safe, definable site access that creates a sense of arrival. Truck routes are required for trucks having a maximum gross weight of 5 tons. These routes should avoid conflicts with established communities and be separated from passenger vehicles where possible. Site access should promote safety, efficiency, convenience, and minimize conflict between employee/customer vehicles and large trucks by creating separate access points when possible. Screen Loading Docks When possible, loading areas should be located on the side or rear of a site and shall be screened from public view. When loading areas are located in the Visual Overlay Zone, special consideration to the visible aesthetics of screen walls, fences and landscaping should be considered.

Acceptable screening methods include building offsets, connecting wing walls, perimeter site walls and fences, landscaping, and berming. Such screen walls should be architecturally integrated with building by design, color, and material. Screen walls shall be of the same design and materials as primary buildings and a minimum of 6 feet high so as to sufficiently screen loading docks. Screen walls exceeding 8 feet in height shall be softened with earthen berms and dense landscape. The screening of outdoor storage areas, outdoor work areas (where permitted), and mechanical equipment with walls that utilize the same building materials and architectural design of the buildings is required. Soften screen walls with earth berms and dense landscaping. The intent is to keep walls as low and unobtrusive as possible while performing their screening and security functions.

Outdoor Storage. Outdoor storage is limited to the General Industrial Zone of the Perris Valley Commerce Center (PVCC). No other outdoor storage will be permitted, with the exception of accessory uses for outdoor storage directly associated with and incidental to the primary use occupying less than 10% of the site or floor area.

Water Quality Site Design. Most developments are required to implement a Water Quality Management Plan (WQMP) in accordance with the most recently adopted Riverside County MS4 NPDES Permit (Board Order R8-2010-0033. Approval by the City of a WQMP plan requires submittal of a complete document with supporting data which includes at a minimum, a site “Post-Construction Best Management Practice (BMP) Plan,” and treatment control facility sizing calculations. Site design, based on Low Impact Design, and Source Control BMPs must be incorporated into the civil site design. If these two types of BMPs do not sufficiently manage hydromodification or treat expected pollutants, treatment control facilities must be implemented in order to assure proper pollutant treatment.

Treatment control BMPs are in accordance with Riverside County Storm Water Best Management Practice Handbook. The Regional Water Quality Control Board continuously updates impairments as studies are completed, the most current version of impairment data should be reviewed prior to preparation of Preliminary or Final WQMP document.

The MS4 Permit requires that applicable new development and redevelopment projects:

- Design the site to minimize imperviousness, detain runoff, and infiltrate, reuse or evapotranspirate runoff where feasible.
- Cover or control sources of stormwater pollutants.
- Use LID to infiltrate, evapotranspirate, harvest and use, or treat runoff from impervious surfaces.
- Ensure runoff does not create a hydrologic condition of concern.
- Maintain Stormwater BMPs.

4.2.4 Lighting

General Lighting. All projects shall consider proper lighting for safety and security purposes. All lighting fixtures shall be fully shielded with cut-off fixtures so that there is no glare emitted onto adjacent properties or above the lowest part of the fixture. Parking area lighting shall be provided pursuant to Section 19.02.110.A. All outdoor lighting and utilities, including spotlights, floodlights, electrical reflectors, and other means of illumination for signs, structures, landscaping, and similar areas, shall be made of metal, unbreakable plastic, recessed, or otherwise designed to reduce the problems associated with damage and replacement of fixtures. Fixtures shall be vandal proof. Fixtures should be anchored with concrete footing if low voltage lighting is used. Parking areas shall have lighting which provides adequate illumination for safety and security. Parking lot lighting fixtures shall maintain a minimum of 1-foot candlepower across the surface of the parking area. Parking lot lights shall be located such that they do not conflict or displace intended tree planting locations.

a) Have a substantial adverse effect on a scenic vista?

No Impact. Scenic vistas are generally defined as public viewpoints that provide expansive or notable views of a highly valued landscape and are typically identified in planning documents, such as a general plan, but can also include locally known areas or locations where high quality public views are available. The City's General Plan, PVCCSP, and PVCCSP EIR do not identify or otherwise designate scenic vistas or protected viewsheds; however, views of natural landforms are available throughout the City, such as Lake Perris Dam, the Russell Mountains and Bernasconi Hills (all of which are located approximately four miles east of the Project site), and Gavilan Hills and Motte-Rimrock Reserve (located about four and six miles southwest of the Project site, respectively).

Impacts on scenic vistas can result from development directly diminishing the scenic quality of the view or by blocking view corridors. Due to the relatively flat and broad nature of the City's topography, including the Project site and immediately surrounding areas, Section 6.1 of the City's General Plan EIR identified that "virtually all future building construction consistent with land use and development standards… will obstruct views to the foothills from at least some vantage points." The City's General

Plan EIR concludes that the City's east-west and north-south oriented roadways are intended to frame and preserve scenic views towards distant horizons and foothills. Additionally, the PVCCSP EIR Initial Study determined that the PVCCSP was not located within a scenic vista and that development allowed by the PVCCSP would not adversely impact a scenic vista.

The Project site is relatively flat and undeveloped with little topographical change and sparse vegetation. Development at the Project site would include light industrial land uses consisting of a warehouse, future commercial use, and associated parking within the interior portions and landscaping along the edges of the Project site bordering Indian Avenue, Ramona Expressway, and North Perris Boulevard, which are north-south and east-west trending roadways. While development of the Project may obstruct views to the foothills from at least some vantage points, the Project site is located within the boundaries of the PVCCSP and would not adversely impact a scenic vista. Furthermore, the building design would be consistent with land use development standards and the proposed landscaping would contribute to preserving roadway corridors that also support scenic views. Impacts to scenic vistas would not occur and no mitigation would be required.

b) 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 undeveloped and vacant and does not contain scenic resources such as trees, rock outcroppings, or historic buildings. Further, while there are three officially designated state scenic highways in Riverside County, including SR-62, SR-74, and SR-243, none of these designated state scenic highways are near the Project site (i.e., the nearest highway is SR 74, approximately eight miles from the Project site; Caltrans 2021). Thus, given that the Project site is not visible from an officially designated state scenic highway and no unique scenic resources exist on-site, there would be no impact to scenic resources within a state scenic highway.

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

Less Than Significant Impact. The existing visual character of the Project site and surrounding area is characterized by urbanizing commercial and industrial land uses that have been implemented according to the PVCCSP, which was developed to transition a formerly agricultural area to a modern-day regional commerce center. Development immediately surrounding the vacant and undeveloped Project site includes a gas station, non-conforming residential uses, commercial retail development, and warehouse buildings, as well as vacant and undeveloped land. The Project site is zoned for commercial uses by the PVCCSP and the proposed Project would involve an amendment to the PVCCSP to allow for light industrial uses consistent with the PVCCSP. Therefore, although the Project site would be converted from a vacant lot to a developed warehouse and industrial site, this conversion is consistent with the existing and planned surrounding land uses as identified in the PVCCSP and would not substantially degrade the existing visual character or quality of public views of the site and its surroundings. The Project would also comply with applicable site development criteria contained within the PVCCSP such as height limitations and setbacks. Therefore, the Project would be consistent with the planned site uses and would not conflict with applicable zoning or other regulations governing scenic quality. Impacts associated with the visual character and quality and applicable regulations governing scenic quality would be less than significant and no mitigation would be required.

d) Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area?

Less Than Significant with Mitigation Incorporated. There are two primary artificial sources of light that generally affect an urban environment: light emanating from building interiors that passes through windows to the outside, and light from exterior sources (e.g., street lighting, parking lot lighting, building illumination, security lighting, and landscape lighting) that affect the natural ambient light level. The introduction of light can be a nuisance by affecting adjacent areas and diminishing the view of the clear night sky depending on the location of the light sources and its proximity to nearby light-sensitive areas. Glare can be caused by unshielded or misdirected lighting sources. Reflective surfaces (i.e., polished metal) can also cause glare. Impacts associated with glare range from a simple nuisance to potentially dangerous situations (i.e., if glare is directed into the eyes of motorists). Glare results from development and associated parking areas that contain reflective materials such as hi-efficiency window glass, highly polished surfaces, and expanses of pavement. The Project site is in a developing area with a mix of commercial and industrial development as well as vacant land that is identified for redevelopment in the PVCCSP. The existing lighting in the Project site include streetlights and vehicle lights along surrounding roadways, as well as from interior and exterior building lighting emanating from the developed commercial and industrial sites.

The Project would include the introduction of new lighting at a vacant site without existing lighting sources. Proposed lighting is anticipated to include a combination of operational, street, and security lighting on the building's exterior and in parking areas that would conform to the California Building Standards Code, Title 24, as well as the City's zoning code standards that regulate outdoor lighting. Specifically, the City's Ordinance No. 1051 requires the use of certain types of light fixtures on non-residential properties in an effort to minimize the amount of light cast on adjoining properties, the public right-of-way, and into the night sky. External lighting may be used during nighttime hours and lighting may be required especially during non-daylight-savings-time months. During any non-operational hours, the buildings would only support security lighting. The proposed Project would also comply with the lighting requirements in the PVCCSP, which contains lighting standards for general, decorative, and parking lot lighting.

The PVCCSP Standards and Guidelines related to colors and materials (Section 4.2.3.5 of the PVCCSP, identified above) encourage the use of low-reflectance facades and prohibits metal siding where visible from the public. Allowed building materials generally include wood, brick, native stone, and tinted/textured concrete. Further, as identified in Section 12.1.3, Compatibility with March ARB/IP ALUCP of the PVCCSP, any use that would cause sunlight to be reflected towards an aircraft engaged in a climb following takeoff or descent towards a landing at an airport is prohibited. Buildings would be constructed of painted concrete tilt-up panels and low-reflective materials, including low-reflective glass. Compliance with the requirements of the PVCCSP related to building materials would ensure that glare does not create a nuisance to on- and off-site viewers of the Project site or aircraft traveling to or from the MARB/IP Airport. Therefore, operational impacts related to glare would be less than significant and no mitigation would be required.

During construction, lights may be used within the construction areas, notably the construction staging areas, to provide security for construction equipment and construction materials. Further, in the event that construction-related activities occur during nighttime hours on the Project site, temporary, overhead artificial lighting would be provided to illuminate the work area. Due to the distance between the construction area and the adjacent residence and motorists on adjacent roadways, such security

lights may result in glare to residents and motorists. However, this potential impact will be reduced to a less than significant level through the City's standard project review and approval process and with implementation of mitigation measure MM Aes 1.

Project Mitigation Measure

MM Aes 1 Prior to issuance of grading permits, the Project developer shall provide evidence to the City of Perris that any temporary nighttime lighting installed for security purposes shall be downward facing and hooded or shielded to prevent security light spillage outside of the staging area or direct broadcast of security light into the sky.

II. Agriculture and Forestry Resources

		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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 non-agricultural 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 in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources 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?	☐	☐	☐	■

Applicable PVCCSP Standards and Guidelines

There are no Standards and Guidelines or mitigation measures related to agriculture and forestry resources included in the PVCCSP or its associated PVCCSP EIR.

a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?

No Impact. The Farmland Mapping and Monitoring Program (FMMP) is a statewide program that designates farmland among several categories, including Prime Farmland, Unique Farmland, and Farmland of Statewide Importance. The FMMP is maintained by the California Department of Conservation (CDC) and is the agency responsible for overseeing farmland classification throughout the state. Agricultural land is rated according to soil quality and irrigation status; the best quality land is called Prime Farmland. Unique farmland is land, other than Prime Farmland, that has combined conditions to produce sustained high quality and high yields of specialty crops. Farmland of Statewide Importance may include tracts of land that have been designated for agriculture by State law. In some areas that are not identified as having national or statewide importance, land is Farmland of Local Importance.

While the undeveloped Project site would be converted from vacant to industrial and commercial land use, the conversion would not include the loss of active farmland. According to the FMMP online mapping database (CDC 2016), the Project site is classified as Farmland of Local Importance (with portions designated as "Other Land" and does not contain any Prime Farmland, Unique Farmland, or Farmland of Statewide Importance. Furthermore, the Project site is not used for agricultural production. Additionally, the Conservation Element of the City General Plan does not identify the Project site as containing Prime Farmland, Unique Farmland, Farmland of Statewide Importance, or Grazing Land (City of Perris 2005). Therefore, no impact would occur in relation to this issue.

b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?

No Impact. The Williamson Act, also known as the California Land Conservation Act of 1965, enables local governments to enter into contracts with private landowners for the purpose of restricting specific parcels of land to agricultural or related open space use; in return, landowners receive property tax assessments which are much lower than normal because they are based upon farming and open space uses as opposed to full market value. The Williamson Act is only applicable to parcels within an established agricultural preserve consisting of at least 20 acres of Prime Farmland, or at least 40 acres of land not designated as Prime Farmland. The Williamson Act is designed to prevent the premature and unnecessary conversion of open space lands and agricultural areas to urban uses. As stated above, the Project site is located in an area classified by the CDC as Farmland of Local Importance where no active farmland nor agricultural resources are present. Additionally, the Project site is not within an established agricultural preserve consisting of at least 20 acres of Prime Farmland or at least 40 acres of land not designated as Prime Farmland. Further, the Conservation Element of the General Plan does not map Williamson Act land within the Project site (City of Perris 2005). Therefore, the Project would not conflict with existing zoning for agricultural use, or a Williamson Act contract and no impact would occur.

c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?

No Impact. Public Resources Code Section 12220(g) defines "forest land" as land that can support 10 percent native cover of any species, including hardwoods, under natural conditions, and that allows for management of one or more forest resources, including timber, aesthetics, fish and wildlife,

biodiversity, water quality, recreation, and other public benefits. Based on this definition, no forest land occurs within or adjacent to the Project site. Moreover, there is no land zoned as forest land or timberland that exists within the Project site or within its vicinity. There are scattered trees throughout the area; however, there are no concentration of trees within the site that would constitute a forest. Therefore, the proposed Project would not conflict with existing zoning for forest land or timberland. No impact to forest land would occur.

d) Result in the loss of forest land or conversion of forest land to non-forest use?

No Impact. As stated in under question c), above, there is no concentration of trees on the site that would constitute a forest. The site has not been historically and is not currently used or planned to be used for forest land. As such, implementation of the proposed Project would not result in the loss of forest land or conversion of forest land to non-forest use. Therefore, no impact would occur in relation to this issue.

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?

No Impact. As stated under questions a) through d), above, the Project site is located in an area classified as Farmland of Local Importance, but no agricultural resources are present on the Project site or immediate vicinity. Land to the west of the Project site is similarly vacant and disturbed. To the north are three non-conforming residences, and two undeveloped parking lots. Several businesses, including a used car dealership, bitcoin ATM, and ARCO gas station line the lot bordering Perris Boulevard to the east The majority of the surrounding area is classified as urban and built-up land. Additionally, there is no concentration of trees that would constitute a forest. The proposed Project would result in the conversion of the undeveloped Project site to developed use, but the Project site is not categorized as Prime Farmland, Unique Farmland or Farmland of Statewide Importance nor is the site designated as forest land. Therefore, implementation of the Project would not result in the conversion of Farmland, to nonagricultural use or conversion of forest land to non-forest use. No impact would occur in relation to this issue.

III. Air Quality

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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?	☐	☐	■	☐

		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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?	☐	☐	■	☐

An Air Quality and Greenhouse Gas Emissions Technical Report (HELIX 2022a; attached to this IS/MND as Appendix A), and a Warehouse Operations Health Risk Assessment (HRA) (HELIX 2022b; attached to this IS/MND as Appendix B) was prepared for the proposed Project. The findings and recommendations contained in those reports are incorporated into the following analysis.

Applicable PVCCSP Standards and Guidelines and Mitigation Measures

The PVCCSP includes Standards and Guidelines relevant to the analysis of air quality impacts. These Standards and Guidelines summarized below are incorporated as part of the proposed Project and are assumed in the analysis presented in this section. The chapters/section numbers provided correspond to the PVCCSP chapters/sections.

Industrial Design Standards and Guidelines (Chapter 8.0 of the PVCCSP)

8.2.1.4 Employee Break Areas and Amenities

Buildings exceeding 100,000 sf shall require employee amenities such as, but not limited to, cafeterias, exercise rooms, locker rooms and shower, walking trails and recreational facilities. Inclusion of theses amenities in the project would encourage employee trip reduction, reducing associated transportation pollutant emissions.

The Air Quality and Greenhouse Gas Emissions Technical Report and HRA were prepared for the Project in compliance with the following PVCCSP EIR mitigation measures:

MM Air 1 To identify potential implementing development project-specific impacts resulting from construction activities, proposed development projects that are subject to CEQA shall have construction related air quality impacts analyzed using the latest available URBEMIS model, or other analytical method determined in conjunction with the SCAQMD. The results of the construction-related air quality impacts analysis shall be included in the development project's CEQA documentation. To address potential localized impacts, the air quality analysis may incorporate SCAQMD's Localized Significance Threshold analysis or other appropriate analyses as determined in conjunction with SCAQMD. If such analyses identify potentially significant regional or local air quality impacts, the City shall require the incorporation of appropriate mitigation to reduce such impacts.

MM Air 10 To identify potential implementing development project-specific impacts resulting from operational activities, proposed development projects that are subject to CEQA shall have long-term operational-related air quality impacts analyzed using the latest

URBEMIS model, or other analytical method determined by the City of Perris as lead agency in conjunction with the SCAQMD. The results of the operational-related air quality impacts analysis shall be included in the development project's CEQA documentation. To address potential localized impacts, the air quality analysis may incorporate SCAQMD's Localized Significance Threshold analysis, CO Hot Spot analysis, or other appropriate analyses as determined by the City of Perris in conjunction with SCAQMD. If such analyses identify potentially significant regional or local air quality impacts, the City shall require the incorporation of appropriate mitigation to reduce such impacts.

MM Air 15 To identify potential implementing development project-specific impacts resulting from the use of diesel trucks, proposed implementing development projects that include an excess of 10 dock doors for a single building, a minimum of 100 truck trips per day, 40 truck trips with TRUs per day, or TRU operations exceeding 300 hours per week, and that are subject to CEQA and are located adjacent to sensitive land uses; shall have a facility-specific Health Risk Assessment performed to assess the diesel particulate matter impacts from mobile-source traffic generated by that implementing development project. The results of the Health Risk Assessment shall be included in the CEQA documentation for each implementing development project.

The following mitigation measures from the PVCCSP EIR are applied to the proposed Project:

MM Air 2 Each individual implementing development project shall submit a traffic control plan prior to the issuance of a grading permit. The traffic control plan shall describe in detail safe detours and provide temporary traffic control during construction activities for that project. To reduce traffic congestion, the plan shall include, as necessary, appropriate, and practicable, the following: temporary traffic controls such as a flag person during all phases of construction to maintain smooth traffic flow, dedicated turn lanes for movement of construction trucks and equipment on- and off-site, scheduling of construction activities that affect traffic flow on the arterial system to off-peak hour, consolidating truck deliveries, rerouting of construction trucks away from congested streets or sensitive receptors, and/ or signal synchronization to improve traffic flow.

MM Air 3 To reduce fugitive dust emissions, the development of each individual implementing development project shall comply with SCAQMD Rule 403. The developer of each implementing project shall provide the City of Perris with the SCAQMD-approved dust control plan, or other sufficient proof of compliance with Rule 403, prior to grading permit issuance. Dust control measures shall include, but are not limited to:

- requiring the application of non-toxic soil stabilizers according to manufacturers' specifications to all inactive construction areas (previously graded areas inactive for 20 days or more, assuming no rain),
- keeping disturbed/ loose soil moist at all times,
- requiring trucks entering or leaving the site hauling dirt, sand, or soil, or other loose materials on public roads to be covered,

- installation of wheel washers or gravel construction entrances where vehicles enter and exit unpaved roads onto paved roads, or wash off trucks and any equipment leaving the site each trip,
- posting and enforcement of traffic speed limits of 15 miles per hour or less on all unpaved potions of the project site,
- suspending all excavating and grading operations when wind gusts (as instantaneous gust) exceed 25 miles per hour,
- appointment of a construction relations officer to act as a community liaison concerning on-site construction activity including resolution of issues related to PM-10 generation,
- sweeping streets at the end of the day if visible soil material is carried onto adjacent paved public roads and use of SCAQMD Rule 1186 and 1186.1 certified street sweepers or roadway washing trucks when sweeping streets to remove visible soil materials,
- replacement of ground cover in disturbed areas as quickly as possible.

MM Air 4 Building and grading permits shall include a restriction that limits idling of construction equipment on site to no more than five minutes.

MM Air 5 Electricity from power poles shall be used instead of temporary diesel or gasoline-powered generators to reduce the associated emissions. Approval will be required by the City of Perris' Building Division prior to issuance of grading permits.

MM Air 6 The developer of each implementing development project shall require, by contract specifications, the use of alternative fueled off-road construction equipment, the use of construction equipment that demonstrates early compliance with off-road equipment with the CARB in-use off-road diesel vehicle regulation (SCAQMD Rule 2449) and/or meets or exceeds Tier 3 standards with available CARB verified or US EPA certified technologies. Diesel equipment shall use water emulsified diesel fuel such as PuriNOx unless it is unavailable in Riverside County at the time of project construction activities. Contract specifications shall be included in project construction documents, which shall be reviewed by the City of Perris' Building Division prior to issuance of a grading permit.

MM Air 7 During construction, ozone precursor emissions from mobile construction equipment shall be controlled by maintaining equipment engines in good condition and in proper tune per manufacturers' specifications to the satisfaction of the City of Perris' Building Division. Equipment maintenance records and equipment design specification data sheets shall be kept on-site during construction. Compliance with this measure shall be subject to periodic inspections by the City of Perris' Building Division.

MM Air 8 Each individual implementing development project shall apply paints using either high volume low pressure (HVLP) spray equipment with a minimum transfer efficiency of at least 50 percent or other application techniques with equivalent or higher transfer efficiency.

MM Air 9 To reduce VOC emissions associated with architectural coating, the project designer and contractor shall reduce the use of paints and solvents by utilizing pre-coated materials (e.g., bathroom stall dividers, metal awnings), materials that do not require painting, and require coatings and solvents with a VOC content lower than required under Rule 1113 to be utilized. The construction contractor shall be required to utilize "Super-Compliant" VOC paints, which are defined in SCAQMD's Rule 1113. Construction specifications shall be included in building specifications that assure these requirements are implemented. The specifications for each implementing development project shall be reviewed by the City of Perris' Building Division for compliance with this mitigation measure prior to issuance of a building permit for that project.

MM Air 11 Signage shall be posted at loading docks and all entrances to loading areas prohibiting all on-site truck idling in excess of 5 minutes.

MM Air 13 In order to promote alternative fuels, and help support "clean" truck fleets, the developer/successor-in-interest of each implementing development project shall provide building occupants information related to SCAQMD's Carl Moyer Program, or other state programs that restrict operations to "clean" trucks, such as 2007 or newer model year or 2010 compliant vehicles.

MM Air 14 Each implementing development project shall designate parking spaces for high-occupancy vehicles and provide larger parking spaces to accommodate vans used for ride sharing. Proof of compliance will be required prior to the issuance of occupancy permits.

MM Air 17 New sensitive land uses such as residential, a hospital, medical offices, day care facilities, and fire stations shall not be located closer than 1,000 feet from any existing or proposed distribution center/warehouse facility which generates a minimum of 100 truck trips per day, or 40 truck trips with TRUs per day, or TRU operations exceeding 300 hours per week, pursuant to the recommendations set forth in the CARB Air Quality and Land Use Handbook. If new sensitive land uses cannot meet this setback, they will be designed and conditioned to include mechanical ventilation systems with fresh air filtration. For operable windows or other sources of ambient air filtration, installation of a central HVAC (heating, ventilation, and air conditioning) system that includes high efficiency filters for particulates (MERV-13 or higher) or other similarly effective systems shall be required.

MM Air 18 Prior to the approval of each implementing development project, the Riverside Transit Agency (RTA) shall be contacted to determine if the RTA has plans for the future provision of bus routing within any street that is adjacent to the implementing development project that would require bus stops at the project access points. If the RTA has future plans for the establishment of a bus route that will serve the implementing development project, road improvements adjacent to the project site shall be designed to accommodate future bus turnouts at locations established through consultation with the RTA. RTA shall be responsible for the construction and maintenance of the bus stop facilities. The area set aside for bus turnouts shall conform to RTA design standards, including the design of the contact between sidewalks and

curb and gutter at bus stops and the use of ADA-compliant paths to the major building entrances in the project.

MM Air 20 Each implementing development project shall implement, at a minimum, an increase in each building's energy efficiency 15 percent beyond Title 24, and reduce indoor water use by 25 percent. All requirements will be documented through a checklist to be submitted prior to issuance of building permits for the implementing development project with building plans and calculations.

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

Less Than Significant Impact. The Project site is located within the South Coast Air Basin (SCAB), which consists of all or part of Los Angeles, San Bernardino, Riverside, and Orange Counties. Air quality in the SCAB is regulated by the SCAQMD. As a regional agency, the SCAQMD works directly with SCAG, County transportation commissions, and local governments, as well as cooperates actively with all federal and state government agencies. The SCAQMD develops rules and regulations; establishes permitting requirements for stationary sources; inspects emissions sources; and enforces such measures through educational programs or fines, when necessary.

The SCAQMD is directly responsible for reducing emissions from stationary (area and point), mobile, and indirect sources. It has responded to this requirement by preparing a sequence of Air Quality Management Plans (AQMPs). An AQMP establishes a program of rules and regulations directed at attaining the National Ambient Air Quality Standards and California Ambient Air Quality Standards. The regional plan applicable to the proposed Project is the SCAQMD's AQMP.

SCAG is the regional planning agency for Los Angeles, Orange, Ventura, Riverside, San Bernardino, and Imperial Counties, and addresses regional issues relating to transportation, economy, community development, and environment. Regarding air quality planning, SCAG has prepared the Connect SoCal RTP/SCS, a long-range transportation plan that uses growth forecasts to project trends over a 20-year period to identify regional transportation strategies to address mobility needs. These growth forecasts form the basis for the land use and transportation control portions of the AQMP. These documents are utilized in the preparation of the air quality forecasts and consistency analysis included in the AQMP. Both the RTP/SCS and AQMP are based, in part, on growth projections originating with County and City General Plans and Specific Plans.

Projects that are consistent with the land use designation for their project site are generally consistent with the population and growth assumptions used in the AQMP. The proposed Project does not have a residential component and would not result in regional population growth. The PVCCSP designates the Project site as a Commercial land use. The Project proposes an amendment to the PVCCSP to replace the existing Commercial land use designation with a Light Industrial land use for approximately 13.3 acres of the Project site. Land use designations for the remaining approximately 1.6 acres in the northeastern of the Project site would not be modified as part of the Project and would continue to be designated Commercial. According to data presented in the SCAG's Employment Density Summary Report, average employment densities for commercial uses in the region range from a high of 175.49 employees per acre (high-rise office) to a low of 19.71 employees per acre (regional retail). Average employment densities for light industrial uses are 17.83 employees per acre for light manufacturing and 11.4 employees per acre for warehouse (SCAG 2001). Therefore, changing the land use designation from Commercial to Light Industrial for the warehouse portion of the Project would not result in employment

growth exceeding the assumptions used to develop the AQMP. As such, employment growth in the City as a result of the Project, and the related changes in regional emissions, are accounted for in the AQMP, which is crafted to bring the basin into attainment for all criteria pollutants. Therefore, the proposed Project would not conflict with or obstruct implementation of the AQMP. Impacts would be less than significant and no mitigation would be required.

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. By its very nature, air pollution is largely a cumulative impact. The nonattainment status of regional pollutants is a result of past and present development within the SCAB. The region is a federal and/or state nonattainment area for ozone, PM10 and PM2.5. In accordance with State CEQA Guidelines Section 15064(h)(3), the SCAQMD's approach for assessing cumulative impacts is based on the AQMP forecasts of attainment of ambient air quality standards in accordance with the requirements of the federal and State Clean Air Acts. If a project is not consistent with the AQMP, which is intended to bring the SCAB into attainment for all criteria pollutants, that project can be considered cumulatively considerable. Additionally, if the mass regional emissions calculated for a project exceed the applicable SCAQMD daily significance thresholds that are designed to assist the region in attaining the applicable state and national ambient air quality standards, that project can be considered cumulatively considerable. The SCAQMD thresholds of significance for construction and operational air emissions are shown in Table 4.

Table 4
SCAQMD CRITERIA AIR POLLUTANT EMISSIONS THRESHOLDS

Criteria Pollutant	Emission Thresholds (pounds per day) Construction	Emission Thresholds (pounds per day) Operation
Volatile Organic Compounds (VOC)	75	55
Oxides of Nitrogen (NO_X)	100	55
Carbon Monoxide (CO)	550	550
Particulate Matter (PM_{10})	150	150
Particulate Matter ($PM_{2.5}$)	55	55
Oxides of Sulfur (SO_X)	150	150
Lead	3	3

Source: SCAQMD 2019

As discussed under question a) above, the Project would not conflict with or obstruct implementation of the AQMP. A comparison of the Project mass regional emissions with the applicable SCAQMD daily significance thresholds is provided below.

The Project would generate criteria pollutants and precursors in the short-term during construction and the long-term during operation. The Project's mass regional emissions were estimated using the California Emissions Estimator Model (CalEEMod), Version 2020.4.0. Additional details of modeling methodology, assumptions, and model output data is provided in the Air Quality and Greenhouse Gas Emissions Technical Report (HELIX 2022a; Appendix A).

Construction Emissions

Construction emissions were estimated based on the timeline provided by the Project applicant, which assumes construction of Phase 1 would commence with site preparation in October 2022. Modeling considered construction of the warehouse to be Phase 1 and construction of the hotel to be Phase 2. Construction of Line E is anticipated to start concurrent with Phase 1 grading and finish concurrent with the first two months of warehouse building construction. Line E construction is included in the underground utilities activity. Architectural coatings (e.g., painting) for the hotel are assumed to occur concurrent with the last two months of building construction. The results of the calculations for Project construction are shown in Table 5. The data are presented as the maximum anticipated daily emissions for comparison with the SCAQMD thresholds.

Table 5
MAXIMUM DAILY CONSTRUCTION EMISSIONS

Activity	ROG (lbs/day)	NO_X (lbs/day)	CO (lbs/day)	SO_X (lbs/day)	PM_{10} (lbs/day)	$PM_{2.5}$ (lbs/day)
Phase 1 Site Preparation	3.8	37.2	23.7	<0.1	10.8	6.2
Phase 1 Grading	4.0	51.6	32.4	0.1	7.8	3.8
Phase 1 Underground Utilities/Line E	1.2	10.1	9.3	<0.1	0.5	0.4
Phase 1 Building Construction	3.1	23.7	27.6	<0.1	3.8	1.7
Phase 1 Paving	1.9	20.0	15.9	<0.1	1.2	0.7
Phase 1 Architectural Coatings	55.6	1.3	2.9	<0.1	0.5	0.2
Phase 1 Concurrent Grading Underground Utilities	5.2	61.7	41.8	<0.1	8.4	4.2
Phase 1 Concurrent Underground Utilities and Building Construction	4.3	33.8	36.9	<0.1	4.4	2.1
Phase 1 Maximum Daily Emissions	**55.6**	**61.7**	**41.8**	**0.1**	**10.8**	**6.2**
SCAQMD Thresholds	*75*	*100*	*550*	*150*	*150*	*55*
Phase 1 Significant Impact?	***No***	***No***	***No***	***No***	***No***	***No***
Phase 2 Site Preparation	1.4	1.5	8.35	<0.1	3.5	1.9
Phase 2 Grading	1.6	15.5	10.7	<0.1	4.0	2.2
Phase 2 Building Construction	2.0	13.2	16.7	<0.1	1.6	0.8
Phase 2 Architectural Coatings	20.9	1.2	2.2	<0.1	0.2	0.1
Phase 2 Paving	0.8	6.3	9.4	<0.1	0.6	0.3
Phase 2 Concurrent Building Construction and Architectural Coating	22.8	14.4	19.0	<0.1	1.9	0.9
Phase 2 Maximum Daily Emissions	**22.8**	**14.4**	**19.0**	**<0.1**	**4.0**	**2.2**
SCAQMD Thresholds	*75*	*100*	*550*	*150*	*150*	*55*
Phase 2 Significant Impact?	***No***	***No***	***No***	***No***	***No***	***No***

Source: CalEEMod; Appendix A
lbs/day = pounds per day; ROG = reactive organic gas; NO_X = nitrogen oxides; CO = carbon monoxide; SO_X = sulfur oxides; PM_{10} = particulate matter 10 microns or less in diameter; $PM_{2.5}$ = particulate matter 2.5 microns or less in diameter

As shown in Table 5, construction period emissions of criteria pollutants and precursors would not exceed the SCAQMD significance thresholds.

Operational Emissions

Operational sources of emissions include area, energy, mobile (transportation), water use, and solid waste. Per the Project applicant, all warehouse space was modeled in CalEEMod with a land use of Unrefrigerated Warehouse – No Railroad. Table 6 presents the summary of operational and construction emissions that would occur when Phase 1 (warehouse) is operational and Phase 2 (hotel) is still under construction. The data are presented as the maximum anticipated daily emissions for comparison with the SCAQMD thresholds.

Table 6
MAXIMUM DAILY OPERATIONAL EMISSIONS

Category	ROG (lbs/day)	NO_X (lbs/day)	CO (lbs/day)	SO_X (lbs/day)	PM_{10} (lbs/day)	$PM_{2.5}$ (lbs/day)
Phase 1 Area	5.0	<0.1	<0.1	<0.1	<0.1	<0.1
Phase 1 Energy	0.1	0.1	0.1	<0.1	<0.1	<0.1
Phase 1 Mobile	1.0	22.6	11.0	0.1	7.2	2.2
Phase 1 Total[1]	**6.1**	**22.7**	**11.2**	**0.1**	**7.2**	**2.2**
Phase 2 Construction	22.8	14.4	19.0	<0.1	4.0	2.2
Total Maximum Daily Emissions[1]	**28.6**	**36.5**	**29.9**	**0.1**	**11.2**	**4.4**
SCAQMD Thresholds	*55*	*55*	*550*	*150*	*150*	*55*
Significant Impact?	***No***	***No***	***No***	***No***	***No***	***No***

Source: CalEEMod ; Appendix A

[1] Totals may not sum due to rounding.

lbs/day = pounds per day; ROG = reactive organic gas; NO_X = nitrogen oxides; CO = carbon monoxide; SO_2 = sulfur dioxide; PM_{10} = particulate matter 10 microns or less in diameter; $PM_{2.5}$ = particulate matter 2.5 microns or less in diameter

As shown in Table 6, Project emissions during operation of the warehouse and construction of a hotel would not exceed the daily thresholds set by the SCAQMD. Table 7 shows the combined operational emissions of the warehouse and hotel use.

Table 7
PHASE 1 AND PHASE 2 OPERATIONAL DAILY EMISSIONS

Category	ROG (lbs/day)	NO_X (lbs/day)	CO (lbs/day)	SO_X (lbs/day)	PM_{10} (lbs/day)	$PM_{2.5}$ (lbs/day)
Phase 1 Area	5.0	<0.1	<0.1	<0.1	<0.1	<0.1
Phase 1 Energy	<0.1	0.1	0.1	<0.1	<0.1	<0.1
Phase 1 Mobile	1.0	22.5	11.0	0.1	7.2	2.2
Phase 1 Total[1]	**6.1**	**22.7**	**11.2**	**0.1**	**7.2**	**2.2**
Phase 2 Area	4.1	<0.1	<0.1	<0.1	<0.1	<0.1
Phase 2 Energy	0.3	2.9	2.4	<0.1	0.2	0.2
Phase 2 Mobile	2.1	2.9	18.8	<0.1	5.1	1.4
Phase 2 Total[1]	**6.5**	**5.8**	**21.2**	**<0.1**	**5.3**	**1.6**
Total Maximum Daily Emissions[1]	**12.6**	**28.5**	**32.4**	**0.1**	**12.5**	**3.8**
SCAQMD Thresholds	*55*	*55*	*550*	*150*	*150*	*55*
Significant Impact?	***No***	***No***	***No***	***No***	***No***	***No***

Source: CalEEMod; Appendix A

[1] Totals may not sum due to rounding.

lb/day = pounds per day; ROG = reactive organic gas; NO_X = nitrogen oxides; CO = carbon monoxide; SO_2 = sulfur dioxide; PM_{10} = particulate matter 10 microns or less in diameter; $PM_{2.5}$ = particulate matter 2.5 microns or less in diameter

As shown in Table 7, the combined operational emissions of Phase 1 and Phase 2 would not exceed the daily thresholds set by the SCAQMD.

Impact Conclusion

Short-term construction and long-term operation of the Project would not result in criteria pollutant and precursor pollutant emissions that would exceed the SCAQMD significance thresholds. Although Project emissions would not exceed the SCAQMD thresholds, the Project would be required to implement mitigation measures MM Air 2, MM Air 3, MM Air 4, MM Air 5, MM Air 6, MM Air 7, MM Air 8, MM Air 9, MM Air 11, MM Air 13, MM Air 14, MM Air 18, and MM Air 20 from the PVCCSP EIR (see Section 5.2.1). In accordance with PVCCSP EIR mitigation measure MM Air 18, the Project applicant contacted the RTA to determine if the RTA has plans for the future provision of bus routing within any street that is adjacent to the Project that would require bus stops at the Project access points. The RTA was contacted regarding this Project on May 18, 2022 and informed the applicant on May 19, 2022 that the RTA has no plans for bus stops adjacent to the Project site given the existing stops nearby. No adjustments to the Project would be necessary to accommodate existing or future RTA bus stops. Therefore, the Project has already complied with MM Air 18. No further Project-specific mitigation measures would be required.

The Project would not result in a cumulatively considerable net increase of any criteria pollutant for which the SCAB is non-attainment, and the impact would be less than significant and no mitigation would be required.

c) Expose sensitive receptors to substantial pollutant concentrations?

Less Than Significant Impact. CARB and the Office of Environmental Health Assessment (OEHHA) have identified the following groups of individuals as the mostly likely to be affected by air pollution: adults over 65, children under 14, infants (including in utero in the third trimester of pregnancy), and persons with cardiovascular and chronic respiratory diseases such as asthma, emphysema, and bronchitis. The closest existing sensitive receptor locations to the Project site are located at three single-family residences on parcels abutting the Project site to the north. Even though these parcels are not zoned for residential uses, they are still considered locations where sensitive receptors may be located for extended periods. To be conservative (health protective) in this analysis, this location is considered a residential site. Additional residential sensitive receptors are located southeast of the Project site, across Ramona Expressway and North Perris Boulevard, behind a row of commercial buildings.

For a Type A project (siting a new source of emissions), the SCAQMD recommends the following thresholds for the Project's incremental contribution to community health risks:

Cancer Risk – An increased risk of 10 in 1 million for the maximally exposed individual to project emissions.

Cancer Burden – 0.5 excess cancer cases in areas exposed to 1 in 1 million or greater cancer risk from project emissions.

Chronic Health Risk – A Hazard Index of 1 for the maximally exposed individual to project emissions.

Construction Activities

Criteria Pollutants

The localized effects from the on-site portion of daily construction emissions were evaluated at sensitive receptor locations potentially impacted by the Project according to the SCAQMD's localized significance threshold (LST) method. The proposed Project is within SRA 24, Moreno Valley. Consistent with the LST guidelines, when quantifying mass emissions for localized analysis, only emissions that occur on site are considered. Emissions related to off-site delivery/haul truck activity and construction worker trips are not considered in the evaluation of construction-related localized impacts, as these do not contribute to emissions generated on a project site. The closest sensitive receptor is the single-family residence adjacent to the northwest corner of the Project site. Therefore, the LSTs in SRA 24 for receptors located less than 82 feet (25 meters) are used for project sites greater than five acres. Table 8 shows the localized daily construction emissions.

Table 8
MAXIMUM LOCALIZED DAILY CONSTRUCTION EMISSIONS

Activity	NO_X (lbs/day)	CO (lbs/day)	PM_{10} (lbs/day)	$PM_{2.5}$ (lbs/day)
Phase 1 Site Preparation	37.1	23.1	10.6	6.2
Phase 1 Grading	38.8	29.0	5.8	3.2
Phase 1 Underground Utilities/Line E	10.1	8.9	0.4	0.4
Phase 1 Building Construction	19.6	19.7	1.0	0.9
Phase 1 Paving	9.5	14.6	0.5	0.4
Phase 1 Architectural Coatings	1.2	1.8	0.1	0.1
Phase 1 Concurrent Grading and Underground Utilities	48.9	37.9	6.2	3.5
Phase 1 Concurrent Underground Utilities and Building Construction	26.7	28.6	1.3	1.3
Phase 2 Site Preparation	13.5	8.3	3.4	1.9
Phase 2 Grading	15.5	10.3	3.8	2.1
Phase 2 Building Construction	12.7	14.1	0.4	0.4
Phase 2 Architectural Coatings	1.1	1.8	0.1	0.1
Phase 2 Paving	5.3	8.8	0.2	0.2
Phase 2 Concurrent Building Construction and Architectural Coating	13.0	15.8	0.5	0.5
Maximum Daily Emissions	**48.9**	**37.9**	**10.6**	**6.2**
SCAQMD LST Thresholds (25 meters)	*270*	*1,577*	*13*	*8*
Exceed LST (25 meters)?	***No***	***No***	***No***	***No***

Source: CalEEMod; Appendix A
lbs/day = pounds per day; NO_X = nitrogen oxides; CO = carbon monoxide; PM_{10} = particulate matter 10 microns or less in diameter; $PM_{2.5}$ = particulate matter 2.5 microns or less in diameter

As shown in Table 8, localized emissions for all criteria pollutants would remain below their respective SCAQMD LSTs at 82 feet (25 meters). Therefore, construction of the Project would not result in exposure of sensitive receptors to substantial localized concentrations of criteria pollutants and precursors.

Construction Toxic Air Contaminants

Implementation of the Project would result in the use of heavy-duty construction equipment, haul trucks, on-site generators, and construction worker vehicles. These vehicles and equipment could generate the Toxic Air Contaminant (TAC) diesel particulate matter (DPM). Generation of DPM from construction projects typically occurs in a localized area (e.g., at the Project site) for a short period of time. Because construction activities and subsequent emissions vary depending on the phase of construction (e.g., grading, building construction), the construction-related emissions to which nearby receptors are exposed to would also vary throughout the construction period. During some equipment-intensive phases such as grading, construction-related emissions would be higher than other less equipment-intensive phases such as building construction. Concentrations of mobile-source DPM emissions are typically reduced by 70 percent at approximately 500 feet (CARB 2005).

The dose (of TAC) to which receptors are exposed is the primary factor used to determine health risk. Dose is a function of the concentration of a substance in the environment and the extent of exposure a person has with the substance; a longer exposure period to a fixed quantity of emissions would result in higher health risks. Current models and methodologies for conducting cancer health risk assessments are associated with longer-term exposure periods (typically 30 years for individual residents based on guidance from OEHHA) and are best suited for evaluation of long duration TAC emissions with predictable schedules and locations. These assessment models and methodologies do not correlate well with the temporary and highly variable nature of construction activities. Cancer potency factors are based on animal lifetime studies or worker studies where there is consistent long-term exposure to the carcinogenic agent. There is considerable uncertainty in trying to evaluate the cancer risk from projects that will only last a small fraction of a lifetime (OEHHA 2015). Considering this information, the highly dispersive nature of DPM, and the fact that construction activities would occur at various locations and varying intensities throughout the Project site, it is not anticipated that construction of the Project would expose sensitive receptors to substantial DPM concentrations.

Operational Activities

Criteria Pollutants

SCAQMD's LST methodology can be used by public agencies to determine whether a project may generate significant adverse localized air quality impacts from on-site emissions of NO_X, CO, PM_{10} and $PM_{2.5}$. For Project operational activities, emissions of NO_X and CO are associated with truck and passenger vehicle emissions which primarily occur off-site. The portion of truck and passenger vehicle emissions which occur on-site are limited to low-speed circulation and idling and would be a small portion of the Project operational emissions of 28 pounds per day of NO_X and 32 pounds per day of CO, far below the applicable LST thresholds of 270 pounds per day NO_X and 1,577 pounds per day CO. Operational PM_{10} and $PM_{2.5}$ emissions from area sources (primarily landscape equipment exhaust) and energy sources (natural gas combustion exhaust) would be negligible—less than 0.01 pound per day. The only remaining on-site operational source of PM emissions would be low-speed circulation and idling exhaust emissions from trucks. The total exhaust PM emissions produced on or near the project site by project-related truck trips would be approximately 0.54 pound per year (0.001 pound per day) of PM_{10} and $PM_{2.5}$. Total PM_{10} or $PM_{2.5}$ produced on the project site would be less than 0.01 pound per day, far below the LST threshold of 4 pounds per day for PM_{10} and 2 pounds per day for $PM_{2.5}$. Therefore, operation of the Project would not result in exposure of sensitive receptors to substantial localized concentrations of NO_X or CO. Impacts related to exposure of sensitive receptors to Project operational emissions of PM (primarily DPM) are discussed and evaluated below.

Carbon Monoxide Hotspots

Vehicle exhaust is the primary source of carbon monoxide (CO). In an urban setting, the highest CO concentrations are generally found within close proximity to congested intersections. Under typical meteorological conditions, CO concentrations tend to decrease as distance from the emissions source (i.e., congested intersection) increase. Project-generated traffic has the potential of contributing to localized "hot spots" of CO off-site. Because CO is a byproduct of incomplete combustion, exhaust emissions are worse when fossil-fueled vehicles are operated inefficiently, such as in stop-and-go traffic or through heavily congested intersections, where the level of service (LOS) is severely degraded.

CARB recommends evaluation of the potential for the formation of locally high concentrations of CO, known as CO hot spots. A CO hot spot is a localized concentration of CO that is above the state or national 1-hour or 8-hour CO ambient air standards. To verify that the Project would not cause or contribute to a violation of the 1-hour and 8-hour CO standards, an evaluation of the potential for CO hot spots at nearby intersections was conducted. In accordance with the Transportation Project-Level Carbon Monoxide Protocol, CO hot spots are typically evaluated when: (a) the LOS of an intersection decreases to a LOS E or worse because of the Project; (b) signalization and/or channelization is added to an intersection; and (c) sensitive receptors such as residences, schools, hospitals, etc., are located in the vicinity of the affected intersection or roadway segment (California Department of Transportation [Caltrans] 1998).

According to the intersection analysis contained in the Traffic Analysis, no Project-affected intersection would operate at LOS E or worse under existing or existing plus Project conditions. Under cumulative conditions (2022) the intersections of Ramona Expressway/Indian Avenue and Ramona Expressway/ Perris Boulevard would operate at LOS F during the afternoon peak hour. The addition of Project traffic would increase intersection delays by up to 5 seconds but would not change the LOS (Urban Crossroads 2022). There are no sensitive receptors located in proximity to either intersection. The closest sensitive receptors would be the mobile home park, located approximately 420 feet southwest of the Ramona Expressway/Perris Boulevard intersection. Therefore, implementation of the Project would not expose sensitive receptors to substantial localized concentrations of CO.

Operational DPM Emissions

Implementation of the Project would result in emissions of DPM from operation of a warehouse facility. The HRA prepared for the Project evaluated potential impacts to sensitive receptors from the operational DPM emissions (HELIX 2022b; Appendix B).

Long-term operation of the Project would result in emissions of DPM from diesel-powered trucks traveling to and from the Project site, circulating on the Project site, and parked while idling at the Project site. Truck DPM emissions were calculated using truck emissions and vehicle miles traveled (VMT) data from CARB's EMFAC2021 version 1.0.01 online database. All trucks were assumed to idle at the loading docks for the maximum allowable 5 minutes (per California Code of Regulations [CCR] Title 13, Section 2485). In addition, 25 percent of trucks were assumed to stage in the truck/trailer parking area before or after unloading/loading and idle for an additional 5 minutes. Truck idling emissions were assumed to be approximately equivalent to truck emissions at 5 mph reported in the EMFAC2021 database.

Localized concentrations of DPM were modeled using Lakes AERMOD View version 10.2.0. The Lakes program utilizes the U.S. Environmental Protection Agency's (USEPA) AERMOD gaussian air dispersion

model version 19191. Plot files from AERMOD using unitized emissions (one gram per second) for each DPM source were imported into CARB's Hotspots Analysis and Reporting Program (HARP), Air Dispersion Modeling and Risk Tool (ADMRT) version 21081. The ADMRT calculated ground-level concentrations of DPM utilizing the imported plot files and the calculated annual and hourly emissions.

Health risks resulting from localized concentration of DPM were estimated using the ADMRT. The latest cancer slope factors and chronic Reference Exposure Limits (RELs), and exposure paths for all TACs designated by CARB are included in ADMRT. For the residential cancer risk, an exposure duration of 30 years was selected in accordance with the OEHHA (2015) guidelines. The model conservatively assumes that residents would be standing and breathing outdoors at the location of the property line closest to the gas station every day between 17 and 21 hours per day (depending on the age group, starting with infants in utero in the third trimester of pregnancy) for 30 years. The Risk Management Policy using the derived method for the intake rate percentile was selected in accordance with the SCAQMD guide recommendations. For off-site worker cancer risk, an exposure duration of 25 years was selected with an assumption of 8 hours per day, 5 days per week of exposure while standing outside with moderate intensity breathing rates, in accordance with the OEHHA guidelines. Because DPM only has an inhalation cancer slope factor and an inhalation chronic REL, only the cancer risk and chronic risk from exposure to DPM was evaluated, and only the inhalations pathway was evaluated.

The incremental excess cancer risk is an estimate of the chance a person exposed to a specific source of a TAC may have of developing cancer from that exposure beyond the individual's risk of developing cancer from existing background levels of TACs in the ambient air. For context, the average cancer risk from TACs in the ambient air for an individual living in an urban area of California is 830 in 1 million. Cancer risk estimates do not mean, and should not be interpreted to mean, that a person will develop cancer from estimated exposures to toxic air pollutants.

The maximum estimated community incremental excess cancer risks due to exposure to the Proposed Project TAC emissions from long term operation of the warehouse facility are presented in Table 9 (*Maximum Incremental Cancer Health Risk*). These estimates are conservative (health protective) and assume that the student, resident, or worker is outdoors for the entire exposure period.

Table 9
MAXIMUM INCREMENTAL CANCER HEALTH RISK

	Maximally Exposed Individual Resident Cancer Risk (per million)	Maximally Exposed Individual Worker Cancer Risk (per million)
Results	1.1	<0.1
Threshold	10	10
Exceed Threshold?	No	No

Source: Lakes AERMOD View and CARB ADMRT; Appendix B.

As shown in Table 9, the Project's incremental increased cancer risk would not exceed the SCAQMD's threshold of 10 in 1 million. The chronic health risk hazard index for all receptors would be less than 0.01 and would not exceed the SCAQMD's threshold of 1.

Cancer burden evaluates an overall population's increased cancer risk and is defined as the increases in cancer cases in the population due exposure to TACs from a project. Cancer burden is calculated differently from individual risk. Per OEHHA, cancer burden uses a 70-year exposure to evaluate

population-wide cancer risk, and the cancer burden only evaluates residential exposure (not worksites). Cancer burden is calculated by multiplying the number of residents exposed to an incremental excess cancer risk of 1 in 1 million or greater by the estimated incremental excess cancer risk of the maximum exposed individual resident. Only the residence adjacent to the northwest corner of the Project site would be within or touching the 1 in 1 million isopleth (geographic lines of equal risk). Assuming up to 10 residents per residence, the cancer burden resulting from long-term operation of the Project would be 0.00001, below the SCAQMD threshold of 0.5.

Impact Conclusion

Construction of the Project would not result in significant localized concentrations of criteria pollutants or TACs. Long-term operation of the Project would not result in significant localized concentrations of CO. Long-term operation of the Project would result in cancer risk, chronic health risk, and cancer burden below the respective SCAQMD thresholds. Although Project emissions would not exceed the SCAQMD thresholds for community health risks, or result in substantial localized pollutant concentrations, the proposed Project would be required to implement mitigation measures MM Air 11 and MM Air 13 from the PVCCSP EIR. The requirements of mitigation measure MM Air 15 from the PVCCSP EIR are satisfied by the Project specific HRA completed and included as Appendix B to this Initial Study. Mitigation measures MM Air 16 and MM Air 17 concern the siting of new sensitive receptors and would not apply to the Project. No additional Project specific mitigation measures would be required to reduce the severity of impacts related to the exposure of sensitive receptors to substantial pollutant concentrations.

Implementation of the Project would not expose sensitive receptors to substantial pollutant concentrations. Impacts would be less than significant and no additional mitigation would be required.

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

Less Than Significant Impact. According to the SCAQMD CEQA Air Quality Handbook, land uses associated with odor complaints include agricultural uses, wastewater treatment plants, food processing plants, chemical plants, composting activities, refineries, landfills, dairies, and fiberglass molding operations. The proposed Project, involving a warehouse facility development, would not include any of these uses nor are there any of these land uses in the Project vicinity.

Emissions from construction equipment, such as diesel exhaust, and VOCs from architectural coatings and paving activities may generate odors; however, these odors would be temporary, intermittent, and not expected to affect a substantial number of people. Additionally, noxious odors would be confined to the immediate vicinity of construction equipment. Furthermore, short term construction-related odors are expected to cease upon the drying or hardening of the odor-producing materials. Long-term operation of the Project would not be a substantial source of objectionable odors. The Project would also be required to comply with SCAQMD Rule 402 to prevent occurrences of public nuisances. Therefore, the Project would not create objectionable odors affecting a substantial number of people, the impact would be less than significant and no mitigation would be required.

IV. Biological Resources

		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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 Wildlife 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 Wildlife 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?	☐	☐	■	☐

A General Biological Resource Assessment and Western Riverside County Multiple Species Habitat Conservation Plan Consistency Analysis prepared by HELIX (GBRA-MSHCP; HELIX 2022c), which is attached to this IS/MND as Appendix C, was prepared for the proposed Project. The report provides a general evaluation of biological resources potentially affected by the proposed Project and analyzes the potential impacts of the Project pursuant to the requirement of the adopted Western Riverside Multiple Species Habitat Conservation Plan (MSHCP; Dudek and Associates [Dudek] 2003). Its findings and recommendations are incorporated into the following analysis.

Applicable PVCCSP Standards and Guidelines and Mitigation Measures

There are no PVCCSP Standards and Guidelines applicable to the analysis of biological resources for the proposed Project. The GBRA-MSHCP prepared for the Project implements the following applicable PVCCSP EIR mitigation measures:

MM Bio 3 Project-specific delineations will be required to determine the limits of ACOE, RWQCB, and CDFG jurisdiction for implementing projects that may contain jurisdictional features. Impacts to jurisdictional waters will require authorization by the corresponding regulatory agency. If impacts are indicated in an implementing project-specific delineation, prior to the issuance of a grading permit, such implementing projects will obtain the necessary authorizations from the regulatory agencies for proposed impacts to jurisdictional waters. Authorizations may include, but are not limited to, a Section 404 permit from the ACOE, a Section 401 Water Quality Certification from the RWQCB, and a Section 1602 Streambed Alteration Agreement from CDFG.

MM Bio 4 Project-specific mapping of riparian and unvegetated riverine features will be required for implementing projects pursuant to Section 6.1.2 of the MSHCP. For areas not excluded as artificially created, the MSHCP requires 100 percent avoidance of riparian/riverine areas. If for any implementing project avoidance is not feasible, then such implementing projects will require the approval of a DBESP including appropriate mitigation to offset the loss of functions and values as they pertain to the MSHCP covered species. Riparian vegetation will also need to be evaluated for the least Bell's vireo, southwestern willow flycatcher, and western yellow-billed cuckoo.

MM Bio 5 Project-specific mapping of vernal pools for implementing projects will be required pursuant to Section 6.1.2 of the MSHCP. For areas not excluded as artificially created, the MSHCP requires 100 percent avoidance of vernal pools. If for any implementing project avoidance is not feasible, then such implementing projects will require the approval of a DBESP including appropriate mitigation to offset the loss of functions and values as they pertain to the MSHCP and covered species. Vernal pools and other seasonal ponding depressions will also need to be evaluated for listed fairy shrimp.

The PVCCSP EIR mitigation measures that are applicable to the proposed Project are as follows:

MM Bio 1 In order to avoid violation of the MBTA and the California Fish and Game Code, site preparation activities (removal of trees and vegetation) for all PVCC implementing development and infrastructure projects shall be avoided, to the greatest extent possible, during the nesting season (generally February 1 to August 31) of potentially occurring native and migratory bird species.

If site-preparation activities for an implementing project are proposed during the nesting/breeding season (February 1 to August 31), a pre-activity field survey shall be conducted by a qualified biologist prior to the issuance of grading permits for such project, to determine if active nests of species protected by the MBTA or the California Fish and Game Code are present in the construction zone. If active nests are not located within the implementing project site and an appropriate buffer of 500 feet of an active listed species or raptor nest, 300 feet of other sensitive or protected bird nests (non-listed), or 100 feet of sensitive or protected songbird nests, construction may be conducted during the nesting/breeding season. However, if active nests are located during the pre-activity field survey, no grading or heavy equipment activity shall take place within at least 500 feet of an active listed species or raptor nest, 300 feet of other sensitive or protected (under MBTA or California Fish and Game Code) bird nests (non-

listed), or within 100 feet of sensitive or protected songbird nests until the nest is no longer active.

MM Bio 2 Project-specific habitats assessments and focused surveys for burrowing owls will be conducted for implementing development or infrastructure projects within burrowing owl survey areas. A pre-construction survey for resident burrowing owls will also be conducted by a qualified biologist within 30 days prior to commencement of grading and construction activities within those portions of implementing project sites containing suitable burrowing owl habitat and for those properties within an implementing project site where the biologist could not gain access. If ground disturbing activities in these areas are delayed or suspended for more than 30 days after the pre-construction survey, the area shall be resurveyed for owls. The pre-construction survey and any relocation activity will be conducted in accordance with the current Burrowing Owl Instruction for the Western Riverside MSHCP.

If active nests are identified on an implementing project site during the pre-construction survey, the nests shall be avoided or the owls actively or passively relocated. To adequately avoid active nests, no grading or heavy equipment activity shall take place within at least 250 feet of an active nest during the breeding season (February 1 through August 31), and 160 feet during the non-breeding season.

If burrowing owls occupy any implementing project site and cannot be avoided, active or passive relocation shall be used to exclude owls from their burrows, as agreed to by the City of Perris Planning Department and the CDFG. Relocation shall be conducted outside the breeding season or once the young are able to leave the nest and fly. Passive relocation is the exclusion of owls from their burrows (Outside the breeding season or once the young are able to leave the nest and fly) by installing one-way doors in burrow entrances. These one-way doors allow the owl to exit the burrow, but not enter it. These doors shall be left in place 48 hours to ensure owls have left the burrow. Artificial burrows shall be provided nearby. The implementing project area shall be monitored daily for one week to confirm owl use of burrows before excavating burrows in the impact area. Burrows shall be excavated using hand tools and refilled to prevent reoccupation. Sections of flexible pipe shall be inserted into the tunnels during excavation to maintain an escape route for any animals inside the burrow. The CDFG shall be consulted prior to any active relocation to determine acceptable receiving sites available where this species has a greater chance of successful long-term relocation. If voidance is infeasible, then a DBESP will be required, including associated relocation of burrowing owls. If conservation is not required, then owl relocation will still be required following accepted protocols. Take of active nests will be avoided, so it is strongly recommended that any relocation occur outside the nesting season.

a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

Less Than Significant with Mitigation Incorporated. HELIX conducted biological surveys in March, October, and December 2020, and January, February, March, and April 2021. Based on HELIX's

observations of the Project site, the site consists of disturbed, formerly disked land and documented an open brow ditch that connects to the Perris Valley Storm Drain at the southern edge of the property.

Wildlife

According to the biological evaluation conducted for the Project (HELIX 2022c; Appendix C), special status wildlife species with the potential to occur include vernal pool fairy shrimp; BUOW; California horned lark (*Eremophila alpestris actia*); western spadefoot (*Spea hammondii*).

Surveys for fairy shrimp were conducted in the vernal pools on the Project site on December 30, 2020, January 12, 19, and 25, February 3, 6, 9, 16 and 23, March 2, 9, 16, 23 and 30, and April 6, 2021. While fairy shrimp were observed in the vernal pools, no sensitive species of fairy shrimp were observed. Sensitive species of fairy shrimp are presumed absent from the site and no additional surveys or mitigation are required.

The Project site is located within a MSHCP Survey Area for burrowing owls. A focused burrow survey was conducted by HELIX biologists, and suitable habitat was discovered during the first survey on February 2, 2021. As a result, additional surveys were conducted on March 9, 22, 31, and April 6, 2021, by biologist Robert Hogenauer, in accordance with survey guidelines described in the 2006 MSHCP Burrowing Owl Survey Instructions. No burrowing owls or signs of burrowing owls were found on the Project site during the focused survey efforts; however, because the Project site and surrounding areas provide potentially suitable habitat burrowing owls could occur on the site. Construction activities have the potential to directly harm individual owls, if present, and could negatively impact nesting activities if the site is used for nesting. Mitigation measure MM Bio 2 from the PVCCSP EIR requires that a burrowing owl pre-construction survey be conducted prior to initiation of construction activities to avoid negatively impacting individuals and/or their nests. Furthermore, if burrowing owls colonize the Project site prior to the initiation of construction, the Project Applicant would immediately inform the Regional Conservation Authority (RCA) and the Wildlife Agencies and would need to prepare a *Burrowing Owl Protection and Relocation Plan* for approval by RCA and the Wildlife Agencies prior to initiating ground disturbance.

In accordance with Objective 5 of the MSHCP for burrowing owl, if the Project site (including adjacent areas) supports three or more pairs of burrowing owl, is greater than 35 acres of suitable habitat, and is non-contiguous with MSHCP conservation land, at least 90 percent of the area with long-term conservation value will be conserved on-site. Based on the small size of the study area and surrounding development and land uses, the study area does not represent land with a long-term conservation value for burrowing owl.

One special-status animal species, the California horned lark, was observed foraging on-site. Potential impacts to this species are covered via compliance with the MSHCP. Payment of the Local Development Mitigation Fee (LDMF) and compliance with the MSCHP would satisfy mitigation requirements associated with potential impacts to this species. No Project-specific mitigation for California horned lark is required. Refer to the discussion in question d), below for more discussion regarding the LDMF.

The western spadefoot is a species with low potential to occur. Although pools on-site represent potential habitat for western spadefoot, no species were observed during focused surveys of the pools on the Project site. Western spadefoot is considered to be absent from the site and no additional surveys or mitigation are required.

The Project site provides potential nesting habitat for a variety of birds and raptors. Vegetation removal during the nesting season has the potential to impact nesting birds, if present. Nesting birds are protected under the Migratory Bird Treaty Act (MBTA) and under the CDFW code and impacts to nesting birds would be potentially significant. Mitigation measure MM Bio 1 from the PVCCSP EIR would be implemented to reduce potentially significant impacts to a level of less than significant.

Plants

According to the biological evaluation conducted for the Project (HELIX 2022c; Appendix C), 23 MSHCP plant species have the potential to occur in the aquatic habitats on the Project site (refer to the GBRA-MSHCP in Appendix C for the list of species); three State and/or federally-listed sensitive plant species not included in the MSHCP were identified as having a low potential to occur. They are the federal threatened and state endangered thread-laved brodiaea (*Brodiaea filifolia*), federal endangered San Jacinto valley crownscale (*Atriplex var. notatior*), and the federal threatened spreading navarretia (*Navarretia fossalis*). An additional three sensitive plant species not included in the MSHCP also have a low potential to occur: vernal barley (Hordeum intercedens), paniculate tarplant (*Deinandra aniculate*), and smooth tarplant (*Centromadia pungens laevis*).

Focused surveys for special status plant species were conducted by HELIX biologists on March 9 and 22, 2020. No special-status plants were detected or observed on the Project site and none are expected to occur. Furthermore, the Project site has been subject to previous agricultural use and disturbance from disking. Additionally, the Project site is not located within Narrow Endemic Plan Species Survey Area (NEPSSA) or Criteria Area Plant Species Survey area (CAPSSA) of the MSHCP. No mitigation would be needed to avoid impacts to MSHCP and special-status plants.

b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

Less Than Significant Impact. HELIX biologists identified two riverine features and twelve pools on the Project site. The MSHCP identified “riparian” and “riverine” features as those which are natural in origin, as well as part of natural features that have been modified and/or redirected and can include features indirectly created through manipulation of the landscape, including channelization of a historic riverine feature. If these features connect to nearby downstream resources that are either existing or described conservation lands, they would be considered riverine. Riparian features are those with vegetation dependent upon a water source such as a stream, drainage pond, or similar. A Riparian/Riverine and Vernal Pool habitat assessment was conducted by Mr. Hogenauer during a site visit on October 5, 2020. The assessment was conducted concurrently in the field with the aquatic resources delineation and updated during additional visits in February and March 2021. The initial evaluation on October 5, 2020, consisted of a directed search for field characteristics indicate of Riparian/Riverine habitats. The March 2021 visit consisted of a focused survey for Riparian/Riverine and Vernal Pool plant species. The surveys concluded that the two features and several pools features were determined not to be riparian water features or vernal pools under MSHCP and CDFW guidelines. The two riverine features identified were labelled as Drainage 1 and Drainage 2. Drainage 1 is compromised of the concrete ditch located along the Ramona Expressway and the earthen bottom connection to a box culvert. Drainage 2 originates from a box culvert and flows onto the site for 23 feet, then changes to sheet flow for an additional 55 feet, where it dissipates. Both Drainages originate from culverts.

A concrete brow ditch and associated earthen channel are storm drain features constructed in uplands. Per the MSHCP, features that are artificially created in uplands do not meet the definition of an MSHCP riverine feature.

For the vernal pool analysis, historical aerial photos of the site from 2018, 2014, 2011, 2006, and 1966 were reviewed to aid in the identification of potential vernal pools. Vernal pools were assessed during the Riparian/Riverine survey conducted on October 5, 2020. Vernal pool indicators searched for include standing water, cracked soil, presence of certain plan species, and changes in soil or vegetation characteristics. Soils information was gathered from the U.S. Department of Agriculture online database (USDA 2020). Due to potential vernal pools (or ephemeral pools) being detected during the October 5 survey, the site was surveyed again on January 5 and February 5, 2021. Both visits in 2021 were conducted approximately one week following a significant rain event to ensure the mapping effort did not include short-lived non-jurisdictional puddles.

The Project site includes 12 pools on the eastern side of the property that hold water for at least seven days. All but one of the pools occur on the hardpan dirt/gravel surface in the northeast that was used as a parking lot in the past. The manipulation of the land to be used as a parking lot resulted in several low spots that now pool from rainfall. These pools (1-11) on the hardpan surface essentially unvegetated and are disturbed due to vehicle traffic and unauthorized dumping. These are artificial features and not naturally occurring.

One pool, (Pool 12, the largest of the pools), occurs in the southeast area of the site. Pool 12 occurs on land that was used as active agriculture through 2005. This pool occurs adjacent to the commercial property located at the northwest corner of Ramona Expressway and Perris Drive. This area now pools as a result of the commercial property and adjacent Ramona Expressway being constructed a slighter higher topographic elevation than the subject property. Pool 12 is not naturally occurring, but rather the result of the manipulation of the adjacent land. A review of historic aerials shows the first sign of water pooling at the location of Pool 12 occurs in 2011. Vegetation within Pool 12 is similar to the adjacent land within the fallow agricultural field. No wetland or vernal pool indicator plant species was observed in the pool. The pools total 0.604 acres.

Therefore, HELIX biologists concluded that the impacts to riparian or other sensitive vegetation communities, including special-status vegetation communities would be less than significant.

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?

Less than Significant with Mitigation Incorporated. Approximately 0.58 acres of wetland habitat on the Project site was identified to be under jurisdiction of the CDFW/RWQCB. Drainage 1 is comprised of a short earth bottom channel that connects to a create ditch along the Ramona Expressway that serves as a storm drain, including flows from the box culvert under Indian Avenue and a storm drain under Ramona Expressway. Flow from the box culvert bifurcates with a portion of flows entering Drainage 1 and other flows forming Drainage 2. Drainage 2 flows onto the site for a short distance 923 feet then transitions to a 10-foot-wide sheet flow. Both drainages originate from culverts with flows that primarily are from artificial sources.

Pool 12 is also considered jurisdictional as a water of the State. Flows from the box culvert contribute to the ponding of this pool. The flows from the box culvert are partially from the re-direction a naturally

occurring stream (waters of the State) but mostly from runoff of the existing developments located north and west of the Project site. The artificially increased flows and increase in elevation from development to the southeast result in the formation of Pool 12.

Impacts to waters of the State would result from the construction of the reach of Line E within the property limits and from the development of the proposed warehouse and associated infrastructure. The storm drain flows would be directed into the reach of Line E, which would connect to an existing storm drain lateral at the western edge of Perris Boulevard to allow flow to continue to the east and connect to the Perris Valley Sanitation District. This interim proposed connection of Line E would be in place until such time as the City constructs additional downstream sections of the Line E storm drain that are not part of this Project.

The proposed Project impacts would require a Streambed Alteration Agreement from CDFW and a Waste Discharge Requirement from RWQCB. The following Project mitigation measure (MM Bio 1) would reduce impacts to waters of the State to less than significant levels.

Based on aquatic resource delineation, the drainages on-site are not waters of the U.S. jurisdictional to the USACE. The drainages on-site, as described above, are storm drain flood control features constructed in uplands and only flow in direct response to precipitation resulting in stormwater runoff. The brow ditch flows in direct response to rainfall runoff, with flows typically lasting from a day to a week depending on the amount and frequency of rainfall. Based on confirmation with USACE staff which included a review of site conditions, the storm drain (Drainage 1) constructed in uplands is not a water of the U.S. Since no other waters in the study area have a downstream connection to a water of the U.S., the other waters in the study area are also not waters of the U.S., resulting in no waters of the U.S. occur on the property will be submitted to the USACE as part of the permitting process.

While the Project will result in impacts to all waters of the State on the property, no impacts to waters of the U.S. are proposed, as none occur on the property.

Project Mitigation Measure

MM Bio 1 Prior to the City's issuance of a grading permit for the Project site, the Applicant shall demonstrate proof of purchase of mitigation credits at a 2:1 ratio for impacts to Pool 12.

This 2:1 mitigation ratio and mitigation type are proposed, given the flows on-site are mainly artificial and the adjacent lands resulted in an increase in elevation that contributed to the formation of Pool 12. Drainage 2 (sheet flow and channel) and the earthen bottom portions of Drainage 1 that are the result of storm drains flows are proposed to be mitigated with 1:1 rehabilitation credit. Purchase of mitigation credits is not proposed for the impacts to the concrete brow ditch of Drainage 1, as this will be replaced on-site with the construction of Line E.

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?

Less than Significant Impact. The Project site is not located within a MSHCP Criteria Cell Group, Conservation area or other conservation land (Appendix C). The land uses surrounding the Project site include a mix of vacant and undeveloped land to the north, industrial uses to the south and west, and a

mix of vacant land, commercial uses, and non-conforming residential uses to the east. Therefore, the Project site is not located near any open space or native habitats and does not represent a wildlife corridor between large open space habitats. Impacts would be less than significant and no mitigation would be required.

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

Less Than Significant Impact. Projects located within the MSHCP are subject to the MSHCP LDMF. MSHCP reserve land purchase and management are funded by the collection of the LDMF. The LDMF is determined by the RCA and adjusted annually. These fees are adjusted annually and recently had a significant increase. The current fee for commercial and industrial developments is set at $16,358 per acre. No other policies or ordinances are applicable to this Project. With payment to the LDMF, impacts would be less than significant and no mitigation would be required.

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?

Less Than Significant Impact. The Project site is located within the Mead Valley Area Plan of the Western Riverside MSHCP. The Project is not within a MSHCP Criteria Cell or Conservation Area. Because of this, the Project site is not in an area that has been set aside for conservation, nor is it in an area subject to the Habitat Evaluation and Acquisition Negotiation Strategy or Joint Project Review process.

In accordance with the MSHCP, the proposed Project was reviewed for consistency with the MSHCP Section 6.1.2 (Protection of Species Associated with Riparian/Riverine Areas and Vernal Pool), Section 6.1.3 (Protection of Narrow Endemic Plant Species), Section 6.1.4 (Guidelines Pertaining to the Urban/Wildlands Interface), and Section 6.4 (Fuels Management). The Project's consistency with Sections 6.1.2 and 6.1.3 are described above in question a). The Project's consistency with MSHCP Sections 6.1.4 and 6.4 are described below.

MSHCP Section 6.1.4 (Guidelines Pertaining to the Urban/Wildland Interface)

Section 6.1.4 of the MSHCP outlines policies intended to minimize the indirect effects associated with locating development in close proximity to the MSHCP Conservation Area. To minimize these indirect effects, the guidelines shall be implemented in conjunction with the review of individual public and private development projects that are located in proximity to the MSHCP Conservation Area. The review of such implementing development and infrastructure projects is required to address drainage, toxics, lighting, noise, invasive species, barriers, and grading/land development.

The proposed Project site is not within a Criteria Cell and lands immediately adjacent to the Project site are not within a Criteria Cell which would include MSHCP Conservation Areas. The land surrounding the Project site is a mix of vacant, industrial, and commercial uses. Therefore, the Project is not subject to Section 6.1.4 of the MSHCP.

MSHCP Section 6.4 (Fuels Management)

Section 6.4 of the MSHCP focuses on hazard reduction for human safety in a manner compatible with public safety and conservation of biological resources. According to the Fuels Management Guidelines of the MSHCP, new development that is planned adjacent to the MSHCP Conservation Area, or other

undeveloped areas, shall incorporate brush management within the development boundaries and shall not encroach into the MSHCP Conservation Area. The proposed Project is not located adjacent to or within an existing or proposed MSHCP Conservation Area. Therefore, the Project is consistent with this section.

In conclusion, the proposed Project would have a less than significant impact and no mitigation is required.

V. Cultural Resources

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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 interred outside of dedicated cemeteries?	☐	■	☐	☐

A Cultural Resources Survey Report (HELIX 2022d) which is attached to this IS/MND as Appendix D, was prepared for the proposed Project. Its findings and recommendations are also incorporated into the following analysis.

Applicable PVCCSP Standards and Guidelines and Mitigation Measures

There are no Standards and Guidelines included in the PVCCSP related to cultural resources. The Cultural Resources Survey (HELIX 2022d; Appendix D) was prepared for the Project in compliance with the following applicable PVCCSP EIR mitigation measure:

MM Cultural 1 Prior to the consideration by the City of Perris of implementing development or infrastructure projects for properties that are vacant, undeveloped, or considered to be sensitive for cultural resources by the City of Perris Planning Division, a Phase I Cultural Resources Study of the subject property prepared in accordance with the protocol of the City of Perris by a professional archeologist[1] shall be submitted to the City of Perris Planning Division for review and approval. The Phase I Cultural Resources Study shall determine whether the subject implementing development would potentially cause a substantial adverse change to any significant paleontological, archeological, or historic resources. The Phase I Cultural Resources Study shall be prepared to meet the standards

[1] For the purpose of this measure, the City of Perris considers professional archaeologists to be those who meet the United States Secretary of the Interior's standards for recognition as a professional, including an advanced degree in anthropology, archaeology, or a related field, and the local experience necessary to evaluate the specific project. The professional archaeologist must also meet the minimum criteria for recognition by the Register for Professional Archaeologists (RPA), although membership is not required.

established by Riverside County and shall, at a minimum, include the results of the following:

1. Records searches at the Eastern Information Center (EIC), the National or State Registry of Historic Places and any appropriate public, private, and tribal archives.

2. Sacred Lands File record search with the Native American Heritage Commission (NAHC) followed by project scoping with tribes recommended by the NAHC.

3. Field survey of the implementing development or infrastructure Project site.

The proponents of the subject implementing development projects and the professional archaeologists shall also contact the local Native American tribes (as identified by the California Native Heritage Commission and the City of Perris) to obtain input regarding the potential for Native American resources to occur at the project site. Measures shall be identified to mitigate the known and potential significant effects of the implementing development or infrastructure project, if any. Mitigation for historic resources shall be considered in the following order of preference:

1. Avoidance

2. Changes to the structure provided pursuant to the Secretary of Interior's Standards

3. Relocation of the structure

4. Recordation of the structure to Historic American Buildings Survey (HABS)/Historic American Engineering Record (HAER) standard if demolition is allowed

Avoidance is the preferred treatment for known and discovered significant prehistoric and historical archaeological sites, and sites containing Native American human remains. Where feasible, plans for implementing projects shall be developed to avoid known significant archaeological resources and sites containing human remains. Where avoidance of construction impacts is possible, the implementing projects shall be designed and landscaped in a manner, which would ensure that indirect impacts from increased public availability to these sites are avoided. Where avoidance is selected, archaeological resource sites and sites containing Native American human remains shall be placed within permanent conservation easements or dedicated open space areas.

The Phase I Cultural Resources Study submitted for each implementing development or infrastructure project shall have been completed no more than three years prior to the submittal of the application for the subject implementing development project or the start of construction of an implementing infrastructure project.

The PVCCSP EIR includes additional mitigation measures that are relevant to cultural resources. These mitigation measures have been replaced by the City of Perris as reflected in Project Mitigation Measures MM Cult 1 and MM Cult 2.

Record Searches and Native American Correspondence

An archeological records search was conducted by HELIX staff archeologist, Mary Villalobos, at the EIC at the University of California, Riverside UCR. Although no resources were recorded within the Project boundaries, the records search identified 13 previously recorded cultural resources within a one-mile radius of the Project. All but one of the resources are historic, consisting mainly of sites associated with water conveyance and agriculture. One prehistoric resource occurs within the one-mile radius—a bedrock milling feature and associated lithic artifacts. Based on the results of the records search, a total of 48 previous cultural resource studies have been conducted within the record search limits, three of which overlap with the Project site.

HELIX archaeologists reviewed the National Register of Historic Places Index, the Office of Historic Preservation Archeological Determinations of Eligibility, and the Office of Historic Preservation Directory of Properties in the Historic Property Data File, and historic USGS maps for the following years and locations: 1953, 1967, 1973, and 1979 Perris, the 1901 Elsinore, and the 1942 Perries topographic maps. While no buildings or structures appear within or adjacent to the Project site on any of the topographic maps from before 1967, a well and a structure first appear on the 1967 Perris map and are present on the 1973 and 1979 Perris maps. The well is shown as existing in the northwest corner of the Project site, while the structure is located west of Perris Boulevard, adjacent to but outside of the Project site. The historic aerials consulted include photographic images dating to 1966, 1967, 1978, 1997 and 2002. The area surrounding the intersection of the Ramona Expressway and Perris Boulevard, including the Project site, appear to have been used primarily for agricultural purposes; the structure seen on the 1967 topographic map and visible on the aerials beginning in 1966 (the earliest available) appears to have been related to the agricultural activity. By the time of the 2002 aerial, the currently existing gas station southeast of the Project site is shown in the area of these former agricultural buildings. The well shown on the 1967 topographic map was not visible in any of the consulted aerial photographs, likely due to its small size.

HELIX requested a records search of the Sacred Lands File (SLF) of NAHC, which did not indicate the presence of any sacred sites or locations or religious or ceremonial importance with the Project site. In accordance with the NAHC, HELIX contacted all Native American consultants listed in the NAHC response letter and received four responses to date. The Augustine Band of Cahuilla Indians stated that the Tribe is unaware of specific cultural resources that may be affected by the Project. The Agua Caliente Band of Cahuilla Indians stated that the Project site is not located within the Tribe's Traditional Use Area. As such, they defer to local tribes. The Rincon Band of Luiseño Indians responded in a letter that the Project location is within the Territory of the Luiseño people and within Rincon's specific area of Historic interest. "Embedded in this Luiseño territory are Rincon's history, culture and identify. The proposed Project site is located in a cultural significant area." The Rincon Band recommended that an archeological record search be conducted and asked to receive a copy of this cultural resources survey report. The Soboba Band of Luiseño Indians responded in a letter sent via email that the Project site falls within the bounds of Soboba's Tribal Traditional Use Areas. "This [P]roject location is in proximity to known sites, is a shared use area that was used in ongoing trade between the tribes and is considered to be culturally sensitive by the people of Soboba." The Tribe indicated they wish to initiate consultation with the Project Applicants and lead agency and requested that "Native American Monitor(s) from the Soboba Band of Luiseño Indians Cultural Resource Department to be present during any ground disturbing proceedings." Refer to Section XVIII for more information regarding Tribal Cultural Resources.

Pedestrian Survey

A pedestrian survey of the Project site was conducted on October 8, 2020 by HELIX staff archaeologist, Mary Villalobos, and Alex Lopez from Soboba. Ground visibility was excellent for the Project site; with the exception of the northwest corner of the Project site, visibility was 100 percent. The visibility in the northwestern corner of the Project site was approximately 50 percent, due to the presence of grasses. A small portion of the east side of the Project site, adjacent to and north of the gas station located southeast of the Project site had been graded and the soil contained gravel. Soil in the remainder of the Project site consisted of medium brown sandy silt with no rocks. Modern trash and construction debris were scattered around the entire Project site, but no potential cultural resources were observed in the Project site.

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

Less Than Significant with Mitigation Incorporated. Based on the results of the cultural resources assessment conducted for the Project (HELIX 2022d; Appendix D), while 13 cultural resource properties have been recorded within a one-mile radius of the Project site no known cultural resources/historical resources are present on the Project site. However, there is the potential for previously undiscovered subsurface cultural resources to occur in the alluvial soils at the Project site. Ground disturbing activities could harm previously undiscovered subsurface resources which would be a potentially significant impact. The Cultural Resources Survey recommends that an archaeological and Native American monitoring program be implemented. This will be implemented through Project mitigation measure MM Cult 1. Project mitigation measure MM Cult 1 implements PVCCSP EIR mitigation measures MM Cult 2 through MM Cult 4, as subsequently revised by the City of Perris. With implementation of the proposed mitigation, impacts to cultural resources would be less than significant.

Project Mitigation Measures

MM Cult 1 Prior to the issuance of grading permits, the Project Applicant shall retain a professional archaeologist meeting the Secretary of the Interior's Professional Standards for Archaeology (U.S. Department of Interior, 2012; Registered Professional Archaeologist preferred). The primary task of the consulting archaeologist shall be to monitor the initial ground-disturbing activities at both the subject site and any off-site project-related improvement areas for the identification of any previously unknown archaeological and/or cultural resources. Selection of the archaeologist shall be subject to the approval of the City of Perris Director of Development Services and no ground-disturbing activities shall occur at the site or within the off-site Project improvement areas until the archaeologist has been approved by the City.

The archaeologist shall be responsible for monitoring ground-disturbing activities, maintaining daily field notes and a photographic record, and for reporting all finds to the developer and the City of Perris in a timely manner. The archaeologist shall be prepared and equipped to record and salvage cultural resources that may be unearthed during ground-disturbing activities and shall be empowered to temporarily halt or divert ground-disturbing equipment to allow time for the recording and removal of the resources.

The Project Applicant shall also enter into an agreement with either the Soboba Band of Luiseño Indians or the Pechanga Band of Luiseño Indians for a Luiseño tribal

representative (observer/monitor) to work along with the consulting archaeologist. This tribal representative will assist in the identification of Native American resources and will act as a representative between the City, the project proponent/developer, and Native American Tribal Cultural Resources Department. The Luiseño tribal representative(s) shall be on-site during all ground-disturbing of each portion of the project site including clearing, grubbing, tree removals, grading, trenching, etc. The Luiseño tribal representative(s) should be on-site any time the consulting archaeologist is required to be on-site. Working with the consulting archaeologist, the Luiseño representative(s) shall have the authority to halt, redirect, or divert any activities in areas where the identification, recording, or recovery of Native American resources are on-going.

The agreement between the proponent/developer and the Luiseño tribe shall include, but not be limited to:

- An agreement that artifacts will be reburied on-site and in an area of permanent protection;

- Reburial shall not occur until all cataloging and basic recordation have been completed by the consulting archaeologist;

- Native American artifacts that cannot be avoided or relocated at the project site shall be prepared for curation at an accredited curation facility in Riverside County that meets federal standards (per 36 CFR Part 79) and available to archaeologists/researchers for further study; and

- The project archaeologist shall deliver the Native American artifacts, including title, to the identified curation facility within a reasonable amount of time, along with applicable fees for permanent curation.

The Project Applicant shall submit a fully executed copy of the agreement to the City of Perris Planning Division to ensure compliance with this condition of approval. Upon verification, the City of Perris Planning Division shall clear this condition. This agreement shall not modify any condition of approval or mitigation measure.

In the event that archeological resources are discovered at the Project site or within the off-site Project improvement areas, the handling of the discovered resource(s) will differ, depending on the nature of the find. Consistent with California Public Resources Code Section 21083.2(b) and Assembly Bill 52 (Chapter 532, Statutes of 2014), avoidance shall be the preferred method of preservation for Native American/tribal cultural/archaeological resources. However, it is understood that all artifacts with the exception of human remains and related grave goods or sacred/ceremonial/religious objects belong to the property owner. The property owner will commit to the relinquishing and curation of all artifacts identified as being of Native American origin. All artifacts discovered at the development site during the monitoring program shall be recorded and inventoried by the consulting archaeologist.

If any Native American artifacts are identified when Luiseño tribal representatives are not present, all reasonable measures will be taken to protect the resource(s) *in situ* and the City Planning Division and Luiseño tribal representative will be notified. The designated Luiseño tribal representative will be given ample time to examine the find. If the find is determined to be of sacred or religious value, the Luiseño tribal representative will work with the City and Project archaeologist to protect the resource in accordance with tribal requirements. All analysis will be undertaking in a manner that avoids destruction or other adverse impacts.

In the event that human remains are discovered at the Project site or within the off-site Project improvement areas, mitigation measure CULT-2 shall immediately apply and all items found in association with Native American human remains shall be considered grave goods or sacred in origin and subject to special handling.

Non-Native American artifacts shall be inventoried, assessed, and analyzed for cultural affiliation, personal affiliation (prior ownership), function, and temporal replacement. Subsequent to analysis and reporting, these artifacts will be subjected to curation, as deemed appropriate, or returned to the property owner.

Once grading activities have ceased and/or the archaeologist, in consultation with the designated Luiseño tribal representative, determines that monitoring is no longer necessary, monitoring activities can be discontinued following notification to the City of Perris Planning Division.

A report of findings, including an itemized inventory of recovered artifacts, shall be prepared upon completion of the steps outlined above. The report shall include all data outlined by the Office of Historic Preservation guidelines, including conclusions of the significance of all recovered, relocated, and reburied artifacts. A copy of the report shall also be filed with the City of Perris Planning Division, the University of California, Riverside, Eastern Information Center (EIC) and the Luiseño tribe(s) involved with the Project.

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

Less Than Significant with Mitigation Incorporated. As stated under discussion a) above, no known cultural resources are present on the Project site; however, ground disturbing activities have the potential to encounter previously undiscovered archaeological resources, which would result in a potentially significant impact. Implementation of Project mitigation measure MM Cult 1 during construction would reduce the impact to a less than significant level.

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

Less Than Significant with Mitigation Incorporated. The proposed Project site has been historically used for agriculture and has since been vacant. No known cemetery has occurred at the Project site or off-site improvement areas, so the Project site is not expected to contain human remains, including those interred outside of formal cemeteries. In the unlikely event that human remains are discovered during construction, all activities in the vicinity of the remains shall cease and the contractor shall notify the County Coroner immediately pursuant to California Health & Safety Code Section 7050.5 and California

Public Resources Code Section 5097.98. Project mitigation measure MM Cult 2 shall be implemented to ensure impacts to human remains are less than significant. Project mitigation measure MM Cult 2 implements PVCCSP EIR mitigation measure MM Cult 6, as subsequently revised by the City of Perris.

Project Mitigation Measures

MM Cult 2 In the event that human remains (or remains that may be human) are discovered at the Project site or within the off-site Project improvement areas during ground-disturbing activities, the construction contractors, Project archaeologist, and/or designated Luiseño tribal representative(s) shall immediately stop all activities within 100 feet of the find. The Project Applicant shall then inform the Riverside County Coroner and the City of Perris Planning Division immediately and the coroner shall be permitted to examine the remains as required by California Health and Safety Code Section 7050.5(b).

If the coroner determines that the remains are of Native American origin, the coroner would notify the Native American Heritage Commission (NAHC), which will identify the Most Likely Descendent (MLD). Despite the affiliation of any Luiseño tribal representative(s) at the site, the NAHC identification of the MLD will stand. The MLD shall be granted access to inspect the site of the discovery of the Native American human remains and may recommend to the Project Applicant means for treatment or disposition, with appropriate dignity of the human remains and any associated grave goods. The MLD shall complete his or her inspection and make recommendations or preferences for treatment within 48 hours of being granted access to the site. The disposition of the remains will be determined in consultation between the Project Applicant and the MLD. In the event that there is disagreement regarding the disposition of the remains, State law will apply and median with the NAHC will make the applicable determination (see Public Resources Code Section 5097.98(e) and 5097.94(k)).

The specific locations of Native American burials and reburials would be proprietary and not disclosed to the general public. The locations would be documented by the consulting archaeologist in conjunction with the various stakeholders and a report of findings shall be filed with the Eastern Information Center (EIC).

VI. Energy

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Result in potentially significant environmental impact 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?	☐	☐	☐	■

Applicable PVCCSP Standards and Guidelines

Section 1.2 (Specific Plan Vision and Objectives) of the PVCCSP encourages increased energy efficiency in building design and the offering of incentives for LEED certification. Section 4.2.4 (Lighting) of the PVCCSP requires lighting standards to be energy efficient. No other PVCCSP Standard and Guidelines are applicable to the analysis of energy.

The proposed Project is required to adhere to PVCCSP EIR Mitigation Measures MM Air 19 and MM Air 20. PVCCSP EIR Mitigation Measure MM Air 19 requires implementing development projects to include installation of energy-efficient street lighting throughout project sites. PVCCSP Mitigation Measure MM Air 20 requires each implementing development project to implement, at a minimum, an increase in each building's energy efficiency 15 percent beyond Title 24, and reduce indoor water use by 25 percent. See Section VIII, Greenhouse Gas Emissions for the full mitigation measure text.

a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during MAXIMUM INCREMENTAL CANCER HEALTH RISK project construction or operation?

Less Than Significant Impact. During construction, the project would temporarily consume energy for the operation of construction equipment and vehicles. Standard methods of earth moving, excavations, building construction, and paving are planned. Construction activities do not include methods of construction which would result in inefficient or unnecessary use of energy resources. For operational energy use, the project would be required to meet CCR Title 24 building energy and CALGreen green standards.

CCR Title 24 Part 6: California's Energy Efficiency Standards for Residential and Nonresidential Buildings were first established in 1978 in response to a legislative mandate to reduce California's energy consumption. Energy-efficient buildings require less electricity, natural gas, and other fuels. Electricity production from fossil fuels and on-site fuel combustion (typically for space or water heating) results in greenhouse gases (GHG) emissions. The Title 24 standards are updated approximately every three years to allow consideration and possible incorporation of new energy efficiency technologies and methods. The 2019 Title 24 standards went into effect on January 1, 2020. The standards are divided into three basic sets. First, there is a basic set of mandatory requirements that apply to all buildings. Second, there is a set of performance standards—the energy budgets—that vary by climate zone (of which there are

16 in California) and building type; thus, the standards are tailored to local conditions. Finally, the third set constitutes an alternative to the performance standards, which is a set of prescriptive packages that are basically a recipe or a checklist compliance approach.

CALGreen (CCR Title 24, Part 11) is a code with mandatory requirements for all nonresidential buildings (including industrial buildings) and residential buildings for which no other state agency has authority to adopt green building standards. The current 2019 Standards for new construction of, and additions and alterations to, residential and nonresidential buildings went into effect on January 1, 2020. The development of CALGreen is intended to (1) cause a reduction in GHG emissions from buildings; (2) promote environmentally responsible, cost-effective, healthier places to live and work; (3) reduce energy and water consumption; and (4) respond to the directives by the Governor. In short, the code is established to reduce construction waste; make buildings more efficient in the use of materials and energy; and reduce environmental impact during and after construction. CALGreen contains requirements for storm water control during construction; construction waste reduction; indoor water use reduction; material selection; natural resource conservation; site irrigation conservation; and more. The code provides for design options allowing the designer to determine how best to achieve compliance for a given site or building condition. The code also requires building commissioning, which is a process for the verification that all building systems, like heating and cooling equipment and lighting systems, are functioning at their maximum efficiency.

Compliance with state Title 24 and CALGreen standards, and PCSCCP design standards and guidelines, and PVCCSP EIR mitigation measures MM Air 19 and MM Air 20 would ensure the project would not result in wasteful, inefficient, or unnecessary consumption of energy resources. No further Project-specific mitigation measures would be required.

Implementation of the Project would not result in wasteful, inefficient, or unnecessary consumption of energy resource that may have a significant impact on the environment. Impacts would be less than significant and no mitigation would be required.

b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

No Impact. Several levels of government have implemented regulatory programs in response to reducing GHG emissions, which consequently serve to increase energy efficiency. Several state agencies, including CARB, California Energy Commission, California Public Utilities Commission, CalRecycle, California Department of Transportation (Caltrans), and the Department of Water Resources have developed regulatory and incentive programs that promote energy efficiency. Many of the measures are generally beyond the ability of any future development to implement and are implemented at the utility provider or the manufacturer level.

The Project does not conflict with any state or local plans for renewable energy efficiency. The Project would employ standard methods of construction and does not propose to create a project condition post-construction whereby increased energy demand would be created. The Project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency. There would be no impact.

VII. Geology and Soils

		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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?	☐	■	☐	

The discussion below is based on a Geotechnical Engineering Investigation prepared by NorCal Engineering (NorCal Engineering 2020; Appendix E), and a Paleontological Technical Study, prepared by Paleo Solutions, Inc (Paleo Solutions 2020; Appendix F).

Applicable PVCCSP Standards and Guidelines and Mitigation Measures

There are no PVCCSP Standard and Guidelines applicable to the analysis of geology and soils. The Geotechnical Engineering Investigation was prepared for the Project in compliance with the following applicable PVCCSP EIR mitigation measure:

MM Geo 1 Concurrent with the City of Perris' review of implementing development projects, the project proponent of the implementing development project shall submit a geotechnical report prepared by a registered geotechnical engineer and a qualified engineering geologist to the City of Perris Public Works/Engineering Administration Division for its review and approval. The geotechnical report shall assess the soil stability within the implementing development project affecting individual lots and building pads, and shall describe the methodology (e.g., overexcavated, backfilled, compaction) being used to implement the project's design.

In addition, PVCCSP EIR mitigation measure MM Cult 5 provides mitigation for the discovery and protection of paleontological resources. This mitigation measure has been replaced by the City of Perris as reflected in Project Mitigation Measure MM Geo 1.

Regulatory Framework

The following regulatory framework was provided by the Paleontological Report and is based on the City of Perris General Plan, which has one goal, one policy, and three implementation measures relating to paleontological resources. They are as follows:

- Goal 4 requires the protection of historical, archaeological, and paleontological sites.
- Policy IV A requires that the City of Perris comply with state and federal regulations and ensure preservation of the significant historical, archaeological, and paleontological resources within the City.
- The three implementation measures require that all new construction involving grading require appropriate surveys and necessary site investigations in conjunction with the earliest environmental documents prepared for a project, that in specifically delineated areas shown on the City's paleontological sensitivity map that levels of paleontological monitoring will be required, from full-time monitoring to part-time monitoring in some less-sensitive areas. Finally, the General Plan requires that the City of Perris identify and collect previous surveys of cultural resources, evaluate each resource, and consider preparation of a comprehensive citywide inventory of cultural resources including both prehistoric sites and man-made resources.

a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involve

   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?

No Impact. The City, like the rest of southern California, is located within a seismically active region as a result of being located near the active margin between the North American and Pacific tectonic plates. The Alquist-Priolo Earthquake Fault Zoning Act requires the State Geologist to identify earthquake fault zones along traces of both recently and potentially active major faults. Cities and counties that contain such zones must inform the public regarding the location of these zones, which are usually one-quarter mile or less in width. Proposed development plans within these earthquake fault zones must be accompanied by a geotechnical report prepared by a qualified geologist describing the likelihood of

surface rupture. As discussed in the Geotechnical Engineering Investigation, the Project site is not within an Alquist-Priolo Fault Zone. The Elsinore Fault Zone is the nearest Alquist-Priolo Earthquake Fault Zone that is located approximately 10 kilometers (or about 6.2 miles) east of the Project site. Due to this distance, it is unlikely that the Project would be subjected to fault rupture associated with the Elsinore Fault Zone. No impact associated with faults and rupture would occur at the Project site.

ii. Strong seismic ground shaking?

Less Than Significant Impact. The Project site is located within the seismically active southern California region. Active faults are those faults which have had surface displacement within Holocene times (about the last 11,000 years). The Geotechnical Engineering Investigation prepared for the Project concluded that "ground shaking originating from earthquakes along other active faults in the region is expected to induce lower horizontal accelerations due to smaller anticipated earthquakes and/or greater distances to other faults." Engineering and construction of the Project would be required to be in conformance with the International Code Council (ICC) International Building Code (IBC) and related California Building Code (CBC), and other applicable standards. Due to distances from active faults in the region, as well as conformance with standard engineering practices and design criteria, the Project would not directly or indirectly cause adverse effects related to seismic ground shaking. Impacts associated with seismic ground shaking would be less than significant.

iii. Seismic-related ground failure, including liquefaction?

Less Than Significant Impact. Liquefaction is a phenomenon that occurs when soil undergoes transformation from a solid state to a liquefied condition when subjected to high intensity ground shaking. This typically occurs where susceptible soils (particularly the medium sand to silt range) are located over a high groundwater table (within 50 feet of the surface). Affected soils lose all strength during liquefaction and foundation failure can occur. The Project's Geotechnical Engineering Investigation concluded that the Project site is in an area with low potential for liquefaction hazards due to the lack of groundwater within 50 feet of the ground surface. Also, the Project site is identified in the City's General Plan to be an area of "low generalized liquefaction susceptibility" (City of Perris 2005). Therefore, impacts related to exposing people or structures to seismic-related ground failure, including liquefaction, would be less than significant and no mitigation would be required.

iv. Landslides?

No Impact. The Project site is relatively flat and there are no hillsides or steep topographic features at the site or in surrounding areas. According to the City's General Plan Safety Element, the Project site is not located within an area with high susceptibility to seismically induced landslides and rockfalls (City of Perris 2005). As such, there would be no impacts related to landslides as a result of the proposed Project.

b) Result in substantial soil erosion or the loss of topsoil?

Less Than Significant Impact. Soil exposed by construction activities could be subject to erosion if exposed to heavy rain, winds, or other storm events. There is the potential for soil erosion or loss of topsoil during construction activities as the ground is cleared and graded. Compliance with the SCAQMD Rule 403 (Fugitive Dust) and PVCCSP EIR mitigation measure MM Air 3 would include implementation of soil stabilization measures, such as daily watering, and compliance with the National Pollution Discharge Elimination System (NPDES) General Construction Permit would include implementation of the City's

standard erosion control practices, such as silt fencing, fiber rolls, or sandbags. Further, the CBC requires an erosion control and grading plans prior to issuance of a grading permit as a means to minimize soil erosion to the extent practicable during both construction and operational phases.

Once operational, the Project site would include some impervious or semi-impervious features, that if not designed properly could allow for stormwater to sheet flow and consequently erode soils. However, the preparation of a WQMP would describe the management of stormwater flows so as to not carry soils and sediments. The WQMP (as well as a Storm Water Pollution Prevention Plan [SWPPP]) must be approved by the City Engineer prior to the issuance of grading permits. Additionally, other features such as an underground water quality treatment and storage basin would capture storm flows that could otherwise be directed and erode loose soils across the site. Therefore, the required compliance with the various permits and plans would reduce Project impacts to less than significant levels and no mitigation would be required.

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?

Less Than Significant Impact. The Project site is not located within an area that is subject to landslides, and so impacts related to landslides would not occur (City of Perris 2022). The Perris Valley is susceptible to subsidence in various portions throughout the region. However, impacts related to liquefaction, lateral spreading, or subsidence would not be significant because the proposed Project would comply with the CBC building safety design standards. Furthermore, the Geotechnical Engineering Investigation indicated that the Project site is not likely to experience liquefaction or subsidence due to the depth of groundwater below the site (NorCal Engineering 2020). Therefore, impacts associated with subsidence and liquefaction would be less than significant and no mitigation would be required.

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?

Less Than Significant Impact. The majority of soil that underlies the Project site has a low to moderate potential for shrinking and swelling (NorCal Engineers 2021). Furthermore, adherence to standard engineering practices contained within the IBC and CBC would further reduce potential impacts to less than significant and no mitigation would be required.

e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?

No Impact. The proposed Project does not include the implementation of septic tanks or alternative wastewater disposal systems. No impact would occur.

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

Less than Significant with Mitigation. According to the City General Plan Conservation Element Figure CN-7, the Project site is located near areas identified as highly sensitive for the discovery of paleontological resources. The Paleontological Technical Report prepared by Paleo Solutions, Inc., identified sensitivity guidelines for paleontological resources based on the Riverside County EIR. “High Sensitivity A” resources are based on geologic formations or mapped rock units that are known to contain or have the correct age and depositional conditions to contain significant paleontological

resources. These include rocks of Silurian or Devonian age and younger that have potential to contain remains of fossil fish, and Mesozoic and Cenozoic rocks that contain fossilized body elements and trace fossils such as tracks, nests, and eggs. “High Sensitivity B” is a sensitivity equivalent to High A, but is based on the occurrence of fossils at a specified depth below the surface. This category indicates fossils that are likely to be encountered at or below 4 feet of depth and may be impacted during construction activities.

The report stated that based on an evaluation of existing paleontological data, the Project site has a High Potential/Sensitivity (High A and High B) which is based on the presence of Holocene-age alluvial sediments and middle to early Pleistocene-age very old alluvial-fan deposits. Based on the ground disturbance necessary to complete the Project, there is potential for adverse direct impacts to scientifically significant paleontological resources within middle to early Pleistocene-age very old alluvial fan deposits, either at the surface or at depth. Because of the High Paleontological Sensitivity (High B) on the Project site, Project mitigation measures MM Geo 1 and MM Geo 2 shall be implemented to reduce impacts to less than significant levels. Project mitigation measure MM Geo 1 implements PVCCSP EIR mitigation measure MM Cult 5, as subsequently revised by the City of Perris. Project mitigation measure MM Geo 2 is incorporated based on the recommendations of the Paleontological Technical Report prepared for the Project.

Project Mitigation Measures

MM-GEO 1 Prior to the issuance of grading permits, the Project Applicant shall submit to and receive approval from the City, a Paleontological Resource Impact Mitigation Monitoring Program (PRIMMP). The PRIMMP shall include the provision for a qualified professional paleontologist (or his or her paleontological monitor representative) to be on-site or any Project-related excavations that exceed three (3) feet below the pre-grade surface. Selection of the paleontologist shall be subject to the approval of the City of Perris Planning Manager and no grading activities shall occur at the Project site or the off-site Project improvement areas until the paleontologist has been approved by the City.

Monitoring shall be restricted to undisturbed subsurface areas of older Quaternary alluvium. The approved paleontologist shall be prepared to quickly salvage fossils as they are unearthed to avoid construction delays. The paleontologist shall also remove samples of sediments which are likely to contain the remains of small fossil invertebrates and vertebrates. The paleontologist shall have the power to temporarily halt or divert grading equipment to allow for removal of abundant or large specimens.

Collected samples of sediments shall be washed to recover small invertebrate and vertebrate fossils. Recovered specimens shall be prepared so that they can be identified and permanently preserved. Specimens shall be identified and curated and placed into an accredited repository (such as the Western Science Center or the Riverside Metropolitan Museum) with permanent curation and retrievable storage.

A report of findings, including an itemized inventory of recovered specimens, shall be prepared upon completion of the steps outlined above. The report shall include a discussion of the significance of all recovered specimens. The report and inventory, when submitted to the City of Perris Planning Division, will signify completion of the program to mitigate impacts to paleontological resources.

MM Geo 2 Prior to the start of construction, a paleontological resources worker environmental awareness program (WEAP) training shall be presented to all earthmoving personnel to inform them of the possibility for buried resources and the procedures to follow in the event of fossil discoveries.

VIII. Greenhouse Gas Emissions

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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?	☐	☐	■	☐

An Air Quality and Greenhouse Gas Emissions Technical Report (HELIX 2022a; attached to this IS/MND as Appendix A) was prepared for the proposed Project. The findings and recommendations contained in the report are incorporated into the following analysis.

Applicable PVCCSP Standards and Guidelines

The PVCCSP includes Standards and Guidelines relevant to the analysis of greenhouse gas (GHG) emissions impacts presented in this IS and summarized below are incorporated as part of the proposed Project; as such, they are assumed in the analysis presented in this section.

Industrial Design Standards and Guidelines (Chapter 8.0 of the PVCCSP)

8.2.1.4 Employee Break Areas and Amenities

Buildings exceeding 100,000 sf shall require employee amenities such as, but not limited to, cafeterias, exercise rooms, locker rooms and shower, walking trails and recreational facilities. Inclusion of theses amenities in the project would encourage employee trip reduction, reducing associated transportation pollutant emissions.

The following mitigation measures from the PVCCSP EIR are applied to the proposed Project:

MM Air 19 In order to reduce energy consumption from the individual implementing development projects, applicable plans (e.g., electrical plans, improvement maps) submitted to the City shall include the installation of energy-efficient street lighting throughout the project site. These plans shall be reviewed and approved by the applicable City Department (e.g., City of Perris' Building Division) prior to conveyance of applicable streets.

MM Air 20 Each implementing development project shall implement, at a minimum, an increase in each building's energy efficiency 15 percent beyond Title 24, and reduce indoor water use by 25 percent. All requirements will be documented through a checklist to be submitted prior to issuance of building permits for the implementing development project with building plans and calculations.

MM Air 21 Each implementing development project shall implement, at a minimum, use of water conserving appliances and fixtures (low-flush toilets, and low-flow shower heads and faucets) within all new residential developments.

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

Less than Significant Impact. Given the relatively small levels of emissions generated by a typical development in relationship to the total amount of GHG emissions generated on a national or global basis, individual development projects are not expected to result in significant, direct impacts with respect to climate change. However, given the magnitude of the impact of GHG emissions on the global climate, GHG emissions from new development could result in significant, cumulative impacts with respect to climate change. Therefore, the potential for a significant GHG impact is limited to cumulative impacts.

The determination of significance is governed by State CEQA Guidelines Section 15064.4, entitled "Determining the Significance of Impacts from Greenhouse Gas Emissions." State CEQA Guidelines Section 15064.4(a) states, "[t]he determination of the significance of greenhouse gas emissions calls for a careful judgment by the lead agency consistent with the provisions in Section 15064. A lead agency should make a good-faith effort, based to the extent possible on scientific and factual data, to describe, calculate or estimate the amount of greenhouse gas emissions resulting from a project. A lead agency shall have discretion to determine, in the context of a particular project, whether to … [use a quantitative model or qualitative model]" (emphasis added). In turn, State CEQA Guidelines Section 15064.4(b) clarifies that a lead agency should consider "Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project." Therefore, consistent with State CEQA Guidelines Section 15064.4, the GHG analysis for the proposed Project appropriately relies upon a threshold based on the exercise of careful judgement and believed to be appropriate in the context of this particular Project.

On December 5, 2008, the SCAQMD Governing Board adopted their Interim CEQA Greenhouse Gas Significance Threshold for Stationary Sources, Rules and Plans for projects where the SCAQMD is the lead agency. The SCAQMD's interim GHG significance threshold uses a tiered approach to determining significance. Tier 1 consists of evaluating whether or not the project qualifies for any applicable exemption under CEQA. Tier 2 consists of determining whether or not the project is consistent with a GHG reduction plan that may be part of a local general plan, for example. Tier 3 establishes a screening significance threshold level to determine significance using a 90 percent emission capture rate approach, which corresponds to 10,000 MT CO2e emissions per year for stationary sources at industrial facilities. Tier 4, to be based on performance standards, is yet to be developed. Under Tier 5 the project proponent would allow offsets to reduce GHG emission impacts to less than the proposed screening level.

As the City does not currently have any approved quantitative thresholds related to GHG emissions, the quantitative analysis provided herein relies upon the SCAQMD adopted screening threshold for industrial facility projects of 10,000 metric tons (MT) carbon dioxide equivalent (CO_2e). Although the proposed project includes both an industrial use as well as a commercial use, it is not considered to be a mixed-use project, which is generally defined as a kind of urban development that blends multiple uses, such as residential, commercial, cultural, institutional, or entertainment into one space, where those functions are to some degree physically and functionally integrated, and that provides pedestrian connections. The City's use of the 10,000 MT CO_2e threshold is also considered to be conservative for the proposed project since it is being applied to all of the GHG emissions generated by the proposed project (i.e., area sources, energy sources, vehicular sources, solid waste sources, and water sources) whereas the SCAQMD's 10,000 MT CO_2e threshold applies only to the new stationary sources generated at industrial facilities.

The Project would generate GHG emissions in the short-term during construction and the long-term during operation. The Project's mass regional GHG emissions were estimated using CalEEMod Version 2020.4.0. Refer to the Air Quality and Greenhouse Gas Emissions Technical Report prepared for the Project for additional details regarding modeling methodology, assumptions, and model output data (HELIX 2022a; Appendix A).

Construction Emissions

Emissions of GHGs related to the construction of the Project would be temporary. As shown in Table 10, total GHG emissions associated with construction of the Project are estimated at 1,289 MT CO_2e for the warehouse and 393 MT CO_2e for the hotel. For construction emissions, SCAQMD guidance recommends that the emissions be amortized (i.e., averaged) over 30 years and added to operational emissions. Averaged over 30 years, the proposed construction activities would contribute approximately 43.0 MT CO_2e emissions per year for Phase 1 and 13.1 MT CO_2e emissions per year for Phase 2.

Table 10
ESTIMATED CONSTRUCTION GREENHOUSE GAS EMISSIONS

Year	Emissions (MT CO_2e)
Phase 1 2022	259.0
Phase 1 2023	903.0
Phase 1 2024	126.4
Phase 1 Total[1]	**1,289.4**
Phase 1 Amortized Construction Emissions[2]	*43.0*
Phase 2 2024	240.8
Phase 2 2025	152.6
Phase 2 Total[1]	**393.4**
Phase 2 Amortized Construction Emissions[2]	*13.1*

Source: CalEEMod; Appendix A

[1] Totals may not sum due to rounding.

[2] Construction emissions are amortized over 30 years in accordance with SCAQMD guidance.

MT = metric tons; CO_2e = carbon dioxide equivalent

Operational Emissions

Calculated total annual emissions for the Project, including amortized annual construction emissions, are shown in Table 11. Refer to the report in Appendix A for the CalEEMod output files for the Project.

Table 11
TOTAL ESTIMATED OPERATIONAL GREENHOUSE GAS EMISSIONS

Emission Sources	2024 Emissions (MT CO_2e)
Phase 1 Area Sources	<0.1
Phase 1 Energy Sources	132.7
Phase 1 Vehicular (Mobile) Sources	2,578.2
Phase 1 Solid Waste Sources	82.4
Phase 1 Water Sources	158.6
Phase 1 Subtotal[1]	**2,951.9**
Phase 1 Construction (Annualized over 30 years)	43.0
Phase 1 Total[1]	**2,994.94**
Phase 2 Area Sources	**<0.1**
Phase 2 Energy Sources	**1,145.5**
Phase 2 Vehicular (Mobile) Sources	**756.4**
Phase 2 Solid Waste Sources	**25.8**
Phase 2 Water Sources	**9.9**
Phase 2 Subtotal[1]	**1,937.6**
Phase 2 Construction (Annualized over 30 years)	**13.1**
Phase 2 Total[1]	**1,950.7**
PROJECT TOTAL[1]	**4,945.6**
SCAQMD Screening Threshold	**10,000**
Exceed Threshold?	**No**

Source: CalEEMod (output data is provided in Appendix A)
[1] Totals may not sum due to rounding.
[2] Emission per capita is the project total emissions divided by the project population (2,301.3/690).
MT = metric tons; CO_2e = carbon dioxide equivalent

As shown in Table 11, the Project emissions, including amortized construction emissions, would total 4,946 MT CO_2e per year and would not exceed the industrial facility SCAQMD GHG screening threshold of 10,000 MT CO_2e per year.

Impact Conclusion

Although Project GHG emissions would not exceed the SCAQMD threshold, the Project would be required to implement mitigation measures MM Air 19, MM Air 20, and MM Air 21 from the PVCCSP EIR. No further Project-specific mitigation measures would be required. Implementation of the Project would not generate GHG emissions that may have a significant impact on the environment, and the impact would be less than significant.

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

Less Than Significant Impact. There are numerous State plans, policies, and regulations adopted for the purpose of reducing GHG emissions. The principal overall State plan and policy is AB 32, the California

Global Warming Solutions Act of 2006. The quantitative goal of AB 32 is to reduce GHG emissions to 1990 levels by 2020. SB 32 would require further reductions of 40 percent below 1990 levels by 2030. Because the Project's operational year is post-2020, the Project aims to reach the quantitative goals set by SB 32. Statewide plans and regulations such as GHG emissions standards for vehicles (AB 1493), the LCFS, and regulations requiring an increasing fraction of electricity to be generated from renewable sources are being implemented at the statewide level; as such, compliance at the Project level is not addressed. Therefore, the proposed Project would not conflict with those plans and regulations.

The Project does not have a residential competent and would not result in regional population growth. The Project would seek a change in land use designation from commercial to light industrial for an approximately 13-acre portion of the Project site. As discussed in the air quality plan consistency analysis (Section 5.1), the average employment density for a warehouse or light industrial land use is lower than that for a commercial land use and the Project would be consistent with the employment growth assumptions used to develop the SCAG's RTP/SCS. As shown in Section 3.2, transportation-related emissions consistently contribute the most GHG emissions in California (41 percent in 2017). According to the VMT screening evaluation (Urban Crossroads 2022), the Project is located in an area with higher employee per capita than the City average. However, in accordance with City guidelines, projects that generate less than 500 average daily trips would not cause a substantial increase in the total citywide or regional VMT and are therefore presumed to have a less than significant impact on VMT. The project warehouse land use would result in 402 trips per day, below the 500 average daily trip thresholds. The proposed hotel component of the project would be considered a local serving land use which leads to shortened trips lengths and reduced VMT (Urban Crossroads 2022b). Therefore, the Project would not conflict with or obstruct implementation of the SCAG's RTP/SCS.

The City adopted a Climate Action Plan (CAP) in 2016, which contains state, regional, and local GHG reduction measures to achieve the GHG Perris community wide GHG reductions mandated by AB 32. Local GHG reduction measures contained in the CAP include:

E-1 Energy Action Plan
T-1 Bicycle Infrastructure Improvements
T-2 Bicycle Parking
T-3 End of Trip Facilities
T-4 Transit Frequency Expansion
T-5 Traffic Signal Coordination
T-6 Density
T-7 Mixed Use Development
T-8 Design/Site Planning
T-9 Pedestrian Only Areas
T-10 Limited Parking Requirements for New Development
T-11 Voluntary Transportation Demand Management
T-12 Accelerated Bike Plan Implementation
SW-1 Yard Waste Collection
SW-2 Food Scrap and Paper Diversion

In accordance with City zoning regulations and PVCCSP design standards and guidelines, the Project would support applicable measures by providing, bicycle parking, sidewalks, and transit demand management (commute trip reduction, ridesharing programs). In addition, the Project would be constructed in accordance with the energy-efficiency standards, water reduction goals, and other

standards required by the 2019 Title 24 Part 6 Building Energy Efficiency Standards and Part 11 (CALGreen) Building Standards. Therefore, the Project would not conflict with or obstruct implementation of the City CAP.

The Project would not conflict with applicable GHG reduction plans including the SCAG's RTP/SCS and the City's CAP, the impact would be less than significant and no mitigation would be required.

IX. Hazards and Hazardous Materials

		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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?	☐	☐	☐	■

A Phase I Environmental Health Assessment prepared by Environmental and Regulatory Specialists, Inc (EARSI 2021), which is attached to this IS/MND as Appendix G, was prepared for the proposed Project. Its findings and recommendations are incorporated into the following analysis.

Applicable PVCCSP Standards and Guidelines and Mitigation Measures

The PVCCSP includes Standards and Guidelines relevant to development with the Airport Influence Zones. These Standards and Guidelines are summarized below and are incorporated as part of the proposed Project and are assumed in the analysis presented in this section.

Airport Overlay Zone (Chapter 2.0, Land Use Plan, of the PVCCSP)

2.1.6 Airport Overlay Zone

Accident Potential Zone II (APZ-II): This zone prohibits many uses that involve hazardous materials (such as gas stations), and those uses that have higher densities of people per acre. Non-residential development will be limited to those uses that have not more than 50 persons per acre at any time including hotels and motels. This zone prohibits new residential development, schools, or churches. It should be noted that there is some existing residential development in this area.

Airport Overlay Zone (Chapter 12.0 of the PVCCSP)

12.1 Prohibited Uses in Airport Overlay Zones

Zone B1 (Inner Approach/Departure Zone): encompasses areas of high noise and high accident potential risk within the inner portion of the runway approach and departure corridors. The zone is defined by the boundaries of APZs I and II, adjusted on the north to take into account the turning departure flight tracks. The majority of the zone is exposed to projected noise levels in excess of 65 dB Community Noise Equivalent Level (CNEL).

Zone C1 (Primary Approach/Departure Zone): encompasses most of the projected 60 dB CNEL contour plus immediately adjoining areas. The zone boundary follows geographic features. Accident potential risks are moderate in that aircraft fly at low altitudes over or near the zone. To the south, an area beginning just beyond Nuevo Road—approximately five miles from the runway end—is excluded from the zone. Exposure to noise in this area is greater (above 60 dB CNEL), however, the accident potential risks at this distance from the runway are reduced by the altitude at which aircraft typically fly over the area. Single-event noise levels are potentially disruptive in this zone.

12.1.1 Compatibility with March Air Reserve Base

The PVCCSP area is located in MARB Airport Influence Zones I and II; therefore, all development within the Plan shall comply with the following measures:

- Avigation Easement
- Noise Standard
- Land Use and Activities
- Retention and Water Quality Basins
- Notice of Airport in the Vicinity
- Disclosure
- Lighting Plans
- Height Restrictions per Federal Aviation Regulations Part 77
- Clear Zone (Surface B)
- Approach/Departure Clearance Surface (Surface C)

- Inner Horizontal Surface (Surface E)
- Conical Surface
- Form 7460 (Notice of Proposed Construction or Alteration)

The PVCCSP EIR includes mitigation measures for potential impacts related to hazards and hazardous materials. Applicable mitigation measures are identified below.

MM Haz 2 Prior to the recordation of a final map, issuance of a building permit, or conveyance to an entity exempt from the Subdivision Map Act, whichever occurs first, the landowner shall convey an avigation easement to the MARB/March Inland Port Airport Authority.

MM Haz 3 Any outdoor lighting installed shall be hooded or shielded to prevent either the spillage of lumens or reflection into the sky or above the horizontal plane.

MM Haz 4 The following notice shall be provided to all potential purchasers and tenants:

"This property is presently located in the vicinity of an airport, within what is known as an airport influence area. For that reason, the property may be subject to some of the annoyances or inconveniences associated with proximity to airport operations (for example, noise, vibration, or odors). Individual sensitivities to those annoyances can vary from person to person. You may wish to consider what airport annoyances, if any, are associated with the property before you complete your purchase and determine whether they are acceptable to you. Business & Profession Code 11010 13(A)."

MM Haz 5 The following uses shall be prohibited:

a) Any use which would direct a steady light or flashing light of red, white, green, or amber colors associated with airport operations toward an aircraft engaged in an initial straight climb following takeoff or toward an aircraft engaged in a straight final approach toward a landing at an airport, other than an FAA-approved navigational signal light or visual approach slope indicator.

b) Any use which would cause sunlight to be reflected towards an aircraft engaged in an initial straight climb following takeoff or towards an aircraft engaged in a straight final approach towards a landing at an airport.

c) Any use which would generate smoke or water vapor or which would attract large concentrations of birds, or which may otherwise affect safe air navigation within the area.

d) Any use which would generate electrical interference that may be detrimental to the operation of aircraft and/or aircraft instrumentation.

e) All retention and water quality basins shall be designed to dewater within 48 hours of a rainfall event.

MM Haz 6 A minimum of 45 days prior to submittal of an application for a building permit for an implementing development project, the implementing development project applicant shall consult with the City of Perris Planning Department in order to determine whether

any implementing project-related vertical structures or construction equipment will encroach into the 100-to-1 imaginary surface surrounding the MARB. If it is determined that there will be an encroachment into the 100-to-1 imaginary surface, the implementing development project applicant shall file a FAA Form 7460-1, Notice of Proposed Construction or Alteration. If FAA determines that the implementing development project would potentially be an obstruction unless reduced to a specified height, the implementing development project applicant and the Perris Planning Division will work with FAA to resolve any adverse effects on aeronautical operations.

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. Small amounts of potentially hazardous materials (e.g., fuel, lubricants, and solvents) may be used during construction activities. Hazardous materials used during Project construction would be transported, used, and stored in accordance with state and federal regulations regarding hazardous materials. In addition, materials such as paints, adhesives, solvents, and other substances typically used in building construction would be located in the Project site during construction. Improper use, storage, or transportation of hazardous materials can result in accidental releases or spills, potentially posing health risks to workers, the public, and the environment. This is a standard risk on all construction sites, and there would be no greater risk for improper handling, transportation, or spills associated with the Project than would occur on any other similar construction site. Construction contractors would be required to comply with all applicable federal, State, and local laws and regulations regarding the transport, use, and storage of hazardous construction-related materials, including but not limited to requirements imposed by the EPA, DTSC, SCAQMD, and RWQCB. With mandatory compliance to applicable hazardous materials regulations, the Project would not create a significant hazard to the public or the environment through routine transport, use, or disposal of hazardous materials during the construction phase. Impacts would be less than significant.

Operation of the proposed Project would involve the use of materials common to all urban development that are labeled hazardous (e.g., solvents and commercial cleansers; petroleum products; and pesticides, fertilizers, and other landscape maintenance materials). There is the potential for routine use, storage, or transport of other hazardous materials; however, the precise materials are not known, as the tenants of the proposed industrial and commercial uses are not yet defined. In the event that hazardous materials, other than those common materials described above, are associated with future warehouse operations, the hazardous materials would only be stored and transported to and from the building sites. Manufacturing and other chemical processing would not occur within the proposed warehouse uses.

Exposure of people or the environment to hazardous materials during operation of the Project may result from (1) the improper handling or use of hazardous substances; (2) transportation accidents; or (3) an unforeseen event (e.g., fire, flood, or earthquake). The severity of any such exposure is dependent upon the type and amount of the hazardous material involved; the timing, location, and nature of the event; and the sensitivity of the individuals or environment affected. As previously discussed, the U.S. Department of Transportation prescribes strict regulations for hazardous materials transport, as described in Title 49 of the Code of Federal Regulations (i.e., the Hazardous Materials Transportation Act); these are implemented by Title 13 of the California Code of Regulations. It is possible that vendors may transport hazardous materials to and from the Project; and the drivers of the transport vehicles must comply with the Hazardous Materials Transportation Act. Hazardous materials or wastes stored on

site are subject to requirements associated with accumulation time limits, amounts, and proper storage locations and containers, and proper labeling. The amount of materials that would be handled at any one time for the proposed warehouse operations would be relatively small. Additionally, for removal of hazardous waste from the site, hazardous waste generators are required to use a certified hazardous waste transportation company which must ship hazardous waste to a permitted facility for treatment, storage, recycling, or disposal. With compliance with applicable regulations, operation of the Project would result in a less than significant impact related to a significant risk to the public or the environment through the potential routine transport, use, or disposal of hazardous materials and no mitigation would be required.

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. Hazardous materials releases can occur if there are existing hazardous materials at the Project site that would be disturbed by Project construction or operation, or if future Project construction or operation activities involve the handling of substantial amounts of hazardous materials with a potential to result in upset and accident conditions. A Phase I Environmental Site Assessment (ESA) was completed for the Project site in May 2020 involving records review, site reconnaissance, and interviews (EARSI 2021; Appendix G). The Phase 1 ESA concluded that the Project site has historically been undeveloped and has been in agriculture use dating back to at least 1901. The Project site is described as flat, recently disked, and without structures. No Recognized Environmental Conditions were documented or identified in the Phase 1 ESA related to potentially hazardous materials (EARSI 2021). Therefore, PVCCSP EIR mitigation measure MM Haz 7 is not required for the proposed Project.

During the temporary, short-term construction period, there is the possibility of accidental release of hazardous substances such as spilling of hydraulic fluid or diesel fuel associated with construction equipment maintenance. The level of risk associated with the accidental release of these hazardous substances is not considered significant due to the small volume and low concentration of hazardous materials. The construction contractor would be required to use standard construction controls and safety procedures to avoid or minimize the potential for accidental release of such substances into the environment. Further, Project operations would involve warehouse and commercial use activities and it is possible that hazardous materials could be used by a future occupant's daily operations; however, future operations at the Project site would be required to comply with all applicable local, State, and federal regulations related to the transport, handling, and usage of hazardous materials. Therefore, the impact of the proposed Project with respect to exposing the public or the environment to hazardous materials through upset and accident conditions would be less than significant and no mitigation would be required.

c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

No Impact. The Project site is not located within one-quarter mile of a school as the school nearest to the Project site is approximately 1.25 miles southeast of the Project site (e.g., May Ranch Elementary School). Furthermore, the use of these materials would be temporary and in accordance with applicable standards and regulations. Therefore, no impact related to the handling of hazardous materials within one-quarter mile of a school 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. Pursuant to Government Code Section 65962.5 (Cortese List) requirements, the State Water Resources Control Board (SWRCB) GeoTracker database (SWRCB 2021) and the California Department of Toxic Substances Control (DTSC) EnviroStor database (DTSC 2021) were searched for hazardous materials sites within the Project site. The Project site is not located within 1,000 feet of an active hazardous materials site according to these databases. Therefore, no impact related to hazardous materials sites is anticipated.

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 site?

Less Than Significant Impact. The nearest airport to the Project site is the MARB/IPA, located approximately 1.5 miles to the northwest. The Perris Valley Airport-L65 is located approximately 5 miles south of the Project site. According to the ALUCP for the Perris Valley Airport, the Project site is not located within the Airport Influence Area Boundary (Riverside County Airport Land Use Commission 2011). However, the proposed Project is located within the 2014 Riverside County Airport Land Use Commission ALUCP for MARB/IPA, the 2018 AICUZ Study, and the City's AOZ. The Project site is within Zone B1/APZ II and Zone C1 per the ALUCP for MARB/IPA. Zone B1/APZ II is the inner approach/departure zone and encompasses areas of high noise and high accident potential risk within the inner portion of the runway approach and departure corridors. Although the City created an Airport Overlay Zone component to the City's land use planning to accommodate development consistent with the land use designations of the ALUCP for MARB/IPA, the Project was required to go through Airport Land Use Commission (ALUC) review and consistency determination because it requires legislative actions (i.e., the requested Specific Plan Amendment and Zoning Amendment).

The Project site is bisected by the two zoning designations from the northwestern to southeastern portion of the Project site. The northwestern, western, and southwestern portion of the Project site fall within Zone B1/APZ II. Approximately 279,313 sf of land area and 119,650 sf of building area are located within this zoning designation. This includes a portion of the trailer parking lot, Driveway 1 to Indian Avenue, Driveway 2 to Ramona Expressway, car parking, and approximately half of the warehouse building. The northern, northeastern, eastern, and southeastern portion of the Project site fall within Zone C1. Approximately 371,037 sf of land area and 118,237 sf of building area fall within this zoning designation. This includes the rest of the trailer parking lot, Driveway 3 to Perris Boulevard, car parking, the commercial area, and half of the warehouse building.

Within Zone C1, aircraft are generally greater than 2,000 feet above runway elevation on arrival and generally great than 3,000 feet above runway elevation on departure. Projects within this Zone would be located beneath or adjacent to low altitude overflight corridors, which has the potential to generate noise at a level that could be potentially disruptive. Noise impacts on the proposed Project are evaluated in Section XIII, Noise.

The MARB/IP ALUCP limits the total number of people permitted on a Project site at any time in APZ II areas. These limitations are as follows:

- Compatibility Zone B1/APZ II Criteria = Limited to an average of 50 people per acre
- Comply with the maximum 50 percent lot coverage per the applicable APZs
- Warehouse – 35% of the usage intensity from 1 person/500 sf
- Office – 1 person / 200 sf
- Single-acre Persons Limit = Limited 100 people in a single acre

The Riverside County ALUC found the Project to be consistent with the MARB/IPA ALUCP subject to conditions outlined in their letter dated April 14, 2022. These conditions include details such as the requirements for future review or studies based on changes to development plans and noticing requirements for aircraft noise. The applicant also agreed to a condition, which shall be recorded and the title of the property, to restrict occupancy to 50 people in any given acre in APZ-II. With adherence to these conditions, the Project would comply with the density requirements of the ALUCP.

The proposed industrial uses do not include any Prohibited Uses of the ALUC, such as children's schools, libraries, and day care centers, nor are they identified as other discouraged developments, such as above ground bulk storage of hazardous materials (i.e., gas stations). The future development of the commercial pad was not considered by the ALUC review. When a specific development is proposed for the commercial pad, it would be subject to the AOZ regulations and zoning restrictions. If it complies with these regulations, City staff could voluntarily provide the development plans to the ALUC for review. Given required compliance with specified land use and safety requirements and/or a consistency determination by the ALUC, impacts related to the commercial land use would be less than significant.

According to Exhibit MA-5 in the Background Data: March Air Reserve Base / Inland Port Airport and Environs, the Project site is within the FAR Part 77 Military Outer Horizontal Surface Limits. However, the Project would be below this surface; therefore, an obstruction evaluation in accordance with PVCCSP EIR mitigation measure MM Haz 6 is not required.

Part of the Project site is within the noise contours of 60 to 65 dBA CNEL for the MARB/IPA. The commercial pad where the hotel could be constructed is outside of the 60 dBA CNEL contour. These noise levels would be compatible with the proposed industrial, office, and hotel land uses. Noise impacts on the proposed Project are further evaluated in Section XIII, Noise.

Although impacts associated with aircraft activities would be less than significant, the proposed Project is required to comply with PVCCSP EIR mitigation measures MM Haz 2 through PVCCSP MM Haz 5 to reduce impacts associated with MARB/IPA operations. Therefore, hazards associated with aircraft operations would be less than significant and no Project-specific mitigation would be required.

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

Less Than Significant Impact. The City participates in the Riverside County Multiagency Multi-Hazard Functional Plan, which outlines requirements for emergency access and standards for emergency responses. Access to the Project site would be via Indian Avenue, North Perris Boulevard, and Ramona Expressway. Project related traffic would be minimal and would not cause a significant increase in congestion. During construction of the Project, heavy construction vehicles could interfere with

emergency response to the site or emergency evacuation procedures in the event of an emergency (e.g., vehicles traveling behind the slow-moving truck). However, such delays would be brief and infrequent. Moreover, as required in the City's Municipal Code Section 10.12.100, no street shall be closed or partially obstructed, or detours established, without approval of the City's traffic engineer. As a result, the Project's impacts 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?

No Impact. According to the Safety Element of the City's General Plan, wildfires typically pose minimal threat to people and buildings in urban areas but increasing human encroachment into natural areas increases the likelihood of bodily harm or structural damage. This encroachment occurs in areas called the wildland-urban interface (WUI), which is considered an area within the high and very high fire hazard severity zone, as defined by Cal FIRE. The Safety Element Wildfire Hazards map shows that the Project site is not located in a Very High Fire Hazard Severity Zone (City of Perris 2022). Therefore, the proposed Project is not anticipated to expose people or structures to wildland fires. No impacts associated with wildland fires would occur and no mitigation would be required.

X. Hydrology and Water Quality

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water 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 off-site?	☐	☐	■	☐
iii. Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional resources of polluted runoff?	☐	☐	■	☐
iv. Impede or redirect flood flows?	☐	☐	■	☐

		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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?	☐	☐	■	☐

Applicable PVCCSP Standards and Guidelines

The PVCCSP includes Standards and Guidelines relevant to water quality and hydrology. These Standards and Guidelines are summarized below, are incorporated as part of the proposed Project, and are assumed in the analysis presented in this section. A preliminary drainage study, prepared by SD& H Associates (SD&H Associates 2021; Appendix H) provided information that is also incorporated into the below analysis.

On-Site Design Standards and Guidelines (Chapter 4.0 of the PVCCSP)

On-Site Standards and Guidelines

Properties within the PVCCSP shall be developed in general conformance with the Land Use Plan. Uses and development standards will be in accordance with the City of Perris Municipal Code Chapter 19 (Zoning/Land Use Ordinance) as amended by the PVCCSP zoning ordinance, and further defined by the Specific Plan objectives, design guidelines, as well as future detailed development proposals including subdivisions, development plans, and conditional use permits. If there are any conflicts between the Specific Plan and the City of Perris Municipal Code, the Specific Plan will supersede. If the Specific Plan is silent on particular subjects, the City shall refer to the Municipal Code for guidance. Except for the Specific Plan Development Standards/Design Guidelines adopted with the PVCCSP no portion of the Specific Plan which purport or propose to change, waive, or modify any ordinance or other legal requirement for development shall be considered to be part of the adopted PVCCSP.

Development of properties governed by the PVCCSP area shall be in accordance with the mandatory requirements of all City of Perris ordinances, including state laws, and shall conform substantially to the PVCCSP, as filed in the office of the City of Perris Development Services Department, unless otherwise amended.

Water Quality Site Design

General Standards. Refer to NPDES Permit Board Order R8-2010-0033 for complete and current information on water quality management standards

Water Quality Management Plan. Most developments are required to implement a Water Quality Management Plan (WQMP) in accordance with the most recently adopted Riverside County Municipal Separate Stormwater Sewer System (MS4) NPDES Permit. The MS4 Permit requires that applicable new development and redevelopment projects implement the following:

- Design the site to minimize imperviousness, detain runoff, and infiltrate, reuse or evapotranspirate runoff where feasible;
- Cover or control sources of stormwater pollutants;
- Use Low-Impact Design (LID) to infiltrate, evapotranspirate, harvest and use, or treat runoff from impervious surfaces;
- Ensure runoff does not create a hydrologic condition of concern; and
- Maintain Stormwater BMPs.

Low Impact Design (LID). According to the State Water Resources Control Board, LID is "a sustainable practice that benefits water supply and contributes to water quality protection." The goal of LID is to mimic a site's predevelopment hydrology. The seven mandatory BMP types to be implemented on project sites:

- Infiltration Basins
- Infiltration Trenches
- Permeable Pavement
- Harvest and Reuse
- Bioretention Facilities
- Extended Detention Basins
- Sand Filter Basins

The NPDES permit requires that the design capture volume be first infiltrated, evapotranspirated, or harvested and reused. When sure retention methods are infeasible, the remainder of the volume can be biotreated. The steps to this approach include:

- Optimize the Site Layout
- Preserve existing drainage patterns
- Protection of existing vegetation and sensitive areas
- Preserve natural infiltration capacity 90 Final Initial Study Minimize impervious area
- Disperse runoff to adjacent pervious areas
- Delineate drainage management areas
- Classify and Tabulate DMAs and determine runoff factors for
    - Self-treating areas
    - Self-retaining areas
    - Areas draining to self-retaining areas
    - Areas draining to BMPs Source Control

Source control features are also required to be implemented for each project as part of the Final WQMP. Source control features include permanent (structural) or operational and are those measures which can be taken to eliminate the presence of pollutants through prevention. Steps to selecting Source Control BMPs include:

- Specify source control BMPs
- Identify pollutant sources
- Note locations on project-specific WQMP exhibit
- Prepare a table and narrative
- Identify operational source control BMPs BMP Features in “Visibility Zone”
- Treatment control BMPs adjacent to the public right-of-way must drain properly to adequate storm drain facilities. If no storm drain is available, alternative drainage shall be proposed for approval by City Engineer. Treatment control BMPs are not to be placed within public right-of-way.
- Open Jointed Surfaces for Sidewalks. Interlocking pavers, porous pavement and pervious concrete or other surfaces.
- Open Jointed Surfaces in Low Traffic Areas. Open jointed surfaces or porous concrete in low traffic areas of parking lots and for patios and sidewalks.
- Filter Strips. Vegetated areas consisting of grass turf or other low lying, thick vegetation intended to treat sheet flow from adjacent impervious areas shall be considered for use adjacent to parking lots, sidewalks, and roads. Filter Strip Adjoining Impervious Surfaces. Filter strips should adjoin impervious surfaces where feasible. Roof Runoff Discharge into Landscape Area.
- Discharge to landscaped areas adjacent to the buildings. Second Treatment of Roof Water. If roof runoff cannot be conveyed without mixing with on-site untreated runoff, the roof runoff will require a second treatment.
- Covered Trash Enclosures. Trash enclosures covers must be provided.

Industrial Design Standards and Guidelines (Chapter 8.0 of the PVCCSP)

8.2.1.8 Water Quality Site Design Runoff from Loading Docks.

Runoff from loading docks must be treated for pollutants of concern prior to discharge from the site. Truck wells. Truck-wells are discouraged due to potential clogging of sump condition storm drain inlets. If used, run-off needs to run through landscape before discharging from site.

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

Less Than Significant Impact. The Santa Ana Regional Water Quality Control Board sets water quality standards for all ground and surface waters within the Project's region. Water quality standards are defined under the Clean Water Act to include both the beneficial uses of specific water bodies and the levels of water quality that must be met and maintained to protect those water quality objectives. The proposed Project site is located within the Santa Ana Watershed and San Jacinto Sub-Watershed. Runoff from the PVCC area, including the Project site, discharges into the Perris Valley Storm Channel, which is tributary to the San Jacinto River, Canyon Lake, and Lake Elsinore.

Activities associated with the construction of the proposed Project would include grading, which may have the potential to release pollutants (e.g., oil from construction equipment, cleaning solvents, paint) and silt off-site which could impact water quality.

Potential water quality impacts associated with the proposed Project would be generally limited to short-term construction-related erosion and sedimentation. During operation, the discharge of minor amounts of fuels or other pollutants associated with automobiles into storm drains during rain events may occur. The Project would include construction of an underground stormwater basin and on-site storm drains in compliance with City design standards. Furthermore, the Project would prepare a WQMP to illustrate how low impact development Best Management Practices (BMPs) have been incorporated into Project construction and design. The WQMP would incorporate BMPs in accordance with the California Stormwater BMPs Handbook and the City's BMP Design Manual to control erosion and protect the quality of surface water runoff.

As required under the NPDES, a SWPPP would be created specifically for construction of the proposed Project. The plan would address erosion control measures that would be implemented to avoid or minimize erosion impacts to exposed soil associated with construction activities. The SWPPP would include a program of BMPs to provide erosion and sediment control and reduce potential impacts to water quality that may result from construction activities. BMPs would include providing gravel bags and silt fences where applicable. Through compliance with the regulatory requirements of the NPDES Statewide General Construction Permit and on-site drainage facilities, the Project is not expected to violate any water quality standards or waste discharge requirements during construction.

Development of the proposed Project would add impervious surfaces to the site through associated parking, loading areas, and drive aisles. By increasing the percentage of impervious surfaces on the site, less water would percolate into the ground and more surface runoff would be generated. Paved areas and streets would collect dust, soil and other impurities that would then assimilate into surface runoff during rainfall events. The Project would be required to comply with the NPDES permit and Waste Discharge Requirements for Riverside County, of which the City is a co-permittee. The City is responsible for discharges into its MS4 facilities to the extent of its legal authority and as required by federal regulations s (40 C.F.R. § 122.26(d)(2)(i)), the City shall control discharges of pollutants into the MS4 to the maximum extent practicable (MEP). Although not held liable for pollutants coming from outside sources, if the City authorizes the connection of other dischargers into their MS4 systems, the City is required by the Order to approve a written WQMP describing post-construction BMPs to control the discharges of pollutants into the MS4 to the MEP. The permittees are responsible for several plans to reduce pollutants in urban runoff, including a WQMP for certain new development and redevelopment

projects. The proposed Project meets the threshold of a Priority Development Project since it involves more than 10,000 sf of impervious surface.

The proposed Project incorporates site design, source controls and treatment control BMPs to address storm water runoff. Thus, through the BMPs combined with compliance with existing regulations such as the implementation of the WQMP, the proposed Project would not violate water quality standards or waste discharge requirements. Therefore, impacts are less than significant and no mitigation would be required.

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 is located within the San Jacinto Groundwater Basin, which underlies the valleys of San Jacinto, Perris, Moreno Valley, and Menifee in western Riverside County. Natural recharge to the San Jacinto groundwater basin is primarily from percolation of flows into the San Jacinto River and its tributary streams, with percolation of water stored in Lake Perris as an additional source of recharge.

While the majority of the site would become impermeable after development, Project design features and BMPs such as the use of impervious or semi-pervious materials and the use of landscaping would facilitate some groundwater recharge and percolation. In addition, due to the proposed Project's small size in relationship to the total size of the San Jacinto Groundwater Basin (approximately 188,000 acres) and implementation of BMPs to be identified in the Project's WQMP, there would not be a substantial effect upon groundwater recharge within the groundwater basin. Furthermore, the Project would rely on domestic water supply and would not require the use of groundwater sources and would not substantially deplete groundwater supplies. Therefore, impacts would be less than significant.

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:

- Result in substantial erosion or siltation on- or off-site, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?

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

Less Than Significant Impact. There are no streams or rivers currently mapped at the Project site. Based on review of historic aerials, drainage on the Project appears to flow from northwest to southeast. According to the Preliminary Drainage Study, Project site runoff drains in a southeasterly direction in a sheet flow manner to a low point located near the southeast corner of the Project. When the capacity of the lump sum is exceeded, the excess flows generally spills into an existing channel/swale located along the southerly edge of the Project (within the City of Perris right-of-way) and this existing concrete channel drains into an existing downstream storm drain system located downstream (northeast of the intersection of Ramona Expressway and Perris Boulevard. Runoff from the remaining portion of the Project (near the northeasterly area) drains toward Perris Boulevard. via surface flow to an existing catch basin near the intersection of Ramona Expressway and Perris Boulevard. The runoff gets conveyed via an existing storm drain system and outlets into the same downstream earthen channel located northeast of the intersection of Ramona Expressway and Perris Boulevard. This earth channel also

receives flows from an existing Perris Valley MDP Lateral Line E-11. From this point, runoff is conveyed via the existing channel in an easterly direction for approximately 0.74 mile until discharging into the existing Riverside County Flood Control District's Perris Valley Storm Drain Channel.

Runoff from the proposed Project will be collected via an underground water quality/treatment and storage basin and conveyed via on-site private storm drainpipes to an off-site flood control detention basin for treatment and flood control mitigation purposes. The Project also plans to construct a 30-inch diameter lateral pipe that can connect into the existing Perris Valley MDP Lateral Line E-11 in Perris Boulevard. and the outlet pipe from the proposed on-site BMP will connect into the lateral pipe. As indicated above, the runoff in the Perris Valley MDP Lateral Line E-11 will discharge into the same existing earthen channel located downstream at the northeast of the intersection Roman Expressway and Perris Boulevard. Since the on-site runoff that used to drain to the southeasterly corner of the Project in the existing condition will now be directed off-site (around the existing business) to a flood control detention basin, the Project will reduce (or possibly eliminate) the on-site flows that is getting to the existing concrete channel (within the City right-of-way, north of Ramona Expressway) and help improve the existing channel capacity situation.

Therefore, the proposed Project will not substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation onsite or offsite. Thus, impacts would be less than significant and no mitigation would be required.

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

Less Than Significant Impact. According to the Safety Element of the City General Plan, the Project site is not located within a Special Flood Hazard Area Inundated by 100-Year Flood Zone. However, the Project site is within the Dam Inundation Area for the Lake Perris Dam (City of Perris 2022). The Department of Water Resources (DWR) has developed The Perris Dam Modernization Project, which is intended to make the dam more seismically resilient. The final phase is the construction of an Emergency Release Facility, which will allow for the safe drawdown of lake water surface levels following a seismic event. This final phase of the project is scheduled to begin construction in 2022 (City of Perris 2022). Therefore, due to the unlikely event of a dam failure and through compliance with all applicable policies contained in the City's General Plan, impacts related to dam inundation are less than significant.

Additionally, the FEMA Flood Map Service Center identifies the Project site as not being mapped within a special flood hazard area (FEMA 2008). Therefore, impacts related to flood hazards would not occur. Tsunamis are usually caused by displacement of the ocean flood causing large waves and are typically generated by seismic activity. The proposed Project is located approximately 34 miles from the Pacific Ocean; therefore, risks from a tsunami are not present for the Project site. A seiche is a standing wave in an enclosed or partly enclosed body of water. Seiches are normally caused by earthquake activity, and can affect harbors, bays, lakes, rivers, and canals. The nearest body of water, Perris Reservoir, is approximately 2 miles away, which is too far to present impacts by a seiche event. Impacts relating to the release of pollutants due to tsunamis or seiches event would not occur.

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

Less Than Significant Impact. Implementation of the Project would not have a substantial effect on groundwater recharge within the overlapping Perris North Groundwater Management Zone of the West

San Jacinto Groundwater Sub-basin. Under the Sustainable Groundwater Management Act (SGMA) passed in 2014 (California Water Code Section 10729[d]), each high and medium priority basin, as identified by the DWR, is required to have a Groundwater Sustainability Agency (GSA) that will be responsible for groundwater management and development of a Groundwater Sustainability Plan (GSP) (DWR 2020a).

The San Jacinto Groundwater Basin is a high priority basin (DWR 2019). The Eastern Municipal Water District (EMWD) Board of Directors is the GSA for the West San Jacinto Groundwater Sub-basin and is responsible for development and implementation of a GSP. The EMWD Board of Directors is required to develop a GSP by 2022 and implement the GSP by 2042. A draft GSP was prepared in April 2021. The final GSP will document the basin conditions and basin management will be based on measurable objectives and minimum thresholds defined to prevent significant and unreasonable impacts to the sustainability indicators defined in the GSP. While the GSP has not been approved for the basin yet, the Project would not conflict with the plan because groundwater would not be used to serve the Project. The Project would be supplied with imported, potable water and recycled water for non-potable water demands and the Project site is not within a groundwater recharge area. Therefore, the Project does not have the potential to conflict or obstruct implementation of a sustainable groundwater management plan and impacts would be less than significant and no mitigation would be required.

XI. Land Use and Planning

		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:					
a)	Physically divide an established community?	☐	☐	☐	■
b)	Cause 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?	☐	☐	■	☐

Applicable PVCCSP Standards and Guidelines

Land Use Plan (Chapter 2.0, PVCCSP)

2.1 Perris Valley Commerce Center Land Use Designations

2.1.1 Industrial Uses

Light Industrial (LI): This zone provides for light industrial uses and related activities including manufacturing, research, warehouse and distribution, assembly of non-hazardous materials and retail related to manufacturing. This zone correlates with the 'Light Industrial' General Plan Land Use designation.

2.1.6 Airport Overly Zone

The Airport Overlay Zone extends from the south end of the runway at March Field, through the central part of the PVCCSP, terminating in the area adjacent to the Rider Street/Perris Boulevard intersection. It is comprised of three distinct areas with specific land uses and land use densities within their respective category. These three areas correspond to the Airport Safety Zones, as established by the 2018 AICUZ Study.

Accident Potential Zone II (APZ-II): This zone prohibits many uses that involve hazardous materials (such as gas stations), and those uses that have higher densities of people per acre. Non-residential development will be limited to those uses that have not more than 50 persons per acre at any time, including hotels and motels. This zone prohibits new residential development, schools, or churches.

a) Physically divide an established community?

No Impact. The Project would develop an existing vacant lot and does not propose any features that would physically divide an established community. Therefore, no impact would occur.

b) Cause 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 proposed Project site is located within the City and within the PVCCSP area. Thus, land use is guided by both the Perris General Plan and the PVCCSP. The proposed Project includes a warehouse building, a construction of a portion of Line E storm drain, and a future commercial development. While the future commercial use located on the 1.61-acre commercial pad is consistent with the PVCCSP Commercial (C) land use designation, the proposed amendment to the PVCCSP would replace the existing Commercial land use and zoning designation on the remainder of the Project site with a Light Industrial land use and zoning designation on approximately 13 acres.

The consistency of the Project with the applicable policies from the City of Perris General Plan that have been adopted for the purpose of avoiding or mitigating an environmental effect is evaluated in Table 12. As shown, the Project would be consistent with the policies of the City's General Plan.

Table 12
GENERAL PLAN CONSISTENCY ANALYSIS

Policy No.	Policy	Statement of Consistency
Land Use Element		
Policy II.A	Require new development to pay its full, fair-share of infrastructure costs.	The Project applicant will pay applicable development impact fees (DIFs) pursuant to City Ordinance No. 1182 to mitigate the cost of public facilities to support new development. Thus, the Project is consistent with Land Use Policy II.A.

Policy No.	Policy	Statement of Consistency
Policy II.B	Require new development to include school facilities or pay school impact fees, where appropriate.	The Project applicant would be required to pay school impact fees, as set by the Val Verde Unified School District. Effective May 4, 2020, the fee would be $0.66 per assessed square foot of constructed commercial or industrial space. Therefore, the Project is consistent with Land Use Policy II.B.
Policy III.A	Accommodate diversity in the local economy.	The warehouse building of the proposed Project is not consistent with the existing Commercial (C) land use designation for the Project site. However, the proposed amendment to the PVCCSP would replace the existing Commercial land use and zoning designation with a Light Industrial (LI) land use and zoning designation for approximately 13 acres. The PVCCSP was adopted by the City to ensure quality, organized development within the Project area vicinity. While development of the Project would change the Project site's designation, it would be consistent with the surrounding land uses. Specifically, surrounding properties include undeveloped areas, and commercial development followed by industrial development to the north; a gas station and a car wash adjacent to and southeast of the Project site; undeveloped areas and commercial development to the east; and undeveloped areas followed by industrial development to the south and west. The Project would assist the City in achieving its goal of building out the PVCCSP planning area and generating revenue and land use diversity for the local economy. Therefore, the proposed Project is consistent with Land Use Policy III.A.
Policy V.A	Restrict development in areas at risk of damage due to disasters.	The proposed Project site is not located within an area of significant risk due to human or natural disasters; therefore, although it would be the responsibility of the City to determine whether development restrictions should be in place, the Project is consistent with Land Use Policy V.A.

Policy No.	Policy	Statement of Consistency
Circulation Element		
Policy II.B	Maintain the existing transportation network while providing for future expansion and improvement based on travel demand, and the development of alternative travel modes.	The proposed Project would not significantly impact the existing transportation network upon implementation of the mitigation measures identified below in Section XVII. PVCCSP EIR mitigation measures would be implemented along with the proposed circulation improvements. Additionally, the Project applicant would participate in payment of the Project's fair share of traffic mitigation fees. Further, installation of sidewalks and bike racks at the Project site would support alternative travel modes such that the Project is consistent with Circulation Policy II.B.
Policy III.A	Implement a transportation system that accommodates and is integrated with new and existing development and is consistent with financing capabilities.	The Project applicant proposes transportation improvements consistent with the increased trips that would be related to the proposed development. The applicant would be responsible for financing the proposed improvements. Therefore, the Project is consistent with Circulation Policy III.A
Policy V.A	Provide for safe movement of goods along the street and highway system.	The Project would be located adjacent to a designated truck route (Indian Avenue) and would only provide truck ingress/egress to this road. These routes allow for the movement of goods without compromising the circulation or safety of local roads. The Project would be consistent with Circulation Policy V.A.
Conservation Element		
Policy II.A	Comply with state and federal regulations to ensure protection and preservation of significant biological resources.	The proposed Project would be consistent with the Multiple Species Habitat Conservation Plan (MSHCP) upon implementation of the mitigation measures identified in Section IV, Biological Resources. Furthermore, the Project applicant would pay applicable fees pursuant to City's Ordinance No. 1123 to offset incremental impacts to biological resources from Project construction and operation. Therefore, the Project is consistent with Conservation Policy II.A.

Policy No.	Policy	Statement of Consistency
Policy III.A	Review all public and private development and construction projects and any other land use plans or activities within the MSHCP area, in accordance with the conservation criteria procedures and mitigation requirements set forth in the MSHCP.	The Project site is located within the Mead Valley Area Plan of the Western Riverside MSHCP. The Project is not within a MSHCP Criteria Cell or Conservation Area. In accordance with the MSHCP, the proposed Project was reviewed for consistency with the MSHCP in Section IV, Biological Resources, and the Project's GBRA-MSHCP, located in Appendix C. The Project would be consistent with the requirements and mitigation set forth in the MSHCP and Conservation Policy III.A.
Policy IV.A	Comply with State and Federal regulations and ensure preservation of the significant historical, archaeological, and paleontological resources.	As detailed in Sections V, Cultural Resources and VII, Geology and Soils, the Project would comply with applicable regulations and implement mitigation measures to ensure preservation of significant historical, archaeological, and paleontological resources. Therefore, the Project is consistent with Conservation Policy IV.A.
Policy V.A	Coordinate land-planning efforts with local water purveyors.	The EMWD is the local water purveyor and has been involved with utility planning for the proposed land uses at the Project site. Water-related improvements are detailed in Section 1.5, Project Components. The Project is consistent with Conservation Policy V.A.
Policy VI.A	Comply with requirements of the National Pollutant Discharge Elimination System (NPDES).	As required under the NPDES, a SWPPP would be created for construction of the proposed Project. The Project would also be required to comply with the NPDES permit and Waste Discharge Requirements for Riverside County during operation. The Project would be consistent with Conservation Policy VI.A
Policy VIII.A	Adopt and maintain development regulations that encourage water and resource conservation.	The Project would be subject to local development regulations designed to encourage water and resource conservation. For example, proposed plant materials would have either low or moderate water needs. The Project would therefore be consistent with Conservation Policy VIII.A.
Policy VIII.B	Adopt and maintain development regulations that encourage recycling and reduced waste generation by construction projects.	The proposed Project would be required to comply with applicable local, State, and federal solid waste management regulations. For example, the Project must develop a collection program for recyclables and comply with practices enacted by the City under the California Integrated Waste Management Act of 1989 (AB 939). The Project would be consistent with Conservation Policy VIII.B.

Policy No.	Policy	Statement of Consistency
Noise Element		
Policy I.A	The State of California Noise/Land Use Compatibility Criteria shall be use in determining land use compatibility for new development.	These criteria, as adopted by the City's General Plan Noise element, were used in the Project's noise study (Appendix I) to evaluate land use compatibility related to the Project. The proposed uses are compatible with existing noise. Therefore, the Project is consistent with Noise Policy I.A.
Policy V.A	New large scale commercial or industrial facilities located within 160 feet of sensitive land uses shall mitigate noise impacts to attain an acceptable level as required by the State of California Noise/Land Use Compatibility Criteria.	As the Project proposes an industrial land use within 160 feet of a sensitive land use (a residence), the Project's Acoustical Analysis (Appendix I) considered whether the Project would generate noise in excess of 60 CNEL, at the nearby residence. Operation of the warehouse would not exceed this threshold. When precise plans for the commercial pad and hotel become available, an acoustical analysis would be required to demonstrate compliance with this policy. The Project would comply with Noise Policy V.A.
Safety Element		
Policy S-2.1	Require road upgrades as part of new developments/major remodels to ensure adequate evacuation and emergency vehicle access. Limit improvements for existing building sites to property frontages.	The Project applicant proposes multiple road upgrades to accommodate the three Project driveways. Stop controls would be installed and intersections would be constructed in accordance with the specifications of the Project's traffic analysis included as Appendix J. The Project would be consistent with Safety Policy S-2.1.
Policy S-2.2	Require new development or major remodels include backbone infrastructure master plans substantially consistent with the provisions of "Infrastructure Concept Plans" in the Land Use Element.	The Project includes proposed vehicular access improvements and stormwater infrastructure consistent with the provisions contained in the Land Use Element, including Safety Policy S-2.2.
Policy S-2.5	Require all new developments, redevelopments, and major remodels to provide adequate ingress/egress, including at least two points of access for sites, neighborhoods, and/or subdivisions.	The Project would include three driveways, with two dedicated to passenger vehicles and one dedicated to trucks. Based on the Project's traffic study (Appendix J), these driveways and associated roadway improvements would provide adequate ingress/egress. The Project is consistent with Safety Policy S-2.5.
Policy S-4.1	Restrict future development in areas of high flood hazard potential until it can be shown that risk is or can be mitigated.	The Project is not located in an area of high flood hazard according to the Safety Element. Therefore, the Project is consistent with Safety Policy S-4.1

Policy No.	Policy	Statement of Consistency
Policy S-4.3	Require new development projects and major remodels to control stormwater run- off on site.	An underground water quality treatment and storage basin would capture storm flows that could otherwise be directed and erode loose soils across the site. The Project's WQMP and SWPPP must be approved by the City Engineer prior to the issuance of grading permits. Therefore, the Project is consistent with Safety Policy S-4.3.
Policy S-4.4	Require flood mitigation plans for all proposed projects in the 100-year floodplain (Flood Zone A and Flood Zone AE).	The Project site is not within the 100-year floodplain and therefore is consistent with Safety Policy S-4.4.
Policy S-4.5	Ensure areas downstream of dams within the City are aware of the hazard potential and educated on the necessary steps to prepare and respond to these risks.	The applicant is aware of the Project's location in the Dam Inundation Zone identified in the Safety Element. Due to the dam's upgrades a flooding event is unlikely to occur. The Project is consistent with Safety Policy S-4.5.
Policy S-5.3	Promote new development and redevelopment in areas of the City outside the VHFHSZ and allow for the transfer of development rights into lower-risk areas, if feasible.	The site is outside of the Very High Fire Hazard Severity Zone (VHFHSZ) and therefore in a low-risk area. No transfer of development rights would be necessary to decrease fire risk but the proposed development would keep development outside of the VHFHSZ. The Project is consistent with Safety Policy S-5.3.
Policy S-5.6	All developments throughout the City Zones are required to provide adequate circulation capacity, including connections to at least two roadways for evacuation.	The Project would provide adequate circulation capacity and would include connections to all three of the roadways adjacent to the Project site. The Project is therefore consistent with Safety Policy S-5.6.
Policy S-5.10	Ensure that existing and new developments have adequate water supplies and conveyance capacity to meet daily demands and firefighting requirements.	Project utilities have been designed to ensure the development has adequate supplies for both daily demands and firefighting requirements in compliance with Safety Policy S-5.10.
Policy S-6.1	Ensure new development and redevelopments comply with the development requirements of the AICUZ Land Use Compatibility Guidelines and ALUP Airport Influence Area for March Air Reserve Base.	The Project required review by the Riverside County ALUC to ensure consistency with the applicable plans and development requirements related to the MARB/IPA. The ALUC reviewed the Project and found it consistent with the applicable policies. Therefore, the Project is consistent with Safety Policy S-6.1.
Policy S-6.2	Effectively coordinate with March Air Reserve Base, Perris Valley Airport, and the March Inland Port Airport Authority on development within its influence areas.	As stated above, the Project applicant has coordinated with the Riverside County ALUC, which issued a requirement for the applicant to record an aviation easement to the March Inland Port Airport Authority. The March Inland Port Airport Authority was also notified of the ALUC review. The Project is consistent with Safety Policy S-6.2.

Policy No.	Policy	Statement of Consistency
Policy S-6.3	Effectively coordinate with March Air Reserve Base and Perris Valley Airport on development within its influence areas.	As stated above, the Project applicant has coordinated with the applicable ALUC and Airport Authority regarding the Project and is therefore consistent with Safety Policy S-6.3.
Policy S-7.1	Require all development to provide adequate protection from damage associated with seismic incidents.	Engineering and construction of the Project would be required to be in conformance with the ICC, IBC, CBC, and other applicable standards to protect from seismically induced damage. Based on the Project's distance from active faults and other geologic characteristics, there are minimal seismic risks associated with the Project site. The Project is consistent with Safety Policy S-7.1.
Policy S-7.2	Require geological and geotechnical investigations by State-licensed professionals in areas with potential for seismic and geologic hazards as part of the environmental and development review and approval process.	A Geotechnical Engineering Investigation was prepared by NORCAL Engineering and a registered engineer. The report is attached to this IS/MND as Appendix E. The Project is consistent with Safety Policy S-7.2.
Healthy Community Element		
Policy HC 1.3	Improve safety and the perception of safety by requiring adequate lighting, street visibility, and defensible space.	Proposed lighting is anticipated to include a combination of operational, street, and security lighting on the building's exterior and in parking areas that would conform to the Title 24 and City standards that regulate outdoor lighting. The transportation analysis provided design requirements for safe circulation. The Project is not in a VHFHSZ and does not have adjacent wildlands that require excess defensible space. No landscaping would be installed which would exacerbate fire risks. The Project would comply with Policy HC 1.3.

Policy No.	Policy	Statement of Consistency
Policy HC 6.3	Promote measures that will be effective in reducing emissions during construction activities • Perris will ensure that construction activities follow existing South Coast Air Quality Management District (SCAQMD) rules and regulations • All construction equipment for public and private projects will also comply with California Air Resources Board's vehicle standards. For projects that may exceed daily construction emissions established by the SCAQMD, Best Available Control Measures will be incorporated to reduce construction emissions to below daily emission standards established by the SCAQMD • Project proponents will be required to prepare and implement a Construction Management Plan which will include Best Available Control Measures among others. Appropriate control measures will be determined on a project by project basis, and should be specific to the pollutant for which the daily threshold is exceeded	Construction activities would follow SCAQMD and CARB rules and regulations and would not generate a significant impact. As there are no pollutants for which the Project's construction activities would exceed daily thresholds, the applicant would not be required to submit a Construction Management Plan that includes Best Available Control Measures and other applicable measures. The Project would implement the applicable PVCCSP EIR mitigation measures and would comply with Policy HC 6.3.

Policy No.	Policy	Statement of Consistency
Environmental Justice Element		
Goal 3.1 Policy	Continue to ensure new development is compatible with the surrounding uses by co-locating compatible uses and using physical barriers, geographic features, roadways or other infrastructure to separate less compatible uses. When this is not possible, impacts may be mitigated using: noise barriers, building insulation, sound buffers, traffic diversion.	The proposed Project is consistent with surrounding commercial and industrial land uses. The residential land uses are non-conforming but would be separated from the proposed Project by a 13-foot noise barrier to achieve acceptable noise levels. The Project is consistent with this Environmental Justice policy.
Goal 3.1 Policy	Support identification, clean-up and remediation of local toxic sites through the development review process.	A Phase I ESA was completed for the project and is attached to this IS/MND as Appendix G. No Recognized Environmental Conditions were documented or identified in the Phase 1 ESA related to potentially hazardous materials. The Project is consistent with this Environmental Justice policy.
Goal 3.1 Policy	Encourage smoke-free/vape-free workplaces, multi-family housing, parks, and other outdoor gathering places to reduce exposure to second-hand smoke. As part of the development review process, require conditions that promote Good Neighbor Policies for Industrial Development for industrial buildings larger than 100,000 square feet. The conditions shall be aimed at protecting nearby homes, churches, parks, day-care centers, schools, and nursing homes from air pollution, noise lighting, and traffic associated with large warehouses, making them a "good neighbor."	The City has not adopted official Good Neighbor Policies for development projects. However, the Project would not result in significant impacts related to the identified issues. The Project would not generate unacceptable noise at the nearby residence. Traffic improvements would be constructed by the Project. Further, the Project would conform with policies to prevent light and air pollution. The Project would be consistent with this Environmental Justice Policy.
Goal 5.1 Policy	Require developers to provide pedestrian and bike friendly infrastructure in alignment with the vision set in the City's Active Transportation Plan or active transportation in-lieu fee to fund active mobility projects.	The Rider Street Bike Trail would be accessible from the Project site and bike stalls would be installed around the primary office area and main entrances. Crosswalks would be installed for safety at intersections. The development fee action (A4.5) of the City's Active Transportation Plan has not yet been reflected in the development fee schedule. The Project is consistent with this Environmental Justice policy.

According to data presented in the SCAG's Employment Density Summary Report, average employment densities for commercial uses in the region range from a high of 175.49 employees per acre (high-rise office) to a low of 19.71 employees per acre (regional retail). Average employment densities for light industrial uses are 17.83 employees per acre for light manufacturing and 11.4 employees per acre for warehouse (SCAG 2001). Therefore, changing the land use designation from Commercial to Light Industrial would not result in additional employment growth beyond what would have been assumed for the development of the Commercial land use. Forecasts from the Connect SoCal Plan project an increase of 10,300 employees between 2016 and 2045 in the City. The Project therefore is consistent with SCAG's Connect SoCal forecasts.

The Connect SoCal 2020-2045 RTP/SCS (2020) contains ten regional goals that provide guidance for considering projects based on SCAG's long-range planning strategies. Table 13 provides analysis of the consistency of the Project with the policies from the Connect SoCal Plan. As shown, the proposed Project would achieve the goals of the Connect SoCal Plan.

Table 13
SCAG CONNECT SOCAL GOALS AND PROJECT CONSISTENCY

SCAG Goals	Statement of Consistency
Goal 1: Encourage regional economic prosperity and global competitiveness.	The introduction of the warehouse and future commercial development would provide jobs in a housing-rich area with limited job opportunities.
Goal 2: Improve mobility, accessibility, reliability, and travel safety for people and goods.	Roadway improvements are a component of the proposed Project that would improve vehicular circulation. The Rider Street Bike Trail would be accessible from the Project site and bicycle parking would be provided at the site. Pedestrian safety would be established through the separation of truck areas from passenger areas. Goods distribution would be improved by the availability of the warehouse nearby the existing truck route. The Project would be consistent with Goal 2.
Goal 3: Enhance the preservation, security, and resilience of the regional transportation system.	See analysis of Goal 2. The Project would provide roadway improvements on the three roadways surrounding the Project site and would be consistent with Goal 3.
Goal 4: Increase person and goods movement and travel choices within the transportation system.	The development would provide a warehouse near the existing truck route, which would increase goods movement choices. The Project would be consistent with Goal 4.
Goal 5: Reduce greenhouse gas emissions and improve air quality.	The Project would be constructed in accordance with the energy-efficiency standards, water reduction goals, and other standards required by the 2019 Title 24 Standards and CALGreen Building Standards. In addition, the Project would implement measures from the City's CAP such as bicycle parking, sidewalks, and transit demand management. The Project would be consistent with Goal 5.
Goal 6: Support healthy and equitable communities.	The Project would provide a variety of job opportunities within the local economy to support a more equitable community. The increase in jobs would reduce long commutes from home to work. The Project would be consistent with Goal 6.

SCAG Goals	Statement of Consistency
Goal 7: Adapt to a changing climate and support an integrated regional development pattern and transportation network.	The Project would provide a warehouse in close proximity to an existing truck route, which can provide distribution within the region. The Project would be consistent with Goal 7.
Goal 8: Leverage new transportation technologies and data-driven solutions that result in more efficient travel.	The Project would be required to comply with SCAQMD Rule 2305, which applies to new warehouses greater than 100,000 sf. The rule aims to facilitate emission reductions associated with warehouses and their mobile sources. The Project owner and future tenants would continue to be responsible for compliance with evolving regulations related to emissions and efficiency. The Project would be consistent with Goal 8.
Goal 9: Encourage development of diverse housing types in areas that are supported by multiple transportation options.	The Project does not propose any residential uses; therefore, Goal 9 is not applicable to the proposed Project.
Goal 10: Promote conservation of natural and agricultural lands and restoration of habitats.	The Project site does not contain agricultural lands. Impacts to waters of the State would be mitigated at a 2:1 ratio through the purchase of credits and the Project applicant would pay the LDMF in compliance with the MSCHP. Therefore, the Project would be consistent with Goal 10.

Impacts associated with conflicts with land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect would be less than significant and no mitigation would be required.

XII. Mineral Resources

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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?	☐	☐	☐	■

Applicable PVCCSP Standards and Guidelines

There are no Standards and Guidelines or mitigation measures related to mineral resources included in the PVCCSP or associated PVCCSP EIR.

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?

No Impact. The CDC classifies the availability of mineral resources in a region into four mineral resource zone (MRZ) categories: MRZ 1 for no mineral resources, MRZ 2 for significant resources areas with the quality and quantity known, MRZ 3 for significant resource areas with the quality and quantity unknown,

and MRZ 4 for areas with no information. According to the City's General Plan, the CDC is primarily interested in the preservation of significant resources in MRZ 2 regions. The land within the City, including the Project site, is classified as MRZ 3 and MRZ 4, which are not considered to be significant resource areas (City of Perris 2005). 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 and the residents of the state. No impacts to mineral resources would occur.

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?

No Impact. As stated above in question a), the City's General Plan does not consider the Project site to be a significant mineral resource area. Additionally, the Project site is not used for mineral extraction and is not known as a locally important mineral resource recovery site. Further, the Project site is not delineated on any plan for mineral resource recovery uses. No impacts to mineral resource availability would occur.

XIII. Noise

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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?	☐	☐	■	☐

An Acoustical Analysis Report prepared by HELIX (HELIX 2022e) for the proposed project is attached to this IS/MND as Appendix I. Its findings and recommendations are incorporated into the following analysis.

Applicable PVCCSP Standards and Guidelines

The PVCCSP Standards and Guidelines relevant to the analysis of noise impacts presented in this IS/MND and summarized below are incorporated as part of the proposed Project and assumed in the analysis presented in this section.

The PVCCSP EIR mitigation measures that are applicable to the proposed Project are incorporated in the following analysis.

MM Noise 1 During all project site excavation and grading on-site, the construction contractors shall equip all construction equipment, fixed or mobile, shall be equipped with properly operating and maintained mufflers consistent with manufacturer's standards. The construction contractor shall place all stationary construction equipment so that emitted noise is directed away from the noise sensitive receptors nearest the project site.

MM Noise 2 During construction, stationary construction equipment, stockpiling and vehicle staging areas will be placed a minimum of 446 feet away from the closet sensitive receptor.

MM Noise 3 No combustion-powered equipment, such as pumps or generators, shall be allowed to operate within 446 feet of any occupied residence unless the equipment is surrounded by a noise protection barrier.

MM Noise 4 Construction contractors of implementing development projects shall limit haul truck deliveries to the same hours specified for construction equipment. To the extent feasible, haul routes shall not pass sensitive land uses or residential dwellings.

MM Noise 5 New sensitive land uses, including residential dwellings, mobile homes, hotels, motels, hospitals, nursing homes, education facilities, and libraries, to be located within the PVCC shall be protected from excessive noise, including existing and projected noise. Attenuation shall be provided to ensure that noise levels do not exceed an exterior standard of 60 dBA (65 dBA is conditionally acceptable) in outdoor living areas and an interior standard of 45 dBA in all habitable rooms. Specifically, special consideration shall be given to land uses abutting Ramona Expressway from Redlands Avenue to Evans Road and from Evans Road to Bradley Road; Rider Street from Evans Road to Bradley Road; Placentia Avenue from Perris Boulevard to Redlands Avenue, from Redlands Avenue to Wilson Avenue, from Wilson Avenue to Murrieta Road, and from Murrieta Road to Evans Road. Perris Boulevard from Orange Avenue to Placentia Avenue and from San Michele Road to Krameria Avenue; and Redlands Avenue from Nuevo Road to Citrus Avenue, from Citrus Avenue to Orange Avenue and from Orange Avenue to Placentia Avenue.

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 with Mitigation Incorporated.

Temporary Increase in Ambient Noise Levels (Construction)

The Project would generate temporary increases in noise during its construction. Construction of the project would require site clearing, grading, installation of underground utilities/infrastructure, construction of new buildings, paving, and architectural coating. The magnitude of the noise impact would depend on the type of construction activity, equipment, duration of each construction phase, distance between the noise source and receiver, and any intervening structures. Construction would

generate elevated noise levels that may disrupt the nearby non-conforming residence to the north. Construction equipment would be continuously moving across the site, and equipment is not anticipated to be located at a single location during a typical workday. The Project's noise study therefore modeled construction equipment at an average distance of 100 feet from the nearest non-conforming residence to the north of the Project.

The City's Municipal Code restricts construction to the hours of 7:00 am and 7:00 pm or on Sundays or applicable holidays. Additionally, construction noise would be significant if it exceeds a maximum level (L_{MAX}) of 80 A-weighted decibels (dBA). The Project would comply with the Municipal Code restrictions on construction hours, and the loudest construction equipment (an excavator, loader, and dump truck used together) would generate noise levels of 74.7 dBA L_{MAX} at 100 feet, below the 80 dBA L_{MAX} requirement.

During the grading period, there would be an average of 22 hourly haul truck passes for each of the 21 days of grading work. The segment of Indian Avenue nearest the residence carries 4,850 vehicle trips per day. An additional 22 trips per hour would temporarily increase the hourly noise level along that roadway from 58.7 dBA to 59.9 dBA. This would not exceed the 80 dBA L_{MAX} limits set by the Municipal Code. Although traffic noise levels would increase temporarily during the 21-day grading phase, impacts would be less than significant.

Although impacts from construction noise would be less than significant, the project would be required to comply with PVCCSP EIR mitigation measures MM Noise 1 through MM Noise 4, which further limit noise generated by construction equipment.

Permanent Increase in Ambient Noise Levels (Warehouse Operation)

The Project's proposed loading dock area, HVAC units, trash compactor, and increase in traffic would generate elevated noise levels compared to existing conditions. The nearest noise-sensitive land uses to these operations is the nonconforming residence to the north of the Project. The Project's primary operational noise sources would be located within the delivery area, the northern portion of which is adjacent to the Project boundary. Truck deliveries may take place within 130 feet of the Project boundary, and trailer parking may take place at closer distances. Delivery trucks were assumed to involve diesel-powered heavy trucks, with seven truck trips during the peak hour entering and exiting the site (Urban Crossroads 2022). Because the exact schedule and docking locations for a given day cannot be determined, it is conservatively assumed that three individual trucks each hour would be attempting to use the loading docks within the Project's northwestern corner closest to the off-site nonconforming residence. Noise sources associated with the delivery trucks would include the truck's diesel engine and backup alarm.

Per the City General Plan Noise Element, impacts would be significant if a commercial or industrial Project is located within 160 feet of a sensitive land use and the noise levels generated by the Project would exceed the CNEL of 60 dBA at the sensitive land use. Modeling of the Project's deliveries and stationary equipment indicated that noise levels at the nonconforming residence to the north would be up to 51.9 dBA CNEL, which would not exceed the 60 dBA CNEL limit. Operational noise impacts related to the warehouse use would be less than significant.

Permanent Increase in Ambient Noise Levels (Hotel Use)

As the exact site layout and design of the hotel use are unknown, its noise sources are not specifically known. A hotel's noise sources are anticipated to include HVAC units for heating and cooling of the hotel's rooms and common spaces. Because the exact location, size, and noise output of the future HVAC system is not known, impacts from noise generated by the hotel component of the Project are conservatively assessed as significant. Project mitigation measure NOI-1 would be required to ensure that noise levels from the hotel are reduced to a less than significant level.

Permanent Increase in Ambient Noise Levels (Traffic)

The Project would generate vehicular traffic along nearby roadways. Project traffic utilizing Indian Avenue would have the highest potential to result in increased noise levels due to the number of delivery trucks and the existing low traffic levels as compared to Ramona Expressway and Perris Boulevard. Modeling of traffic conditions was used to calculate the noise contour distances for Indian Avenue under existing conditions and post-Project conditions. The off-site roadway modeling represents a conservative analysis that does not consider topography or attenuation provided by existing structures. Traffic noise levels presented in this analysis are based on traffic volumes provided in the Project's traffic study (Urban Crossroads 2022).

As described in the SVCCSP EIR, impacts would be significant when existing noise levels are less than 60 dBA CNEL and the Project generates an increase in noise levels by 5 dBA CNEL or more. As measured at the nearby nonconforming residence just north of the Project, noise levels generated by Indian Avenue from Project traffic were modeled levels to increase by 1 dBA CNEL when compared to existing conditions. This increase would not be a perceptible increase and noise impacts from Project-generated traffic would be less than significant. Project traffic for other roadways in the Project vicinity would be less than those analyzed for this segment of Indian Avenue and would be on roadways with higher existing volumes. Therefore, noise increases from Project traffic on all nearby roadways would be less than significant.

Project Mitigation Measures

MM Noise 1 Noise levels from operational noise generated by the project's hotel component shall not exceed 60 dBA CNEL when measured at nearby sensitive land uses (including residences). When plans for the hotel component become available, an acoustic analysis shall be performed for the hotel's operational noise sources. This includes, but is not limited to, HVAC units and emergency generators. If the analysis determines that noise levels would exceed noise limits, noise reduction measures will be implemented as part of the hotel design. These noise reduction measures may include architectural parapets, or on-site sound barriers (wall).

If a barrier is used to shield noise for nearby NSLUs, it shall be located between the noise source and noise-sensitive receptor. The barrier must be solid. It can be constructed of masonry, wood, plastic, fiberglass, steel, or a combination of those materials, as long as there are no cracks or gaps, through or below the wall. Any seams or cracks must be filled or caulked. If wood is used, it can be tongue and groove and must be at least one-inch total thickness or have a density of at least 3½ pounds per square foot. The barrier must be an adequate height to break the line-of-sight between the noise source and receptor.

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

Less Than Significant Impact. Construction activities known to generate excessive ground-borne vibration, such as pile driving, would not be conducted by the Project. A possible source of vibration during general Project construction activities would be a vibratory roller used for gravel or pavement compaction. A vibratory roller could be used up to 100 feet from the closest off-site structure (gas station to the east). A vibratory roller would create approximately 0.210 inch per second PPV at 25 feet (Caltrans 2013b). A 0.210 inch per second PPV vibration level would equal 0.046 inch per second PPV at a distance of 100 feet.[2] This would be lower than what is considered a "strongly perceptible" level for humans of 0.1 inches per second PPV, and lower than the structural damage threshold of 0.5 inches per second PPV for continuous/frequent intermittent construction sources. Therefore, although a vibratory roller may be perceptible to nearby human receptors, temporary impacts associated with the roller (and other potential equipment) would be less than significant and no mitigation would be required.

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 with Mitigation Incorporated. As noted under question e) in Section IX, the nearest airports to the proposed Project site are MARB/IPA and the Perris Valley Airport. According to the ALUCP for Perris Valley Airport, the Project site is not located within the Airport Influence Area Boundary (Riverside County 2010). However, the proposed Project is located within the limits of the MARB/IPA ALUCP. The eastern portion of the Project site falls within the MARB's CNEL noise contours above 60 dBA CNEL but below 65 dBA CNEL. The City General Plan states that office uses are normally compatible up to 65 dBA CNEL and conditionally compatible up to 70 dBA CNEL. The Project would provide office areas along the southwestern corner of the building. The Project's office components would be located outside the 65 dBA CNEL contour and would therefore be compatible with the General Plan. Hotel uses would be normally compatible up to 60 dBA CNEL and conditionally compatible up to 70 dBA CNEL. The hotel portion of the project would be located outside the 60 dBA CNEL contour, and would therefore be compatible with the General Plan as it relates to airport noise exposure.

PVCCSP EIR MM Noise 5 would require new noise-sensitive land uses, such as the hotel, to ensure that exterior noise levels do not exceed 60 dBA and interior noise levels do not exceed 45 dBA. This measure would apply to the hotel use and would account for noise generated by nearby roadways, such as Ramona Expressway and Perris Boulevard.

[2] Equipment PPV = Reference PPV * $(25/D)^n$ (in/sec), where Reference PPV is PPV at 25 feet, D is distance from equipment to the receiver in feet, and n = 1.1 (the value related to the attenuation rate through the ground); formula from Caltrans 2013b.

XIV. Population and Housing

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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?	☐	☐	☐	■

Applicable PVCCSP Standards and Guidelines

There are no Standards and Guidelines or mitigation measures related to population and housing resources included in the PVCCSP or associated PVCCSP EIR.

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. The proposed Project does not include residential development that would directly or indirectly affect the number of residents in the area and would not contribute to the creation of additional housing in the City. The Project includes uses that would not be of a magnitude to support additional population growth in the area. The proposed Project concept would include a warehouse building and future commercial use, analyzed as a hotel. Therefore, since the Project is intended to serve the existing population and has no other features that would directly or indirectly induce growth, impacts would be less than significant and no mitigation would be required.

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

No Impact. The proposed Project includes the development of industrial and commercial uses on vacant land that is not currently used for housing. The proposed Project would not remove housing and would not displace substantial numbers of people or housing, necessitating the construction of replacement housing elsewhere. There would be no impacts associated with displacing people and no mitigation would be required.

XV. Public Services

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
a) Fire protection?	☐	☐	■	☐
b) Police protection?	☐	☐	■	☐
c) Schools?	☐	☐	☐	■
d) Parks?	☐	☐	☐	■
e) Other public facilities?	☐	☐	☐	■

Applicable PVCCSP Standards and Guidelines

There are no PVCCSP EIR mitigation measures related to public services. The PVCCSP Standards and Guidelines relevant to the analysis of impacts to public services summarized below are incorporated as part of the proposed Project and assumed in the analysis presented in this section.

On-Site Design Standards and Guidelines (Chapter 4.0 of the PVCCSP)

4.2.1 Crime Prevention Measures

Development projects should take precautions by installing on-site security measures. Security and safety of future users of facilities constructed within the PVCCSP should be considered in the design concepts for each individual development proposal such as:

- Sensored lights that automatically operate at night
- Installation of building alarm, fire systems, and video surveillance
- Special lighting to improve visibility of the address
- Graffiti prevention measures such as vines on wall and anti-graffiti covering
- Downward lighting through development site.

Off-Site Design Standards and Guidelines (Chapter 5.0 of the PVCCSP

5.4 Off-Site Infrastructure Standards

All water facilities shall be sized to provide adequate fire protection per the requirements of the City of Perris Building and Safety Department.

a) Fire protection?

Less Than Significant Impact. The proposed Project would include the construction and operation of a warehouse facility and future commercial use that would require fire protection services; however, no new residential uses or other uses that would increase the City's population would be involved. The City contracts with the Riverside County Fire Department to provide fire protection services within the City and has two fire stations within its boundaries that are served by 14 firefighters (City 2021). The two fire stations are located at 210 W. San Jacinto Avenue (Station No. 1) and 333 Placentia Avenue (Station No. 90) and are located approximately 4.0 and 1.6 miles from the Project site, respectively. As such, the nearest fire station and presumed first responder is Station No. 90. While the Project site is identified for commercial development and the proposed Project would allow for industrial and commercial uses, the Project would not spur the growth of the region in an unplanned manner that would require the construction of new or expanded fire protection facilities. However, the Project sponsor would be required to pay a Development Impact Fee (DIF) for fire services that would support fire protection services at the Project site. Therefore, impacts would be less than significant and no mitigation would be required.

b) Police protection?

Less Than Significant Impact. The proposed Project would include the construction and operation of warehouse facility and future commercial use that would require police protection services; however, no new residential uses or other uses that would increase the City's population would be involved. The City contracts with the Riverside County Sheriff's Department to provide police protection services within the City and has a police station located at 137 North Perris Boulevard, approximately 4.0 miles south of the Project site. While the Project site is identified for commercial development and the proposed Project would allow for industrial and commercial uses, the Project would not spur the growth of the region in an unplanned manner that would place unexpected future demands on existing police protection services. The Project would also not represent a use that would require unique or expanded police protection services. As a result, the Project itself is not expected to require the construction of new or expanded police protection facilities; however, the Project sponsor would be required to pay a Development Impact Fee (DIF) that would support police protection services at the Project site. Therefore, impacts would be less than significant and no mitigation would be required.

c) Schools?

No Impact. The proposed Project involves the construction and operation of warehouse and commercial facilities. It is not anticipated to introduce new residents to the Project site that would generate new students and require additional schools. No impacts related to schools would occur.

d) Parks?

No Impact. The proposed Project involves the construction and operation of a warehouse facility and future commercial use. It is not anticipated to result in increased use or demand on parks that would require the construction or expansion of additional park and recreational facilities. Therefore, there would be no impact.

e) Other public facilities?

No Impact. Other public facilities may include libraries, senior centers, community centers, and pools, all of which are intended to serve the general public. The proposed Project involves the construction and operation of a warehouse facility and future commercial use and would not result in increased demand on these services that would require the construction or expansion of other public facilities. Therefore, there would be no impact.

XVI. Recreation

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) 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?	☐	☐	☐	■

Applicable PVCCSP Standards and Guidelines

There are no PVCCSP EIR mitigation measures related to recreation. The PVCCSP Standards and Guidelines relevant to recreation summarized below are incorporated as part of the proposed Project and assumed in the analysis presented in this section.

Industrial Design Standards and Guidelines (Chapter 8.0 of the PVCCSP)

8.2.1.4 Employee Break Areas and Amenities

- An outdoor break area should be provided at each office area location.
- Buildings exceeding 100,000 sf shall require employee amenities such as, but not limited to, cafeterias, exercise rooms, locker rooms and shower, walking trails, and recreational facilities.
- Site design should consider pedestrian access when adjacent to area wide open space, trails, parks, or other community amenities.

a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

No Impact. The proposed Project consists of construction and operation of a warehouse facility and future commercial use. The Project would not increase the use of or create the need for new parks and recreational facilities. Similarly, the proposed Project would not result in physical deterioration of an existing open space area or any recreation facilities. Therefore, there would be no impact.

b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

No Impact. The proposed Project consists of construction and operation of a warehouse facility and future commercial use that would not require or result in the need to construct or expand recreational facilities. Therefore, there would be no impact.

XVII. Transportation

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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?	☐	☐	■	☐

A Traffic Analysis prepared by Urban Crossroads (2022) was prepared for the proposed Project and is attached to this IS/MND as Appendix J. Its findings and recommendations are incorporated into the following analysis.

Applicable PVCCSP Standards and Guidelines

The PVCCSP Standards and Guidelines summarized below relevant to the analysis of transportation/traffic presented in this Initial Study are incorporated as part of the proposed Project and assumed in the analysis presented in this section. Additionally, a Traffic Study was prepared by Urban Crossroads for the proposed Project (Appendix J). The information and recommended measures provided in that report are also incorporated into the analysis below.

Infrastructure Plan (Chapter 3.0 of the PVCCSP)

3.1 Circulation

The Circulation Plan provides Standards and Guidelines intended to ensure the safe and efficient movement of people and goods within the PVCCSP area, as well as meeting the future transportation needs City-wide.

3.2 Vehicular Circulation

Freeway

Interstate-215 (North-South): Interstate-215 runs along the Western boundary of the PVCC. Existing Freeway on and off-ramps are located at Harley Knox Boulevard and Ramona Expressway. Placentia Avenue is a planned future interchange

Expressways

An expressway is a limited access divided highway built to accommodate high-speed travel by automobiles within a 184-foot right-of-way. At least two traffic lanes in each direction are physically separated within a 134-foot curb-to-curb width.

Arterials

An arterial serves major traffic movements or major traffic corridors within 128-foot right-of-way. While they may provide access to abutting land, their primary function is to serve traffic moving through the area. Arterial streets generally have a curb-to-curb width of 94-feet.

A secondary arterial is intended to carry local traffic between the local street system and the primary arterial system. Arterial streets generally vary from a curb-to-curb width of 64-feet to 70-feet and may have one or two lanes in each direction.

3.2.2 Truck Circulation

The PVCCSP area is primarily intended to accommodate commercial and industrial uses and as such, requires a greater need for established truck routes to serve existing and future businesses. The City has adopted specific truck routes throughout the Perris Valley Commerce Center area in an effort to separate passenger and truck traffic and move truck traffic efficiently through the Project site while avoiding residential communities as much as possible. Existing truck routes are identified on Figure 3 as shown below but should be verified with the City's General Plan for the most up to date information as some streets may be removed once others have been improved such as Ramona Expressway and Perris Boulevard:

- Harley Knox Boulevard from Redlands Avenue to Interstate-215
- Placentia Avenue from Perris Boulevard to Interstate-215
- Perris Boulevard within the entire Specific Plan boundary
- Morgan Street from Frontage Road to Redlands Avenue
- Rider Street from Frontage Road to Perris Boulevard

- Western Way from Harley Knox to northerly City limit Specific Plan Boundary
- Indian Avenue from Placentia Avenue to Harley Knox Boulevard
- Redlands Avenue from Rider Street to Harley Knox Boulevard

Off-Site Design Standards and Guidelines (Chapter 5.0 of the PVCCSP)

5.2 Off-Site Vehicular Circulation: Roadway Standards and Guidelines, Truck Route Standards and Guidelines

The PVCC Circulation Plan establishes the general alignments and right-of-way sections to safely meet the transportation needs of its residents, businesses, and visitors. The improvements required for development of individual projects along segments of roadways identified on the Circulation Plan will be confirmed at the development stage.

The following mitigation measures from the PVCCSP EIR that are applied to this project are as follows:

MM Trans 1 Future implementing development projects shall construct on-site roadway improvements pursuant to the general alignments and right-of-way sections set forth in the PVCC Circulation Plan, except where said improvements have previously been constructed.

MM Trans 2 Sight distance at the project entrance roadway of each implementing development project shall be reviewed with respect to standard City of Perris sight distance standards at the time of preparation of final grading.

MM Trans 3 Each implementing development project shall participate in the phased construction of off-site traffic signals through payment of that project's fair share of traffic signal mitigation fees and the cost of other off-site improvements through payment of fair share mitigation fees which include TUMF (Transportation Uniform Mitigation Fee), DIF (Development Impact Fee), and the NPRBBD (North Perris Road and Bridge Benefit District). The fees shall be collected and utilized as needed by the City of Perris to construct the improvements necessary to maintain the required level of service and build or improve roads to their build-out level.

MM Trans 4 Prior to the approval of individual implementing development projects, the Riverside Transit Agency (RTA) shall be contacted to determine if the RTA has plans for the future provision of bus routing in the Project site that would require bus stops at the project access points. If the RTA has future plans for the establishment of a bus route that will serve the Project site, road improvements adjacent to the Project site shall be designed to accommodate future bus turnouts at locations established through consultation with the RTA. RTA shall be responsible for the construction and maintenance of the bus stop facilities. The area set aside for bus turnouts shall conform to RTA design standards, including the design of the contact between sidewalk and curb and gutter at bus stops and the use of ADA-compliant paths to the major building entrances in the project.

MM Trans 5 Bike racks shall be installed in all parking lots in compliance with City of Perris standards.

MM Trans 6 Each implementing development project that is located adjacent to the MWD Trail shall coordinate with the City of Perris Parks and Recreation Department to determine the development plan for the trail.

MM Trans 7 Implementing project-level traffic studies shall be required for all subsequent implementing development proposals within the boundaries of the PVCC as approved by the City of Perris Engineering Department. These subsequent traffic studies shall identify specific project deficiencies and needed roadway improvements to be constructed in conjunction with each implementing development project. All intersection spacing for individual tracts or maps shall conform to the minimum City intersection spacing standards. All turn pocket lengths shall conform at least to the minimum City turn pocket length standards. If any of the proposed improvements are found to be infeasible, the implementing development project applicant would be required to provide alternative feasible improvements to achieve levels of service satisfactory to the City.

MM Trans 8 Proposed mitigation measures resulting from project-level traffic studies shall be coordinated with the North Perris Road and Bridge Benefit District (NPRBBD) to ensure that they are in conformance with the ultimate improvements planned by the NPRBBD. The applicant shall be eligible to receive proportional credits again the NPRBBD for construction of project level mitigation that is included in NPRBBD.

Project Site Access

Site access for personal vehicles would be provided from Ramona Expressway and Perris Boulevard. One driveway from the center of the Project site along Ramona Expressway would provide non-commercial truck access to the site and personal vehicle access to the warehouse area. A driveway in the northeastern corner of the site would provide access from Perris Boulevard to the future commercial use. Truck and commercial traffic would enter and exit the Project site from Indian Avenue via a 56-foot-wide driveway in the northwestern part of the Project site.

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

Less Than Significant Impact. The Traffic Analysis for the Project evaluates the proposed Project's impacts on traffic. The trips generated by the Project's proposed land uses have been estimated based on trip generation rates collected by the Institute of Transportation Engineers (ITE) Trip Generation Manual, 11th Edition, 2021, for warehouse use and a hotel use. Given that, the proposed Project is projected to generate 1,402 two-way trip-ends per day on a typical weekday with approximately 96 AM peak hours trips and 116 PM peak hour trips (actual vehicles). Impacts related to VMT are discussed in response to the threshold below.

The PVCCSP EIR identified several transportation guidelines, identified in the "PVCCSP Applicable Guidelines" section above. With the incorporation of the PVCCSP guidelines above, impacts to existing County plans would be less than significant. PVCCSP EIR mitigation measure MM Trans 4 has been completed given coordination with the RTA, which is further documented in Section III.

To further evaluate if the Project would conflict with existing circulation plans, or effectiveness of circulation, a traffic signal warrant analysis was conducted by Urban Crossroads and summarized in the

Traffic Analysis (Appendix J). The signal warrant criteria for existing conditions are based upon several factors, including volume of vehicular and pedestrian traffic, frequency of accidents, and location of school areas. The Caltrans Manual on Uniform Traffic Control Devices indicates that the installation of a traffic signal should be considered if one or more signal warrants are met. Specifically, this Traffic Analysis utilizes the Peak Hour Volume-based Warrant 3 as the appropriate representative traffic signal warrant analysis for existing study area intersections for all analysis scenarios. Warrant 3 is appropriate to use for this TAS because it provides specialized warrant criteria for intersections with rural characteristics (e.g., located in communities with populations of less than 10,000 persons or with adjacent major streets operating above 40 miles an hour).

Traffic signal warrants for existing traffic conditions are based on existing peak hour intersection turning volumes. There are no applicable study area intersections that may warrant a traffic signal for existing (2021) traffic conditions.

The proposed Project would include site access and roadway improvements to Ramona Expressway, Indian Avenue, and Perris Boulevard. Ramona Expressway is an east-west oriented roadway located along the Project's northern boundary. Ramona Expressway is currently constructed at its ultimate half-section pavement width as an Expressway (184-foot right-of-way) between the western and eastern boundaries consistent with the PVCCSP and the City of Perris General Plan Circulation Element.

Indian Avenue is a north-south oriented roadway located along the Project's western boundary. Indian Avenue is currently constructed at its ultimate half-section pavement width as a Secondary (94-foot right-of-way) between the Project's northern and southern boundaries consistent with the PVCCSP and the City of Perris General Plan Circulation Element.

Perris Boulevard is a north-south oriented roadway located along the Project's eastern boundary. Perris Boulevard is currently constructed at its ultimate half-section pavement width as an Arterial (128-foot right-of-way) between the northern and southern boundaries consistent with the PVCCSP and the City of Perris General Plan Circulation Element. With adherence to the City of Perris Specific Plan and General Plan Circulation Element requirements, the proposed Project would have a less than significant impact related to circulation plans and policies.

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

Less Than Significant Impact. The City of Perris adopted the Transportation Impact Analysis Guidelines for CEQA in May 2020, which include VMT thresholds. The VMT Scoping Form for Land Use Projects (Appendix 1.1 of Appendix J), provided by the City of Perris, has been completed and reviewed for accuracy. Section 15064.3 of the State CEQA Guidelines, upon which the aforementioned Traffic Impact Analysis Guidelines and Scoping plan are based, recommends the use of VMT as the primary metric for the evaluation of transportation impacts, under CEQA, associated with land use and transportation projects. In general terms, VMT quantifies the amount and distance of automobile travel attributable to a project or region. All agencies and projects State-wide are required to utilize the updated CEQA guidelines recommending the use of VMT for evaluating transportation impacts as of July 1, 2020.

The updated State CEQA Guidelines allow for lead agency discretion in establishing methodologies and thresholds provided there is substantial evidence to demonstrate that the established procedures promote the intended goals of the legislation. Where quantitative models or methods are unavailable, Section 15064.3 allows agencies to assess VMT qualitatively using factors such as availability of transit and proximity to other destinations. The Office of Planning and Research (OPR) Technical Advisory on

Evaluating Transportation Impacts in CEQA (State of California, December 2018) ["OPR Technical Advisory"] provides technical considerations regarding methodologies and thresholds with a focus on office, residential, and retail developments as these projects tend to have the greatest influence on VMT. The proposed Project's VMT impact has been assessed in accordance with guidance from the City of Perris Transportation Impact Analysis Guidelines for CEQA. The transportation guidelines provide a framework for "screening thresholds" for when a project is expected to cause a less than significant impact without conducting a detailed VMT study. The Project requirements for evaluation of transportation impacts under CEQA was assessed using the City of Perris VMT Scoping Form for Land Use Projects as appended to the City of Perris Traffic Impact Analysis Guidelines. The criteria for a project resulting in a less than significant VMT impact is as follows:

- Is the Project 100% affordable housing?
- Is the Project within ½ mile of the qualifying transit?
- Is the Project a local serving land use?
- Is the project in a low VMT area?
- Are the Project's Net Daily Trips less than 500 ADT?

The Project meets the Local-Serving Land Use screening criteria for the hotel component and Net Daily Trips less than 500 ADT criteria for the warehouse component. Therefore, a detailed VMT study is not required and impacts related to VMT would be less than significant.

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 site is within the influence area of the MARB/IP and does not include any design features that would increase traffic hazards. The Project is consistent with the on-site and surrounding land use and zoning designations, and implementation of the Project will not introduce incompatible uses to the Project site. Improvements related to safety contained in the PVCCSP EIR mitigation measure MM Trans 2 will ensure that adequate site distance is provided at each Project access location. Additionally, prior to the issuance of final occupancy, City staff will ensure that signing/striping are implemented in conjunction with the detailed construction plans for the Project site and off-site improvement area.

Implementation of PVCCSP EIR MM Trans 3 shall require signage be posted on-site directing truck drivers to use the existing City truck route on Harley Knox Boulevard. The information on the signage will be coordinated with City Planning and the City's Traffic Engineer during the plan check process. Furthermore, Driveway 1 and Indian Avenue (truck access only) is not anticipated to warrant a traffic signal based on future projected daily traffic. This truck access driveway would be separated from the passenger car parking areas (accessible via Driveways 2 and 3) by a crash gate to ensure the safety of pedestrians and passenger cars. Additionally, the operation of the Project would occur within one parcel and would not create dangerous curves or intersections. During construction, the proposed Project would comply with all local regulations regarding temporary road closures or/and/or one-way traffic controls. Impacts would be less than significant and no project-specific mitigation would be required.

d) Result in inadequate emergency access?

Less Than Significant Impact. A significant impact would occur if the design of the proposed Project would not satisfy emergency access requirements of the Riverside County Fire Department or in any other way threaten the ability of emergency vehicles to access and serve the Project site or adjacent uses. The proposed Project would not result in inadequate emergency access. As discussed above, access to the site will be provided via a driveway on Indian Avenue, a driveway from Ramona Expressway, and a driveway off Perris Boulevard. The driveways are of standard size to accommodate passenger cars, and the driveway off Indian Avenue is expected to accommodate trucks. All access features are subject to the City of Perris design requirements, including the Fire Department's requirement of a minimum 20-foot width for driveways. Because of this, emergency vehicles would be able to access the Project site. Impacts associated with this issue would be less than significant and no mitigation would be required.

XVIII. Tribal Cultural Resources

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
i. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k), or	☐	■	☐	☐
ii. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	☐	■	☐	☐

A Cultural Resources Survey Report (HELIX 2022d) which is attached to this IS/MND as Appendix D, was prepared for the proposed Project. Its findings and recommendations are also incorporated into the following analysis. Further background information regarding the records searches, Native American correspondence, and surveys completed for this Project is available in Section V, Cultural Resources.

Applicable PVCCSP Standards and Guidelines

There are no PVCCSP Standards and Guidelines or PVCCSP EIR mitigation measures related to the analysis of tribal cultural resources. The Cultural Resources Survey (HELIX 2022d; Appendix D) was prepared for the Project in compliance with PVCCSP EIR mitigation measure MM Cult 1, provided in Section V, Cultural Resources. Additional PVCCSP EIR mitigation measures related to cultural resources have been replaced by the City of Perris as reflected in Project Mitigation Measures MM Cult 1 and MM Cult 2.

a) Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

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

    ii. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe?

Less Than Significant with Mitigation Incorporated. Based on the results of the cultural resources survey conducted for the Project (HELIX 2022d; Appendix D), no known tribal cultural resources are present on the Project site. However, there is the potential for previously undiscovered tribal cultural resources to occur at the Project site given the cultural significance of the area identified by tribes in the region. Ground disturbing activities could harm previously undiscovered subsurface resources which would be a potentially significant impact. The Cultural Resources Survey recommends that a Native American monitoring program be implemented. This would be implemented through Project mitigation measure MM Cult 1. Project mitigation measure MM Cult 1, provided in Section V, Cultural Resources, implements PVCCSP EIR mitigation measures MM Cult 2 through MM Cult 4, as subsequently revised by the City of Perris.

In the unlikely event that human remains are discovered during construction, all activities in the vicinity of the remains shall cease and the contractor shall notify the County Coroner immediately pursuant to California Health & Safety Code Section 7050.5 and California Public Resources Code Section 5097.98. Project mitigation measure MM Cult 2 shall be implemented to ensure impacts to potential Native American human remains are less than significant. Project mitigation measure MM Cult 2 implements PVCCSP EIR mitigation measure MM Cult 6, as subsequently revised by the City of Perris, and is provided in Section V, Cultural Resources.

In accordance with the requirements of AB 52, the City, as the lead agency, notified the tribes identified by the NAHC. To date three tribes have responded and the City has initiated consultation, which remains ongoing. The tribes have been provided the proposed mitigation to review. With completion of consultation pursuant to AB 52 and implementation of Project mitigation measures MM Cult 1 and MM Cult 2, impacts to tribal cultural resources would be less than significant.

XIX. Utilities and Service Systems

		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:					
a)	Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	☐	☐	■	☐
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?	☐	☐	■	☐

Applicable PVCCSP Standards and Guidelines and Mitigation Measures

On-Site Design Standards and Guidelines (Chapter 4.0, PVCCSP)

4.2.1 General On-Site Project Development Standards and Guidelines

Trash and Recyclable Materials

Development of all PVCCSP sites shall contain enclosures (or compactors) for collection of trash and recyclable materials subject to water quality and best management practices. All trash enclosures shall comply with City of Perris Standards and with applicable City of Perris recycling requirements.

Waste Hauling

Construction and other waste disposal shall be hauled to a city approved facility.

4.2.7 Utilities

Utility Connections and Meters

All utility connections and meters shall be coordinated with the development of the site and should not be exposed, except where deemed appropriate or necessary by the building official. To the greatest extent possible, these utility connections should be integrated into the building or the architectural design.

Pad-Mounted Transformers and Meter Box Locations

Pad-mounted transformers and/or meter box locations shall be screened from view from surrounding properties and public rights-of-way. Utilities shall be located underground, unless waived by the City Engineer.

Electrical, Telephone, CATV and Similar Service Wires and Cables

All electrical, telephone, CATV and similar service wires and cables which provide direct service to the property being developed, within the exterior boundary lines of such property, shall be installed underground. Electrical Transmission Lines Electrical transmission lines 66kv and less shall be installed underground. All equipment shall be internalized into the building design to the greatest extent possible. When unfeasible, they shall be screened and not prominently visible from public rights-of-way.

a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?

Less Than Significant Impact. The proposed Project is in a developing area with existing infrastructure. Wastewater services are provided by the EMWD, which is managed by the Metropolitan Water District of Southern California (MWD). A secondary source of imported water is provided by the Colorado River Aqueduct. The water used within the EMWD service area as of 2015 was approximately 147,300 AFY and is expected to increase to 268,200 AFY (during a normal year) by the year 2040, an increase of 120,900 AFY.

Based on the CalEEMod assumptions for water usage, the proposed Project's estimated water demand is approximately 1.65 AFY, within the estimated increase in water demand. With regard to wastewater, a new development in the City is required to install wastewater infrastructure concurrent with Project development. Wastewater in the City is treated by the EMWD at the Perris Valley Regional Water Reclamation Facility (PVRWRF); the facility has typical inflows of 13.8 million gallons per day (mgd; Eastern Municipal Water District 2014). Currently, the facility has the capacity to treat 22.0 mgd, so the facility has the capacity for potential future increases in wastewater. The Project includes the construction of a warehouse, office space area, parking lot and truck dock stations. All wastewater generated from the office space and warehouse would be discharged into the local sewer main and conveyed for treatment.

Based on the CalEEMod assumptions, the proposed Project's total estimated water demand is approximately 46.29 million gallons per year, which would translate to an average of approximately 0.13 mgd. Estimated wastewater generation for the proposed Project is 45.14 million gallons per year or 0.12 mgd. This volume is within the remaining capacity of the PVRWRF's 13.8 mgd total treatment

capacity. This Project would thus have a less than significant impact on the ability of the PVRWRF to operate within its established wastewater treatment requirements, which are enforced via the facility's NPDES permit authorized by the Santa Ana Regional Water Quality Control Board (SARWQCB). Therefore, the proposed Project would have a less than significant impact related to wastewater treatment requirements of the SARWQCB.

Potentially significant impacts could occur as a result of the Project if stormwater runoff was increased to a level that would require the construction of new storm drainage facilities. As discussed in Section X, *Hydrology*, the Project would not generate any increased runoff from the site that would require the construction of new storm drainage facilities.

The Project applicant/developer would be required to provide all necessary on-site infrastructure. Line E, which has been discussed in previous sections, is part of the utility infrastructure that will constructed with this project. Within the Project boundary, Line E will consist of an underground reinforced concrete box and pipe that will connect to a detention basin near Ramona Expressway and I-215, run along the southern Project boundary, jog north, and connect at the eastern Project boundary to the existing lateral that runs north and south in Perris Boulevard. This interim proposed connection of Line E will be in place until such time as the City constructs additional downstream sections of the Line E storm drain. Those future Line E extensions are not part of the Project and not required to meet the Project storm water or water quality requirements.

Impacts would be less than significant, and no mitigation beyond compliance with existing regulations is required. The proposed Project would have a less than significant impact on requiring the construction of new facilities or expansion of existing storm drainage facilities.

In conclusion, connections to these utilities would be made at the Project site during construction and would not require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities that could cause additional significant environmental effects. Therefore, impact is 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?

Less Than Significant Impact. Operation of the proposed Project would result in increases in water demand. City residents and businesses, including the future operator of the Project site, are served by the EMWD. Water is imported via the California Aqueduct from northern and central California, which is managed by the Metropolitan Water District of Southern California (MWD). A secondary source of imported water is provided by the Colorado River Aqueduct. As of June 2021, the EMWD is in the process of updating their Urban Water Management Plan, which was last updated in 2015. According to the 2015 Urban Water Management Plan for EMWD, the EMWD will continue to rely on imported water from the MWD as the main source of supply. The water used within the EMWD service area as of 2015 was approximately 147,300 AFY and is expected to increase to 268,200 AFY (during a normal year) by the year 2040, an increase of 120,900 AFY. Based on the CalEEMod assumptions, the proposed Project's estimated water demand is approximately 167 AFY. According to the 2015 Urban Water Management Plan for EMWD, there is sufficient supply to accommodate demand under normal and single- and multiple-dry year conditions utilizing imported water. Local supplies would supplement imported supplies and provide additional supply reliability. Local supplies include groundwater pumped from the San Jacinto groundwater Basin, desalinated groundwater, and recycled water.

Connections to local water mains would involve temporary and less than significant construction impacts that would occur in conjunction with other on-site improvements. The Project site is located within the existing service area of the EMWD and is surrounded by existing development that is currently connected to existing EMWD water lines. No additional improvements are needed to water lines or facilities to serve the proposed Project. Standard connection fees would address any incremental impacts of the proposed Project. Therefore, the proposed Project will have sufficient water supplies available to serve the Project and reasonably foreseeable future development during normal, dry, and multiple dry years. Impacts will be less than significant.

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?

Less Than Significant Impact. Wastewater generated at the Project site would be treated by the EMWD at the PVRWRF; the facility has typical inflows of 15.5 mgd and a current capacity of 22 mgd. The ultimate capacity of the PVRWRF is anticipated to increase to 100 mgd (EMWD 2021). The PVRWRF has typical inflows of 13.8 mgd (Eastern Municipal Water District, 2014). Currently, the facility has the capacity to treat 22.0 mgd, so the facility has the capacity for potential future increases in wastewater associated with the proposed Project. Therefore, the expansion of the existing facility would not be required, and impacts will be less than significant.

Connections to local water and sewer mains would involve temporary and less than significant construction impacts that would occur in conjunction with other on-site improvements and that were analyzed as part of the Project. The Project site is located within the existing service area of the EMWD and is surrounded by existing development that is currently connected to existing EMWD water and wastewater lines. No additional improvements are needed to either water lines, sewer lines, or treatment facilities to serve the Project. Standard connection fees would address any incremental impacts of the Project. Therefore, the Project would result in less than significant impacts with regard to the need for new or expanded wastewater treatment facilities.

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. Significant impacts could occur if the proposed Project would exceed the existing permitted landfill capacity or if it would violate federal, state, and local statutes and regulations. Solid waste disposal services in the City of Perris are provided by CR&R Incorporated – Environmental Services. Waste from Perris is primarily transferred to the El Sobrante Landfill in Corona or the Badlands Landfill in Moreno Valley. These solid waste facilities serving Riverside County have a combined remaining capacity of 151,777,170 tons. The Badlands Landfill is expected to close in 2026 while the El Sobrante Landfill has the capacity to remain open until 2051 (CalRecycle 2022).

Overall, the amount of solid waste produced as a result of this Project is negligible compared to the capacity available at the two primary landfills. Compliance with County waste reduction programs and policies would also reduce the volume of solid waste entering landfills. Individual development projects within the County would be required to comply with applicable state and local regulations, thus reducing the amount of landfill waste by at least 50 percent. Therefore, because there would be adequate landfill capacity in the region to accommodate Project-generated waste, and the proposed

Project is not expected to generate a substantial quantity of solid waste, the impact would be less than significant.

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

Less Than Significant Impact. Federal, State, and local statutes and regulations regarding solid waste generation, transport, and disposal are intended to decrease solid waste generation through mandatory reductions in solid waste quantities (e.g., through recycling and composting of green waste) and the safe and efficient transport of solid waste. The proposed Project would be required to coordinate with CR&R Waste Services to develop a collection program for recyclables, such as paper, plastics, glass, and aluminum, in accordance with local and State programs, including the California Solid Waste Reuse and Recycling Act of 1991. Additionally, the proposed Project would be required to comply with applicable practices enacted by the City under the California Integrated Waste Management Act of 1989 (AB 939) and any other applicable local, State, and federal solid waste management regulations. AB 939 requires all counties to prepare a County Integrated Waste Management Plan (CIWMP). The County of Riverside adopted its CIWMP in 1998. The CIWMP includes the Countywide Summary Plan; the Countywide Siting Element; and the Source Reduction and Recycling Elements, the Household Hazardous Waste Elements, and Non-disposal Facility Elements for Riverside County and each city in Riverside County. In summary, the proposed Project would comply with all regulatory requirements regarding solid waste.

XX. Wildfire

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, 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?	☐	☐	☐	■

Applicable PVCCSP Standards and Guidelines

There are no Standards and Guidelines or mitigation measures related to wildfire management included in the PVCCSP or its associated PVCCSP EIR.

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?

No Impact. According to Figure S-05, Wildfire Hazards, of the City of Perris General Plan Safety Element, the Project site is located within a Local Responsibility Area and is not located in or near an area identified as being a Very High Fire Hazard Severity Zone (Perris, 2022). The Project site is not within a State Responsibility Area. Therefore, the Project would have no impacts related to wildfires or the associated issues identified in thresholds a through d, above. No impacts would occur and no mitigation is required.

XXI. Mandatory Findings of Significance

		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a)	Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	■	☐	☐
b)	Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of past, present, and probable future projects)?	☐	☐	■	☐

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

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 with Mitigation Incorporated. The preceding analysis that the proposed Project has the potential to adversely affect air quality, biological resources, cultural resources, noise, and transportation. See Sections III, IV, V, XIII, and XVII for discussion of the proposed Project's potential impacts on these environmental issue areas. With implementation of the mitigation measures identified in those Sections, and compliance with City programs and requirements identified in this report, impacts would be reduced to a less than significant level. No Significant or potentially significant impacts would remain.

b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of past, present, and probable future projects)?

Less Than Significant Impact. State CEQA Guidelines Section 15130 requires a discussion of the cumulative impacts of a project when the project's incremental effect is "cumulatively considerable," meaning that the project's incremental effects are considerable when viewed in connection with the effects of past, current, and probable future projects. While the proposed Project would indirectly contribute to cumulative impacts associated with increase urban development in the region, these impacts have been previously evaluated by the City and considered in development of the City's General Plan and PVCCSP as set forth in this Initial Study. Transportation is a key area of concern and is discussed in detail below.

Cumulative transportation impacts were evaluated in the traffic impact analysis prepared for the Project (Urban Crossroads 2022). The Project's impacts to VMT were analyzed against the City of Perris Transportation Guidelines and the requirements for VMT analysis specified by Section 15064.3, subdivision (b). The Project's VMT impacts were found to be less than significant. However, in order to ensure continued functionality of regional circulation infrastructure, the Traffic Analysis made intersection recommendations and detailed the fees that would be owed to the City. Off-site improvements, such as traffic signals, that are needed to serve cumulative traffic conditions are funded through the payment of fees to the City. The Project is within the North Perris Road and Bridge Benefit District, which is intended to provide transportation improvements specifically to the PVCCSP area. Fair share fees are collected by the City and used as part of a funding mechanism aimed at ensuring that regional highways and arterial expansions keep pace with the projected population increases. The

applicant would be required to pay the applicable fees. The Project would not result in cumulatively considerable transportation impacts.

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

Less Than Significant with Mitigation Incorporated. Based on the analyses contained in Sections I – XX of this IS/MND, the proposed Project would not result in substantial adverse effects on human beings. With implementation of the proposed mitigation, potentially significant impacts would be reduced to a level of less than significant. Direct and indirect impacts to human beings as a result of the proposed Project would be less than significant with mitigation.

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Initial Study Appendix A

Air Quality and Greenhouse Gas Emissions Technical Report

The following section contains content that was obtained from a third party and may not achieve the same level of Americans with Disabilities Act (ADA) and Section 508 accessibility as other parts of this document.

HELIX Environmental Planning

Ramona-Indian Warehouse Project

Air Quality and Greenhouse Gas Emissions Technical Report

July 2022 | 04823.00001.001

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ACRONYMS AND ABBREVIATIONS

AB	Assembly Bill
amsl	above mean sea level
APN	Assessor's Parcel Number
AQMP	Air Quality Management Plan
C_2F_6	hexafluoroethane
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
CAFE	Corporate Average Fuel Economy
CalEEMod	California Emissions Estimator Model
CALGreen	California Green Building Standards Code
Caltrans	California Department of Transportation
CAP	Climate Action Plan
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CCR	California Code of Regulations
CEQA	California Environmental Quality Act
CF_4	tetraflouromethane
CFC	chlorofluorocarbon
CH_4	methane
City	City of Perris
CO	carbon monoxide
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalent
DPM	diesel particulate matter
EO	Executive Order
EV	electric vehicle
GHG	greenhouse gas
GWP	global warming potential
HFC	hydrofluorocarbon
I-	Interstate
IPCC	Intergovernmental Panel on Climate Change
kW	kilowatts
kWhr	kilowatts-hours
LCFS	Low Carbon Fuel Standard
LOS	Level of Service
LST	localized significance threshold

ACRONYMS AND ABBREVIATIONS (cont.)

mg/m^3	milligrams per cubic meter
MMT	million metric tons
mpg	miles per gallon
mph	miles per hour
MT	metric tons
N_2O	nitrous oxide
NAAQS	National Ambient Air Quality Standards
NASA	National Aeronautics and Space Administration
NHTSA	National Highway Traffic Safety Administration
NO	nitrogen oxide
NO_2	nitrogen dioxide
NO_X	nitrogen oxides
O_3	ozone
Pb	lead
PFC	perfluorocarbon
PM_{10}	particulate matter less than 10 microns or less in diameter
$PM_{2.5}$	particulate matter less than 2.5 microns or less in diameter
ppm	parts per million
PVCCSP	Perris Valley Commercial Center Specific Plan
ROG	reactive organic gas
RTP	Regional Transportation Plan
SB	Senate Bill
SCAB	South Coast Air Basin
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SCS	Sustainable Communities Strategy
SF	Square feet/foot
SF_6	hexafluoride
SIP	State Implementation Plan
SO_2	sulfur dioxide
SO_X	sulfur oxides
SRA	source receptor area
TACs	toxic air contaminants
USEPA	U.S. Environmental Protection Agency

ACRONYMS AND ABBREVIATIONS (cont.)

VMT	vehicle miles traveled
VOC	volatile organic compound
WRCOG	Western Riverside Council of Governments

EXECUTIVE SUMMARY

This report presents an assessment of potential air quality and greenhouse gas (GHG) emissions impacts resulting from implementation of the Ramona-Indian Warehouse Project (project) located in the City of Perris (City). The project would develop light industrial uses and commercial uses in two phases. Phase 1 would develop a 232,575 square-foot (SF) multi-tenant distribution building (warehouse) and associated internal office space, parking lots, storm water improvements, landscaping, and street access/ driveways. Phase 2 would develop a commercial pad on the 1.61 acres in the northeastern portion of the project site with a 125-room hotel. The project would be located within the Perris Valley Commercial Center Specific Plan (PVCCSP) area.

The project applicant proposes an amendment to the PVCCSP to replace the Commercial land use designation with a Light Industrial land use for approximately 13 acres of the project site. Because average employment densities for light industrial use are lower than those for commercial uses, the project contribution to regional employment growth would be accounted for in regional planning documents (e.g., general plans, Regional Transportation Plan/Sustainable Communities Strategy) used to develop control measures in the South Coast Air Quality Management District's (SCAQMD) Air Quality Management Plan (AQMP). The project would not conflict with the 2016 AQMP.

The project would result in emissions of criteria air pollutants during construction and operation. In accordance with SCAQMD Rule 403 and applicable mitigation from the PVCCSP Environmental Impact Report (EIR), fugitive dust control measures would be required. Project emissions of criteria pollutants and precursors during construction or operation would not exceed the SCAQMD emissions thresholds. Impacts related to cumulatively considerable net increases of criteria pollutants in the region would be less than significant with mitigation incorporated. Implementation of applicable mitigation measures from the PVCCSP EIR would be required.

Project-generated traffic would not result in a carbon monoxide hot spot. Construction and operation of the project would not result in exposure of sensitive receptors to significant quantities of toxic air contaminants or substantial localized criteria pollutant and precursor concentrations. A health risk assessment (HRA) was conducted to evaluate potential community health risks from exposure to diesel particulate matter emitted by trucks related to operation of the proposed warehouse. Community cancer risk, chronic health risk, or cancer burden would not exceed the SCAQMDs thresholds. Impacts related to exposure of sensitive receptors to substantial pollutant concentrations would be less than significant. Implementation of applicable mitigation measures from the PVCCSP EIR would be required.

The project would not generate other emissions (such as those leading to odors) that would affect a substantial number of people.

GHG emissions resulting from construction and operation of the project would not exceed the SCAQMD's screening threshold for industrial facilities. The project would not conflict with the City of Perris Climate Action Plan (CAP) or other regional and stage GHG reduction plans. Impacts related to GHG emissions and conflicts with GHG reduction plans and policies would be less than significant. Implementation of applicable mitigation measures from the PVCCSP EIR would be required.

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1.0 INTRODUCTION

This report presents an assessment of potential air quality and greenhouse gas (GHG) emissions impacts resulting from construction and operation of the proposed Ramona-Indian Warehouse Project (project). The project site is located within the Perris Valley Commerce Center Specific Plan (PVCCSP) planning area. In November 2011, the City of Perris Council certified an Environmental Impact Report (EIR; State Clearinghouse Number 2009081086) for the PVCCSP. This report summarizes the impact conclusions related air quality and GHG emissions in the EIR and identifies mitigation measures from the EIR that would be applicable to the project.

1.1 PROJECT LOCATION

The project site is located at the northeast corner of the intersection of Ramona Expressway and Indian Avenue, in the City of Perris (City) in western Riverside County, California. The project site includes approximately 15 acres and is located approximately 1.4 miles east of Interstate (I-) 215 and approximately 6.5 miles south of State Route (SR-) 60. The project site is within the western Riverside County portion of the South Coast Air Basin (SCAB). Air quality in the project area is under the jurisdiction of the South Coast Air Quality Management District (SCAQMD). See Figure 1, *Regional Location* and Figure 2, *Aerial Photo*.

1.2 PROJECT DESCRIPTION

The project would develop light industrial uses and commercial uses in two phases. Phase 1 would develop a 232,575-square-foot (SF) multi-tenant distribution building (warehouse) that includes 10,000 SF of internal office space, parking areas and driveways, a pad for future commercial development, storm drains and a water quality management retention basin, all on approximately 15 acres at the northeast corner of Indian Avenue and Ramona Expressway. The warehouse would include 39 loading docks. The parking area would include 215 auto/light truck stalls, and 52 truck/trailer stalls. The storm drain system would include construction of the storm drain Line E within the project site. See Figure 3, Site Plan. The project would include roadway improvements for Ramona Expressway, Indian Avenue, and Perris Boulevard. Additional improvements would include landscaping, screen walls and fencing, and lighting.

Phase 2 would develop a commercial pad on the 1.61 acres in the northeastern portion of the project site. Development of the commercial pad is not proposed as part of the project application; however, development of a 125-room hotel has been assumed as part of this environmental analysis. Until development of the commercial pad occurs, temporary staging activities may occur in this area to support construction of the light industrial uses described above.

1.3 CONSTRUCTION ACTIVITIES AND PHASING

Project construction of Phase 1 (the multi-tenant distribution building) is assumed to occur over an approximately 1-year, 6-month period starting in October 2022 and completing in March 2024. Construction activities would include site preparation, grading, installation of underground utilities, (including storm drain Line E), building construction, paving, and architectural coating (e.g., painting). The project would not require demolition, as the site is currently vacant and undeveloped. Grading

would result in approximately 28,823 cubic yards (CY) of cut and 12,981 CY of fill, resulting in 15,842 CY of total soil import required.

The timeline for development of the commercial pad has not been established as of the time of this analysis. This analysis assumes Phase 2 (the 125-room hotel) would commence construction in July 2024, immediately following completion of Phase 1, and would be complete in approximately 10 months.

Project construction would be required to implement all applicable fugitive dust best available control measures specified in Table 1 of the SCAQMD Rule 403, *Fugitive Dust* (SCAQMD 2005), including, but not limited to: the use of an on-site water truck to wet down exposed areas at least twice daily, maintaining a 12 percent moisture content to unpaved roads, and limiting vehicle speeds to 15 miles per hour (mph). Project construction would also be required to comply with applicable air quality mitigation measures identified in the PVCCSP EIR, as discussed in Section 5.2, below.

2.0 REGULATORY SETTING

2.1 AIR QUALITY

The project site is located within the SCAB. Air quality in the SCAB is regulated by the U.S. Environmental Protection Agency (USEPA) at the federal level, by the California Air Resources Board (CARB) at the state level, and by the SCAQMD at the regional level.

2.1.1 Air Pollutants of Concern

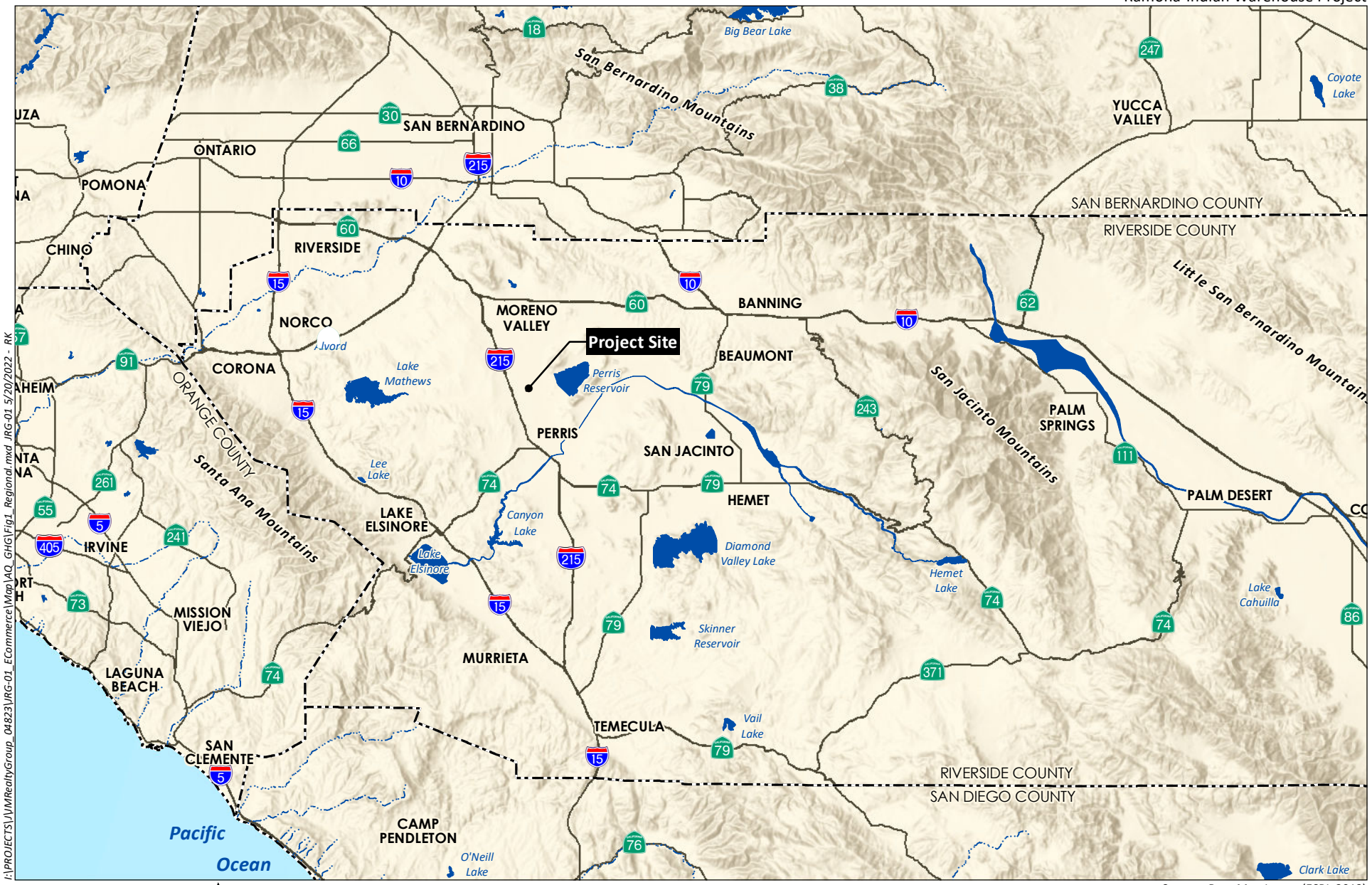
2.1.1.1 Criteria Pollutants

Criteria pollutants are defined by state and federal law as a risk to the health and welfare of the general public. In general, criteria air pollutants include the following compounds:

- Ozone (O_3)
- Carbon monoxide (CO)
- Nitrogen dioxide (NO_2)
- Particulate matter (PM), which is further subdivided:
  - Coarse PM, 10 microns or less in diameter (PM_{10})
  - Fine PM, 2.5 microns or less in diameter ($PM_{2.5}$)
- Sulfur dioxide (SO_2)
- Lead (Pb)

Criteria pollutants can be emitted directly from sources (primary pollutants; e.g., CO, SO_2, PM_{10}, $PM_{2.5}$, and lead), or they may be formed through chemical and photochemical reactions of precursor pollutants in the atmosphere (secondary pollutants; e.g., ozone, NO_2, PM_{10}, and $PM_{2.5}$). PM_{10} and $PM_{2.5}$ can be both primary and secondary pollutants. The principal precursor pollutants of concern are reactive organic gases ([ROGs] also known as volatile organic compounds [VOCs])[1] and nitrogen oxides (NO_X).

[1] CARB defines and uses the term ROGs while the USEPA defines and uses the term VOCs. The compounds included in the lists of ROGs and VOCs and the methods of calculation are slightly different. However, for the purposes of estimating criteria pollutant precursor emissions, the two terms are often used interchangeably.



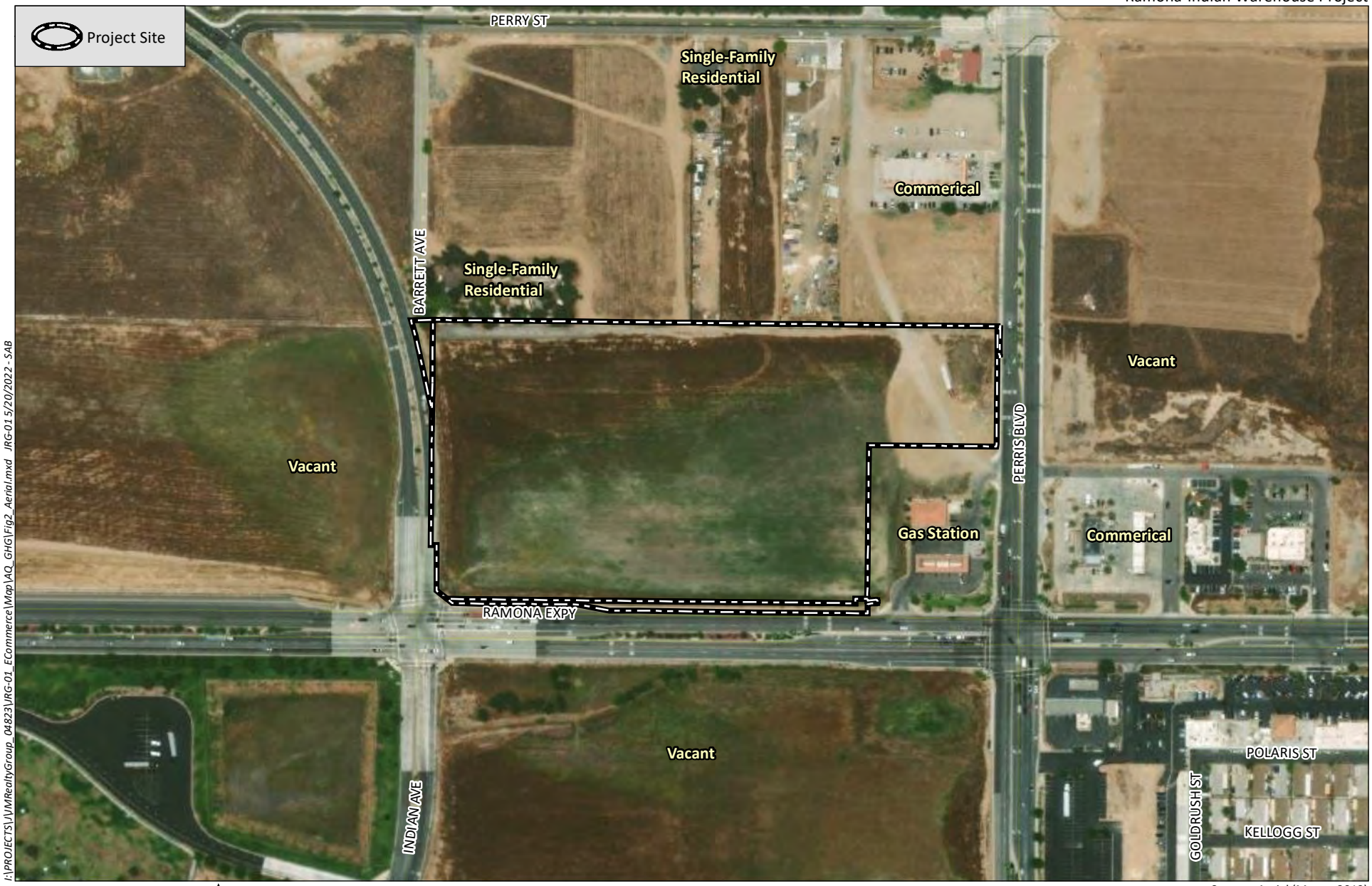
I:\PROJECTS\JVMRealtyGroup_04823\IRG-01_ECommerce\Map\AQ_GHG\Fig1_Regional.mxd IRG-01 5/20/2022 - RK

Source: Base Map Layers (ESRI, 2013)

HELIX Environmental Planning

Regional Location

Figure 1



I:\PROJECTS\JVMRealtyGroup_04823\IRG-01_ECommerce\Map\AQ_GHG\Fig2_Aerial.mxd IRG-01 5/20/2022 - SAB

Source: Aerial (Maxar, 2019)

HELIX Environmental Planning

Aerial Photo

Figure 2

NOTE: LINE OF SIGHT TAKEN FROM 6' 0" ABOVE FINISH GRADE

SHELL BUILDING
TYPE III-B FULLY SPRINKLERED
B / S1 / F1 OCCUPANCY
36'-0" CLEAR
59.30 F.F.
58.7 PAD

39 DOCK POSITIONS

961'-1 3/4"
NEW 8'-0" HIGH TUBE STEEL FENCE

N89°57'32"W 1240.67'

14'-0" HIGH CONCRETE SCREEN WALL

TRASH

GUARDSHACK

GATE
TRUCK TRAFFIC

NO TRUCK TRAFFIC

FULL ACCESS DRIVE-WAY

ELECTRICAL ROOM

PRIMARY OFFICE AREA

MONUMENT SIGNS

AUTO TRAFFIC

RIGHT-IN / RIGHT-OUT

RP-UP

FH

GRADE BREAK

AUC ZONE C1
AFZ II / AUC ZONE B2

POSSIBLE AVIATION LINE LOCATION

FUTURE COMMERCIAL
1.61 AC

229'-9 1/2"
NEW 8'-0" HIGH TUBE STEEL FENCE

N00°03'00"E 264.24'

N89°56'40"W 280.10'

NOT A PART

327'-1 1/2"
NEW 8'-0" HIGH TUBE STEEL FENCE

N00°03'42"E 348.24'

INDIAN AVENUE

PERRIS BOULEVARD

RAMONA EXPRESS WAY

Δ=04°15'47"
R=1200.00'
L=133.38'

595'-9"

805'-0"

530'-2"

460'-6 7/8"

271'-0"

136.5'

225'-0"

0' 10' 20' 50' 100'

Source: RGA 2022

I:\PROJECTS\V1\MRealtyGroup_04823\URG-01_ECommerce\Map\AQ_GHG\Fig3_SitePlan.indd 04823.1.1 5/16/2022 - SAB

HELIX Environmental Planning

Site Plan

Figure 3

The descriptions of sources and general health effects for each of the criteria air pollutants are shown in Table 1, *Summary of Common Sources and Human Health Effects of Criteria Air Pollutants*, based on information provided by the California Air Pollution Control Officers Association ([CAPCOA] 2021a). Specific adverse health effects on individuals or population groups induced by criteria pollutant emissions are highly dependent on a multitude of interconnected variables such as cumulative concentrations, local meteorology and atmospheric conditions, and the number and characteristics of exposed individuals (e.g., age, gender). Criteria pollutant precursors (ROG and NO_X) affect air quality on a regional scale, typically after significant delay and distance from the pollutant source emissions. Health effects related to ozone and NO_2 are, therefore, the product of emissions generated by numerous sources throughout a region. Emissions of criteria pollutants from vehicles traveling to or from the project site (mobile emissions) are distributed nonuniformly in location and time throughout the region, wherever the vehicles may travel. As such, specific health effects from these criteria pollutant emissions cannot be meaningfully correlated to the incremental contribution from the project.

Table 1
SUMMARY OF COMMON SOURCES AND HUMAN HEALTH EFFECTS OF CRITERIA AIR POLLUTANTS

Pollutant	Major Man-Made Sources	Human Health Effects
Carbon Monoxide (CO)	An odorless, colorless gas formed when carbon in fuel is not burned completely; a component of motor vehicle exhaust.	Reduces the ability of blood to deliver oxygen to vital tissues, affecting the cardiovascular and nervous system. Impairs vision, causes dizziness, and can lead to unconsciousness or death.
Nitrogen Dioxide (NO_2)	A reddish-brown gas formed during fuel combustion for motor vehicles and industrial sources. Sources include motor vehicles, electric utilities, and other sources that burn fuel.	Respiratory irritant; aggravates lung and heart problems. Precursor to ozone and acid rain. Contributes to climate change and nutrient overloading, which deteriorates water quality. Causes brown discoloration of the atmosphere.
Ozone (O_3)	Formed by a chemical reaction between reactive organic gases (ROGs) and nitrogen oxides (NO_X) in the presence of sunlight. Common sources of these precursor pollutants include motor vehicle exhaust, industrial emissions, gasoline storage and transport, solvents, paints, and landfills.	Irritates and causes inflammation of the mucous membranes and lung airways; causes wheezing, coughing, and pain when inhaling deeply; decreases lung capacity; aggravates lung and heart problems. Damages plants; reduces crop yield. Damages rubber, some textiles and dyes.
Particulate Matter (PM_{10} and $PM_{2.5}$)	Produced by power plants, steel mills, chemical plants, unpaved roads and parking lots, wood-burning stoves and fireplaces, automobiles, and other sources.	Increased respiratory symptoms, such as irritation of the airways, coughing, or difficulty breathing; aggravated asthma; development of chronic bronchitis; irregular heartbeat; nonfatal heart attacks; and premature death in people with heart or lung disease. Impairs visibility (haze).
Sulfur Dioxide (SO_2)	A colorless, nonflammable gas formed when fuel containing sulfur is burned, when gasoline is extracted from oil, or when metal is extracted from ore. Examples are petroleum refineries, cement manufacturing, metal processing facilities, locomotives, and ships.	Respiratory irritant. Aggravates lung and heart problems. In the presence of moisture and oxygen, sulfur dioxide converts to sulfuric acid, which can damage marble, iron, and steel. Damages crops and natural vegetation. Impairs visibility. Precursor to acid rain.

Pollutant	Major Man-Made Sources	Human Health Effects
Lead	Metallic element emitted from metal refineries, smelters, battery manufacturers, iron and steel producers, use of leaded fuels by racing and aircraft industries.	Anemia, high blood pressure, brain and kidney damage, neurological disorders, cancer, lowered IQ. Affects animals, plants, and aquatic ecosystems.

Source: CAPCOA 2021a

2.1.1.2 Toxic Air Contaminants

The Health and Safety Code (§39655, subd. (a).) defines a toxic air contaminant (TAC) as "an air pollutant which may cause or contribute to an increase in mortality or in serious illness, or which may pose a present or potential hazard to human health." A substance that is listed as a hazardous air pollutant pursuant to subsection (b) of Section 112 of the Federal Clean Air Act (CAA) (42 United States Code Section 7412[b]) is a TAC. Under State law, the California Environmental Protection Agency (CalEPA), acting through CARB, is authorized to identify a substance as a TAC if it determines the substance is an air pollutant that may cause or contribute to an increase in mortality or an increase in serious illness, or that may pose a present or potential hazard to human health.

Diesel engines emit a complex mixture of air pollutants, including both gaseous and solid material. The solid material in diesel exhaust is referred to as diesel particulate matter (DPM). Almost all DPM is 10 microns or less in diameter, and 90 percent of DPM is less than 2.5 microns in diameter (CARB 2021a). Because of their extremely small size, these particles can be inhaled and eventually trapped in the bronchial and alveolar regions of the lung. In 1998, CARB identified DPM as a TAC based on published evidence of a relationship between diesel exhaust exposure and lung cancer and other adverse health effects. DPM has a notable effect on California's population—it is estimated that about 70 percent of total known cancer risk related to air toxics in California is attributable to DPM (CARB 2021a).

2.1.2 Federal Air Quality Regulations

2.1.2.1 Federal Clean Air Act

Air quality is defined by ambient air concentrations of specific pollutants identified by the USEPA to be of concern with respect to health and welfare of the general public. The USEPA is responsible for enforcing the CAA of 1970 and its 1977 and 1990 Amendments. The CAA required the USEPA to establish National Ambient Air Quality Standards (NAAQS), which identify concentrations of pollutants in the ambient air below which no adverse effects on the public health and welfare are anticipated. In response, the USEPA established both primary and secondary standards for several criteria pollutants. Table 2, *Ambient Air Quality Standards*, shows the federal and state ambient air quality standards for these pollutants.

Table 2
AMBIENT AIR QUALITY STANDARDS

Pollutant	Averaging Time	California Standards	Federal Standards Primary[1]	Federal Standards Secondary[2]
O_3	1 Hour	0.09 ppm (180 µg/m^3)	–	–
	8 Hour	0.070 ppm (137 µg/m^3)	0.070 ppm (137 µg/m^3)	Same as Primary
PM_{10}	24 Hour	50 µg/m^3	150 µg/m^3	Same as Primary
	AAM	20 µg/m^3	–	Same as Primary
$PM_{2.5}$	24 Hour	–	35 µg/m^3	Same as Primary
	AAM	12 µg/m^3	12.0 µg/m^3	15.0 µg/m^3
CO	1 Hour	20 ppm (23 mg/m^3)	35 ppm (40 mg/m^3)	–
	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)	–	–
NO_2	1 Hour	0.18 ppm (339 µg/m^3)	0.100 ppm (188 µg/m^3)	–
	AAM	0.030 ppm (57 µg/m^3)	0.053 ppm (100 µg/m^3)	Same as Primary
SO_2	1 Hour	0.25 ppm (655 µg/m^3)	0.075 ppm (196 µg/m^3)	–
	3 Hour	–	–	0.5 ppm (1,300 µg/m^3)
	24 Hour	0.04 ppm (105 µg/m^3)	–	–
Lead	30-day Avg.	1.5 µg/m^3	–	–
	Calendar Quarter	–	1.5 µg/m^3	Same as Primary
	Rolling 3-month Avg.	–	0.15 µg/m^3	Same as Primary
Visibility Reducing Particles	8 Hour	Extinction coefficient of 0.23 per km – visibility ≥ 10 miles (0.07 per km – ≥30 miles for Lake Tahoe)	No Federal Standards	No Federal Standards
Sulfates	24 Hour	25 µg/m^3	No Federal Standards	No Federal Standards
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m^3)	No Federal Standards	No Federal Standards
Vinyl Chloride	24 Hour	0.01 ppm (26 µg/m^3)	No Federal Standards	No Federal Standards

Source: CARB 2016

[1] National Primary Standards: The levels of air quality necessary, within an adequate margin of safety, to protect the public health.

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

O_3 = ozone; ppm: parts per million; µg/m^3 = micrograms per cubic meter; PM_{10} = particulate matter 10 microns or less in diameter; AAM = Annual Arithmetic Mean; $PM_{2.5}$ = fine particulate matter 2.5 microns or less in diameter; CO = carbon monoxide; mg/m^3 = milligrams per cubic meter; NO_2 = nitrogen dioxide; SO_2 = sulfur dioxide; km = kilometer; – = No Standard

The USEPA has classified air basins (or portions thereof) as being in "attainment," "nonattainment," "maintenance," or "unclassified" for each criteria air pollutant, based on whether or not the NAAQS have been achieved. Upon attainment of a standard for which an area was previously designated nonattainment, the area will be classified as a maintenance area. If an area is designated unclassified, it

is because inadequate air quality data were available as a basis for a nonattainment or attainment designation. The project site is located within the Riverside County portion of the SCAB and, as such, is in an area designated as a nonattainment area for certain pollutants that are regulated under the CAA. Table 3, *South Coast Air Basin Attainment Status*, lists the federal and state attainment status of the SCAB for the criteria pollutants. With respect to federal air quality standards, the USEPA classifies the SCAB as in attainment for PM_{10}, CO, NO_2, SO_2, and lead, and in nonattainment for 8-hour ozone and $PM_{2.5}$.

Table 3
SOUTH COAST AIR BASIN ATTAINMENT STATUS
(RIVERSIDE COUNTY PORTION)

Criteria Pollutant	Federal Designation	State Designation
Ozone (O_3) (1-hour)	(No federal standard)	Nonattainment
Ozone (O_3) (8-hour)	Extreme Nonattainment	Nonattainment
CO (Carbon Monoxide (CO)	Attainment (Maintenance)	Attainment
Respirable Particulate Matter (PM_{10})	Attainment (Maintenance)	Nonattainment
Fine Particulate Matter ($PM_{2.5}$)	Serious Nonattainment	Nonattainment
Nitrogen Dioxide (NO_2)	Attainment (Maintenance)	Attainment
Sulfur Dioxide (SO_2)	Unclassifiable/Attainment	Unclassifiable/Attainment
Lead	Attainment	Attainment
Sulfates	(No federal standard)	Attainment
Hydrogen Sulfide	(No federal standard)	Attainment
Visibility	(No federal standard)	Attainment

Source: SCAQMD 2016a

2.1.3 California Air Quality Regulations

2.1.3.1 California Clean Air Act

The federal CAA allows states to adopt ambient air quality standards and other regulations provided that they are at least as stringent as federal standards. CARB, a part of the CalEPA, is responsible for the coordination and administration of both federal and state air pollution control programs within California, including setting the California Ambient Air Quality Standards (CAAQS). CARB also conducts research, compiles emission inventories, develops suggested control measures, and provides oversight of local programs. CARB establishes emissions standards for motor vehicles sold in California, consumer products (such as hairspray, aerosol paints, and barbecue lighter fluid), and various types of commercial equipment. It also sets fuel specifications to further reduce vehicular emissions.

In addition to primary and secondary AAQS, the state has established a set of episode criteria for ozone, CO, NO_2, SO_2, and PM. These criteria refer to episode levels representing periods of short-term exposure to air pollutants that actually threaten public health. Table 3, above, lists the state attainment status of the SCAB for the criteria pollutants. Under state designation, the SCAB is currently in attainment for CO, NO_2, SO_2, and lead; and in nonattainment for ozone, PM_{10}, and $PM_{2.5}$.

2.1.3.2 State Implementation Plan

The CAA requires areas with unhealthy levels of ozone, inhalable particulate matter, carbon monoxide, nitrogen dioxide, and sulfur dioxide to develop plans, known as State Implementation Plans (SIPs). SIPs

are comprehensive plans that describe how an area will attain the NAAQS. The 1990 amendments to the CAA set deadlines for attainment based on the severity of an area's air pollution problem.

SIPs are not single documents—they are a compilation of new and previously submitted plans, programs (e.g., monitoring, modeling, permitting), district rules, state regulations and federal controls. Many of California's SIPs rely on a core set of control strategies, including emission standards for cars and heavy trucks, fuel regulations and limits on emissions from consumer products. State law makes CARB the lead agency for all purposes related to the SIP. Local air districts and other agencies prepare SIP elements and submit them to CARB for review and approval. CARB forwards the SIP revisions to the USEPA for approval and publication in the Federal Register. The Code of Federal Regulations (CFR) Title 40, Chapter I, Part 52, Subpart F, Section 52.220 lists all of the items that are included in the California SIP (CARB 2009). At any one time, several California submittals are pending USEPA approval.

2.1.3.3 California Energy Code

California Code of Regulations (CCR) Title 24 Part 6, California's Energy Efficiency Standards for Residential and Nonresidential Buildings, were first established in 1978 in response to a legislative mandate to reduce California's energy consumption. Energy-efficient buildings require less electricity, natural gas, and other fuels. Electricity production from fossil fuels and on-site fuel combustion (typically for space and water heating) results primarily in GHG emissions. The California Energy Code is discussed in further detail in Section 2.2.4, below.

2.1.4 Local Regulations

2.1.4.1 South Coast Air Quality Management District

Air quality in the non-desert portion of Riverside County is regulated by the SCAQMD. As a regional agency, the SCAQMD works directly with the Southern California Association of Governments (SCAG), County transportation commissions, and local governments and cooperates actively with all federal and state government agencies. The SCAQMD develops rules and regulations; establishes permitting requirements for stationary sources; inspects emissions sources; and enforces such measures through educational programs or fines, when necessary.

Air Quality Management Plan

The SCAQMD is directly responsible for reducing emissions from stationary (area and point), mobile, and indirect sources. It has responded to this requirement by preparing a sequence of Air Quality Management Plans (AQMP).

On March 3, 2017, the SCAQMD adopted the 2016 AQMP, which is a regional and multi-agency effort (SCAQMD, CARB, SCAG, and USEPA). The 2016 AQMP represents a comprehensive analysis of emissions, meteorology, atmospheric chemistry, regional growth projections, and the impact of existing control measures. The plan seeks to achieve multiple goals in partnership with other entities promoting reductions in criteria pollutant, GHGs, and toxic risk, as well as efficiencies in energy use, transportation, and goods movement (SCAQMD 2017).

The AQMP, in combination with those from all other California nonattainment areas with serious (or worse) air quality problems, is submitted to CARB, which develops the California SIP. The SIP relies on the same information from SCAG to develop emission inventories and emission reduction strategies that

are included in the attainment demonstration for the air basin. The current federal and state attainment status for the SCAB is presented above, in Table 3.

Rules and Regulations

The following rules promulgated by the SCAQMD would be applicable to construction and/or operation of the project.

Rule 401 – Visible Emissions: Limits the allowable opacity of air contaminant emissions from any single source (SCAQMD 2001).

Rule 402 – Nuisance: Prohibits the discharge of air contaminants, including odors, which cause injury, detriment, nuisance, or annoyance to any considerable number of persons (SCAQMD 1976).

Rule 403 – Fugitive Dust: Requires actions to prevent, reduce or mitigate anthropogenic fugitive dust emissions, including emissions from construction activities. Project construction would be required to implement all applicable fugitive dust best available control measures specified in Table 1 in the rule (SCAQMD 2005).

Rule 1113 – Architectural Coating: Establishes VOC limits for architectural coatings (e.g., paints, stains, preservatives). Effective January 1, 2019, building interior and exterior paint is limited to a maximum VOC content of 50 grams per liter (SCAQMD 2016b).

Rule 2305 – Warehouse Indirect Source Rule: Requires owners and operators of warehouses with 100,000 SF or more of indoor floor space in a single building to directly reduce NO_X and PM emissions, or to otherwise facilitate emission and exposure reductions of these pollutants in nearby communities (SCAQMD 2021a).

2.2 GREENHOUSE GASES

2.2.1 Climate Change Overview

Global climate change refers to changes in average climatic conditions on Earth including temperature, wind patterns, precipitation, and storms. Global temperatures are moderated by atmospheric gases. These gases are commonly referred to as GHGs because they function like a greenhouse by letting sunlight in but preventing heat from escaping, thus warming the Earth's atmosphere.

GHGs are emitted by natural processes and human (anthropogenic) activities. Anthropogenic GHG emissions are primarily associated with: (1) the burning of fossil fuels during motorized transport, electricity generation, natural gas consumption, industrial activity, manufacturing, and other activities; (2) deforestation; (3) agricultural activity; and (4) solid waste decomposition.

The temperature record shows a decades-long trend of warming, with 2016 global surface temperatures ranking as the warmest year on record since 1880. The newest release in long-term warming trends announced 2020 ranked as tied with 2016 for the warmest year on record with an increase of 1.84 degrees Fahrenheit compared to the 1951-1980 average (National Aeronautics and Space Administration [NASA] 2021). GHG emissions from human activities are the most significant driver of observed climate change since the mid-20th century (United Nations Intergovernmental Panel on Climate Change [IPCC] 2013). The IPCC constructed several emission trajectories of GHGs needed to

stabilize global temperatures and climate change impacts. The statistical models show a "high confidence" that temperature increase caused by anthropogenic GHG emissions could be kept to less than two degrees Celsius relative to pre-industrial levels if atmospheric concentrations are stabilized at about 450 parts per million (ppm) carbon dioxide equivalent (Co_oke) by the year 2100 (IPCC 2014).

2.2.2 Types of Greenhouse Gases

The GHGs defined under California's AB 32 include carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6).

Carbon Dioxide. CO_2 is the most important and common anthropogenic GHG. CO_2 is an odorless, colorless GHG. Natural sources include the decomposition of dead organic matter; respiration of bacteria, plants, animals, and fungi; evaporation from oceans; and volcanic outgassing. Anthropogenic sources of CO_2 include burning fuels, such as coal, oil, natural gas, and wood. Data from ice cores indicate that CO_2 concentrations remained steady prior to the current period for approximately 10,000 years. The atmospheric CO_2 concentration in 2010 was 390 ppm, 39 percent above the concentration at the start of the Industrial Revolution (approximately 280 ppm in 1750). In February 2021, the CO_2 concentration was 416 ppm, a 48 percent increase since 1750 (National Oceanic and Atmospheric Administration [NOAA] 2021).

Methane. CH_4 is the main component of natural gas used in homes. A natural source of methane is from the decay of organic matter. Geological deposits known as natural gas fields contain methane, which is extracted for fuel. Other sources are from decay of organic material in landfills, fermentation of manure, and cattle digestion.

Nitrous Oxide. N_2O is produced by both natural and human-related sources. N_2O is emitted during agricultural and industrial activities, as well as during the combustion of fossil fuels and solid waste. Primary human-related sources of N_2O are agricultural soil management, animal manure management, sewage treatment, mobile and stationary combustion of fossil fuel, adipic (fatty) acid production, and nitric acid production.

Hydrofluorocarbons. Fluorocarbons are gases formed synthetically by replacing all hydrogen atoms in methane or ethane with chlorine and/or fluorine atoms. Chlorofluorocarbons (CFCs) are nontoxic, nonflammable, insoluble, and chemically nonreactive in the troposphere (the level of air at Earth's surface). CFCs were first synthesized in 1928 for use as refrigerants, aerosol propellants, and cleaning solvents. They destroy stratospheric ozone; therefore, their production was stopped as required by the 1989 Montreal Protocol.

Sulfur Hexafluoride. SF_6 is an inorganic, odorless, colorless, nontoxic, nonflammable gas. SF_6 is used for insulation in electric power transmission and distribution equipment, in the magnesium industry, in semi-conductor manufacturing, and as a tracer gas for leak detection.

GHGs have long atmospheric lifetimes that range from one year to several thousand years. Long atmospheric lifetimes allow for GHG emissions to disperse around the globe. Because GHG emissions vary widely in the power of their climatic effects, climate scientists have established a unit called global warming potential (GWP). The GWP of a gas is a measure of both potency and lifespan in the atmosphere as compared to CO_2. For example, a gas with a GWP of 10 is 10 times more potent than CO_2 over 100 years. CO_2e is a quantity that enables all GHG emissions to be considered as a group despite their varying GWP. The GWP of each GHG is multiplied by the prevalence of that gas to produce CO_2e.

Historically, GHG emission inventories have been calculated using the GWPs from the IPCC's Second Assessment Report (SAR). In 2007, IPCC updated the GWP values based on the latest science at the time in its Fourth Assessment Report (AR4). The updated GWPs in the IPCC AR4 have begun to be used in recent GHG emissions inventories. In 2013, IPCC again updated the GWP values based on the latest science in its Fifth Assessment Report (AR5) (IPCC 2013). However, United Nations Framework Convention on Climate Change (UNFCCC) reporting guidelines for national inventories require the use of GWP values from the AR4. To comply with international reporting standards under the UNFCCC, official emission estimates for California and the U.S. are reported using AR4 GWP values, and statewide and national GHG inventories have not yet updated their GWP values to the AR5 values. Project GHG emissions in this analysis are reported using the AR4 GWP values.

By applying the GWP ratios, project-related CO_2e emissions can be tabulated in metric tons per year. Typically, the GWP ratio corresponding to the warming potential of CO_2 over a 100-year period is used as a baseline. The atmospheric lifetime and GWP of selected GHGs are summarized in Table 4, *Global Warming Potentials and Atmospheric Lifetimes*.

Table 4
GLOBAL WARMING POTENTIALS AND ATMOSPHERIC LIFETIMES

Greenhouse Gas	Atmospheric Lifetime (years)	IPCC SAR GWP	IPCC AR4 GWP	IPCC AR5 GWP
Carbon Dioxide (CO_2)	50-200	1	1	1
Methane (CH_4)	12	21	25	28
Nitrous Oxide (N_2O)	114	310	298	265
HFC-134a	14	1,300	1,430	1,300
PFC: Tetraflouromethane (CF_4)	50,000	6,500	7,390	6,630
PFC: Hexafluoroethane (C_2F_6)	10,000	9,200	12,200	11,100
Sulfur Hexafluoride (SF_6)	3,200	23,900	22,800	23,500

Source: IPCC 2007
IPCC = Intergovernmental Panel on Climate Change; GWP = global warming potential; HFC = hydrofluorocarbon; PFC = perfluorocarbon

2.2.3 Federal Greenhouse Gas Regulations

2.2.3.1 Federal Clean Air Act

The U.S. Supreme Court ruled on April 2, 2007, in *Massachusetts v. U.S. Environmental Protection Agency* that CO_2 is an air pollutant, as defined under the CAA, and that the USEPA has the authority to regulate emissions of GHGs. The USEPA announced that GHGs (including CO_2, CH_4, N_2O, HFC, PFC, and SF_6) threaten the public health and welfare of the American people (USEPA 2021). This action was a prerequisite to finalizing the USEPA's GHG emissions standards for light-duty vehicles, which were jointly proposed by the USEPA and the United States Department of Transportation's National Highway Traffic Safety Administration (NHTSA).

On June 30, 2022, the U.S. Supreme Court decision published in *West Virginia v. U.S. Environmental Protection Agency* overturned the USEPA's Clean Power Plan rule which cited Section 111(d) of the CAA for authority to set limits on CO_2 emissions from existing coal- and natural-gas-fired power plants. The June 30, 2022 decision does not overturn the April 2, 2007 decision; however, it may limit the USEPA's authority to develop rules limiting GHG emissions without clear congressional authorization

2.2.3.2 Light-Duty Vehicle Greenhouse Gas Emissions Standards and Corporate Average Fuel Economy Standards

The USEPA and the NHTSA worked together on developing a national program of regulations to reduce GHG emissions and to improve fuel economy of light-duty vehicles. The USEPA established the first-ever national GHG emissions standards under the CAA, and the NHTSA established CAFE standards under the Energy Policy and Conservation Act. On April 1, 2010, the USEPA and NHTSA announced a joint Final Rulemaking that established standards for 2012 through 2016 model year vehicles. This was followed up on October 15, 2012, when the agencies issued a Final Rulemaking with standards for model years 2017 through 2025.

2.2.4 California Greenhouse Gas Regulations

2.2.4.1 California Code of Regulations, Title 24, Part 6

CCR Title 24 Part 6: California's Energy Efficiency Standards for Residential and Nonresidential Buildings were first established in 1978 in response to a legislative mandate to reduce California's energy consumption. Energy-efficient buildings require less electricity, natural gas, and other fuels. Electricity production from fossil fuels and on-site fuel combustion (typically for space or water heating) results in GHG emissions.

The Title 24 standards are updated approximately every three years to allow consideration and possible incorporation of new energy efficiency technologies and methods. The 2019 Title 24 standards went into effect on January 1, 2020. The 2019 update to the Building Energy Efficiency Standards focuses on several key areas to improve the energy efficiency of newly constructed buildings and additions and alterations to existing buildings (California Energy Commission [CEC] 2019).

The standards are divided into three basic sets. First, there is a basic set of mandatory requirements that apply to all buildings. Second, there is a set of performance standards – the energy budgets – that vary by climate zone (of which there are 16 in California) and building type; thus, the standards are tailored to local conditions. Finally, the third set constitutes an alternative to the performance standards, which is a set of prescriptive packages that are basically a recipe or a checklist compliance approach.

2.2.4.2 California Green Building Standards Code

The California Green Building Standards Code (CALGreen; CCR Title 24, Part 11) is a code with mandatory requirements for all nonresidential buildings (including industrial buildings) and residential buildings for which no other state agency has authority to adopt green building standards. The current 2019 Standards for new construction of, and additions and alterations to, residential and nonresidential buildings went into effect on January 1, 2020 (California Building Standards Commission [CBSC] 2019).

The development of CALGreen is intended to (1) cause a reduction in GHG emissions from buildings; (2) promote environmentally responsible, cost-effective, healthier places to live and work; (3) reduce energy and water consumption; and (4) respond to the directives by the Governor. In short, the code is established to reduce construction waste; make buildings more efficient in the use of materials and energy; and reduce environmental impact during and after construction.

CALGreen contains requirements for storm water control during construction; construction waste reduction; indoor water use reduction; material selection; natural resource conservation; site irrigation

conservation; and more. The code provides for design options allowing the designer to determine how best to achieve compliance for a given site or building condition. The code also requires building commissioning, which is a process for the verification that all building systems, like heating and cooling equipment and lighting systems, are functioning at their maximum efficiency.

2.2.4.3 Executive Order S-3-05

On June 1, 2005, Executive Order (EO) S-3-05 proclaimed that California is vulnerable to climate change impacts. It declared that increased temperatures could reduce snowpack in the Sierra Nevada, further exacerbate California's air quality problems, and potentially cause a rise in sea levels. To avoid or reduce climate change impacts, EO S-3-05 calls for a reduction in GHG emissions to the year 2000 level by 2010, to year 1990 levels by 2020, and to 80 percent below 1990 levels by 2050.

2.2.4.4 Assembly Bill 32 – Global Warming Solution Act of 2006

The California Global Warming Solutions Act of 2006, widely known as AB 32, requires that CARB develop and enforce regulations for the reporting and verification of statewide GHG emissions. CARB is directed by AB 32 to set a GHG emission limit, based on 1990 levels, to be achieved by 2020. The bill requires CARB to adopt rules and regulations in an open public process to achieve the maximum technologically feasible and cost-effective GHG emission reductions.

2.2.4.5 Executive Order B-30-15

On April 29, 2015, EO B-30-15 established a California GHG emission reduction target of 40 percent below 1990 levels by 2030. The EO aligns California's GHG emission reduction targets with those of leading international governments, including the 28 nation European Union. California is on track to meet or exceed the target of reducing GHGs emissions to 1990 levels by 2020, as established in AB 32. California's new emission reduction target of 40 percent below 1990 levels by 2030 will make it possible to reach the goal established by EO S-3-05 of reducing emissions 80 percent under 1990 levels by 2050.

2.2.4.6 Senate Bill 32

Senate Bill (SB) 32 (Amendments to the California Global Warming Solutions Action of 2006) extends California's GHG reduction programs beyond 2020. SB 32 amended the Health and Safety Code to include Section 38566, which contains language to authorize CARB to achieve a statewide GHG emission reduction of at least 40 percent below 1990 levels by no later than December 31, 2030. SB 32 codified the targets established by EO B-30-15 for 2030, which set the next interim step in the State's continuing efforts to pursue the long-term target expressed in EO B-30-15 of 80 percent below 1990 emissions levels by 2050.

2.2.4.7 Assembly Bill 197

A condition of approval for SB 32 was the passage of AB 197. AB 197 requires that CARB consider the social costs of GHG emissions and prioritize direct reductions in GHG emissions at mobile sources and large stationary sources. AB 197 also gives the California legislature more oversight over CARB through the addition of two legislatively appointed members to the CARB Board and the establishment a legislative committee to make recommendations about CARB programs to the legislature.

2.2.4.8 Assembly Bill 1493 – Vehicular Emissions of Greenhouse Gases

AB 1493 (Pavley) requires that CARB develop and adopt regulations that achieve "the maximum feasible reduction of GHGs emitted by passenger vehicles and light-duty truck and other vehicles determined by CARB to be vehicles whose primary use is noncommercial personal transportation in the State." On September 24, 2009, CARB adopted amendments to the Pavley regulations that intend to reduce GHG emissions in new passenger vehicles from 2009 through 2016. The amendments bind California's enforcement of AB 1493 (starting in 2009), while providing vehicle manufacturers with new compliance flexibility. In January 2012, CARB approved a new emissions-control program for model years 2017 through 2025. The program combines the control of smog, soot, and global warming gases and requirements for greater numbers of zero-emission vehicles into a single packet of standards called Advanced Clean Cars (CARB 2021b).

2.2.4.9 Assembly Bill 341

The state legislature enacted AB 341 (California Public Resource Code Section 42649.2), increasing the diversion target to 75 percent statewide. AB 341 requires all businesses and public entities that generate 4 cubic yards or more of waste per week to have a recycling program in place. The final regulation was approved by the Office of Administrative Law on May 7, 2012 and went into effect on July 1, 2012.

2.2.4.10 Executive Order S-01-07

This EO, signed by Governor Schwarzenegger on January 18, 2007, directs that a statewide goal be established to reduce the carbon intensity of California's transportation fuels by at least 10 percent by the year 2020. It orders that a Low Carbon Fuel Standard (LCFS) for transportation fuels be established for California and directs CARB to determine whether a LCFS can be adopted as a discrete early action measure pursuant to AB 32. CARB approved the LCFS as a discrete early action item with a regulation adopted and implemented in April 2010. Although challenged in 2011, the Ninth Circuit reversed the District Court's opinion and rejected arguments that implementing LCFS violates the interstate commerce clause in September 2013. CARB is therefore continuing to implement the LCFS statewide.

2.2.4.11 Senate Bill 350

Approved by Governor Brown on October 7, 2015, SB 350 increases California's renewable electricity procurement goal from 33 percent by 2020 to 50 percent by 2030. This will increase the use of Renewables Portfolio Standard eligible resources, including solar, wind, biomass, and geothermal. In addition, large utilities are required to develop and submit Integrated Resource Plans to detail how each entity will meet their customers resource needs, reduce GHG emissions, and increase the use of clean energy.

2.2.4.12 Senate Bill 375

SB 375, the Sustainable Communities and Climate Protection Act of 2008, supports the State's climate action goals to reduce GHG emissions through coordinated transportation and land use planning with the goal of more sustainable communities.

Under the Sustainable Communities Act, CARB sets regional targets for GHG emissions reductions from passenger vehicle use. In 2010, CARB established these targets for 2020 and 2035 for each region

covered by one of the State's metropolitan planning organizations (MPOs). CARB periodically reviews and updates the targets, as needed.

Each of California's MPOs must prepare a Sustainable Communities Strategy (SCS) as an integral part of its regional transportation plan (RTP). The SCS contains land use, housing, and transportation strategies that, if implemented, would allow the region to meet its GHG emission reduction targets. Once adopted by the MPO, the RTP/SCS guides the transportation policies and investments for the region. CARB must review the adopted SCS to confirm and accept the MPO's determination that the SCS, if implemented, would meet the regional GHG targets. If the combination of measures in the SCS would not meet the regional targets, the MPO must prepare a separate alternative planning strategy (APS) to meet the targets. The APS is not a part of the RTP. Qualified projects consistent with an approved SCS or Alternative Planning Strategy categorized as "transit priority projects" would receive incentives to streamline CEQA processing.

2.2.4.13 Senate Bill 100

Approved by Governor Brown on September 10, 2018, SB 100 extends the renewable electricity procurement goals and requirements of SB 350. SB 100 requires that all retail sale of electricity to California end-use customers be procured from 100 percent eligible renewable energy resources and zero-carbon resources by the end of 2045.

2.2.4.14 California Air Resources Board: Scoping Plan

On December 11, 2008, the CARB adopted the Scoping Plan (CARB 2008) as directed by AB 32. The Scoping Plan proposes a set of actions designed to reduce overall GHG emissions in California to the levels required by AB 32. Measures applicable to development projects include those related to energy-efficiency building and appliance standards, the use of renewable sources for electricity generation, regional transportation targets, and green building strategy. Relative to transportation, the Scoping Plan includes nine measures or recommended actions related to reducing VMT and vehicle GHGs through fuel and efficiency measures. These measures would be implemented statewide rather than on a project-by-project basis.

In response to EO B-30-15 and SB 32, all state agencies with jurisdiction over sources of GHG emissions were directed to implement measures to achieve reductions of GHG emissions to meet the 2030 and 2050 targets. CARB was directed to update the Scoping Plan to reflect the 2030 target and, therefore, is moving forward with the update process (CARB 2014). The mid-term target is critical to help frame the suite of policy measures, regulations, planning efforts, and investments in clean technologies and infrastructure needed to continue driving down emissions. CARB is moving forward with a second update to the Scoping Plan to reflect the 2030 target set by EO B-30-15 and codified by SB 32. The 2017 Climate Change Scoping Plan Update, Proposed Strategy for Achieving California's 2030 Greenhouse Gas Target, was adopted in December 2017. The Scoping Plan Update establishes a proposed framework for California to meet a 40 percent reduction in GHGs by 2030 compared to 1990 levels (CARB 2017).

2.2.5 Regional GHG Policies and Plans

2.2.5.1 Southern California Association of Governments

SCAG is the regional planning agency for Los Angeles, Orange, Ventura, Riverside, San Bernardino, and Imperial Counties, and addresses regional issues relating to transportation, the economy, community

development and the environment. SCAG coordinates with various air quality and transportation stakeholders in Southern California to ensure compliance with the federal and state air quality requirements. Pursuant to California Health and Safety Code Section 40460, SCAG has the responsibility of preparing and approving the portions of the AQMP relating to the regional demographic projections and integrated regional land use, housing, employment, and transportation programs, measures, and strategies. SCAG is required by law to ensure that transportation activities "conform" to, and are supportive of, the goals of regional and state air quality plans to attain the NAAQS. The RTP/SCS includes transportation programs, measures, and strategies generally designed to reduce vehicle miles traveled (VMT), which are contained in the AQMP. The SCAQMD combines its portion of the AQMP with those prepared by SCAG. The RTP/SCS and Transportation Control Measures, included as Appendix IV-C of the 2016 AQMP for the Air Basin, are based on SCAG's 2016-2040 RTP/SCS.

2.2.5.2 Western Riverside Council of Governments

In September 2014, the Western Riverside Council of Governments (WRCOG) completed the Subregional Climate Action Plan (Subregional CAP). The Subregional CAP is a joint effort by twelve cities in the subregion which establishes emissions reduction targets, emissions reduction measures, and action steps to assist each community to demonstrate consistency AB 32 (WRCOG 2014). The City was a participating agency in developing the Subregional CAP and has adopted a local CAP based on the Subregional CAP (see below).

2.2.5.3 City of Perris

The City of Perris Climate Action Plan (CAP) was adopted by the City Council on February 23, 2016. The CAP was developed to address global climate change through the reduction of GHG emissions at the community level, and as part of California's mandated statewide GHG emissions reduction goals under AB 32. The CAP, including the GHG inventories and forecasts contained within, is based on the Subregional CAP. The City CAP utilized the analyses in the Subregional CAP of existing GHG reduction programs and policies that have already been implemented in the subregion and applicable best practices from other regions to assist in meeting the 2020 subregional reduction target. The CAP contains community wide GHG emissions reduction targets of 15 percent below 2010 levels by 2020, and 47.5 percent below 2010 levels by 2035 (City 2016).

3.0 EXISTING CONDITIONS

The project site is generally characterized as disturbed vacant land that was previously used for agricultural purposes. The project site is generally flat with an elevation between 1,450 and 1,460 feet above mean sea level (amsl). The southern portion of the project site includes a surface-level drainage swale that is owned and maintained by the Riverside County Flood Control and Water Conservation District and runs in an east-west direction. Surrounding land uses include: three single family residences (on parcels with commercial and industrial land use designations), undeveloped area, and commercial development (beyond and undeveloped area to the north; a retail gasoline station abutting the project site to the east; commercial development and undeveloped land to the east across Perris Boulevard; commercial development with residential areas beyond to the southeast across Ramona Expressway and Perris Boulevard; industrial development (beyond undeveloped areas) to the south across Ramona Expressway; industrial development to the southwest (beyond retention basins) across Ramona Expressway and Indian Avenue; and undeveloped land to the east across Indian Avenue. See Figure 2.

3.1 CLIMATE AND METEOROLOGY

The project site is in the SCAB, which consists of all or part of four counties: Los Angeles, San Bernardino, Riverside, and Orange. The distinctive climate of the SCAB is determined by its terrain and geographic location. The SCAB is a coastal plain with connecting broad valleys and low hills. It is bound by the Pacific Ocean to the southwest and high mountains around the rest of its perimeter. The general region lies in the semi-permanent high-pressure zone of the eastern Pacific, resulting in a mild climate tempered by cool sea breezes with light, average wind speeds.

The usually mild climatological pattern is interrupted occasionally by periods of extremely hot weather, winter storms, or Santa Ana winds. Winds in the project area are usually driven by the dominant land/ sea breeze circulation system. Regional wind patterns are dominated by daytime onshore sea breezes. At night, the wind generally slows and reverses direction traveling toward the sea. Local canyons can also alter wind direction, with wind tending to flow parallel to the canyons. The vertical dispersion of air pollutants in the SCAB is hampered by the presence of persistent temperature inversions. High pressure systems, such as the semi-permanent high-pressure zone in which the SCAB is located, are characterized by an upper layer of dry air that warms as it descends, restricting the mobility of cooler marine-influenced air near the ground surface, and resulting in the formation of subsidence inversions. Such inversions restrict the vertical dispersion of air pollutants released into the marine layer and, together with strong sunlight, can produce worst-case conditions for the formation of photochemical smog. The basin-wide occurrence of inversions at 3,500 feet above mean sea level or less averages 191 days per year (SCAQMD 1993).

The predominant wind direction in the vicinity of the project site is from the northwest and the average wind speed is approximately 4.9 mph, as measured at the March Air Force Base, approximately 3 miles northwest of the project site (Iowa Environmental Mesonet [IEM] 2021). The annual average maximum temperature in the project area, as measured at the Riverside Fire Station 3 climatic station, approximately 13.5 miles northwest of the project site, is approximately 79.5 degrees Fahrenheit (°F), and the annual average minimum temperature is approximately 48.6°F. Total precipitation in the project area averages approximately 10.2 inches annually. Precipitation occurs mostly during the winter and relatively infrequently during the summer (Western Regional Climate Center [WRCC] 2017).

3.2 SENSITIVE RECEPTORS

CARB and the Office of Environmental Health Hazard Assessment (OEHHA) have identified the following groups of individuals as the most likely to be affected by air pollution: adults over 65, children under 14, infants (including in utero in the third trimester of pregnancy), and persons with cardiovascular and chronic respiratory diseases such as asthma, emphysema, and bronchitis (CARB 2005; OEHHA 2015). Some land uses are considered more sensitive to air pollution than others due to the types of population groups or activities involved and are referred to as sensitive receptor locations. Examples of these sensitive receptor locations are residences, schools, hospitals, and daycare centers. For health risk assessments, the health impacts are analyzed for individual residents assumed to be standing in their primary outdoor spaces closest to the source of TACs, for students assumed to be standing outside of the school buildings or in outdoor recreation areas closest to the source of TACs, and for individual off-site workers assumed to be standing outside of a commercial or industrial building.

The closest existing sensitive receptor locations to the project site are located at three single-family residences on parcels abutting the project site to the north. Even though these parcels are not zoned for

residential uses, they are still considered locations where sensitive receptors may be located for extended periods. There are reports that the closest single-family residence to the project site (adjacent to the project northwest corner) has been demolished. However, persons may still be residing at this location in recreational vehicles. To be conservative (health protective) in this analysis, this location is considered a residential site and a sensitive receptor location. Additional residential sensitive receptors are located southeast of the project site, across Ramona Expressway and North Perris Boulevard, behind a row of commercial buildings.

3.3 EXISTING AIR QUALITY

3.3.1 Criteria Pollutants

3.3.1.1 Attainment Designations

Attainment designations are discussed in Section 2.1 and Table 2. The SCAB is a federal and state nonattainment area for 8-hour ozone and $PM_{2.5}$. The SCAB is also a state nonattainment area for 1-hour ozone and PM_{10}.

3.3.1.2 Monitored Air Quality

The SCAQMD maintains monitoring stations to measure ambient concentrations of pollutants in the SCAB. The nearest monitoring station, approximately 4 miles south project site, is the Perris monitoring station. The closest monitoring station with data for $PM_{2.5}$ and NO_2 is the Riverside-Rubidoux monitoring station, approximately 15 miles northwest of the project site. Table 5, *Air Quality Monitoring Data*, presents a summary of the ambient pollutant concentrations monitored at the two air quality monitoring stations during the most recent three years (2018 through 2020) for which the SCAQMD has reported data.

Table 5
AIR QUALITY MONITORING DATA

Pollutant Standard	2018	2019	2020
Ozone (O_3) – Perris Station			
Maximum concentration 1-hour period (ppm)	0.117	0.118	0.125
Maximum concentration 8-hour period (ppm)	0.103	0.095	0.106
Days above 1-hour state standard (>0.09 ppm)	31	28	34
Days above 8-hour state/federal standard (>0.070 ppm)	67	64	74
Coarse Particulate Matter (PM_{10}) – Perris Station			
Maximum 24-hour concentration (µg/m^3)	64.4	97.0	92.3
Measured Days above 24-hr state standard (>50 µg/m^3)	2	4	6
Measured Days above 24-hr federal standard (>150 µg/m^3)	0	0	0
Annual average (µg/m^3)	28.9	24.4	*
Exceed state annual standard (20 µg/m^3)	Yes	Yes	*
Fine Particulate Matter ($PM_{2.5}$) – Riverside-Rubidoux Station			
Maximum 24-hour concentration (µg/m^3)	66.3	55.7	59.9
Measured Days above 24-hour federal standard (>35 µg/m^3)	3	5	12
Annual average (µg/m^3)	12.6	11.2	14.1
Exceed state and federal annual standard (12 µg/m^3)	Yes	No	Yes

Pollutant Standard	2018	2019	2020
Nitrogen Dioxide (NO_2) – Riverside-Rubidoux Station			
Maximum 1-hour concentration (ppm)	0.055	0.056	0.062
Days above state 1-hour standard (0.18 ppm)	0	0	0
Days above federal 1-hour standard (0.100 ppm)	0	0	0
Annual average (ppm)	0.014	0.014	0.014
Exceed annual federal standard (0.053 ppm)	No	No	No
Exceed annual state standard (0.030 ppm)	No	No	No

Source: CARB 2021c
ppb = parts per billion; ppm = parts per million; $\mu g/m^3$ = micrograms per cubic meter, * = insufficient data available.

As shown in Table 5, the 1- and 8-hour ozone, PM_{10}, and $PM_{2.5}$ standards were exceeded numerous times in each of the sample years. Data for NO_2 showed no exceedances.

3.3.2 Greenhouse Gases

In 2014, total GHG emissions worldwide were estimated at 48,892 million metric tons (MMT) of CO_2e emissions (World Resource Institute [WRI] 2020). The U.S. contributed the second largest portion (13 percent) of global GHG emissions in 2014. The total U.S. GHG emissions was 6,319 MMT CO_2e in 2019, of which 82 percent was CO_2 emission (WRI 2020). On a national level, approximately 27 percent of GHG emissions were associated with transportation and about 38 percent were associated with electricity generation (WRI 2020).

CARB performed statewide inventories for the years 1990 to 2019, as shown in Table 6, *California Greenhouse Gas Emissions by Sector*. The inventory is divided into five broad sectors of economic activity: agriculture, commercial and residential, electricity generation, industrial, and transportation. Emissions are quantified in MMT CO_2e.

Table 6
CALIFORNIA GREENHOUSE GAS EMISSIONS BY SECTOR

Sector	Emissions (MMT CO_2e) 1990	Emissions (MMT CO_2e) 2000	Emissions (MMT CO_2e) 2010	Emissions (MMT CO_2e) 2019
Agriculture and Forestry	18.9 (4%)	31.0 (7%)	33.7 (8%)	31.8 (8%)
Commercial and Residential	44.1 (10%)	45.8 (10%)	52.2 (12%)	43.8 (10%)
Electricity Generation	110.5 (26%)	105.4 (22%)	90.6 (20%)	58.8 (14%)
Industrial	105.3 (24%)	105.8 (22%)	101.8 (23%)	88.2 (21%)
Transportation	150.6 (35%)	183.2 (39%)	170.2 (38%)	166.1 (40%)
Unspecified Remaining	1.3 (<1%)	0.0 (0%)	0.0 (0%)	29.5 (7%)
Total	**430.7**	**471.1**	**448.5**	**418.2**

Source: CARB 2007 and CARB 2021d
MMT = million metric tons; CO_2e = carbon dioxide equivalent

As shown in Table 6, statewide GHG source emissions totaled 431 MMT CO_2e in 1990, 471 MMT CO_2e in 2000, 449 MMT CO_2e in 2010, and 418 MMT CO_2e in 2019. Transportation-related emissions consistently contribute the most GHG emissions, followed by electricity generation and industrial emissions (CARB 2007 and CARB 2021d).

A community GHG emissions inventory was prepared as part of the Subregional CAP and used in the City CAP. The 2010 emissions inventory for the community is shown below in Table 7, *Perris Greenhouse Gas Emissions by Sector*. The sectors included in this inventory are somewhat different from those in the statewide inventory. Similar to the statewide emissions, transportation related GHG emissions contributed the most in Perris with 60 percent of the total.

Table 7
PERRIS GREENHOUSE GAS EMISSIONS BY SECTOR (MT CO_2E)

Sector	2010
Residential	73,879 (19.5%)
Commercial/Industrial	57,528 (15.2%)
Transportation	228,578 (60.5%)
Solid Waste and other	18,114 (4.8%)
Total	**378,099**

Source: City 2016
MT = metric tons; CO_2e = carbon dioxide equivalent

4.0 METHODOLOGY AND SIGNIFICANCE CRITERIA

4.1 METHODOLOGY

Criteria pollutant and GHG emissions were calculated using the California Emissions Estimator Model (CalEEMod), Version 2020.4.0 CalEEMod is a computer model used to estimate air emissions resulting from land development projects throughout the state of California. CalEEMod was developed by CAPCOA in collaboration with the California air quality management and pollution control districts, primarily the SCAQMD. The calculation methodology, source of emission factors used, and default data is described in the CalEEMod User's Guide, and Appendices A, D, and E (CAPCOA 2021b).

In brief, CalEEMod is a computer model that estimates criteria air pollutant and greenhouse gas emissions from mobile (i.e., vehicular) sources, area sources (fireplaces, woodstoves, and landscape maintenance equipment), energy use (electricity and natural gas used in space heating, ventilation, and cooling; lighting; and plug-in appliances), water use and wastewater generation, and solid waste disposal. Emissions are estimated based on land use information input to the model by the user.

In the first module, the user defines the specific land uses that will occur at the project site. The user also selects the appropriate land use setting (urban or rural), operational year, location, climate zone, and utility provider. The input land uses, size features, and population are used throughout CalEEMod in determining default parameters and calculations in each of the subsequent modules. The input land use information consists of land use subtypes (such as the residential subtypes of single-family residential and multi-family medium-rise residential) and their unit or square footage quantities.

Subsequent modules include construction (including off-road vehicle emissions), mobile (on-road vehicle emissions), area sources (architectural coatings [painting], consumer products [cleansers, aerosols, solvents]), water and wastewater, and solid waste. Each module comprises multiple components including an associated mitigation module to account for further reductions in the reported baseline calculations. Other inputs include trip generation rates, trip lengths, vehicle fleet mix (percentage autos,

trucks, etc.), trip distribution (percent work to home, etc.), duration of construction phases, construction equipment usage, grading areas, season, and ambient temperature, as well as other parameters.

In various places the user can input additional information and/or override the default assumptions to account for project- or location-specific parameters. For this assessment, the default parameters were not changed unless otherwise noted. The CalEEMod output files are included in Appendix A to this report.

4.1.1 Construction Emissions

CalEEMod has the capability to calculate reductions in construction emissions from the effects of dust control, diesel-engine classifications, and other selected emissions reduction measures. In compliance with SCAQMD Rule 403, fugitive dust emissions calculations assume application of water on exposed surface a minimum of two times per day. Based on CalEEMod, Version 2020.4.0 defaults, the control efficiency for watering two times per day is 55 percent.

CalEEMod estimates construction emissions for each year of construction activity based on the annual construction equipment profile and other factors determined as needed to complete all phases of construction by the target completion year. As such, each year of construction activity has varying quantities of GHG emissions. Per SCAQMD guidance, total construction GHG emissions resulting from the project are amortized over 30 years (the anticipated period before the project building would require replacement or significant renovation) and added to operational GHG emissions.

4.1.1.1 Construction Activities

Construction emissions were estimated based on the timeline provided by the project applicant, which assumes construction would commence with site preparation in October 2022. Construction of Line E is anticipated to start concurrent with grading and finish concurrent with the first two months of building construction. Line E construction is included in the underground utilities activity. Architectural coatings (e.g., painting) for the hotel are assumed to occur concurrent with the last two months of building construction. The quantity, duration, and intensity of construction activity influence the amount of construction emissions and related pollutant concentrations that occur at any one time. As such, the emission forecasts provided herein reflect a specific set of conservative assumptions based on the expected construction scenario wherein a relatively large amount of construction activity is occurring in a relatively intensive manner. Because of this conservative assumption, actual emissions could be less than those forecasted. If construction is delayed or occurs over a longer time period, emissions could be reduced because of: (1) a more modern and cleaner-burning construction equipment fleet mix than assumed in CalEEMod; and/or (2) a less intensive buildout schedule (i.e., fewer daily emissions occurring over a longer time interval).

Construction activities for Phase 1 would include site preparation, grading, installation of underground utilities and Line E, building construction, paving internal streets, and architectural coatings. Construction activities for Phase 2 would include site preparation, grading, building construction, architectural coatings, and paving. Off-site improvements to city streets in the project vicinity are included in the grading and paving activities. Construction is assumed to occur five days per week with equipment operating up to eight hours per day. The construction schedule assumed in the modeling is shown in Table 8, *Anticipated Construction Schedule*.

Table 8
ANTICIPATED CONSTRUCTION SCHEDULE

Construction Activity	Construction Period Start	Construction Period End	Number of Working Days
Phase 1 Site Preparation	10/1/2022	10/14/2022	10
Phase 1 Grading	10/15/2022	11/14/2022	21
Phase 1 Underground Utilities/Line E	10/15/2022	2/14/2023	87
Phase 1 Building Construction	12/12/2022	2/2/2024	300
Phase 1 Paving	2/3/2024	3/1/2024	20
Phase 1 Architectural Coatings	3/2/2024	3/29/2024	20
Phase 2 Site Preparation	7/1/2024	7/2/2024	2
Phase 2 Grading	7/3/2024	7/8/2024	4
Phase 2 Building Construction	7/9/2024	4/14/2025	200
Phase 2 Architectural Coatings	2/15/2025	4/14/2025	41
Phase 2 Paving	4/15/2025	4/28/2025	10

Source: JM Realty; CalEEMod (complete data is provided in Appendix A)

4.1.1.2 Construction Off-Road Equipment

Construction would require the use of heavy off-road equipment. Construction equipment estimates for other activities estimates are based on default values in CalEEMod, with additional equipment added for excavation for underground utilities (based on assumptions used for similar projects). Table 9, *Construction Equipment Assumptions*, presents a summary of the assumed equipment that would be involved in each stage of construction.

Table 9
CONSTRUCTION EQUIPMENT ASSUMPTIONS

Equipment	Horsepower	Number	Hours/Day
Phase 1 Site Preparation			
Rubber Tired Dozers	247	3	8
Tractors/Loaders/Backhoes	97	4	8
Water Trucks	402	1	8
Phase 1 Grading			
Excavators	158	2	8
Graders	187	1	8
Rubber Tired Dozers	247	1	8
Scrapers	367	2	8
Tractors/Loaders/Backhoes	97	2	8
Phase 1 Underground Utilities/Line E			
Cranes	231	1	2
Excavators	158	1	8
Rubber Tired Loaders	203	1	8
Tractors/Loaders/Backhoes	97	1	1
Water Trucks	402	1	8

Equipment	Horsepower	Number	Hours/Day
Phase 1 Building Construction			
Cranes	231	1	7
Forklifts	89	3	8
Generator Sets	84	1	8
Tractors/Loaders/Backhoes	97	3	7
Welders	46	1	8
Water Trucks	402	1	8
Phase 1 Architectural Coating			
Air Compressors	78	1	6
Phase 1 Paving			
Pavers	130	2	8
Paving Equipment	132	2	8
Rollers	80	2	8
Phase 2 Site Preparation			
Graders	187	1	8
Rubber Tired Dozers	247	1	8
Tractors/Loaders/Backhoes	97	1	8
Water Trucks	402	1	4
Phase 2 Grading			
Graders	187	1	8
Rubber Tired Dozers	247	1	8
Tractors/Loaders/Backhoes	97	2	7
Water Trucks	402	1	4
Phase 2 Building Construction			
Cranes	231	1	6
Forklifts	89	1	6
Generator Sets	84	1	8
Tractors/Loaders/Backhoes	97	1	6
Welders	46	3	8
Water Trucks	402	1	4
Phase 2 Architectural Coating			
Air Compressors	78	1	6
Phase 2 Paving			
Cement and Mortar Mixers	9	1	6
Pavers	130	1	6
Paving Equipment	132	1	8
Rollers	80	1	7
Tractors/Loaders/Backhoes	97	1	8

Source: CalEEMod (complete data is provided in Appendix A)

4.1.1.3 Construction On-Road Trips

Worker commute trips and vendor delivery trips were modeled based on CalEEMod defaults. Worker trips are anticipated to vary between 15 and 209 trips per day, depending on construction activity. Vendor delivery trips would be 82 per day during building construction. Based on the model default of 16 CY per load, import of soil would require 990 loads (1,980 trips). Based on the paved areas shown on the site plan, approximately 310 loads (620 trips) of aggregate/asphalt would be imported to the project site during Phase 1 paving and 43 loads (86 trips) of aggregate/asphalt would be imported to the project

site during Phase 2 paving. The CalEEMod default worker, vendor and haul trip distances were used in the model.

4.1.2 Operation Emissions

Operational impacts were estimated using CalEEMod. Operational sources of emissions include area, energy, transportation, water use, and solid waste. Per the project applicant, all warehouse space was modeled in CalEEMod with a land use of Unrefrigerated Warehouse – No Railroad. Operational emissions are calculated for the earliest anticipated full year of operation: 2025 for Phase 1 and 2026 for Phase 2.

4.1.2.1 Area Source Emissions

Area sources include emissions from landscaping equipment, the use of consumer products, the reapplication of architectural coatings for maintenance, and hearths. Emissions associated with area sources were estimated using the CalEEMod default values and SCAQMD Rule 1113 architectural coatings VOC limits.

4.1.2.2 Energy Emissions

Development within the project would use electricity for lighting, heating, and cooling. Direct emissions from the burning of natural gas may result from furnaces, hot water heaters, and appliances. Electricity generation typically entails the combustion of fossil fuels, including natural gas and coal, which is then transmitted to end users. A building's electricity use is thus associated with the off-site or indirect emission of GHGs at the source of electricity generation (power plant). The project's energy use was modeled using CalEEMod defaults.

The project would include electric vehicle (EV) charging infrastructure. Including EV infrastructure in a development project is generally accepted as a GHG reduction measure. Adding EV charging infrastructure to a development project would not result in increased GHG emissions in the region. Without the project including EV infrastructure, EV owners would either charge their vehicles somewhere else, resulting in similar electricity use, or they would choose to use conventional vehicles, resulting in higher GHG emissions. Therefore, project electricity use for EV charging is not included in this analysis.

4.1.2.3 Vehicular (Mobile) Sources

Operational emissions from mobile source emissions are associated with project-related vehicle trip generation and trip length. Based on the trip generation rate from the Traffic Analysis prepared for the project, the light industrial building in Phase 1 would generate 402 average daily trips (260 passenger car trips and 142 truck trips; Urban Crossroads 2022a). Passenger car trip purposes and distances were modeled using CalEEMod defaults. The Traffic Analysis reported that project truck trips would consist of 24 two-axle trucks, 30 three-axle trucks, and 88 four or more axle trucks (142 total truck ADT; Urban Crossroads 2022a). Two-axle trucks were assumed to be light-heavy duty (LHDT2; 10,000 to 14,000 pounds gross vehicle weight [GVW]). Three-axle trucks were assumed to be medium-heavy duty (MHDT; 14,000 to 33,000 GVR). Four or more axle trucks were assumed to be heavy-heavy duty (HHDT; greater than 33,000 GVR). The fleet mix for project truck trips was set in CalEEMod to match the Traffic Analysis truck mix. All truck trips were assumed to be primary (no diverted or pass-by trip reductions). Truck trip distances were modeled using the SCAQMD recommended distance of 40 miles for warehouse projects,

assuming that only the local portion of each trip (local delivery or highway access) would result in new VMT to the region (SCAQMD 2021b). The hotel envisioned for Phase 2 would generate approximately 1,000 ADT (Urban Crossroads 2022a).

4.1.2.4 Solid Waste Sources

The disposal of solid waste produces GHG emissions from anaerobic decomposition in landfills, incineration, and transportation of waste. CalEEMod determines the GHG emissions associated with disposal of solid waste into landfills. Portions of these emissions are biogenic. CalEEMod methods for quantifying GHG emissions from solid waste are based on the IPCC method using the degradable organic content of waste. A conservative 25 percent solid waste diversion rate was applied in CalEEMod to account for mandatory compliance with AB 341 which is not included in the model defaults.

4.1.2.5 Water Sources

Water-related GHG emissions are from the conveyance and treatment of water. CalEEMod uses the CEC's 2006 *Refining Estimates of Water-Related Energy Use in California* to establish default water-related emission factors. Modeling was conducted using these defaults and a 20 percent reduction in potable water use and wastewater generation in accordance with 2019 CALGreen requirements not accounted for in the model defaults.

4.1.3 Localized Significance Threshold Methodology

As part of the SCAQMD's environmental justice program, more attention has been focused on localized air quality effects. Also, while regional impact analysis is based on attaining or maintaining regional emissions standards, localized impact analysis compares the concentration of a pollutant at a receptor site to a health-based standard.

SCAQMD has developed a localized significance threshold (LST) methodology and mass rate look-up tables by source receptor area (SRA) that can be used by public agencies to determine whether a project may generate significant adverse localized air quality impacts. LSTs represent the maximum emissions from a project that will not cause or contribute to an exceedance of the most stringent applicable federal or state ambient air quality standard; they are developed based on the ambient concentrations of that pollutant for each SRA (SCAQMD 2009). The LST methodology translates the concentration standards into emissions thresholds that are a function of project site area, source to receptor distance, and the location within the SCAB. The LST methodology is recommended to be limited to projects of 5 acres or less and to avoid the need for complex dispersion modeling. For projects that exceed 5 acres, such as the proposed project, the 5-acre LST look-up values can be used as a screening tool to determine which pollutants require detailed analysis. This approach is conservative as it assumes that all on-site emissions would occur within a 5-acre area and over-predicts potential localized impacts (i.e., more pollutant emissions occurring within a smaller area and within closer proximity to potential sensitive receptors). If a project exceeds the LST look up values, then the SCAQMD recommends that project-specific localized air quality modeling be performed.

The proposed project is within SRA 24, Perris Valley. The closest sensitive receptor is a single-family residence adjacent to the northwest corner of the project site. Therefore, the LSTs in SRA 24 for project sites of 5 acres with receptors located within 82 feet (25 meters) are used in this analysis.

4.2 SIGNIFICANCE CRITERIA

4.2.1 Air Quality

Thresholds used to evaluate potential air quality and odor impacts are based on applicable criteria in the State's California Environmental Quality Act (CEQA) Guidelines Appendix G. A significant air quality and/or odor impact could occur if the implementation of the proposed project would:

1. Conflict with or obstruct implementation of the SCAQMD Air Quality Management Plan, or applicable portions of the SIP; or

2. Result in a cumulatively considerable net increase of any criteria pollutant for which the SCAB is non-attainment under an applicable NAAQS or CAAQS; or

3. Expose sensitive receptors to substantial pollutant concentrations; or

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

Appendix G of the State CEQA Guidelines states that the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the above determinations. The SCAQMD has established significance thresholds to assess the regional and localized impacts of project-related air pollutant emissions. The significance thresholds are updated, as needed, to appropriately represent the most current technical information and attainment status in the SCAB. Table 10, *SCAQMD Thresholds of Significance*, presents the most current significance thresholds, including regional daily thresholds for short-term construction and long-term operational emissions; maximum incremental cancer risk and hazard indices for TACs; and maximum ambient concentrations for exposure of sensitive receptors to localized pollutants. A project with daily emission rates, risk values, or concentrations below these thresholds is generally considered to have a less than significant effect on air quality.

Table 10
SCAQMD THRESHOLDS OF SIGNIFICANCE

Pollutant	Construction	Operation
Mass Daily Thresholds (pounds per day)		
VOC	75	55
NO_X	100	55
CO	550	550
PM_{10}	150	150
$PM_{2.5}$	55	55
SO_X	150	150
Lead	3	3
Toxic Air Contaminants		
TACs	Maximum Incremental Cancer Risk ≥ 10 in 1 million Cancer Burden > 0.5 excess cancer cases (in areas ≥ 1 in 1 million) Chronic & Acute Hazard Index ≥ 1.0 (project increment)	

Ambient Air Quality for Criteria Pollutants	
NO_2	1-hour average ≥ 0.18 ppm Annual average ≥ 0.03 ppm
CO	1-hour average ≥ 20.0 ppm (state) 8-hour average ≥ 9.0 ppm (state/federal)
PM_{10}	24-hour average ≥ 10.4 µg/m^3 (construction) 24-hour average ≥ 2.5 µg/m^3 (operation) Annual average ≥ 1.0 µg/m^3
$PM_{2.5}$	24-hour average ≥ 10.4 µg/m^3 (construction) 24-hour average ≥ 2.5 µg/m^3 (operation)
SO_2	1-hour average ≥ 0.075 ppm 24-hour average ≥ 0.04 ppm

Source: SCAQMD 2019
lbs/day = pounds per day; VOC = volatile organic compound; NO_X = nitrogen oxides; CO = carbon monoxide; PM_{10} = respirable particulate matter with a diameter of 10 microns or less; $PM_{2.5}$ = fine particulate matter with a diameter of 2.5 microns or less; SO_X = sulfur oxides; TACs = toxic air contaminants; GHG = greenhouse gas emissions; MT/yr = metric tons per year; CO_2e = carbon dioxide equivalent; NO_2 = nitrogen dioxide; ppm = parts per million; µg/m^3 = micrograms per cubic meter

4.2.2 Greenhouse Gases

Given the relatively small levels of emissions generated by a typical development in relationship to the total amount of GHG emissions generated on a national or global basis, individual development projects are not expected to result in significant, direct impacts with respect to climate change. However, given the magnitude of the impact of GHG emissions on the global climate, GHG emissions from new development could result in significant, cumulative impacts with respect to climate change. Therefore, the potential for a significant GHG impact is limited to cumulative impacts.

According to Appendix G of the CEQA Guidelines, a project would have a significant environmental impact if it would:

(1) Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment; or

(2) Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs.

The determination of significance is governed by CEQA Guidelines 15064.4, entitled "Determining the Significance of Impacts from Greenhouse Gas Emissions." CEQA Guidelines Section 15064.4(a) states, "[t]he determination of the significance of greenhouse gas emissions calls for a careful judgment by the lead agency consistent with the provisions in Section 15064. A lead agency should make a good-faith effort, based to the extent possible on scientific and factual data, to describe, calculate or estimate the amount of greenhouse gas emissions resulting from a project. A lead agency shall have discretion to determine, in the context of a particular project, whether to … [use a quantitative model or qualitative model]" (emphasis added). In turn, CEQA Guidelines Section 15064.4(b) clarifies that a lead agency should consider "Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project." Therefore, consistent with CEQA Guidelines Section 15064.4, the GHG analysis for the project appropriately relies upon a threshold based on the exercise of careful judgement and believed to be appropriate in the context of this particular project.

On December 5, 2008, the SCAQMD Governing Board adopted their Interim CEQA GHG Significance Threshold for Stationary Sources, Rules and Plans for projects where the SCAQMD is the lead agency. The SCAQMD's interim GHG significance threshold uses a tiered approach to determining significance. Tier 1 consists of evaluating whether or not the project qualifies for any applicable exemption under CEQA. Tier 2 consists of determining whether or not the project is consistent with a GHG reduction plan that may be part of a local general plan, for example. Tier 3 establishes a screening significance threshold level to determine significance using a 90 percent emission capture rate approach, which corresponds to 10,000 MT CO_2e emissions per year for stationary sources at industrial facilities. Tier 4, to be based on performance standards, is yet to be developed. Under Tier 5 the project proponent would allow offsets to reduce GHG emission impacts to less than the proposed screening level.

The SCAQMD has continued to consider adoption of significance thresholds for residential and general development projects. The most recent proposal issued in September 2010 uses the following tiered approach to evaluate potential GHG impacts from various uses. Under option 1, separate screening thresholds are proposed for residential projects (3,500 MT CO_2e/year), commercial projects (1,400 MT CO_2e/year), and mixed-use projects (3,000 MT CO_2e/year). Under option 2 a single numerical screening threshold of 3,000 MT CO_2e/year would be used for all non-industrial projects. These thresholds have not been adopted by the SCAQMD or distributed for widespread public review and comment, and the working group tasked with developing the thresholds has not met since September 2010. The future schedule and likelihood of threshold adoption is uncertain.

If the CARB adopts statewide significance thresholds, SCAQMD staff plans to report back to the SCAQMD Governing Board regarding any recommended changes or additions to the SCAQMD's interim threshold.

As the City does not currently have any approved quantitative thresholds related to GHG emissions, the quantitative analysis provided herein relies upon the SCAQMD adopted screening threshold for industrial facility projects of 10,000 MT CO_2e (SCAQMD 2008). Although the proposed project includes both an industrial use as well as a commercial use, it is not considered to be a mixed-use project, which is generally defined as a kind of urban development that blends multiple uses, such as residential, commercial, cultural, institutional, or entertainment into one space, where those functions are to some degree physically and functionally integrated, and that provides pedestrian connections. The City's use of the 10,000 MT CO_2e threshold is also considered to be conservative for the proposed project since it is being applied to all of the GHG emissions generated by the proposed project (i.e., area sources, energy sources, vehicular sources, solid waste sources, and water sources) whereas the SCAQMD's 10,000 MT CO_2e threshold applies only to the new stationary sources generated at industrial facilities.

5.0 AIR QUALITY IMPACT ANALYSIS

This section evaluates potential direct impacts of the proposed project related to the air pollutant emissions. Project-level air quality modeling was completed as part of this analysis. Complete modeling results are included as Appendix A of this report.

5.1 ISSUE 1: CONFLICTS WITH AIR QUALITY PLANS

5.1.1 Analysis in the Specific Plan EIR

Impacts related emissions of conflicts with the air quality plans resulting from implementation of development within the PVCCSP Area were analyzed in the EIR which concluded that the

implementation of the PVCCSP and its subsequent implementing development and infrastructure projects will not conflict with or obstruct implementation of the AQMP, and the impact would be less than significant. No mitigation would be required (City 2011 pp. 4.2-32, 4.2-4.2-33).

5.1.2 Impacts

SCAG is the regional planning agency for Los Angeles, Orange, Ventura, Riverside, San Bernardino, and Imperial Counties, and addresses regional issues relating to transportation, economy, community development, and environment. With regard to air quality planning, SCAG has prepared the RTP/SCS, a long-range transportation plan that uses growth forecasts to project trends out over a 20-year period to identify regional transportation strategies to address mobility needs. These growth forecasts form the basis for the land use and transportation control portions of the AQMP. These documents are utilized in the preparation of the air quality forecasts and consistency analysis included in the AQMP. Both the RTP/SCS and AQMP are based, in part, on regional population and employment growth projections originating with County and City General Plans.[2]

Projects that are consistent with the land use designation for their project site are generally consistent with the population and growth assumptions used in the AQMP. The project does not have a residential component and would not result in regional population growth. The PVCCSP designates the project site as a Commercial land use. The project applicant proposes an amendment to the PVCCSP to replace the Commercial land use designation with a Light Industrial land use for approximately 13 acres of the project site. Land use designations for the remaining two acres in the northeastern of the project site would not be modified as part of the project and would continue to be designated Commercial. According to data presented in the SCAG's Employment Density Summary Report, average employment densities for commercial uses in the region range from a high of 175.49 employees per acre (high-rise office) to a low of 19.71 employees per acre (regional retail). Average employment densities for light industrial uses are 17.83 employees per acre for light manufacturing and 11.4 employees per acre for warehouse (SCAG 2001). Therefore, changing the land use designation from Commercial to Light Industrial for the warehouse portion of the project would not result in employment growth exceeding the assumptions used to develop the AQMP. As such, employment growth in the City as a result of the project, and the related changes in regional emissions, are accounted for in the AQMP, which is crafted to bring the basin into attainment for all criteria pollutants. Therefore, the proposed project would not conflict with or obstruct implementation of the AQMP.

5.1.3 Significance of Impacts

Implementation of the project would not conflict with or obstruct implementation of the SCAQMD's AQMP, and the impact would be less than significant.

5.1.4 Mitigation Framework

Impacts would be less than significant; therefore, no mitigation measures are required.

[2] SCAG serves as the federally designated metropolitan planning organization for the southern California region.

5.1.5 Significance After Mitigation

Impacts related to conflicts with the applicable air quality plan would be less than significant.

5.2 ISSUE 2: CUMULATIVELY CONSIDERABLE NET INCREASE OF NONATTAINMENT CRITERIA POLLUTANTS

By its very nature, air pollution is largely a cumulative impact. The nonattainment status of regional pollutants is a result of past and present development within the SCAB. The region is a federal and/or state nonattainment area for ozone, PM_{10} and $PM_{2.5}$. In accordance with CEQA Guidelines Section 15064(h)(3), the SCAQMD's approach for assessing cumulative impacts is based on the AQMP forecasts of attainment of ambient air quality standards in accordance with the requirements of the federal and State Clean Air Acts. If a project conflicts with the AQMP, which is intended to bring the SCAB into attainment for all criteria pollutants, that project can be considered cumulatively considerable. Additionally, if the mass regional emissions calculated for a project exceed the applicable SCAQMD daily significance thresholds that are designed to assist the region in attaining the applicable state and national ambient air quality standards, that project can be considered cumulatively considerable. As discussed in Issue 1, above, the project would not conflict with or obstruct implementation of the AQMP. A comparison of the project mass regional emissions with the applicable SCAQMD daily significance thresholds is provided below.

5.2.1 Analysis in the Specific Plan EIR

Impacts related emissions of criteria pollutants resulting from implementation of development within the PVCCSP Area were analyzed in the EIR which concluded that short-term construction and long-term operation would result in emissions of criteria pollutants and precursors exceed the SCAQMD thresholds and impacts would be potentially significant (City 2011 pp. 4.2-33 through 4.2-4.2-38). Implementation of the following mitigation measures would reduce air quality impacts; however, construction and operational air quality impacts associated with overall development under the PVCCSP was determined to be significant and unavoidable:

MM Air 1 To identify potential implementing development project-specific impacts resulting from construction activities, proposed development projects that are subject to CEQA shall have construction related air quality impacts analyzed using the latest available URBEMIS model, or other analytical method determined in conjunction with the SCAQMD. The results of the construction-related air quality impacts analysis shall be included in the development project's CEQA documentation. To address potential localized impacts, the air quality analysis may incorporate SCAQMD's Localized Significance Threshold analysis or other appropriate analyses as determined in conjunction with SCAQMD. If such analyses identify potentially significant regional or local air quality impacts, the City shall require the incorporation of appropriate mitigation to reduce such impacts.

MM Air 2 Each individual implementing development project shall submit a traffic control plan prior to the issuance of a grading permit. The traffic control plan shall describe in detail safe detours and provide temporary traffic control during construction activities for that project. To reduce traffic congestion, the plan shall include, as necessary, appropriate, and practicable, the following: temporary traffic controls such as a flag person during all

phases of construction to maintain smooth traffic flow, dedicated turn lanes for movement of construction trucks and equipment on- and off-site, scheduling of construction activities that affect traffic flow on the arterial system to off-peak hour, consolidating truck deliveries, rerouting of construction trucks away from congested streets or sensitive receptors, and/or signal synchronization to improve traffic flow.

MM Air 3 To reduce fugitive dust emissions, the development of each individual implementing development project shall comply with SCAQMD Rule 403. The developer of each implementing project shall provide the City of Perris with the SCAQMD-approved dust control plan, or other sufficient proof of compliance with Rule 403, prior to grading permit issuance. Dust control measures shall include, but are not limited to:

- requiring the application of non-toxic soil stabilizers according to manufacturers' specifications to all inactive construction areas (previously graded areas inactive for 20 days or more, assuming no rain),
- keeping disturbed/loose soil moist at all times,
- requiring trucks entering or leaving the site hauling dirt, sand, or soil, or other loose materials on public roads to be covered,
- installation of wheel washers or gravel construction entrances where vehicles enter and exit unpaved roads onto paved roads, or wash off trucks and any equipment leaving the site each trip,
- posting and enforcement of traffic speed limits of 15 miles per hour or less on all unpaved potions of the project site,
- suspending all excavating and grading operations when wind gusts (as instantaneous gust) exceed 25 miles per hour,
- appointment of a construction relations officer to act as a community liaison concerning on-site construction activity including resolution of issues related to PM-10 generation,
- sweeping streets at the end of the day if visible soil material is carried onto adjacent paved public roads and use of SCAQMD Rule 1186 and 1186.1 certified street sweepers or roadway washing trucks when sweeping streets to remove visible soil materials,
- replacement of ground cover in disturbed areas as quickly as possible.

MM Air 4 Building and grading permits shall include a restriction that limits idling of construction equipment on site to no more than five minutes.

MM Air 5 Electricity from power poles shall be used instead of temporary diesel or gasoline-powered generators to reduce the associated emissions. Approval will be required by the City of Perris' Building Division prior to issuance of grading permits.

MM Air 6 The developer of each implementing development project shall require, by contract specifications, the use of alternative fueled off-road construction equipment, the use of construction equipment that demonstrates early compliance with off-road equipment with the CARB in-use off-road diesel vehicle regulation (SCAQMD Rule 2449) and/or meets or exceeds Tier 3 standards with available CARB verified or US EPA certified technologies. Diesel equipment shall use water emulsified diesel fuel such as PuriNOx unless it is unavailable in Riverside County at the time of project construction activities. Contract specifications shall be included in project construction documents, which shall be reviewed by the City of Perris' Building Division prior to issuance of a grading permit.

MM Air 7 During construction, ozone precursor emissions from mobile construction equipment shall be controlled by maintaining equipment engines in good condition and in proper tune per manufacturers' specifications to the satisfaction of the City of Perris' Building Division. Equipment maintenance records and equipment design specification data sheets shall be kept on-site during construction. Compliance with this measure shall be subject to periodic inspections by the City of Perris' Building Division.

MM Air 8 Each individual implementing development project shall apply paints using either high volume low pressure (HVLP) spray equipment with a minimum transfer efficiency of at least 50 percent or other application techniques with equivalent or higher transfer efficiency.

MM Air 9 To reduce VOC emissions associated with architectural coating, the project designer and contractor shall reduce the use of paints and solvents by utilizing pre-coated materials (e.g., bathroom stall dividers, metal awnings), materials that do not require painting, and require coatings and solvents with a VOC content lower than required under Rule 1113 to be utilized. The construction contractor shall be required to utilize "Super-Compliant" VOC paints, which are defined in SCAQMD's Rule 1113. Construction specifications shall be included in building specifications that assure these requirements are implemented. The specifications for each implementing development project shall be reviewed by the City of Perris' Building Division for compliance with this mitigation measure prior to issuance of a building permit for that project.

MM Air 10 To identify potential implementing development project-specific impacts resulting from operational activities, proposed development projects that are subject to CEQA shall have long-term operational-related air quality impacts analyzed using the latest available URBEMIS model, or other analytical method determined by the City of Perris as lead agency in conjunction with the SCAQMD. The results of the operational-related air quality impacts analysis shall be included in the development project's CEQA documentation. To address potential localized impacts, the air quality analysis may incorporate SCAQMD's Localized Significance Threshold analysis, CO Hot Spot analysis, or other appropriate analyses as determined by the City of Perris in conjunction with SCAQMD. If such analyses identify potentially significant regional or local air quality impacts, the City shall require the incorporation of appropriate mitigation to reduce such impacts.

MM Air 11 Signage shall be posted at loading docks and all entrances to loading areas prohibiting all on-site truck idling in excess of five minutes.

MM Air 13 In order to promote alternative fuels, and help support "clean" truck fleets, the developers/successor-of-interest of each implementing development project shall provide building occupants and businesses with information related to SCAQMD's Carl Moyer Program, or other state programs that restrict operations to "clean" trucks, such as 2007 or newer model year or 2010 compliant vehicles.

MM Air 14 Each implementing development project shall designate parking spaces for high-occupancy vehicles and provide larger parking spaces to accommodate vans used for ride sharing. Proof of compliance will be required prior to issuance of occupancy permits.

MM Air 18 Prior to the approval of each implementing development project, the Riverside Transit Agency (RTA) shall be contacted to determine if the RTA has plans for the future provision of bus routing within any street that is adjacent to the implementing development project that would require bus stops at the project access points. If the RTA has future plans for the establishment of a bus route that will serve the implementing development project, road improvements adjacent to the project site shall be designed to accommodate future bus turnouts at locations established through consultation with the RTA. RTA shall be responsible for the construction and maintenance of the bus stop facilities. The area set aside for bus turnouts shall conform to RTA design standards, including the design of the contact between sidewalks and curb and gutter at bus stops and the use of ADA-compliant paths to the major building entrances in the project.

MM Air 20 Each implementing development project shall implement, at a minimum, an increase in building energy efficiency 15 percent beyond Title 24, and reduce water use by 25 percent. All requirements will be documented through a checklist to be submitted prior to issuance of building permits for the implementing development project with building plans and calculations.

By preparing this Air Quality and Greenhouse Gas Emissions Technical Report, the project has complied with PVCCSP EIR mitigation measures MM Air 1 and MM Air 10. Since the PVCCSP EIR was certified, CalEEMod has replaced URBEMIS as the recommended model for analysis of a project's mass emissions of criteria pollutants and precursors.

5.2.2 Impacts

The project would generate criteria pollutants and precursors in the short-term during construction and the long-term during operation. To determine whether a project would result in cumulatively considerable emissions that would violate an air quality standard or contribute substantially to an existing or projected air quality violation, a project's emissions are evaluated based on the quantitative emission thresholds established by the SCAQMD (as shown in Table 10).

5.2.2.1 Construction

The project's construction emissions were estimated using the CalEEMod model as described in Section 4.1.1. Additional details of phasing, selection of construction equipment, and other input parameters, including CalEEMod data, are included in Appendix A.

The results of the calculations for project Phase 1 and Phase 2 construction are shown in Table 11, *Maximum Daily Construction Emissions*. The data are presented as the maximum anticipated daily emissions for comparison with the SCAQMD thresholds.

Table 11
MAXIMUM DAILY CONSTRUCTION EMISSIONS

Activity	ROG (lbs/day)	NO_X (lbs/day)	CO (lbs/day)	SO_X (lbs/day)	PM_{10} (lbs/day)	$PM_{2.5}$ (lbs/day)
Phase 1 Site Preparation	3.8	37.2	23.7	<0.1	10.8	6.2
Phase 1 Grading	4.0	51.6	32.4	0.1	7.8	3.8
Phase 1 Underground Utilities/Line E	1.2	10.1	9.3	<0.1	0.5	0.4
Phase 1 Building Construction	3.1	23.7	27.6	<0.1	3.8	1.7
Phase 1 Paving	1.9	20.0	15.9	<0.1	1.2	0.7
Phase 1 Architectural Coatings	55.6	1.3	2.9	<0.1	0.5	0.2
Phase 1 Concurrent Grading Underground Utilities	5.2	61.7	41.8	<0.1	8.4	4.2
Phase 1 Concurrent Underground Utilities and Building Construction	4.3	33.8	36.9	<0.1	4.4	2.1
Phase 1 Maximum Daily Emissions	**55.6**	**61.7**	**41.8**	**0.1**	**10.8**	**6.2**
SCAQMD Thresholds	*75*	*100*	*550*	*150*	*150*	*55*
Phase 1 Significant Impact?	***No***	***No***	***No***	***No***	***No***	***No***
Phase 2 Site Preparation	1.4	1.5	8.35	<0.1	3.5	1.9
Phase 2 Grading	1.6	15.5	10.7	<0.1	4.0	2.2
Phase 2 Building Construction	2.0	13.2	16.7	<0.1	1.6	0.8
Phase 2 Architectural Coatings	20.9	1.2	2.2	<0.1	0.2	0.1
Phase 2 Paving	0.8	6.3	9.4	<0.1	0.6	0.3
Phase 2 Concurrent Building Construction and Architectural Coating	22.8	14.4	19.0	<0.1	1.9	0.9
Phase 2 Maximum Daily Emissions	**22.8**	**14.4**	**19.0**	**<0.1**	**4.0**	**2.2**
SCAQMD Thresholds	*75*	*100*	*550*	*150*	*150*	*55*
Phase 2 Significant Impact?	***No***	***No***	***No***	***No***	***No***	***No***

Source: CalEEMod (output data is provided in Appendix A)
lbs/day = pounds per day; ROG = reactive organic gas; NO_X = nitrogen oxides; CO = carbon monoxide; SO_X = sulfur oxides; PM_{10} = particulate matter 10 microns or less in diameter; $PM_{2.5}$ = particulate matter 2.5 microns or less in diameter

As shown in Table 11, Phase 1 and Phase 2 construction period emissions of criteria pollutants and precursors would not exceed the SCAQMD significance thresholds.

5.2.2.2 Operation

The project's operational emissions were estimated using the CalEEMod model as described in Section 4.1.2. Model outputs are provided in Appendix A. Table 12, *Maximum Concurrent Phase 1 Operational and Phase 2 Construction Emissions*, presents the summary of operational and construction emissions that would occur when Phase 1 (warehouse) is operational and Phase 2 (hotel) is still under construction. The data are presented as the maximum anticipated daily emissions for comparison with the SCAQMD thresholds.

Table 12
MAXIMUM CONCURRENT PHASE 1 OPERATIONAL AND PHASE 2 CONSTRUCTION EMISSIONS

Category	ROG (lbs/day)	NO_X (lbs/day)	CO (lbs/day)	SO_X (lbs/day)	PM_{10} (lbs/day)	$PM_{2.5}$ (lbs/day)
Phase 1 Area	5.0	<0.1	<0.1	<0.1	<0.1	<0.1
Phase 1 Energy	0.1	0.1	0.1	<0.1	<0.1	<0.1
Phase 1 Mobile	1.0	22.6	11.0	0.1	7.2	2.2
Phase 1 Total[1]	**6.1**	**22.7**	**11.2**	**0.1**	**7.2**	**2.2**
Phase 2 Construction	22.8	14.4	19.0	<0.1	4.0	2.2
Total Maximum Daily Emissions[1]	**28.6**	**36.5**	**29.9**	**0.1**	**11.2**	**4.4**
SCAQMD Thresholds	*55*	*55*	*550*	*150*	*150*	*55*
Significant Impact?	***No***	***No***	***No***	***No***	***No***	***No***

Source: CalEEMod (output data is provided in Appendix A)
[1] Totals may not sum due to rounding.
lbs/day = pounds per day; ROG = reactive organic gas; NO_X = nitrogen oxides; CO = carbon monoxide; SO_2 = sulfur dioxide; PM_{10} = particulate matter 10 microns or less in diameter; $PM_{2.5}$ = particulate matter 2.5 microns or less in diameter

As shown in Table 12, concurrent emissions during Phase 1 operation and Phase 2 construction would not exceed the daily thresholds set by the SCAQMD. Table 13, *Phase 1 and Phase 2 Operational Daily Emissions*, shows the combined operation emissions of Phase 1 and Phase 2.

Table 13
PHASE 1 AND PHASE 2 OPERATIONAL DAILY EMISSIONS

Category	ROG (lbs/day)	NO_X (lbs/day)	CO (lbs/day)	SO_X (lbs/day)	PM_{10} (lbs/day)	$PM_{2.5}$ (lbs/day)
Phase 1 Area	5.0	<0.1	<0.1	<0.1	<0.1	<0.1
Phase 1 Energy	<0.1	0.1	0.1	<0.1	<0.1	<0.1
Phase 1 Mobile	1.0	22.5	11.0	0.1	7.2	2.2
Phase 1 Total[1]	**6.1**	**22.7**	**11.2**	**0.1**	**7.2**	**2.2**
Phase 2 Area	4.1	<0.1	<0.1	<0.1	<0.1	<0.1
Phase 2 Energy	0.3	2.9	2.4	<0.1	0.2	0.2
Phase 2 Mobile	2.1	2.9	18.8	<0.1	5.1	1.4
Phase 2 Total[1]	**6.5**	**5.8**	**21.2**	**<0.1**	**5.3**	**1.6**
Total Maximum Daily Emissions[1]	**12.6**	**28.5**	**32.4**	**0.1**	**12.5**	**3.8**
SCAQMD Thresholds	*55*	*55*	*550*	*150*	*150*	*55*
Significant Impact?	***No***	***No***	***No***	***No***	***No***	***No***

Source: CalEEMod (output data is provided in Appendix A)
[1] Totals may not sum due to rounding.
lbs/day = pounds per day; ROG = reactive organic gas; NO_X = nitrogen oxides; CO = carbon monoxide; SO_2 = sulfur dioxide; PM_{10} = particulate matter 10 microns or less in diameter; $PM_{2.5}$ = particulate matter 2.5 microns or less in diameter

As shown ion Table 13, the combined operation of project Phase 1 and Phase 2 would not exceed the daily thresholds set by the SCAQMD.

5.2.3 Significance of Impacts

Short-term construction and long-term operation of the project would not result in criteria pollutant and precursor pollutant emissions that would exceed the SCAQMD significance thresholds, and the impact would be less than significant.

5.2.4 Mitigation Framework

Although project emissions would not exceed the SCAQMD thresholds, the project would be required to implement mitigation measures MM Air 2, MM Air 3, MM Air 4, MM Air 5, MM Air 6, MM Air 7, MM Air 8, MM Air 9, MM Air 11, MM Air 13, MM Air 14, MM Air 18, and MM Air 20 from the PVCCSP EIR (see Section 5.2.1).No further project-specific mitigation measures would be required.

5.2.5 Significance After Mitigation

The project would not result in a cumulatively considerable net increase of any criteria pollutant for which the SCAB is non-attainment, and the impact would less than significant.

5.3 ISSUE 3: IMPACTS TO SENSITIVE RECEPTORS

5.3.1 Analysis in the Specific Plan EIR

Impacts to sensitive receptors resulting from long-term operation of development within the PVCCSP Area were analyzed in the EIR which concluded that, implementation of the PVCCSP would not expose sensitive receptors to substantial pollutant concentrations and the impacts would be less than significant (City 2011 pp. 4.2-48 through 4.2-50). Implementation of PVCCSP EIR mitigation measures MM Air 1, MM Air 10, MM Air 11, MM Air 12, and MM Air 13 identified previously along with the following mitigation measures would further reduce impacts to sensitive receptors.

MM Air 15 To identify potential implementing development project-specific impacts resulting from the use of diesel trucks, proposed implementing development projects that include in excess of 10 dock doors for a single building, a minimum of 100 truck trips per day, 40 truck trips with TRUs per day, or TRU operations exceeding 300 hours per week, and that are subject to CEQA and are located adjacent to sensitive land uses; shall have a facility-specific Health Risk Assessment performed to assess the diesel particulate matter impacts from mobile-source traffic generated by the that implementing development project. The results of the Health Risk Assessment shall be included in the CEQA documentation for each implementing development project.

MM Air 16 New sensitive land uses such as a hospital, medical offices, day care facilities, and fire stations to be located within the PVCC shall not be located closer than 500 feet to the I-215 freeway, pursuant to the recommendations set forth in the CARB Air Quality and Land Use Handbook. If new sensitive land uses cannot meet this setback, they will be designed and conditioned to include mechanical ventilation systems with fresh air filtration. For operable windows or other sources of ambient air filtration, installation of a central HVAC (heating, ventilation, and air conditioning) system that includes high efficiency filters for particulates (MERV-13 or higher) or other similarly effective systems shall be required.

MM Air 17 New sensitive land uses such as residential, a hospital, medical offices, day care facilities, and fire stations shall not be located closer than 1,000 feet from any existing or proposed distribution center/warehouse facility which generates a minimum of 100 truck trips per day, or 40 truck trips with TRUs per day, or TRU operations exceeding 300 hours per week, pursuant to the recommendations set forth in the CARB Air Quality

and Land Use Handbook. If new sensitive land uses cannot meet this setback, they will be designed and conditioned to include mechanical ventilation systems with fresh air filtration. For operable windows or other sources of ambient air filtration, installation of a central HVAC (heating, ventilation, and air conditioning) system that includes high efficiency filters for particulates (MERV-13 or higher) or other similarly effective systems shall be required.

By preparing this Air Quality and Greenhouse Gas Emissions Technical Report, the project has complied with PVCCSP EIR mitigation measure MM Air 15. Mitigation measure Air 16 is not applicable to the proposed project since the project site is not located within 500 feet of the I-215 freeway. Mitigation measure MM Air 17 would affect the development of sensitive uses (proposed hotel) within the commercial lot at the project site.

5.3.2 Impacts

5.3.2.1 Construction Activities

Criteria Pollutants

The localized effects from the on-site portion of daily construction emissions were evaluated at sensitive receptor locations potentially impacted by the project according to the SCAQMD's LST method, described above. The proposed project is within SRA 24, Perris Valley. Consistent with the LST guidelines, when quantifying mass emissions for localized analysis, only emissions that occur on site are considered. Emissions related to off-site delivery/haul truck activity and construction worker trips are not considered in the evaluation of construction-related localized impacts, as these do not contribute to emissions generated on a project site. The closest sensitive receptor is the single-family residence adjacent to the northwest corner of the project site. Therefore, the LSTs in SRA 24 for receptors located less than 82 feet (25 meters) are used for project sites greater than 5 acres. Table 14, *Maximum Localized Daily Construction Emissions*, shows the localized construction emissions.

Table 14
MAXIMUM LOCALIZED DAILY CONSTRUCTION EMISSIONS

Activity	NO_X (lbs/day)	CO (lbs/day)	PM_{10} (lbs/day)	$PM_{2.5}$ (lbs/day)
Phase 1 Site Preparation	37.1	23.1	10.6	6.2
Phase 1 Grading	38.8	29.0	5.8	3.2
Phase 1 Underground Utilities/Line E	10.1	8.9	0.4	0.4
Phase 1 Building Construction	19.6	19.7	1.0	0.9
Phase 1 Paving	9.5	14.6	0.5	0.4
Phase 1 Architectural Coatings	1.2	1.8	0.1	0.1
Phase 1 Concurrent Grading and Underground Utilities	48.9	37.9	6.2	3.5
Phase 1 Concurrent Underground Utilities and Building Construction	26.7	28.6	1.3	1.3
Phase 2 Site Preparation	13.5	8.3	3.4	1.9
Phase 2 Grading	15.5	10.3	3.8	2.1
Phase 2 Building Construction	12.7	14.1	0.4	0.4
Phase 2 Architectural Coatings	1.1	1.8	0.1	0.1
Phase 2 Paving	5.3	8.8	0.2	0.2

Activity	NO_X (lbs/day)	CO (lbs/day)	PM_{10} (lbs/day)	$PM_{2.5}$ (lbs/day)
Phase 2 Concurrent Building Construction and Architectural Coating	13.0	15.8	0.5	0.5
Maximum Daily Emissions	**48.9**	**37.9**	**10.6**	**6.2**
SCAQMD LST Thresholds (25 meters)	*270*	*1,577*	*13*	*8*
Exceed LST (25 meters)?	***No***	***No***	***No***	***No***

Source: CalEEMod (output data is provided in Appendix A)
lbs/day = pounds per day; NO_X = nitrogen oxides; CO = carbon monoxide; PM_{10} = particulate matter 10 microns or less in diameter; $PM_{2.5}$ = particulate matter 2.5 microns or less in diameter

As shown in Table 14, localized emissions for all criteria pollutants would remain below their respective SCAQMD LSTs at 82 feet (25 meters). Therefore, construction of the project would not result in exposure of sensitive receptors to substantial localized concentrations of criteria pollutants and precursors.

Toxic Air Contaminants

Implementation of the project would result in the use of heavy-duty construction equipment, haul trucks, on-site generators, and construction worker vehicles. These vehicles and equipment could generate the TAC DPM. Generation of DPM from construction projects typically occurs in a localized area (e.g., at the project site) for a short period of time. Because construction activities and subsequent emissions vary depending on the phase of construction (e.g., grading, building construction), the construction-related emissions to which nearby receptors are exposed to would also vary throughout the construction period. During some equipment-intensive phases such as grading, construction-related emissions would be higher than other less equipment-intensive phases such as building construction. Concentrations of mobile-source DPM emissions are typically reduced by 70 percent at approximately 500 feet (CARB 2005).

The dose (of TAC) to which receptors are exposed is the primary factor used to determine health risk. Dose is a function of the concentration of a substance in the environment and the extent of exposure a person has with the substance; a longer exposure period to a fixed quantity of emissions would result in higher health risks. Current models and methodologies for conducting cancer health risk assessments are associated with longer-term exposure periods (typically 30 years for individual residents based on guidance from OEHHA) and are best suited for evaluation of long duration TAC emissions with predictable schedules and locations. These assessment models and methodologies do not correlate well with the temporary and highly variable nature of construction activities. Cancer potency factors are based on animal lifetime studies or worker studies where there is consistent long-term exposure to the carcinogenic agent. There is considerable uncertainty in trying to evaluate the cancer risk from projects that will only last a small fraction of a lifetime (OEHHA 2015). Considering this information, the highly dispersive nature of DPM, and the fact that construction activities would occur at various locations and varying intensities throughout the project site, it is not anticipated that construction of the project would expose sensitive receptors to substantial DPM concentrations.

5.3.2.2 Operational Activities

Criteria Pollutants

As discussed in Section 4.1.3, SCAQMD has developed a localized significance threshold (LST) methodology that can be used by public agencies to determine whether a project may generate

significant adverse localized air quality impacts from on-site emissions of NO_X, CO, PM_{10} and $PM_{2.5}$. For project operational activities, emissions of NO_X and CO are associated with truck and passenger vehicle emissions which primarily occur off-site. The portion of truck and passenger vehicle emissions which occur on-site are limited to low-speed circulation and idling and would be a small portion of the project operational emissions of 28 pounds per day of NO_X and 32 pounds per day of CO, far below the applicable LST thresholds of 270 pounds per day NO_X and 1,577 pounds per day CO. Operational PM_{10} and $PM_{2.5}$ emissions from areas sources (primarily landscape equipment exhaust) and energy sources (natural gas combustion exhaust) would be negligible—less than 0.01 pounds per day (see Appendix A). The only remaining on-site operational source of PM emissions would be low-speed circulation and idling exhaust emissions from trucks. The total exhaust PM emissions produced on or near the project site by project-related truck trips would be approximately 0.54 pounds per year (0.001 pounds per day) of PM_{10} and $PM_{2.5}$ (see Appendix B). Total PM_{10} or $PM_{2.5}$ produced on the project site would be less than 0.01 pounds per day, far below the LST threshold of 4 pounds per day for PM_{10} and 2 pounds per day for $PM_{2.5}$. Therefore, operation of the project would not result in exposure of sensitive receptors to substantial localized concentrations of NO_X or CO. Impacts related to exposure of sensitive receptors to project operational emissions of PM (primarily DPM) are discussed and evaluated below.

CO Hotspots

Vehicle exhaust is the primary source of CO. In an urban setting, the highest CO concentrations are generally found within close proximity to congested intersections. Under typical meteorological conditions, CO concentrations tend to decrease as distance from the emissions source (i.e., congested intersection) increase. Project-generated traffic has the potential of contributing to localized "hot spots" of CO off-site. Because CO is a byproduct of incomplete combustion, exhaust emissions are worse when fossil-fueled vehicles are operated inefficiently, such as in stop-and-go traffic or through heavily congested intersections, where the level of service (LOS) is severely degraded.

CARB recommends evaluation of the potential for the formation of locally high concentrations of CO, known as CO hot spots. A CO hot spot is a localized concentration of CO that is above the state or national 1-hour or 8-hour CO ambient air standards. To verify that the project would not cause or contribute to a violation of the 1-hour and 8-hour CO standards, an evaluation of the potential for CO hot spots at nearby intersections was conducted. In accordance with the Transportation Project-Level Carbon Monoxide Protocol, CO hot spots are typically evaluated when: (a) the LOS of an intersection decreases to a LOS E or worse because of the project; (b) signalization and/or channelization is added to an intersection; and (c) sensitive receptors such as residences, schools, hospitals, etc., are located in the vicinity of the affected intersection or roadway segment (California Department of Transportation [Caltrans] 1998).

According to the intersection analysis contained in the Traffic Analysis, no project-affected intersection would operate at LOS E or worse under existing or existing plus project conditions. Under cumulative conditions (2022) the intersections of Ramona Expressway/Indian Avenue and Ramona Expressway/Perris Boulevard would operate at LOS F during the afternoon peak hour. The addition of project traffic would increase intersection delays by up to 5 seconds but would not change the LOS (Urban Crossroads 2022a). There are no sensitive receptors located in proximity to either intersection. The closest sensitive receptors would be the mobile home park, located approximately 420 feet southwest of the Ramona Expressway/Perris Boulevard intersection. Therefore, implementation of the project would not expose sensitive receptors to substantial localized concentrations of CO.

Operational DPM Emissions

Implementation of the project would result in emissions of DPM from operation of a warehouse facility. To evaluate potential impacts to sensitive receptors from the operational DPM emissions, a health risk analysis (HRA) was completed. The results of the HRA are summarized here, the complete HRA report is included as Appendix B to this report.

Long-term operation of the project would result in emissions of DPM from diesel-powered trucks traveling to and from the project site, circulating on the project site, and parked while idling at the project site. Truck DPM emissions were calculated using truck emissions and VMT data from CARB's EMFAC2021 version 1.0.01 online database. All trucks were assumed to idle at the loading docks for the maximum allowable 5 minutes (per California Code of Regulations [CCR] Title 13, Section 2485). In addition, 25 percent of trucks were assumed to stage in the truck/trailer parking area before or after unloading/loading and idle for an additional 5 minutes. Truck idling emissions were assumed to be approximately equivalent to truck emissions at 5 mph reported in the EMFAC2021 database.

Localized concentrations of DPM were modeled using Lakes AERMOD View version 10.2.0. The Lakes program utilizes the USEPA's AERMOD gaussian air dispersion model version 19191. Plot files from AERMOD using unitized emissions (one gram per second) for each DPM source were imported into CARB's Hotspots Analysis and Reporting Program (HARP), Air Dispersion Modeling and Risk Tool (ADMRT) version 21081. The ADMRT calculated ground-level concentrations of DPM utilizing the imported plot files and the calculated annual and hourly emissions.

Health risks resulting from localized concentration of DPM were estimated using the ADMRT. The latest cancer slope factors and chronic Reference Exposure Limits (RELs), and exposure paths for all TACs designated by CARB are included in ADMRT. For the residential cancer risk, an exposure duration of 30 years was selected in accordance with the OEHHA (2015) guidelines. The model conservatively assumes that residents would be standing and breathing outdoors at the location of the property line closest to the gas station every day between 17 and 21 hours per day (depending on the age group, starting with infants in utero in the third trimester of pregnancy) for 30 years. The Risk Management Policy (RMP) using the derived method for the intake rate percentile was selected in accordance with the SCAQMD guide recommendations (SCAQMD 2021c). For off-site worker cancer risk, an exposure duration of 25 years was selected with an assumption of 8 hours per day, 5 days per week of exposure while standing outside with moderate intensity breathing rates, in accordance with the OEHHA guidelines. Because DPM only has an inhalation cancer slope factor and an inhalation chronic REL, only the cancer risk and chronic risk from exposure to DPM was evaluated, and only the inhalations pathway was evaluated.

The incremental excess cancer risk is an estimate of the chance a person exposed to a specific source of a TAC may have of developing cancer from that exposure beyond the individual's risk of developing cancer from existing background levels of TACs in the ambient air. For context, the average cancer risk from TACs in the ambient air for an individual living in an urban area of California is 830 in 1 million (CARB 2015). Cancer risk estimates do not mean, and should not be interpreted to mean, that a person will develop cancer from estimated exposures to toxic air pollutants.

The maximum estimated community incremental excess cancer risks due to exposure to the Proposed Project TAC emissions from long term operation of the warehouse facility are presented in Table 15,

Maximum Incremental Cancer Health Risk. These estimates are conservative (health protective) and assume that the student, resident, or worker is outdoors for the entire exposure period.

Table 15
MAXIMUM INCREMENTAL CANCER HEALTH RISK

	Maximally Exposed Individual Resident Cancer Risk (per million)	Maximally Exposed Individual Worker Cancer Risk (per million)
Results	1.1	<0.1
Threshold	10	10
Exceed Threshold?	No	No

Source: Lakes AERMOD View and CARB ADMRT. See Appendix B for the complete HRA report.

As shown in Table 15, the project's incremental increased cancer risk would not exceed the SCAQMD's threshold of 10 in 1 million. The chronic health risk hazard index for all receptors would be less than 0.01 and would not exceed the SCAQMD's threshold of 1.

Cancer burden evaluates an overall population's increased cancer risk and is defined as the increases in cancer cases in the population due exposure to TACs from a project. Cancer burden is calculated differently from individual risk. Per OEHHA, cancer burden uses a 70-year exposure to evaluate population-wide cancer risk, and the cancer burden only evaluates residential exposure (not worksites). Cancer burden is calculated by multiplying the number of residents exposed to an incremental excess cancer risk of 1 in 1 million or greater by the estimated incremental excess cancer risk of the maximum exposed individual resident (MEIR). Only the residence adjacent to the northwest corner of the project site would be within or touching the 1 in 1 million isopleth (geographic lines of equal risk). Assuming up to 10 residents per residence, the cancer burden resulting from long-term operation of the project would be 0.00001, below the SCAQMD threshold of 0.5.

5.3.3 Significance of Impacts

Construction of the project would not result in significant localized concentrations of criteria pollutants or TACs. Long-term operation of the project would not result in significant localized concentrations of CO. Long-term operation of the project would result in cancer risk, chronic health risk, and cancer burden below the respective SCAQMD thresholds. Therefore, implementation of the project could expose sensitive receptors to substantial pollutant concentrations, and the impact less than significant.

5.3.4 Mitigation Framework

Although project emissions would not exceed the SCAQMD thresholds for community health risks, or result in substantial localized pollutant concentrations, the project would be required to implement mitigation measures MM Air 11 and MM Air 13 from the PVCCSP EIR (see Section 5.3.1). The requirements of mitigation measure MM Air 15 from the PVCCSP EIR are satisfied by the project specific HRA completed and included as Appendix B to this report. Mitigation measures MM Air 16 and MM Air 17 concern the siting of new sensitive receptors and would not apply to the project. No additional project specific mitigation measures would be required to reduce the severity of impacts related to the exposure of sensitive receptors to substantial pollutant concentrations.

5.3.5 Significance After Mitigation

Implementation of the project would not expose sensitive receptors to substantial pollutant concentrations, and the impact would be less than significant.

5.4 ISSUE 4: OTHER EMISSIONS (SUCH AS THOSE LEADING TO ODORS)

5.4.1 Analysis in the Specific Plan EIR

Impacts related to emissions leading to odors resulting from construction and operation of implementing development and infrastructure projects within the PVCCSP were analyzed in the EIR which concluded that development and infrastructure projects would not create objectionable odors affecting a substantial number of people and the impact would be less than significant. No mitigation would be required (City 2011 pp. 4.2-51, 4.2-4.2-52).

5.4.2 Impacts

According to the SCAQMD *CEQA Air Quality Handbook*, land uses associated with odor complaints include agricultural uses, wastewater treatment plants, food processing plants, chemical plants, composting activities, refineries, landfills, dairies, and fiberglass molding operations (SCAQMD 1993). The project, involving a warehouse facility development and hotel, would not include any of these uses nor are there any of these land uses in the project vicinity.

Emissions from construction equipment, such as diesel exhaust, and VOCs from architectural coatings and paving activities may generate odors; however, these odors would be temporary, intermittent, and not expected to affect a substantial number of people. Additionally, noxious odors would be confined to the immediate vicinity of construction equipment. Furthermore, short-term construction-related odors are expected to cease upon the drying or hardening of the odor-producing materials. Long-term operation of the project would not be a substantial source of objectionable odors. Therefore, the project would not create objectionable odors affecting a substantial number of people, and the impact would be less than significant.

5.4.3 Significance of Impacts

Implementation of the project would not result in other emissions (such as those leading to odors) adversely affecting a substantial number of people, and the impact would be less than significant.

5.4.4 Mitigation Framework

Impacts would be less than significant; therefore, no mitigation measures are required.

5.4.5 Significance After Mitigation

Implementation of the project would not result in other emissions (such as those leading to odors) adversely affecting a substantial number of people, and the impact would be less than significant.

6.0 GREENHOUSE GAS IMPACT ANALYSIS

This section evaluates potential impacts of the proposed project related to the generation of GHG emissions. Complete modeling results are included as Appendix A of this report.

6.1 ISSUE 1: GREENHOUSE GAS EMISSIONS

6.1.1 Analysis in the Specific Plan EIR

Impacts related to GHG emissions resulting from construction and operation of implementing development and infrastructure projects within the PVCCSP were analyzed in the EIR which concluded that, because construction emissions of criteria pollutants and precursors could exceed the daily emissions threshold, GHG emissions from construction activities would be cumulative considerable. The EIR concluded that long-term operational GHG emissions resulting from implementation of the PVCCSP would be less than cumulatively considerable. The EIR concluded that the following mitigation measures would be required to reduce GHG emission from both construction and operation (City 2011 pp. 4.2-38 through 4.2-41):

MM Air 19 In order to reduce energy consumption from the individual implementing development projects, applicable plans (e.g., electrical plans, improvement maps) submitted to the City shall include the installation of energy-efficient street lighting throughout the project site. These plans shall be reviewed and approved by the applicable City Department (e.g., City of Perris' Building Division) prior to conveyance of applicable streets.

MM Air 20 Each implementing development project shall implement, at a minimum, an increase in each building's energy efficiency 15 percent beyond Title 24, and reduce indoor water use by 25 percent. All requirements will be documented through a checklist to be submitted prior to issuance of building permits for the implementing development project with building plans and calculations.

MM Air 21 Each implementing development project shall implement, at a minimum, use of water conserving appliances and fixtures (low-flush toilets, and low-flow shower heads and faucets) within all new residential developments.

6.1.2 Construction Emissions

Project construction GHG emissions were estimated using the CalEEMod model as described in Section 4.1. Project-specific input was based on general information provided in Section 1.0 and default model settings to estimate reasonably conservative conditions. Additional details of phasing, selection of construction equipment, and other input parameters, including CalEEMod data, are included in Appendix A.

Emissions of GHGs related to the construction of the project would be temporary. As shown in Table 16, *Estimated Construction GHG Emissions*, total GHG emissions associated with construction of the project are estimated at 1,289 MT CO_2e for Phase 1 and 393 MT CO_2e for Phase 2. For construction emissions, SCAQMD guidance recommends that the emissions be amortized (i.e., averaged) over 30 years and added to operational emissions. Averaged over 30 years, the proposed construction activities would

contribute approximately 43.0 MT CO_2e emissions per year for Phase 1 and 13.1 MT CO_2e emissions per year for Phase 2.

Table 16
ESTIMATED CONSTRUCTION GHG EMISSIONS

Year	Emissions (MT CO_2e)
Phase 1 2022	259.0
Phase 1 2023	903.0
Phase 1 2024	126.4
Phase 1 Total[1]	**1,289.4**
Phase 1 Amortized Construction Emissions[2]	*43.0*
Phase 2 2024	240.8
Phase 2 2025	152.6
Phase 2 Total[1]	**393.4**
Phase 2 Amortized Construction Emissions[2]	*13.1*

Source: CalEEMod (output data is provided in Appendix A)
[1] Totals may not sum due to rounding.
[2] Construction emissions are amortized over 30 years in accordance with SCAQMD guidance.
GHG = greenhouse gas; MT = metric tons; CO_2e = carbon dioxide equivalent

6.1.3 Operational Emissions

The project's operational GHG emissions were estimated using the CalEEMod model as described in Section 4.1. Calculated total annual emissions for the project, including amortized annual construction emissions, are shown in Table 17, *Total Estimated Operational GHG Emissions*. Appendix A contains the CalEEMod output files for the project.

Table 17
TOTAL ESTIMATED OPERATIONAL GHG EMISSIONS

Emission Sources	2024 Emissions (MT CO_2e)
Phase 1 Area Sources	<0.1
Phase 1 Energy Sources	132.7
Phase 1 Vehicular (Mobile) Sources	2,578.2
Phase 1 Solid Waste Sources	82.4
Phase 1 Water Sources	158.6
Phase 1 Subtotal[1]	**2,951.9**
Phase 1 Construction (Annualized over 30 years)	43.0
Phase 1 Total[1]	**2,994.94**
Phase 2 Area Sources	**<0.1**
Phase 2 Energy Sources	**1,145.5**
Phase 2 Vehicular (Mobile) Sources	**756.4**
Phase 2 Solid Waste Sources	**25.8**
Phase 2 Water Sources	**9.9**
Phase 2 Subtotal[1]	**1,937.6**

Emission Sources	2024 Emissions (MT CO_2e)
Phase 2 Construction (Annualized over 30 years)	**13.1**
Phase 2 Total[1]	**1,950.7**
Project Total[1]	**4,945.6**
SCAQMD Screening Threshold	**10,000**
Exceed Threshold?	**No**

Source: CalEEMod (output data is provided in Appendix A)
[1] Totals may not sum due to rounding.
[2] Emission per capita is the project total emissions divided by the project population (2,301.3/690).
GHG = greenhouse gas; MT = metric tons; CO_2e = carbon dioxide equivalent

As shown in Table 17, the project emissions, including amortized construction emissions, would total 4,946 MT CO_2e per year and would not exceed the industrial facility SCAQMD GHG screening threshold of 10,000 MT CO_2e per year.

6.1.4 Significance of Impacts

Project GHG emissions, including amortized construction emissions would not exceed the SCAQMD industrial screening threshold, and the impact would be less than significant.

6.1.5 Mitigation Framework

Although project GHG emissions would not exceed the SCAQMD threshold, the project would be required to implement mitigation measures MM AIR 19, MM AIR 20, and MM AIR 21 from the PVCCSP EIR (see Section 6.1.1). No further project-specific mitigation measures would be required.

6.1.6 Significance After Mitigation

Implementation of the project would not generate GHG emissions that may have a significant impact on the environment, and the impact would be less than significant.

6.2 ISSUE 2: CONFLICT WITH APPLICABLE PLANS ADOPTED FOR THE PURPOSE OF REDUCING GHG EMISSIONS

6.2.1 Impacts

There are numerous State plans, policies, and regulations adopted for the purpose of reducing GHG emissions. The principal overall State plan and policy is AB 32, the California Global Warming Solutions Act of 2006. The quantitative goal of AB 32 is to reduce GHG emissions to 1990 levels by 2020. SB 32 would require further reductions of 40 percent below 1990 levels by 2030. Because the project's operational year is post-2020, the project aims to reach the quantitative goals set by SB 32. Statewide plans and regulations such as GHG emissions standards for vehicles (AB 1493), the LCFS, and regulations requiring an increasing fraction of electricity to be generated from renewable sources are being implemented at the statewide level; as such, compliance at the project level is not addressed. Therefore, the proposed project would not conflict with those plans and regulations.

The project does not have a residential component and would not result in regional population growth. The project would seek a change in land use designation from commercial to light industrial for an

approximately 13-acre portion of the project site. As discussed in the air quality plan consistency analysis (Section 5.1), the average employment density for a warehouse or light industrial land use is lower than that for a commercial land use and the project would be consistent with the employment growth assumptions used to develop the SCAG's RTP/SCS. As shown in Section 3.3, transportation-related emissions consistently contribute the most GHG emissions in California (40 percent in 2019). According to the VMT screening evaluation, the project is located in an area with higher employee per capita than the City average. However, in accordance with City guidelines, projects that generate less than 500 average daily trips would not cause a substantial increase in the total citywide or regional VMT and are therefore presumed to have a less than significant impact on VMT. The project warehouse land use would result in 402 trips per day, below the 500 average daily trip thresholds. The proposed hotel component of the project would be considered a local serving land use which leads to shortened trips lengths and reduced VMT (Urban Crossroads 2022b). Therefore, the project would not conflict with or obstruct implementation of the SCAG's RTP/SCS.

As discussed in Section 2.2.5, the City adopted a CAP in 2016. The CAP contains state, regional, and local GHG reduction measures to achieve the GHG Perris community wide GHG reductions mandated by AB 32. Local GHG reduction measures contained in the CAP include:

E-1 Energy Action Plan
T-1 Bicycle Infrastructure Improvements
T-2 Bicycle Parking
T-3 End of Trip Facilities
T-4 Transit Frequency Expansion
T-5 Traffic Signal Coordination
T-6 Density
T-7 Mixed Use Development
T-8 Design/Stie Planning
T-9 Pedestrian Only Areas
T-10 Limited Parking Requirements for New Development
T-11 Voluntary Transportation Demand Management
T-12 Accelerated Bike Plan Implementation
SW-1 Yard Waste Collection
SW-2 Food Scrap and Paper Diversion

In accordance with City zoning regulations and PVCCSP design standards and guidelines, the project would support applicable measures by providing, bicycle parking, sidewalks, and transit demand management (commute trip reduction, ridesharing programs). In addition, the project would be constructed in accordance with the energy-efficiency standards, water reduction goals, and other standards required by the 2019 Title 24 Part 6 Building Energy Efficiency Standards and Part 11 (CALGreen) Building Standards. Therefore, the project would not conflict with or obstruct implementation of the City CAP.

6.2.2 Significance of Impacts

The project would not conflict with applicable GHG reduction plans including the SCAG's RTP/SCS and the City's CAP, and the impact would be less than significant.

6.2.3 Mitigation Framework

Impacts would be less than significant, and no mitigation would be required.

6.2.4 Significance After Mitigation

The project would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs, and the impact would be less than.

7.0 LIST OF PREPARERS

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Appendix A

CalEEMod Output

The following section contains content that was obtained from a third party and may not achieve the same level of Americans with Disabilities Act (ADA) and Section 508 accessibility as other parts of this document.

JM Realty Perris Development, Phase 1 - Riverside-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

JM Realty Perris Development, Phase 1

Riverside-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	10.00	1000sqft	0.23	10,000.00	0
Unrefrigerated Warehouse-No Rail	222.58	1000sqft	5.11	222,580.00	0
Parking Lot	266.89	1000sqft	6.13	266,890.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.4	**Precipitation Freq (Days)**	28
Climate Zone	10			**Operational Year**	2025
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	390.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Run 3 - Warehoue land use changed back to unrefrigerated, construction start bumped to Oct 1 2022.

Land Use - General Office Builing = office space internal to the warehouse building.
Parking lot includes auto parking, tuck trailer parking, loading docks, driveways, sidewalks, and street improvements.

Construction Phase - Site vacant, no demolition.
Construction schedule per project applicant and defaults.

Off-road Equipment -

Off-road Equipment - Off-Highway Truck = water truck.

Off-road Equipment -

Off-road Equipment -

Off-road Equipment - Off-Highway Truck = water truck.

JM Realty Perris Development, Phase 1 - Riverside-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Off-road Equipment - Equipment for excavation/installation of underground utilites and Line E storm drain.
Off-Highway Truck = water truck.

Off-road Equipment - Off-road Equipment - Equipment for excavation/installation of underground utilites and Line E storm drain.
Off-Highway Truck = water truck.

Trips and VMT - 310 loads (620 trips) ashpalt/aggregate imported during paving.

Grading - 15,842 CY soil import during grading

Architectural Coating - 50 g/L maximum VOC content for exterior and interior flat coatings per SCAQMD Rule 1113.

Vehicle Trips - Trip generation per Traffic Report.
Passender car/light truck trips asigned to office space, truck trips assigned to warehouse.
Truck trips assumed to be 100% primary and 100% C-NW.
40 mile warehouse truck trip distasnce per SCAQMD recommendations

Area Coating - 50 g/L maximum VOC content for exterior and interior flat coatings per SCAQMD Rule 1113.

Construction Off-road Equipment Mitigation - Dust miitigation to comply with SCAQMD Rule 403.

Area Mitigation - 50 g/L maximum VOC content for exterior and interior flat coatings per SCAQMD Rule 1113.

Water Mitigation - 20% water conservation per 2019 CalGreen not accounted for in model defaults.

Waste Mitigation - 25% solid waste diversion per AB 341 not accounted for in model defaults

Fleet Mix - Truck fleet mix per Traffic Report.

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	116,290.00	111,290.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	348,870.00	333,870.00
tblArchitecturalCoating	EF_Nonresidential_Exterior	100.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	50.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	100	50
tblAreaCoating	Area_EF_Nonresidential_Interior	100	50
tblAreaCoating	Area_Nonresidential_Exterior	116290	111290
tblAreaCoating	Area_Nonresidential_Interior	348870	333870
tblConstructionPhase	NumDays	30.00	21.00
tblFleetMix	HHD	0.02	0.62
tblFleetMix	LDA	0.54	0.00
tblFleetMix	LDT1	0.06	0.00
tblFleetMix	LDT2	0.17	0.00

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblFleetMix	LHD1	0.03	0.00
tblFleetMix	LHD2	7.0740e-003	0.17
tblFleetMix	MCY	0.02	0.00
tblFleetMix	MDV	0.14	0.00
tblFleetMix	MH	4.9320e-003	0.00
tblFleetMix	MHD	0.01	0.21
tblFleetMix	OBUS	6.1000e-004	0.00
tblFleetMix	SBUS	1.0940e-003	0.00
tblFleetMix	UBUS	3.0400e-004	0.00
tblGrading	MaterialImported	0.00	15,842.00
tblTripsAndVMT	HaulingTripNumber	0.00	620.00
tblVehicleTrips	CNW_TL	6.90	40.00
tblVehicleTrips	CNW_TTP	41.00	100.00
tblVehicleTrips	CW_TTP	59.00	0.00
tblVehicleTrips	DV_TP	5.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PR_TP	92.00	100.00
tblVehicleTrips	ST_TR	2.21	26.00
tblVehicleTrips	ST_TR	1.74	0.64
tblVehicleTrips	SU_TR	0.70	26.00
tblVehicleTrips	SU_TR	1.74	0.64
tblVehicleTrips	WD_TR	9.74	26.00
tblVehicleTrips	WD_TR	1.74	0.64

2.0 Emissions Summary

JM Realty Perris Development, Phase 1 - Riverside-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.1164	1.1842	0.9265	2.8300e-003	0.2415	0.0458	0.2872	0.1014	0.0423	0.1437	0.0000	254.9535	254.9535	0.0548	0.0108	259.5474
2023	0.3875	2.9078	3.6827	0.0100	0.3683	0.1177	0.4860	0.0993	0.1103	0.2096	0.0000	897.6846	897.6846	0.1401	0.0326	910.9000
2024	0.6087	0.3918	0.5228	1.3800e-003	0.0468	0.0153	0.0621	0.0126	0.0143	0.0269	0.0000	125.0620	125.0620	0.0192	5.7200e-003	127.2474
Maximum	**0.6087**	**2.9078**	**3.6827**	**0.0100**	**0.3683**	**0.1177**	**0.4860**	**0.1014**	**0.1103**	**0.2096**	**0.0000**	**897.6846**	**897.6846**	**0.1401**	**0.0326**	**910.9000**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.1164	1.1842	0.9265	2.8300e-003	0.1337	0.0458	0.1795	0.0524	0.0423	0.0947	0.0000	254.9533	254.9533	0.0548	0.0108	259.5472
2023	0.3875	2.9078	3.6827	0.0100	0.3683	0.1177	0.4860	0.0993	0.1103	0.2096	0.0000	897.6840	897.6840	0.1401	0.0326	910.8994
2024	0.6087	0.3918	0.5228	1.3800e-003	0.0468	0.0153	0.0621	0.0126	0.0143	0.0269	0.0000	125.0619	125.0619	0.0192	5.7200e-003	127.2473
Maximum	**0.6087**	**2.9078**	**3.6827**	**0.0100**	**0.3683**	**0.1177**	**0.4860**	**0.0993**	**0.1103**	**0.2096**	**0.0000**	**897.6840**	**897.6840**	**0.1401**	**0.0326**	**910.8994**

JM Realty Perris Development, Phase 1 - Riverside-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**16.41**	**0.00**	**12.90**	**22.95**	**0.00**	**12.88**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**10-1-2022**	**12-31-2022**	1.3271	1.3271
2	**1-1-2023**	**3-31-2023**	0.9383	0.9383
3	**4-1-2023**	**6-30-2023**	0.7812	0.7812
4	**7-1-2023**	**9-30-2023**	0.7897	0.7897
5	**10-1-2023**	**12-31-2023**	0.7938	0.7938
6	**1-1-2024**	**3-31-2024**	0.9850	0.9850
		Highest	1.3271	1.3271

JM Realty Perris Development, Phase 1 - Riverside-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.9136	6.0000e-005	6.3600e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0124	0.0124	3.0000e-005	0.0000	0.0132
Energy	2.6000e-003	0.0236	0.0198	1.4000e-004		1.7900e-003	1.7900e-003		1.7900e-003	1.7900e-003	0.0000	150.1474	150.1474	0.0110	1.7400e-003	150.9422
Mobile	0.1916	4.1164	2.0418	0.0258	1.2332	0.0497	1.2830	0.3435	0.0475	0.3910	0.0000	2,476.3232	2,476.3232	0.0414	0.3384	2,578.2028
Waste						0.0000	0.0000		0.0000	0.0000	44.3596	0.0000	44.3596	2.6216	0.0000	109.8991
Water						0.0000	0.0000		0.0000	0.0000	16.8934	125.1097	142.0031	1.7457	0.0423	198.2356
Total	**1.1078**	**4.1400**	**2.0680**	**0.0259**	**1.2332**	**0.0516**	**1.2848**	**0.3435**	**0.0494**	**0.3928**	**61.2531**	**2,751.5928**	**2,812.8458**	**4.4197**	**0.3824**	**3,037.2928**

JM Realty Perris Development, Phase 1 - Riverside-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.9136	6.0000e-005	6.3600e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0124	0.0124	3.0000e-005	0.0000	0.0132
Energy	2.6000e-003	0.0236	0.0198	1.4000e-004		1.7900e-003	1.7900e-003		1.7900e-003	1.7900e-003	0.0000	150.1474	150.1474	0.0110	1.7400e-003	150.9422
Mobile	0.1916	4.1164	2.0418	0.0258	1.2332	0.0497	1.2830	0.3435	0.0475	0.3910	0.0000	2,476.3232	2,476.3232	0.0414	0.3384	2,578.2028
Waste						0.0000	0.0000		0.0000	0.0000	33.2697	0.0000	33.2697	1.9662	0.0000	82.4243
Water						0.0000	0.0000		0.0000	0.0000	13.5148	100.0878	113.6025	1.3965	0.0338	158.5884
Total	**1.1078**	**4.1400**	**2.0680**	**0.0259**	**1.2332**	**0.0516**	**1.2848**	**0.3435**	**0.0494**	**0.3928**	**46.7845**	**2,726.5708**	**2,773.3553**	**3.4152**	**0.3739**	**2,970.1710**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**23.62**	**0.91**	**1.40**	**22.73**	**2.21**	**2.21**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	10/1/2022	10/14/2022	5	10	
2	Grading	Grading	10/15/2022	11/14/2022	5	21	
3	Underground Utilities	Trenching	10/15/2022	2/14/2023	5	87	

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

4	Building Construction	Building Construction	12/12/2022	2/2/2024	5	300	
5	Paving	Paving	2/3/2024	3/1/2024	5	20	
6	Architectural Coating	Architectural Coating	3/2/2024	3/29/2024	5	20	

Acres of Grading (Site Preparation Phase): 15

Acres of Grading (Grading Phase): 63

Acres of Paving: 6.13

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 333,870; Non-Residential Outdoor: 111,290; Striped Parking Area: 16,013 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Off-Highway Trucks	1	8.00	402	0.38
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Underground Utilities	Cranes	1	2.00	231	0.29
Underground Utilities	Excavators	1	8.00	158	0.38
Underground Utilities	Off-Highway Trucks	1	8.00	402	0.38
Underground Utilities	Rubber Tired Loaders	1	8.00	203	0.36
Underground Utilities	Tractors/Loaders/Backhoes	1	1.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Off-Highway Trucks	1	8.00	402	0.38

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	1,980.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Underground Utilities	5	13.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	10	209.00	82.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	620.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	42.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Site Preparation - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0983	0.0000	0.0983	0.0505	0.0000	0.0505	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0185	0.1855	0.1153	2.6000e-004		8.7900e-003	8.7900e-003		8.0900e-003	8.0900e-003	0.0000	22.5211	22.5211	7.2800e-003	0.0000	22.7032
Total	**0.0185**	**0.1855**	**0.1153**	**2.6000e-004**	**0.0983**	**8.7900e-003**	**0.1071**	**0.0505**	**8.0900e-003**	**0.0586**	**0.0000**	**22.5211**	**22.5211**	**7.2800e-003**	**0.0000**	**22.7032**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.5000e-004	2.7000e-004	3.4000e-003	1.0000e-005	1.1000e-003	1.0000e-005	1.1000e-003	2.9000e-004	1.0000e-005	3.0000e-004	0.0000	0.8635	0.8635	2.0000e-005	2.0000e-005	0.8713
Total	**3.5000e-004**	**2.7000e-004**	**3.4000e-003**	**1.0000e-005**	**1.1000e-003**	**1.0000e-005**	**1.1000e-003**	**2.9000e-004**	**1.0000e-005**	**3.0000e-004**	**0.0000**	**0.8635**	**0.8635**	**2.0000e-005**	**2.0000e-005**	**0.8713**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Site Preparation - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0442	0.0000	0.0442	0.0227	0.0000	0.0227	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0185	0.1855	0.1153	2.6000e-004		8.7900e-003	8.7900e-003		8.0900e-003	8.0900e-003	0.0000	22.5211	22.5211	7.2800e-003	0.0000	22.7031
Total	**0.0185**	**0.1855**	**0.1153**	**2.6000e-004**	**0.0442**	**8.7900e-003**	**0.0530**	**0.0227**	**8.0900e-003**	**0.0308**	**0.0000**	**22.5211**	**22.5211**	**7.2800e-003**	**0.0000**	**22.7031**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.5000e-004	2.7000e-004	3.4000e-003	1.0000e-005	1.1000e-003	1.0000e-005	1.1000e-003	2.9000e-004	1.0000e-005	3.0000e-004	0.0000	0.8635	0.8635	2.0000e-005	2.0000e-005	0.8713
Total	**3.5000e-004**	**2.7000e-004**	**3.4000e-003**	**1.0000e-005**	**1.1000e-003**	**1.0000e-005**	**1.1000e-003**	**2.9000e-004**	**1.0000e-005**	**3.0000e-004**	**0.0000**	**0.8635**	**0.8635**	**2.0000e-005**	**2.0000e-005**	**0.8713**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0976	0.0000	0.0976	0.0385	0.0000	0.0385	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0381	0.4079	0.3049	6.5000e-004		0.0172	0.0172		0.0158	0.0158	0.0000	57.2613	57.2613	0.0185	0.0000	57.7243
Total	**0.0381**	**0.4079**	**0.3049**	**6.5000e-004**	**0.0976**	**0.0172**	**0.1148**	**0.0385**	**0.0158**	**0.0543**	**0.0000**	**57.2613**	**57.2613**	**0.0185**	**0.0000**	**57.7243**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	3.0700e-003	0.1333	0.0284	5.7000e-004	0.0171	1.4700e-003	0.0186	4.6900e-003	1.4100e-003	6.1000e-003	0.0000	55.1036	55.1036	7.4000e-004	8.6800e-003	57.7089
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.3000e-004	5.7000e-004	7.1400e-003	2.0000e-005	2.3100e-003	1.0000e-005	2.3200e-003	6.1000e-004	1.0000e-005	6.2000e-004	0.0000	1.8134	1.8134	5.0000e-005	5.0000e-005	1.8297
Total	**3.8000e-003**	**0.1339**	**0.0356**	**5.9000e-004**	**0.0194**	**1.4800e-003**	**0.0209**	**5.3000e-003**	**1.4200e-003**	**6.7200e-003**	**0.0000**	**56.9170**	**56.9170**	**7.9000e-004**	**8.7300e-003**	**59.5386**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Grading - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0439	0.0000	0.0439	0.0173	0.0000	0.0173	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0381	0.4079	0.3049	6.5000e-004		0.0172	0.0172		0.0158	0.0158	0.0000	57.2613	57.2613	0.0185	0.0000	57.7243
Total	**0.0381**	**0.4079**	**0.3049**	**6.5000e-004**	**0.0439**	**0.0172**	**0.0611**	**0.0173**	**0.0158**	**0.0331**	**0.0000**	**57.2613**	**57.2613**	**0.0185**	**0.0000**	**57.7243**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	3.0700e-003	0.1333	0.0284	5.7000e-004	0.0171	1.4700e-003	0.0186	4.6900e-003	1.4100e-003	6.1000e-003	0.0000	55.1036	55.1036	7.4000e-004	8.6800e-003	57.7089
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.3000e-004	5.7000e-004	7.1400e-003	2.0000e-005	2.3100e-003	1.0000e-005	2.3200e-003	6.1000e-004	1.0000e-005	6.2000e-004	0.0000	1.8134	1.8134	5.0000e-005	5.0000e-005	1.8297
Total	**3.8000e-003**	**0.1339**	**0.0356**	**5.9000e-004**	**0.0194**	**1.4800e-003**	**0.0209**	**5.3000e-003**	**1.4200e-003**	**6.7200e-003**	**0.0000**	**56.9170**	**56.9170**	**7.9000e-004**	**8.7300e-003**	**59.5386**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Underground Utilities - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0312	0.2770	0.2447	7.3000e-004		0.0107	0.0107		9.8200e-003	9.8200e-003	0.0000	63.9164	63.9164	0.0207	0.0000	64.4332
Total	**0.0312**	**0.2770**	**0.2447**	**7.3000e-004**		**0.0107**	**0.0107**		**9.8200e-003**	**9.8200e-003**	**0.0000**	**63.9164**	**63.9164**	**0.0207**	**0.0000**	**64.4332**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.2500e-003	9.7000e-004	0.0122	3.0000e-005	3.9300e-003	2.0000e-005	3.9500e-003	1.0400e-003	2.0000e-005	1.0600e-003	0.0000	3.0871	3.0871	8.0000e-005	9.0000e-005	3.1148
Total	**1.2500e-003**	**9.7000e-004**	**0.0122**	**3.0000e-005**	**3.9300e-003**	**2.0000e-005**	**3.9500e-003**	**1.0400e-003**	**2.0000e-005**	**1.0600e-003**	**0.0000**	**3.0871**	**3.0871**	**8.0000e-005**	**9.0000e-005**	**3.1148**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Underground Utilities - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0312	0.2770	0.2447	7.3000e-004		0.0107	0.0107		9.8200e-003	9.8200e-003	0.0000	63.9163	63.9163	0.0207	0.0000	64.4331
Total	**0.0312**	**0.2770**	**0.2447**	**7.3000e-004**		**0.0107**	**0.0107**		**9.8200e-003**	**9.8200e-003**	**0.0000**	**63.9163**	**63.9163**	**0.0207**	**0.0000**	**64.4331**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.2500e-003	9.7000e-004	0.0122	3.0000e-005	3.9300e-003	2.0000e-005	3.9500e-003	1.0400e-003	2.0000e-005	1.0600e-003	0.0000	3.0871	3.0871	8.0000e-005	9.0000e-005	3.1148
Total	**1.2500e-003**	**9.7000e-004**	**0.0122**	**3.0000e-005**	**3.9300e-003**	**2.0000e-005**	**3.9500e-003**	**1.0400e-003**	**2.0000e-005**	**1.0600e-003**	**0.0000**	**3.0871**	**3.0871**	**8.0000e-005**	**9.0000e-005**	**3.1148**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Underground Utilities - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0171	0.1427	0.1407	4.2000e-004		5.4900e-003	5.4900e-003		5.0500e-003	5.0500e-003	0.0000	37.2012	37.2012	0.0120	0.0000	37.5020
Total	**0.0171**	**0.1427**	**0.1407**	**4.2000e-004**		**5.4900e-003**	**5.4900e-003**		**5.0500e-003**	**5.0500e-003**	**0.0000**	**37.2012**	**37.2012**	**0.0120**	**0.0000**	**37.5020**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.7000e-004	5.0000e-004	6.5100e-003	2.0000e-005	2.2900e-003	1.0000e-005	2.3000e-003	6.1000e-004	1.0000e-005	6.2000e-004	0.0000	1.7386	1.7386	4.0000e-005	5.0000e-005	1.7534
Total	**6.7000e-004**	**5.0000e-004**	**6.5100e-003**	**2.0000e-005**	**2.2900e-003**	**1.0000e-005**	**2.3000e-003**	**6.1000e-004**	**1.0000e-005**	**6.2000e-004**	**0.0000**	**1.7386**	**1.7386**	**4.0000e-005**	**5.0000e-005**	**1.7534**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Underground Utilities - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0171	0.1427	0.1407	4.2000e-004		5.4900e-003	5.4900e-003		5.0500e-003	5.0500e-003	0.0000	37.2012	37.2012	0.0120	0.0000	37.5020
Total	**0.0171**	**0.1427**	**0.1407**	**4.2000e-004**		**5.4900e-003**	**5.4900e-003**		**5.0500e-003**	**5.0500e-003**	**0.0000**	**37.2012**	**37.2012**	**0.0120**	**0.0000**	**37.5020**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.7000e-004	5.0000e-004	6.5100e-003	2.0000e-005	2.2900e-003	1.0000e-005	2.3000e-003	6.1000e-004	1.0000e-005	6.2000e-004	0.0000	1.7386	1.7386	4.0000e-005	5.0000e-005	1.7534
Total	**6.7000e-004**	**5.0000e-004**	**6.5100e-003**	**2.0000e-005**	**2.2900e-003**	**1.0000e-005**	**2.3000e-003**	**6.1000e-004**	**1.0000e-005**	**6.2000e-004**	**0.0000**	**1.7386**	**1.7386**	**4.0000e-005**	**5.0000e-005**	**1.7534**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0168	0.1472	0.1479	3.0000e-004		7.1600e-003	7.1600e-003		6.7200e-003	6.7200e-003	0.0000	26.0815	26.0815	6.9800e-003	0.0000	26.2559
Total	**0.0168**	**0.1472**	**0.1479**	**3.0000e-004**		**7.1600e-003**	**7.1600e-003**		**6.7200e-003**	**6.7200e-003**	**0.0000**	**26.0815**	**26.0815**	**6.9800e-003**	**0.0000**	**26.2559**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	9.8000e-004	0.0273	9.2000e-003	1.1000e-004	3.8900e-003	3.8000e-004	4.2600e-003	1.1200e-003	3.6000e-004	1.4800e-003	0.0000	10.7697	10.7697	1.1000e-004	1.6000e-003	11.2488
Worker	5.4800e-003	4.2700e-003	0.0533	1.5000e-004	0.0172	9.0000e-005	0.0173	4.5700e-003	8.0000e-005	4.6600e-003	0.0000	13.5359	13.5359	3.6000e-004	3.8000e-004	13.6573
Total	**6.4600e-003**	**0.0316**	**0.0625**	**2.6000e-004**	**0.0211**	**4.7000e-004**	**0.0216**	**5.6900e-003**	**4.4000e-004**	**6.1400e-003**	**0.0000**	**24.3056**	**24.3056**	**4.7000e-004**	**1.9800e-003**	**24.9061**

JM Realty Perris Development, Phase 1 - Riverside-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Building Construction - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0168	0.1472	0.1479	3.0000e-004		7.1600e-003	7.1600e-003		6.7200e-003	6.7200e-003	0.0000	26.0814	26.0814	6.9800e-003	0.0000	26.2559
Total	**0.0168**	**0.1472**	**0.1479**	**3.0000e-004**		**7.1600e-003**	**7.1600e-003**		**6.7200e-003**	**6.7200e-003**	**0.0000**	**26.0814**	**26.0814**	**6.9800e-003**	**0.0000**	**26.2559**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	9.8000e-004	0.0273	9.2000e-003	1.1000e-004	3.8900e-003	3.8000e-004	4.2600e-003	1.1200e-003	3.6000e-004	1.4800e-003	0.0000	10.7697	10.7697	1.1000e-004	1.6000e-003	11.2488
Worker	5.4800e-003	4.2700e-003	0.0533	1.5000e-004	0.0172	9.0000e-005	0.0173	4.5700e-003	8.0000e-005	4.6600e-003	0.0000	13.5359	13.5359	3.6000e-004	3.8000e-004	13.6573
Total	**6.4600e-003**	**0.0316**	**0.0625**	**2.6000e-004**	**0.0211**	**4.7000e-004**	**0.0216**	**5.6900e-003**	**4.4000e-004**	**6.1400e-003**	**0.0000**	**24.3056**	**24.3056**	**4.7000e-004**	**1.9800e-003**	**24.9061**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2700	2.3339	2.5392	5.2200e-003		0.1077	0.1077		0.1010	0.1010	0.0000	452.2886	452.2886	0.1205	0.0000	455.3012
Total	**0.2700**	**2.3339**	**2.5392**	**5.2200e-003**		**0.1077**	**0.1077**		**0.1010**	**0.1010**	**0.0000**	**452.2886**	**452.2886**	**0.1205**	**0.0000**	**455.3012**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0116	0.3655	0.1456	1.8600e-003	0.0673	3.0400e-003	0.0704	0.0194	2.9100e-003	0.0223	0.0000	179.3550	179.3550	1.8100e-003	0.0265	187.3035
Worker	0.0881	0.0653	0.8507	2.4800e-003	0.2986	1.4200e-003	0.3001	0.0793	1.3100e-003	0.0806	0.0000	227.1012	227.1012	5.6700e-003	6.0300e-003	229.0399
Total	**0.0997**	**0.4308**	**0.9963**	**4.3400e-003**	**0.3660**	**4.4600e-003**	**0.3704**	**0.0987**	**4.2200e-003**	**0.1030**	**0.0000**	**406.4563**	**406.4563**	**7.4800e-003**	**0.0326**	**416.3434**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Building Construction - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2700	2.3339	2.5392	5.2200e-003		0.1077	0.1077		0.1010	0.1010	0.0000	452.2880	452.2880	0.1205	0.0000	455.3006
Total	**0.2700**	**2.3339**	**2.5392**	**5.2200e-003**		**0.1077**	**0.1077**		**0.1010**	**0.1010**	**0.0000**	**452.2880**	**452.2880**	**0.1205**	**0.0000**	**455.3006**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0116	0.3655	0.1456	1.8600e-003	0.0673	3.0400e-003	0.0704	0.0194	2.9100e-003	0.0223	0.0000	179.3550	179.3550	1.8100e-003	0.0265	187.3035
Worker	0.0881	0.0653	0.8507	2.4800e-003	0.2986	1.4200e-003	0.3001	0.0793	1.3100e-003	0.0806	0.0000	227.1012	227.1012	5.6700e-003	6.0300e-003	229.0399
Total	**0.0997**	**0.4308**	**0.9963**	**4.3400e-003**	**0.3660**	**4.4600e-003**	**0.3704**	**0.0987**	**4.2200e-003**	**0.1030**	**0.0000**	**406.4563**	**406.4563**	**7.4800e-003**	**0.0326**	**416.3434**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0246	0.2097	0.2427	5.0000e-004		9.1600e-003	9.1600e-003		8.5900e-003	8.5900e-003	0.0000	43.5001	43.5001	0.0116	0.0000	43.7888
Total	**0.0246**	**0.2097**	**0.2427**	**5.0000e-004**		**9.1600e-003**	**9.1600e-003**		**8.5900e-003**	**8.5900e-003**	**0.0000**	**43.5001**	**43.5001**	**0.0116**	**0.0000**	**43.7888**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.0900e-003	0.0352	0.0138	1.8000e-004	6.4800e-003	2.9000e-004	6.7700e-003	1.8700e-003	2.8000e-004	2.1500e-003	0.0000	16.9800	16.9800	1.8000e-004	2.5100e-003	17.7316
Worker	7.9100e-003	5.5900e-003	0.0765	2.3000e-004	0.0287	1.3000e-004	0.0288	7.6200e-003	1.2000e-004	7.7400e-003	0.0000	21.1452	21.1452	4.9000e-004	5.4000e-004	21.3181
Total	**9.0000e-003**	**0.0407**	**0.0903**	**4.1000e-004**	**0.0352**	**4.2000e-004**	**0.0356**	**9.4900e-003**	**4.0000e-004**	**9.8900e-003**	**0.0000**	**38.1253**	**38.1253**	**6.7000e-004**	**3.0500e-003**	**39.0496**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Building Construction - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0246	0.2097	0.2427	5.0000e-004		9.1600e-003	9.1600e-003		8.5900e-003	8.5900e-003	0.0000	43.5000	43.5000	0.0116	0.0000	43.7887
Total	**0.0246**	**0.2097**	**0.2427**	**5.0000e-004**		**9.1600e-003**	**9.1600e-003**		**8.5900e-003**	**8.5900e-003**	**0.0000**	**43.5000**	**43.5000**	**0.0116**	**0.0000**	**43.7887**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.0900e-003	0.0352	0.0138	1.8000e-004	6.4800e-003	2.9000e-004	6.7700e-003	1.8700e-003	2.8000e-004	2.1500e-003	0.0000	16.9800	16.9800	1.8000e-004	2.5100e-003	17.7316
Worker	7.9100e-003	5.5900e-003	0.0765	2.3000e-004	0.0287	1.3000e-004	0.0288	7.6200e-003	1.2000e-004	7.7400e-003	0.0000	21.1452	21.1452	4.9000e-004	5.4000e-004	21.3181
Total	**9.0000e-003**	**0.0407**	**0.0903**	**4.1000e-004**	**0.0352**	**4.2000e-004**	**0.0356**	**9.4900e-003**	**4.0000e-004**	**9.8900e-003**	**0.0000**	**38.1253**	**38.1253**	**6.7000e-004**	**3.0500e-003**	**39.0496**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Paving - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	9.8800e-003	0.0953	0.1463	2.3000e-004		4.6900e-003	4.6900e-003		4.3100e-003	4.3100e-003	0.0000	20.0265	20.0265	6.4800e-003	0.0000	20.1885
Paving	8.0300e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0179**	**0.0953**	**0.1463**	**2.3000e-004**		**4.6900e-003**	**4.6900e-003**		**4.3100e-003**	**4.3100e-003**	**0.0000**	**20.0265**	**20.0265**	**6.4800e-003**	**0.0000**	**20.1885**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	6.5000e-004	0.0328	8.6800e-003	1.7000e-004	5.3500e-003	3.7000e-004	5.7200e-003	1.4700e-003	3.6000e-004	1.8200e-003	0.0000	16.2434	16.2434	2.5000e-004	2.5600e-003	17.0125
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.5000e-004	3.2000e-004	4.3900e-003	1.0000e-005	1.6500e-003	1.0000e-005	1.6600e-003	4.4000e-004	1.0000e-005	4.4000e-004	0.0000	1.2141	1.2141	3.0000e-005	3.0000e-005	1.2240
Total	**1.1000e-003**	**0.0331**	**0.0131**	**1.8000e-004**	**7.0000e-003**	**3.8000e-004**	**7.3800e-003**	**1.9100e-003**	**3.7000e-004**	**2.2600e-003**	**0.0000**	**17.4575**	**17.4575**	**2.8000e-004**	**2.5900e-003**	**18.2365**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Paving - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	9.8800e-003	0.0953	0.1463	2.3000e-004		4.6900e-003	4.6900e-003		4.3100e-003	4.3100e-003	0.0000	20.0265	20.0265	6.4800e-003	0.0000	20.1884
Paving	8.0300e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0179**	**0.0953**	**0.1463**	**2.3000e-004**		**4.6900e-003**	**4.6900e-003**		**4.3100e-003**	**4.3100e-003**	**0.0000**	**20.0265**	**20.0265**	**6.4800e-003**	**0.0000**	**20.1884**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	6.5000e-004	0.0328	8.6800e-003	1.7000e-004	5.3500e-003	3.7000e-004	5.7200e-003	1.4700e-003	3.6000e-004	1.8200e-003	0.0000	16.2434	16.2434	2.5000e-004	2.5600e-003	17.0125
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.5000e-004	3.2000e-004	4.3900e-003	1.0000e-005	1.6500e-003	1.0000e-005	1.6600e-003	4.4000e-004	1.0000e-005	4.4000e-004	0.0000	1.2141	1.2141	3.0000e-005	3.0000e-005	1.2240
Total	**1.1000e-003**	**0.0331**	**0.0131**	**1.8000e-004**	**7.0000e-003**	**3.8000e-004**	**7.3800e-003**	**1.9100e-003**	**3.7000e-004**	**2.2600e-003**	**0.0000**	**17.4575**	**17.4575**	**2.8000e-004**	**2.5900e-003**	**18.2365**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.7 Architectural Coating - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.5529					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.8100e-003	0.0122	0.0181	3.0000e-005		6.1000e-004	6.1000e-004		6.1000e-004	6.1000e-004	0.0000	2.5533	2.5533	1.4000e-004	0.0000	2.5569
Total	**0.5548**	**0.0122**	**0.0181**	**3.0000e-005**		**6.1000e-004**	**6.1000e-004**		**6.1000e-004**	**6.1000e-004**	**0.0000**	**2.5533**	**2.5533**	**1.4000e-004**	**0.0000**	**2.5569**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.2700e-003	9.0000e-004	0.0123	4.0000e-005	4.6200e-003	2.0000e-005	4.6400e-003	1.2300e-003	2.0000e-005	1.2500e-003	0.0000	3.3994	3.3994	8.0000e-005	9.0000e-005	3.4272
Total	**1.2700e-003**	**9.0000e-004**	**0.0123**	**4.0000e-005**	**4.6200e-003**	**2.0000e-005**	**4.6400e-003**	**1.2300e-003**	**2.0000e-005**	**1.2500e-003**	**0.0000**	**3.3994**	**3.3994**	**8.0000e-005**	**9.0000e-005**	**3.4272**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.7 Architectural Coating - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.5529					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.8100e-003	0.0122	0.0181	3.0000e-005		6.1000e-004	6.1000e-004		6.1000e-004	6.1000e-004	0.0000	2.5533	2.5533	1.4000e-004	0.0000	2.5568
Total	**0.5548**	**0.0122**	**0.0181**	**3.0000e-005**		**6.1000e-004**	**6.1000e-004**		**6.1000e-004**	**6.1000e-004**	**0.0000**	**2.5533**	**2.5533**	**1.4000e-004**	**0.0000**	**2.5568**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.2700e-003	9.0000e-004	0.0123	4.0000e-005	4.6200e-003	2.0000e-005	4.6400e-003	1.2300e-003	2.0000e-005	1.2500e-003	0.0000	3.3994	3.3994	8.0000e-005	9.0000e-005	3.4272
Total	**1.2700e-003**	**9.0000e-004**	**0.0123**	**4.0000e-005**	**4.6200e-003**	**2.0000e-005**	**4.6400e-003**	**1.2300e-003**	**2.0000e-005**	**1.2500e-003**	**0.0000**	**3.3994**	**3.3994**	**8.0000e-005**	**9.0000e-005**	**3.4272**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.1916	4.1164	2.0418	0.0258	1.2332	0.0497	1.2830	0.3435	0.0475	0.3910	0.0000	2,476.3232	2,476.3232	0.0414	0.3384	2,578.2028
Unmitigated	0.1916	4.1164	2.0418	0.0258	1.2332	0.0497	1.2830	0.3435	0.0475	0.3910	0.0000	2,476.3232	2,476.3232	0.0414	0.3384	2,578.2028

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Office Building	260.00	260.00	260.00	837,580	837,580
Parking Lot	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	142.45	142.45	142.45	2,074,089	2,074,089
Total	402.45	402.45	402.45	2,911,669	2,911,669

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Unrefrigerated Warehouse-No	16.60	8.40	40.00	0.00	0.00	100.00	100	0	0

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Office Building	0.540541	0.056458	0.173793	0.136090	0.025268	0.007074	0.011525	0.018705	0.000610	0.000304	0.023606	0.001094	0.004932
Parking Lot	0.540541	0.056458	0.173793	0.136090	0.025268	0.007074	0.011525	0.018705	0.000610	0.000304	0.023606	0.001094	0.004932
Unrefrigerated Warehouse-No Rail	0.000000	0.000000	0.000000	0.000000	0.000000	0.170000	0.210000	0.620000	0.000000	0.000000	0.000000	0.000000	0.000000

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	124.4429	124.4429	0.0105	1.2700e-003	125.0848
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	124.4429	124.4429	0.0105	1.2700e-003	125.0848
NaturalGas Mitigated	2.6000e-003	0.0236	0.0198	1.4000e-004		1.7900e-003	1.7900e-003		1.7900e-003	1.7900e-003	0.0000	25.7046	25.7046	4.9000e-004	4.7000e-004	25.8573
NaturalGas Unmitigated	2.6000e-003	0.0236	0.0198	1.4000e-004		1.7900e-003	1.7900e-003		1.7900e-003	1.7900e-003	0.0000	25.7046	25.7046	4.9000e-004	4.7000e-004	25.8573

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Office Building	34300	1.8000e-004	1.6800e-003	1.4100e-003	1.0000e-005		1.3000e-004	1.3000e-004		1.3000e-004	1.3000e-004	0.0000	1.8304	1.8304	4.0000e-005	3.0000e-005	1.8413
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	447386	2.4100e-003	0.0219	0.0184	1.3000e-004		1.6700e-003	1.6700e-003		1.6700e-003	1.6700e-003	0.0000	23.8742	23.8742	4.6000e-004	4.4000e-004	24.0161
Total		**2.5900e-003**	**0.0236**	**0.0198**	**1.4000e-004**		**1.8000e-003**	**1.8000e-003**		**1.8000e-003**	**1.8000e-003**	**0.0000**	**25.7046**	**25.7046**	**5.0000e-004**	**4.7000e-004**	**25.8573**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Office Building	34300	1.8000e-004	1.6800e-003	1.4100e-003	1.0000e-005		1.3000e-004	1.3000e-004		1.3000e-004	1.3000e-004	0.0000	1.8304	1.8304	4.0000e-005	3.0000e-005	1.8413
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	447386	2.4100e-003	0.0219	0.0184	1.3000e-004		1.6700e-003	1.6700e-003		1.6700e-003	1.6700e-003	0.0000	23.8742	23.8742	4.6000e-004	4.4000e-004	24.0161
Total		**2.5900e-003**	**0.0236**	**0.0198**	**1.4000e-004**		**1.8000e-003**	**1.8000e-003**		**1.8000e-003**	**1.8000e-003**	**0.0000**	**25.7046**	**25.7046**	**5.0000e-004**	**4.7000e-004**	**25.8573**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Office Building	91900	16.2981	1.3800e-003	1.7000e-004	16.3821
Parking Lot	93411.5	16.5661	1.4000e-003	1.7000e-004	16.6516
Unrefrigerated Warehouse-No Rail	516386	91.5787	7.7300e-003	9.4000e-004	92.0511
Total		**124.4429**	**0.0105**	**1.2800e-003**	**125.0848**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Office Building	91900	16.2981	1.3800e-003	1.7000e-004	16.3821
Parking Lot	93411.5	16.5661	1.4000e-003	1.7000e-004	16.6516
Unrefrigerated Warehouse-No Rail	516386	91.5787	7.7300e-003	9.4000e-004	92.0511
Total		**124.4429**	**0.0105**	**1.2800e-003**	**125.0848**

6.0 Area Detail

6.1 Mitigation Measures Area

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.9136	6.0000e-005	6.3600e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0124	0.0124	3.0000e-005	0.0000	0.0132
Unmitigated	0.9136	6.0000e-005	6.3600e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0124	0.0124	3.0000e-005	0.0000	0.0132

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0553					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.8577					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	5.9000e-004	6.0000e-005	6.3600e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0124	0.0124	3.0000e-005	0.0000	0.0132
Total	**0.9136**	**6.0000e-005**	**6.3600e-003**	**0.0000**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0124**	**0.0124**	**3.0000e-005**	**0.0000**	**0.0132**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0553					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.8577					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	5.9000e-004	6.0000e-005	6.3600e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0124	0.0124	3.0000e-005	0.0000	0.0132
Total	**0.9136**	**6.0000e-005**	**6.3600e-003**	**0.0000**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0124**	**0.0124**	**3.0000e-005**	**0.0000**	**0.0132**

7.0 Water Detail

7.1 Mitigation Measures Water

Apply Water Conservation Strategy

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	113.6025	1.3965	0.0338	158.5884
Unmitigated	142.0031	1.7457	0.0423	198.2356

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Office Building	1.77734 / 1.08934	6.8145	0.0584	1.4300e-003	8.7021
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	51.4716 / 0	135.1887	1.6872	0.0408	189.5335
Total		**142.0031**	**1.7457**	**0.0423**	**198.2355**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Office Building	1.42187 / 0.871469	5.4516	0.0468	1.1500e-003	6.9617
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	41.1773 / 0	108.1510	1.3498	0.0327	151.6268
Total		**113.6025**	**1.3965**	**0.0338**	**158.5884**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	33.2697	1.9662	0.0000	82.4243
Unmitigated	44.3596	2.6216	0.0000	109.8991

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Office Building	9.3	1.8878	0.1116	0.0000	4.6770
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	209.23	42.4718	2.5100	0.0000	105.2221
Total		**44.3596**	**2.6216**	**0.0000**	**109.8991**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Office Building	6.975	1.4159	0.0837	0.0000	3.5077
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	156.922	31.8539	1.8825	0.0000	78.9166
Total		**33.2697**	**1.9662**	**0.0000**	**82.4243**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

11.0 Vegetation

JM Realty Perris Development, Phase 1 - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

JM Realty Perris Development, Phase 1

Riverside-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	10.00	1000sqft	0.23	10,000.00	0
Unrefrigerated Warehouse-No Rail	222.58	1000sqft	5.11	222,580.00	0
Parking Lot	266.89	1000sqft	6.13	266,890.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.4	**Precipitation Freq (Days)**	28
Climate Zone	10			**Operational Year**	2025
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	390.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Run 3 - Warehoue land use changed back to unrefrigerated, construction start bumped to Oct 1 2022.

Land Use - General Office Builing = office space internal to the warehouse building.
Parking lot includes auto parking, tuck trailer parking, loading docks, driveways, sidewalks, and street improvements.

Construction Phase - Site vacant, no demolition.
Construction schedule per project applicant and defaults.

Off-road Equipment -

Off-road Equipment - Off-Highway Truck = water truck.

Off-road Equipment -

Off-road Equipment -

Off-road Equipment - Off-Highway Truck = water truck.

JM Realty Perris Development, Phase 1 - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Off-road Equipment - Equipment for excavation/installation of underground utilites and Line E storm drain.
Off-Highway Truck = water truck.

Off-road Equipment - Off-road Equipment - Equipment for excavation/installation of underground utilites and Line E storm drain.
Off-Highway Truck = water truck.

Trips and VMT - 310 loads (620 trips) ashpalt/aggregate imported during paving.

Grading - 15,842 CY soil import during grading

Architectural Coating - 50 g/L maximum VOC content for exterior and interior flat coatings per SCAQMD Rule 1113.

Vehicle Trips - Trip generation per Traffic Report.
Passender car/light truck trips asigned to office space, truck trips assigned to warehouse.
Truck trips assumed to be 100% primary and 100% C-NW.
40 mile warehouse truck trip distasnce per SCAQMD recommendations

Area Coating - 50 g/L maximum VOC content for exterior and interior flat coatings per SCAQMD Rule 1113.

Construction Off-road Equipment Mitigation - Dust miitigation to comply with SCAQMD Rule 403.

Area Mitigation - 50 g/L maximum VOC content for exterior and interior flat coatings per SCAQMD Rule 1113.

Water Mitigation - 20% water conservation per 2019 CalGreen not accounted for in model defaults.

Waste Mitigation - 25% solid waste diversion per AB 341 not accounted for in model defaults

Fleet Mix - Truck fleet mix per Traffic Report.

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	116,290.00	111,290.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	348,870.00	333,870.00
tblArchitecturalCoating	EF_Nonresidential_Exterior	100.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	50.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	100	50
tblAreaCoating	Area_EF_Nonresidential_Interior	100	50
tblAreaCoating	Area_Nonresidential_Exterior	116290	111290
tblAreaCoating	Area_Nonresidential_Interior	348870	333870
tblConstructionPhase	NumDays	30.00	21.00
tblFleetMix	HHD	0.02	0.62
tblFleetMix	LDA	0.54	0.00
tblFleetMix	LDT1	0.06	0.00
tblFleetMix	LDT2	0.17	0.00

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblFleetMix	LHD1	0.03	0.00
tblFleetMix	LHD2	7.0740e-003	0.17
tblFleetMix	MCY	0.02	0.00
tblFleetMix	MDV	0.14	0.00
tblFleetMix	MH	4.9320e-003	0.00
tblFleetMix	MHD	0.01	0.21
tblFleetMix	OBUS	6.1000e-004	0.00
tblFleetMix	SBUS	1.0940e-003	0.00
tblFleetMix	UBUS	3.0400e-004	0.00
tblGrading	MaterialImported	0.00	15,842.00
tblTripsAndVMT	HaulingTripNumber	0.00	620.00
tblVehicleTrips	CNW_TL	6.90	40.00
tblVehicleTrips	CNW_TTP	41.00	100.00
tblVehicleTrips	CW_TTP	59.00	0.00
tblVehicleTrips	DV_TP	5.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PR_TP	92.00	100.00
tblVehicleTrips	ST_TR	2.21	26.00
tblVehicleTrips	ST_TR	1.74	0.64
tblVehicleTrips	SU_TR	0.70	26.00
tblVehicleTrips	SU_TR	1.74	0.64
tblVehicleTrips	WD_TR	9.74	26.00
tblVehicleTrips	WD_TR	1.74	0.64

2.0 Emissions Summary

JM Realty Perris Development, Phase 1 - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	5.1663	61.7033	41.7554	0.1458	19.8806	2.1649	21.6402	10.1617	1.9969	11.7806	0.0000	14,667.8373	14,667.8373	2.8588	0.9203	15,013.5487
2023	3.9918	30.2306	36.0618	0.1008	3.0067	1.2068	4.2134	0.8093	1.1258	1.9351	0.0000	9,919.9882	9,919.9882	1.9167	0.2785	10,050.9127
2024	55.6091	20.0487	26.3515	0.0724	2.8613	0.7668	3.6281	0.7708	0.7190	1.4897	0.0000	7,157.9219	7,157.9219	1.0776	0.2858	7,264.7382
Maximum	**55.6091**	**61.7033**	**41.7554**	**0.1458**	**19.8806**	**2.1649**	**21.6402**	**10.1617**	**1.9969**	**11.7806**	**0.0000**	**14,667.8373**	**14,667.8373**	**2.8588**	**0.9203**	**15,013.5487**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	5.1663	61.7033	41.7554	0.1458	9.0692	2.1649	10.8289	4.6054	1.9969	6.2243	0.0000	14,667.8373	14,667.8373	2.8588	0.9203	15,013.5487
2023	3.9918	30.2306	36.0618	0.1008	3.0067	1.2068	4.2134	0.8093	1.1258	1.9351	0.0000	9,919.9882	9,919.9882	1.9167	0.2785	10,050.9127
2024	55.6091	20.0487	26.3515	0.0724	2.8613	0.7668	3.6281	0.7708	0.7190	1.4897	0.0000	7,157.9219	7,157.9219	1.0776	0.2858	7,264.7382
Maximum	**55.6091**	**61.7033**	**41.7554**	**0.1458**	**9.0692**	**2.1649**	**10.8289**	**4.6054**	**1.9969**	**6.2243**	**0.0000**	**14,667.8373**	**14,667.8373**	**2.8588**	**0.9203**	**15,013.5487**

JM Realty Perris Development, Phase 1 - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	41.99	0.00	36.67	47.32	0.00	36.54	0.00	0.00	0.00	0.00	0.00	0.00

JM Realty Perris Development, Phase 1 - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	5.0073	4.6000e-004	0.0509	0.0000		1.8000e-004	1.8000e-004		1.8000e-004	1.8000e-004		0.1093	0.1093	2.8000e-004		0.1164
Energy	0.0142	0.1294	0.1087	7.8000e-004		9.8300e-003	9.8300e-003		9.8300e-003	9.8300e-003		155.2573	155.2573	2.9800e-003	2.8500e-003	156.1799
Mobile	1.0362	22.5881	11.0484	0.1417	6.8775	0.2737	7.1512	1.9122	0.2616	2.1737		14,993.7668	14,993.7668	0.2507	2.0523	15,611.6206
Total	**6.0577**	**22.7180**	**11.2080**	**0.1425**	**6.8775**	**0.2837**	**7.1612**	**1.9122**	**0.2716**	**2.1838**		**15,149.1334**	**15,149.1334**	**0.2539**	**2.0552**	**15,767.9170**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	5.0073	4.6000e-004	0.0509	0.0000		1.8000e-004	1.8000e-004		1.8000e-004	1.8000e-004		0.1093	0.1093	2.8000e-004		0.1164
Energy	0.0142	0.1294	0.1087	7.8000e-004		9.8300e-003	9.8300e-003		9.8300e-003	9.8300e-003		155.2573	155.2573	2.9800e-003	2.8500e-003	156.1799
Mobile	1.0362	22.5881	11.0484	0.1417	6.8775	0.2737	7.1512	1.9122	0.2616	2.1737		14,993.7668	14,993.7668	0.2507	2.0523	15,611.6206
Total	**6.0577**	**22.7180**	**11.2080**	**0.1425**	**6.8775**	**0.2837**	**7.1612**	**1.9122**	**0.2716**	**2.1838**		**15,149.1334**	**15,149.1334**	**0.2539**	**2.0552**	**15,767.9170**

JM Realty Perris Development, Phase 1 - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	10/1/2022	10/14/2022	5	10	
2	Grading	Grading	10/15/2022	11/14/2022	5	21	
3	Underground Utilities	Trenching	10/15/2022	2/14/2023	5	87	
4	Building Construction	Building Construction	12/12/2022	2/2/2024	5	300	
5	Paving	Paving	2/3/2024	3/1/2024	5	20	
6	Architectural Coating	Architectural Coating	3/2/2024	3/29/2024	5	20	

Acres of Grading (Site Preparation Phase): 15

Acres of Grading (Grading Phase): 63

Acres of Paving: 6.13

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 333,870; Non-Residential Outdoor: 111,290; Striped Parking Area: 16,013 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Off-Highway Trucks	1	8.00	402	0.38
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41

JM Realty Perris Development, Phase 1 - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Underground Utilities	Cranes	1	2.00	231	0.29
Underground Utilities	Excavators	1	8.00	158	0.38
Underground Utilities	Off-Highway Trucks	1	8.00	402	0.38
Underground Utilities	Rubber Tired Loaders	1	8.00	203	0.36
Underground Utilities	Tractors/Loaders/Backhoes	1	1.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Off-Highway Trucks	1	8.00	402	0.38
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	1,980.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Underground Utilities	5	13.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	10	209.00	82.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	620.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	42.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

JM Realty Perris Development, Phase 1 - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Site Preparation - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					19.6570	0.0000	19.6570	10.1025	0.0000	10.1025			0.0000			0.0000
Off-Road	3.6986	37.0972	23.0565	0.0513		1.7585	1.7585		1.6179	1.6179		4,965.0472	4,965.0472	1.6058		5,005.1921
Total	**3.6986**	**37.0972**	**23.0565**	**0.0513**	**19.6570**	**1.7585**	**21.4155**	**10.1025**	**1.6179**	**11.7203**		**4,965.0472**	**4,965.0472**	**1.6058**		**5,005.1921**

JM Realty Perris Development, Phase 1 - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Site Preparation - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0736	0.0530	0.6453	1.8400e-003	0.2236	1.1100e-003	0.2247	0.0593	1.0200e-003	0.0603		186.0315	186.0315	5.0800e-003	5.2000e-003	187.7096
Total	**0.0736**	**0.0530**	**0.6453**	**1.8400e-003**	**0.2236**	**1.1100e-003**	**0.2247**	**0.0593**	**1.0200e-003**	**0.0603**		**186.0315**	**186.0315**	**5.0800e-003**	**5.2000e-003**	**187.7096**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.8457	0.0000	8.8457	4.5461	0.0000	4.5461			0.0000			0.0000
Off-Road	3.6986	37.0972	23.0565	0.0513		1.7585	1.7585		1.6179	1.6179	0.0000	4,965.0471	4,965.0471	1.6058		5,005.1921
Total	**3.6986**	**37.0972**	**23.0565**	**0.0513**	**8.8457**	**1.7585**	**10.6042**	**4.5461**	**1.6179**	**6.1640**	**0.0000**	**4,965.0471**	**4,965.0471**	**1.6058**		**5,005.1921**

JM Realty Perris Development, Phase 1 - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Site Preparation - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0736	0.0530	0.6453	1.8400e-003	0.2236	1.1100e-003	0.2247	0.0593	1.0200e-003	0.0603		186.0315	186.0315	5.0800e-003	5.2000e-003	187.7096
Total	**0.0736**	**0.0530**	**0.6453**	**1.8400e-003**	**0.2236**	**1.1100e-003**	**0.2247**	**0.0593**	**1.0200e-003**	**0.0603**		**186.0315**	**186.0315**	**5.0800e-003**	**5.2000e-003**	**187.7096**

3.3 Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					9.2991	0.0000	9.2991	3.6682	0.0000	3.6682			0.0000			0.0000
Off-Road	3.6248	38.8435	29.0415	0.0621		1.6349	1.6349		1.5041	1.5041		6,011.4105	6,011.4105	1.9442		6,060.0158
Total	**3.6248**	**38.8435**	**29.0415**	**0.0621**	**9.2991**	**1.6349**	**10.9340**	**3.6682**	**1.5041**	**5.1723**		**6,011.4105**	**6,011.4105**	**1.9442**		**6,060.0158**

JM Realty Perris Development, Phase 1 - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Grading - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.2840	12.7012	2.7513	0.0543	1.6503	0.1402	1.7904	0.4524	0.1341	0.5865		5,787.4474	5,787.4474	0.0775	0.9117	6,061.0694
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0736	0.0530	0.6453	1.8400e-003	0.2236	1.1100e-003	0.2247	0.0593	1.0200e-003	0.0603		186.0315	186.0315	5.0800e-003	5.2000e-003	187.7096
Total	**0.3576**	**12.7542**	**3.3966**	**0.0561**	**1.8738**	**0.1413**	**2.0151**	**0.5117**	**0.1351**	**0.6468**		**5,973.4789**	**5,973.4789**	**0.0826**	**0.9169**	**6,248.7790**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					4.1846	0.0000	4.1846	1.6507	0.0000	1.6507			0.0000			0.0000
Off-Road	3.6248	38.8435	29.0415	0.0621		1.6349	1.6349		1.5041	1.5041	0.0000	6,011.4105	6,011.4105	1.9442		6,060.0158
Total	**3.6248**	**38.8435**	**29.0415**	**0.0621**	**4.1846**	**1.6349**	**5.8195**	**1.6507**	**1.5041**	**3.1548**	**0.0000**	**6,011.4105**	**6,011.4105**	**1.9442**		**6,060.0158**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Grading - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.2840	12.7012	2.7513	0.0543	1.6503	0.1402	1.7904	0.4524	0.1341	0.5865		5,787.4474	5,787.4474	0.0775	0.9117	6,061.0694
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0736	0.0530	0.6453	1.8400e-003	0.2236	1.1100e-003	0.2247	0.0593	1.0200e-003	0.0603		186.0315	186.0315	5.0800e-003	5.2000e-003	187.7096
Total	**0.3576**	**12.7542**	**3.3966**	**0.0561**	**1.8738**	**0.1413**	**2.0151**	**0.5117**	**0.1351**	**0.6468**		**5,973.4789**	**5,973.4789**	**0.0826**	**0.9169**	**6,248.7790**

3.4 Underground Utilities - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.1360	10.0712	8.8979	0.0265		0.3880	0.3880		0.3570	0.3570		2,562.0273	2,562.0273	0.8286		2,582.7426
Total	**1.1360**	**10.0712**	**8.8979**	**0.0265**		**0.3880**	**0.3880**		**0.3570**	**0.3570**		**2,562.0273**	**2,562.0273**	**0.8286**		**2,582.7426**

JM Realty Perris Development, Phase 1 - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Underground Utilities - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0478	0.0345	0.4194	1.2000e-003	0.1453	7.2000e-004	0.1460	0.0385	6.7000e-004	0.0392		120.9205	120.9205	3.3100e-003	3.3800e-003	122.0112
Total	**0.0478**	**0.0345**	**0.4194**	**1.2000e-003**	**0.1453**	**7.2000e-004**	**0.1460**	**0.0385**	**6.7000e-004**	**0.0392**		**120.9205**	**120.9205**	**3.3100e-003**	**3.3800e-003**	**122.0112**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.1360	10.0712	8.8979	0.0265		0.3880	0.3880		0.3570	0.3570	0.0000	2,562.0273	2,562.0273	0.8286		2,582.7426
Total	**1.1360**	**10.0712**	**8.8979**	**0.0265**		**0.3880**	**0.3880**		**0.3570**	**0.3570**	**0.0000**	**2,562.0273**	**2,562.0273**	**0.8286**		**2,582.7426**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Underground Utilities - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0478	0.0345	0.4194	1.2000e-003	0.1453	7.2000e-004	0.1460	0.0385	6.7000e-004	0.0392		120.9205	120.9205	3.3100e-003	3.3800e-003	122.0112
Total	**0.0478**	**0.0345**	**0.4194**	**1.2000e-003**	**0.1453**	**7.2000e-004**	**0.1460**	**0.0385**	**6.7000e-004**	**0.0392**		**120.9205**	**120.9205**	**3.3100e-003**	**3.3800e-003**	**122.0112**

3.4 Underground Utilities - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0698	8.9170	8.7936	0.0265		0.3430	0.3430		0.3156	0.3156		2,562.9572	2,562.9572	0.8289		2,583.6800
Total	**1.0698**	**8.9170**	**8.7936**	**0.0265**		**0.3430**	**0.3430**		**0.3156**	**0.3156**		**2,562.9572**	**2,562.9572**	**0.8289**		**2,583.6800**

JM Realty Perris Development, Phase 1 - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Underground Utilities - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0445	0.0304	0.3862	1.1600e-003	0.1453	6.8000e-004	0.1460	0.0385	6.3000e-004	0.0392		117.0551	117.0551	2.9800e-003	3.1200e-003	118.0596
Total	**0.0445**	**0.0304**	**0.3862**	**1.1600e-003**	**0.1453**	**6.8000e-004**	**0.1460**	**0.0385**	**6.3000e-004**	**0.0392**		**117.0551**	**117.0551**	**2.9800e-003**	**3.1200e-003**	**118.0596**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0698	8.9170	8.7936	0.0265		0.3430	0.3430		0.3156	0.3156	0.0000	2,562.9572	2,562.9572	0.8289		2,583.6800
Total	**1.0698**	**8.9170**	**8.7936**	**0.0265**		**0.3430**	**0.3430**		**0.3156**	**0.3156**	**0.0000**	**2,562.9572**	**2,562.9572**	**0.8289**		**2,583.6800**

JM Realty Perris Development, Phase 1 - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Underground Utilities - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0445	0.0304	0.3862	1.1600e-003	0.1453	6.8000e-004	0.1460	0.0385	6.3000e-004	0.0392		117.0551	117.0551	2.9800e-003	3.1200e-003	118.0596
Total	**0.0445**	**0.0304**	**0.3862**	**1.1600e-003**	**0.1453**	**6.8000e-004**	**0.1460**	**0.0385**	**6.3000e-004**	**0.0392**		**117.0551**	**117.0551**	**2.9800e-003**	**3.1200e-003**	**118.0596**

3.5 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.2347	19.6294	19.7221	0.0402		0.9550	0.9550		0.8954	0.8954		3,833.3189	3,833.3189	1.0256		3,858.9587
Total	**2.2347**	**19.6294**	**19.7221**	**0.0402**		**0.9550**	**0.9550**		**0.8954**	**0.8954**		**3,833.3189**	**3,833.3189**	**1.0256**		**3,858.9587**

JM Realty Perris Development, Phase 1 - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Building Construction - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1277	3.6530	1.2520	0.0149	0.5252	0.0501	0.5753	0.1512	0.0480	0.1992		1,583.8773	1,583.8773	0.0165	0.2351	1,654.3393
Worker	0.7692	0.5538	6.7431	0.0192	2.3361	0.0116	2.3478	0.6196	0.0107	0.6303		1,944.0291	1,944.0291	0.0531	0.0544	1,961.5653
Total	**0.8969**	**4.2069**	**7.9950**	**0.0342**	**2.8614**	**0.0617**	**2.9231**	**0.7708**	**0.0587**	**0.8294**		**3,527.9064**	**3,527.9064**	**0.0696**	**0.2895**	**3,615.9045**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.2347	19.6294	19.7221	0.0402		0.9550	0.9550		0.8954	0.8954	0.0000	3,833.3189	3,833.3189	1.0256		3,858.9587
Total	**2.2347**	**19.6294**	**19.7221**	**0.0402**		**0.9550**	**0.9550**		**0.8954**	**0.8954**	**0.0000**	**3,833.3189**	**3,833.3189**	**1.0256**		**3,858.9587**

JM Realty Perris Development, Phase 1 - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Building Construction - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1277	3.6530	1.2520	0.0149	0.5252	0.0501	0.5753	0.1512	0.0480	0.1992		1,583.8773	1,583.8773	0.0165	0.2351	1,654.3393
Worker	0.7692	0.5538	6.7431	0.0192	2.3361	0.0116	2.3478	0.6196	0.0107	0.6303		1,944.0291	1,944.0291	0.0531	0.0544	1,961.5653
Total	**0.8969**	**4.2069**	**7.9950**	**0.0342**	**2.8614**	**0.0617**	**2.9231**	**0.7708**	**0.0587**	**0.8294**		**3,527.9064**	**3,527.9064**	**0.0696**	**0.2895**	**3,615.9045**

3.5 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.0766	17.9528	19.5325	0.0402		0.8287	0.8287		0.7771	0.7771		3,835.0984	3,835.0984	1.0218		3,860.6431
Total	**2.0766**	**17.9528**	**19.5325**	**0.0402**		**0.8287**	**0.8287**		**0.7771**	**0.7771**		**3,835.0984**	**3,835.0984**	**1.0218**		**3,860.6431**

JM Realty Perris Development, Phase 1 - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Building Construction - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0856	2.8411	1.1402	0.0144	0.5252	0.0234	0.5486	0.1512	0.0224	0.1736		1,522.9926	1,522.9926	0.0152	0.2252	1,590.4947
Worker	0.7153	0.4892	6.2093	0.0186	2.3361	0.0109	2.3471	0.6196	0.0101	0.6296		1,881.8850	1,881.8850	0.0479	0.0502	1,898.0353
Total	**0.8008**	**3.3304**	**7.3495**	**0.0330**	**2.8613**	**0.0343**	**2.8957**	**0.7708**	**0.0325**	**0.8032**		**3,404.8776**	**3,404.8776**	**0.0631**	**0.2754**	**3,488.5300**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.0766	17.9528	19.5325	0.0402		0.8287	0.8287		0.7771	0.7771	0.0000	3,835.0984	3,835.0984	1.0218		3,860.6431
Total	**2.0766**	**17.9528**	**19.5325**	**0.0402**		**0.8287**	**0.8287**		**0.7771**	**0.7771**	**0.0000**	**3,835.0984**	**3,835.0984**	**1.0218**		**3,860.6431**

JM Realty Perris Development, Phase 1 - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Building Construction - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0856	2.8411	1.1402	0.0144	0.5252	0.0234	0.5486	0.1512	0.0224	0.1736		1,522.9926	1,522.9926	0.0152	0.2252	1,590.4947
Worker	0.7153	0.4892	6.2093	0.0186	2.3361	0.0109	2.3471	0.6196	0.0101	0.6296		1,881.8850	1,881.8850	0.0479	0.0502	1,898.0353
Total	**0.8008**	**3.3304**	**7.3495**	**0.0330**	**2.8613**	**0.0343**	**2.8957**	**0.7708**	**0.0325**	**0.8032**		**3,404.8776**	**3,404.8776**	**0.0631**	**0.2754**	**3,488.5300**

3.5 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9686	16.7716	19.4170	0.0402		0.7331	0.7331		0.6871	0.6871		3,836.0493	3,836.0493	1.0184		3,861.5104
Total	**1.9686**	**16.7716**	**19.4170**	**0.0402**		**0.7331**	**0.7331**		**0.6871**	**0.6871**		**3,836.0493**	**3,836.0493**	**1.0184**		**3,861.5104**

JM Realty Perris Development, Phase 1 - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Building Construction - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0842	2.8415	1.1275	0.0141	0.5252	0.0233	0.5485	0.1512	0.0223	0.1735		1,499.5460	1,499.5460	0.0157	0.2214	1,565.9262
Worker	0.6686	0.4356	5.8070	0.0180	2.3361	0.0104	2.3466	0.6196	9.5900e-003	0.6291		1,822.3266	1,822.3266	0.0434	0.0466	1,837.3016
Total	**0.7528**	**3.2771**	**6.9345**	**0.0322**	**2.8613**	**0.0337**	**2.8950**	**0.7708**	**0.0318**	**0.8026**		**3,321.8725**	**3,321.8725**	**0.0592**	**0.2680**	**3,403.2278**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9686	16.7716	19.4170	0.0402		0.7331	0.7331		0.6871	0.6871	0.0000	3,836.0493	3,836.0493	1.0184		3,861.5104
Total	**1.9686**	**16.7716**	**19.4170**	**0.0402**		**0.7331**	**0.7331**		**0.6871**	**0.6871**	**0.0000**	**3,836.0493**	**3,836.0493**	**1.0184**		**3,861.5104**

JM Realty Perris Development, Phase 1 - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Building Construction - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0842	2.8415	1.1275	0.0141	0.5252	0.0233	0.5485	0.1512	0.0223	0.1735		1,499.5460	1,499.5460	0.0157	0.2214	1,565.9262
Worker	0.6686	0.4356	5.8070	0.0180	2.3361	0.0104	2.3466	0.6196	9.5900e-003	0.6291		1,822.3266	1,822.3266	0.0434	0.0466	1,837.3016
Total	**0.7528**	**3.2771**	**6.9345**	**0.0322**	**2.8613**	**0.0337**	**2.8950**	**0.7708**	**0.0318**	**0.8026**		**3,321.8725**	**3,321.8725**	**0.0592**	**0.2680**	**3,403.2278**

3.6 Paving - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9882	9.5246	14.6258	0.0228		0.4685	0.4685		0.4310	0.4310		2,207.5472	2,207.5472	0.7140		2,225.3963
Paving	0.8030					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.7912**	**9.5246**	**14.6258**	**0.0228**		**0.4685**	**0.4685**		**0.4310**	**0.4310**		**2,207.5472**	**2,207.5472**	**0.7140**		**2,225.3963**

JM Realty Perris Development, Phase 1 - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Paving - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0622	3.2897	0.8786	0.0168	0.5425	0.0372	0.5797	0.1487	0.0356	0.1843		1,792.1576	1,792.1576	0.0270	0.2825	1,877.0055
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0480	0.0313	0.4168	1.2900e-003	0.1677	7.5000e-004	0.1684	0.0445	6.9000e-004	0.0452		130.7890	130.7890	3.1200e-003	3.3500e-003	131.8638
Total	**0.1102**	**3.3210**	**1.2954**	**0.0181**	**0.7102**	**0.0380**	**0.7481**	**0.1932**	**0.0363**	**0.2295**		**1,922.9466**	**1,922.9466**	**0.0301**	**0.2858**	**2,008.8692**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9882	9.5246	14.6258	0.0228		0.4685	0.4685		0.4310	0.4310	0.0000	2,207.5472	2,207.5472	0.7140		2,225.3963
Paving	0.8030					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.7912**	**9.5246**	**14.6258**	**0.0228**		**0.4685**	**0.4685**		**0.4310**	**0.4310**	**0.0000**	**2,207.5472**	**2,207.5472**	**0.7140**		**2,225.3963**

JM Realty Perris Development, Phase 1 - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Paving - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0622	3.2897	0.8786	0.0168	0.5425	0.0372	0.5797	0.1487	0.0356	0.1843		1,792.1576	1,792.1576	0.0270	0.2825	1,877.0055
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0480	0.0313	0.4168	1.2900e-003	0.1677	7.5000e-004	0.1684	0.0445	6.9000e-004	0.0452		130.7890	130.7890	3.1200e-003	3.3500e-003	131.8638
Total	**0.1102**	**3.3210**	**1.2954**	**0.0181**	**0.7102**	**0.0380**	**0.7481**	**0.1932**	**0.0363**	**0.2295**		**1,922.9466**	**1,922.9466**	**0.0301**	**0.2858**	**2,008.8692**

3.7 Architectural Coating - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	55.2939					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1808	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609		281.4481	281.4481	0.0159		281.8443
Total	**55.4747**	**1.2188**	**1.8101**	**2.9700e-003**		**0.0609**	**0.0609**		**0.0609**	**0.0609**		**281.4481**	**281.4481**	**0.0159**		**281.8443**

JM Realty Perris Development, Phase 1 - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.7 Architectural Coating - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.1344	0.0875	1.1670	3.6200e-003	0.4695	2.0900e-003	0.4716	0.1245	1.9300e-003	0.1264		366.2092	366.2092	8.7300e-003	9.3700e-003	369.2185
Total	**0.1344**	**0.0875**	**1.1670**	**3.6200e-003**	**0.4695**	**2.0900e-003**	**0.4716**	**0.1245**	**1.9300e-003**	**0.1264**		**366.2092**	**366.2092**	**8.7300e-003**	**9.3700e-003**	**369.2185**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	55.2939					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1808	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609	0.0000	281.4481	281.4481	0.0159		281.8443
Total	**55.4747**	**1.2188**	**1.8101**	**2.9700e-003**		**0.0609**	**0.0609**		**0.0609**	**0.0609**	**0.0000**	**281.4481**	**281.4481**	**0.0159**		**281.8443**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.7 Architectural Coating - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.1344	0.0875	1.1670	3.6200e-003	0.4695	2.0900e-003	0.4716	0.1245	1.9300e-003	0.1264		366.2092	366.2092	8.7300e-003	9.3700e-003	369.2185
Total	**0.1344**	**0.0875**	**1.1670**	**3.6200e-003**	**0.4695**	**2.0900e-003**	**0.4716**	**0.1245**	**1.9300e-003**	**0.1264**		**366.2092**	**366.2092**	**8.7300e-003**	**9.3700e-003**	**369.2185**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

JM Realty Perris Development, Phase 1 - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.0362	22.5881	11.0484	0.1417	6.8775	0.2737	7.1512	1.9122	0.2616	2.1737		14,993.7668	14,993.7668	0.2507	2.0523	15,611.6206
Unmitigated	1.0362	22.5881	11.0484	0.1417	6.8775	0.2737	7.1512	1.9122	0.2616	2.1737		14,993.7668	14,993.7668	0.2507	2.0523	15,611.6206

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Office Building	260.00	260.00	260.00	837,580	837,580
Parking Lot	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	142.45	142.45	142.45	2,074,089	2,074,089
Total	402.45	402.45	402.45	2,911,669	2,911,669

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Unrefrigerated Warehouse-No	16.60	8.40	40.00	0.00	0.00	100.00	100	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Office Building	0.540541	0.056458	0.173793	0.136090	0.025268	0.007074	0.011525	0.018705	0.000610	0.000304	0.023606	0.001094	0.004932
Parking Lot	0.540541	0.056458	0.173793	0.136090	0.025268	0.007074	0.011525	0.018705	0.000610	0.000304	0.023606	0.001094	0.004932

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Unrefrigerated Warehouse-No Rail	0.000000	0.000000	0.000000	0.000000	0.000000	0.170000	0.210000	0.620000	0.000000	0.000000	0.000000	0.000000	0.000000

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0142	0.1294	0.1087	7.8000e-004		9.8300e-003	9.8300e-003		9.8300e-003	9.8300e-003		155.2573	155.2573	2.9800e-003	2.8500e-003	156.1799
NaturalGas Unmitigated	0.0142	0.1294	0.1087	7.8000e-004		9.8300e-003	9.8300e-003		9.8300e-003	9.8300e-003		155.2573	155.2573	2.9800e-003	2.8500e-003	156.1799

JM Realty Perris Development, Phase 1 - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
General Office Building	93.9726	1.0100e-003	9.2100e-003	7.7400e-003	6.0000e-005		7.0000e-004	7.0000e-004		7.0000e-004	7.0000e-004		11.0556	11.0556	2.1000e-004	2.0000e-004	11.1213
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	1225.71	0.0132	0.1202	0.1009	7.2000e-004		9.1300e-003	9.1300e-003		9.1300e-003	9.1300e-003		144.2017	144.2017	2.7600e-003	2.6400e-003	145.0586
Total		**0.0142**	**0.1294**	**0.1087**	**7.8000e-004**		**9.8300e-003**	**9.8300e-003**		**9.8300e-003**	**9.8300e-003**		**155.2573**	**155.2573**	**2.9700e-003**	**2.8400e-003**	**156.1799**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
General Office Building	0.0939726	1.0100e-003	9.2100e-003	7.7400e-003	6.0000e-005		7.0000e-004	7.0000e-004		7.0000e-004	7.0000e-004		11.0556	11.0556	2.1000e-004	2.0000e-004	11.1213
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	1.22571	0.0132	0.1202	0.1009	7.2000e-004		9.1300e-003	9.1300e-003		9.1300e-003	9.1300e-003		144.2017	144.2017	2.7600e-003	2.6400e-003	145.0586
Total		**0.0142**	**0.1294**	**0.1087**	**7.8000e-004**		**9.8300e-003**	**9.8300e-003**		**9.8300e-003**	**9.8300e-003**		**155.2573**	**155.2573**	**2.9700e-003**	**2.8400e-003**	**156.1799**

6.0 Area Detail

6.1 Mitigation Measures Area

JM Realty Perris Development, Phase 1 - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	5.0073	4.6000e-004	0.0509	0.0000		1.8000e-004	1.8000e-004		1.8000e-004	1.8000e-004		0.1093	0.1093	2.8000e-004		0.1164
Unmitigated	5.0073	4.6000e-004	0.0509	0.0000		1.8000e-004	1.8000e-004		1.8000e-004	1.8000e-004		0.1093	0.1093	2.8000e-004		0.1164

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.3030					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	4.6996					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	4.6800e-003	4.6000e-004	0.0509	0.0000		1.8000e-004	1.8000e-004		1.8000e-004	1.8000e-004		0.1093	0.1093	2.8000e-004		0.1164
Total	**5.0073**	**4.6000e-004**	**0.0509**	**0.0000**		**1.8000e-004**	**1.8000e-004**		**1.8000e-004**	**1.8000e-004**		**0.1093**	**0.1093**	**2.8000e-004**		**0.1164**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.3030					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	4.6996					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	4.6800e-003	4.6000e-004	0.0509	0.0000		1.8000e-004	1.8000e-004		1.8000e-004	1.8000e-004		0.1093	0.1093	2.8000e-004		0.1164
Total	**5.0073**	**4.6000e-004**	**0.0509**	**0.0000**		**1.8000e-004**	**1.8000e-004**		**1.8000e-004**	**1.8000e-004**		**0.1093**	**0.1093**	**2.8000e-004**		**0.1164**

7.0 Water Detail

7.1 Mitigation Measures Water

Apply Water Conservation Strategy

JM Realty Perris Development, Phase 1 - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

JM Realty Perris Development, Phase 2 - Riverside-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

JM Realty Perris Development, Phase 2

Riverside-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	24.80	1000sqft	0.57	24,800.00	0
Hotel	125.00	Room	1.04	181,500.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.4	**Precipitation Freq (Days)**	28
Climate Zone	10			**Operational Year**	2026
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	390.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Phase 2 - 125 room hotel.

Land Use - 125 room future hotel on 1.61 acres, assumed to be 4 story.
Remaining space assumed to be parking/paved/concrete.

Construction Phase - Site vacant, no demolition.
Architectural coating assumed to occur concurrently with the last 2 months of building construction.

Off-road Equipment -

Off-road Equipment - Off-Highway Truck = water truck.

Off-road Equipment - Off-Highway Truck = water truck.

Off-road Equipment -

Off-road Equipment - Off-Highway Truck = water truck.

Off-road Equipment - Equipment for excavation/installation of underground utilites and Line E storm drain.
Off-Highway Truck = water truck.

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Trips and VMT - 43 loads (86 trips) ashpalt/aggregate imported during paving.

Grading - Grading cut/fill balanced onsite.

Architectural Coating - 50 g/L maximum VOC content for exterior and interior flat coatings per SCAQMD Rule 1113.

Vehicle Trips - Trip generation per Traffic Report.

Area Coating - 50 g/L maximum VOC content for exterior and interior flat coatings per SCAQMD Rule 1113.

Construction Off-road Equipment Mitigation - Dust miitigation to comply with SCAQMD Rule 403.

Area Mitigation - 50 g/L maximum VOC content for exterior and interior flat coatings per SCAQMD Rule 1113.

Water Mitigation - 20% water conservation per 2019 CalGreen not accounted for in model defaults.

Waste Mitigation - 25% solid waste diversion per AB 341 not accounted for in model defaults

Fleet Mix -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	100.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	50.00
tblConstructionPhase	NumDays	10.00	41.00
tblConstructionPhase	PhaseEndDate	5/12/2025	4/14/2025
tblConstructionPhase	PhaseStartDate	4/29/2025	2/15/2025
tblLandUse	LotAcreage	4.17	1.04
tblTripsAndVMT	HaulingTripNumber	0.00	86.00
tblVehicleTrips	ST_TR	8.19	8.00
tblVehicleTrips	SU_TR	5.95	8.00
tblVehicleTrips	WD_TR	8.36	8.00

2.0 Emissions Summary

JM Realty Perris Development, Phase 2 - Riverside-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2024	0.1286	0.9316	1.1103	2.7400e-003	0.0946	0.0349	0.1295	0.0299	0.0334	0.0632	0.0000	238.0150	238.0150	0.0345	6.3800e-003	240.7783
2025	0.5007	0.5427	0.7173	1.7300e-003	0.0486	0.0193	0.0679	0.0131	0.0185	0.0316	0.0000	150.8862	150.8862	0.0210	4.0600e-003	152.6209
Maximum	**0.5007**	**0.9316**	**1.1103**	**2.7400e-003**	**0.0946**	**0.0349**	**0.1295**	**0.0299**	**0.0334**	**0.0632**	**0.0000**	**238.0150**	**238.0150**	**0.0345**	**6.3800e-003**	**240.7783**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2024	0.1286	0.9316	1.1103	2.7400e-003	0.0834	0.0349	0.1182	0.0244	0.0334	0.0578	0.0000	238.0148	238.0148	0.0345	6.3800e-003	240.7782
2025	0.5007	0.5427	0.7173	1.7300e-003	0.0486	0.0193	0.0679	0.0131	0.0185	0.0316	0.0000	150.8860	150.8860	0.0210	4.0600e-003	152.6207
Maximum	**0.5007**	**0.9316**	**1.1103**	**2.7400e-003**	**0.0834**	**0.0349**	**0.1182**	**0.0244**	**0.0334**	**0.0578**	**0.0000**	**238.0148**	**238.0148**	**0.0345**	**6.3800e-003**	**240.7782**

JM Realty Perris Development, Phase 2 - Riverside-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**7.85**	**0.00**	**5.70**	**12.62**	**0.00**	**5.72**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**7-1-2024**	**9-30-2024**	0.5278	0.5278
2	**10-1-2024**	**12-31-2024**	0.5280	0.5280
3	**1-1-2025**	**3-31-2025**	0.8382	0.8382
4	**4-1-2025**	**6-30-2025**	0.2203	0.2203
		Highest	0.8382	0.8382

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.7421	2.0000e-005	1.9100e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	3.7200e-003	3.7200e-003	1.0000e-005	0.0000	3.9600e-003
Energy	0.0582	0.5290	0.4444	3.1700e-003		0.0402	0.0402		0.0402	0.0402	0.0000	1,139.1254	1,139.1254	0.0586	0.0163	1,145.4533
Mobile	0.3825	0.5326	3.5120	8.0400e-003	0.9022	6.5100e-003	0.9087	0.2410	6.1000e-003	0.2471	0.0000	743.7267	743.7267	0.0421	0.0390	756.3997
Waste						0.0000	0.0000		0.0000	0.0000	13.8927	0.0000	13.8927	0.8210	0.0000	34.4186
Water						0.0000	0.0000		0.0000	0.0000	1.0060	8.0163	9.0223	0.1040	2.5200e-003	12.3737
Total	**1.1828**	**1.0617**	**3.9582**	**0.0112**	**0.9022**	**0.0467**	**0.9489**	**0.2410**	**0.0463**	**0.2873**	**14.8987**	**1,890.8722**	**1,905.7709**	**1.0258**	**0.0578**	**1,948.6493**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.7421	2.0000e-005	1.9100e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	3.7200e-003	3.7200e-003	1.0000e-005	0.0000	3.9600e-003
Energy	0.0582	0.5290	0.4444	3.1700e-003		0.0402	0.0402		0.0402	0.0402	0.0000	1,139.1254	1,139.1254	0.0586	0.0163	1,145.4533
Mobile	0.3825	0.5326	3.5120	8.0400e-003	0.9022	6.5100e-003	0.9087	0.2410	6.1000e-003	0.2471	0.0000	743.7267	743.7267	0.0421	0.0390	756.3997
Waste						0.0000	0.0000		0.0000	0.0000	10.4195	0.0000	10.4195	0.6158	0.0000	25.8139
Water						0.0000	0.0000		0.0000	0.0000	0.8048	6.4131	7.2178	0.0832	2.0200e-003	9.8990
Total	**1.1828**	**1.0617**	**3.9582**	**0.0112**	**0.9022**	**0.0467**	**0.9489**	**0.2410**	**0.0463**	**0.2873**	**11.2243**	**1,889.2690**	**1,900.4933**	**0.7997**	**0.0573**	**1,937.5699**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**24.66**	**0.08**	**0.28**	**22.04**	**0.86**	**0.57**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	7/1/2024	7/2/2024	5	2	
2	Grading	Grading	7/3/2024	7/8/2024	5	4	
3	Building Construction	Building Construction	7/9/2024	4/14/2025	5	200	

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4	Paving	Paving	4/15/2025	4/28/2025	5	10	
5	Architectural Coating	Architectural Coating	2/15/2025	4/14/2025	5	41	

Acres of Grading (Site Preparation Phase): 1.88

Acres of Grading (Grading Phase): 4

Acres of Paving: 0.57

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 272,250; Non-Residential Outdoor: 90,750; Striped Parking Area: 1,488 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Off-Highway Trucks	1	4.00	402	0.38
Site Preparation	Rubber Tired Dozers	1	7.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Graders	1	8.00	187	0.41
Grading	Off-Highway Trucks	1	4.00	402	0.38
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Building Construction	Cranes	1	6.00	231	0.29
Building Construction	Forklifts	1	6.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Off-Highway Trucks	1	4.00	402	0.38
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Paving	Pavers	1	6.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36

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Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	4	10.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	5	13.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	8	87.00	34.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	17.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	13.00	0.00	86.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Site Preparation - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					6.2700e-003	0.0000	6.2700e-003	3.0000e-003	0.0000	3.0000e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.3600e-003	0.0135	8.2600e-003	2.0000e-005		5.4000e-004	5.4000e-004		5.0000e-004	5.0000e-004	0.0000	2.0920	2.0920	6.8000e-004	0.0000	2.1089
Total	**1.3600e-003**	**0.0135**	**8.2600e-003**	**2.0000e-005**	**6.2700e-003**	**5.4000e-004**	**6.8100e-003**	**3.0000e-003**	**5.0000e-004**	**3.5000e-003**	**0.0000**	**2.0920**	**2.0920**	**6.8000e-004**	**0.0000**	**2.1089**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Site Preparation - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.0000e-005	2.0000e-005	2.9000e-004	0.0000	1.1000e-004	0.0000	1.1000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0809	0.0809	0.0000	0.0000	0.0816
Total	**3.0000e-005**	**2.0000e-005**	**2.9000e-004**	**0.0000**	**1.1000e-004**	**0.0000**	**1.1000e-004**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**0.0000**	**0.0809**	**0.0809**	**0.0000**	**0.0000**	**0.0816**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.8200e-003	0.0000	2.8200e-003	1.3500e-003	0.0000	1.3500e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.3600e-003	0.0135	8.2600e-003	2.0000e-005		5.4000e-004	5.4000e-004		5.0000e-004	5.0000e-004	0.0000	2.0920	2.0920	6.8000e-004	0.0000	2.1089
Total	**1.3600e-003**	**0.0135**	**8.2600e-003**	**2.0000e-005**	**2.8200e-003**	**5.4000e-004**	**3.3600e-003**	**1.3500e-003**	**5.0000e-004**	**1.8500e-003**	**0.0000**	**2.0920**	**2.0920**	**6.8000e-004**	**0.0000**	**2.1089**

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3.2 Site Preparation - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.0000e-005	2.0000e-005	2.9000e-004	0.0000	1.1000e-004	0.0000	1.1000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0809	0.0809	0.0000	0.0000	0.0816
Total	**3.0000e-005**	**2.0000e-005**	**2.9000e-004**	**0.0000**	**1.1000e-004**	**0.0000**	**1.1000e-004**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**0.0000**	**0.0809**	**0.0809**	**0.0000**	**0.0000**	**0.0816**

3.3 Grading - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0142	0.0000	0.0142	6.8500e-003	0.0000	6.8500e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.1000e-003	0.0310	0.0207	5.0000e-005		1.2600e-003	1.2600e-003		1.1600e-003	1.1600e-003	0.0000	4.7822	4.7822	1.5500e-003	0.0000	4.8209
Total	**3.1000e-003**	**0.0310**	**0.0207**	**5.0000e-005**	**0.0142**	**1.2600e-003**	**0.0154**	**6.8500e-003**	**1.1600e-003**	**8.0100e-003**	**0.0000**	**4.7822**	**4.7822**	**1.5500e-003**	**0.0000**	**4.8209**

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3.3 Grading - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.0000e-005	6.0000e-005	7.6000e-004	0.0000	2.9000e-004	0.0000	2.9000e-004	8.0000e-005	0.0000	8.0000e-005	0.0000	0.2104	0.2104	0.0000	1.0000e-005	0.2122
Total	**8.0000e-005**	**6.0000e-005**	**7.6000e-004**	**0.0000**	**2.9000e-004**	**0.0000**	**2.9000e-004**	**8.0000e-005**	**0.0000**	**8.0000e-005**	**0.0000**	**0.2104**	**0.2104**	**0.0000**	**1.0000e-005**	**0.2122**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					6.3700e-003	0.0000	6.3700e-003	3.0800e-003	0.0000	3.0800e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.1000e-003	0.0310	0.0207	5.0000e-005		1.2600e-003	1.2600e-003		1.1600e-003	1.1600e-003	0.0000	4.7822	4.7822	1.5500e-003	0.0000	4.8209
Total	**3.1000e-003**	**0.0310**	**0.0207**	**5.0000e-005**	**6.3700e-003**	**1.2600e-003**	**7.6300e-003**	**3.0800e-003**	**1.1600e-003**	**4.2400e-003**	**0.0000**	**4.7822**	**4.7822**	**1.5500e-003**	**0.0000**	**4.8209**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Grading - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.0000e-005	6.0000e-005	7.6000e-004	0.0000	2.9000e-004	0.0000	2.9000e-004	8.0000e-005	0.0000	8.0000e-005	0.0000	0.2104	0.2104	0.0000	1.0000e-005	0.2122
Total	**8.0000e-005**	**6.0000e-005**	**7.6000e-004**	**0.0000**	**2.9000e-004**	**0.0000**	**2.9000e-004**	**8.0000e-005**	**0.0000**	**8.0000e-005**	**0.0000**	**0.2104**	**0.2104**	**0.0000**	**1.0000e-005**	**0.2122**

3.4 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1051	0.8019	0.8910	1.8100e-003		0.0322	0.0322		0.0309	0.0309	0.0000	151.0028	151.0028	0.0309	0.0000	151.7750
Total	**0.1051**	**0.8019**	**0.8910**	**1.8100e-003**		**0.0322**	**0.0322**		**0.0309**	**0.0309**	**0.0000**	**151.0028**	**151.0028**	**0.0309**	**0.0000**	**151.7750**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.2800e-003	0.0735	0.0289	3.7000e-004	0.0135	6.1000e-004	0.0141	3.9000e-003	5.8000e-004	4.4800e-003	0.0000	35.4841	35.4841	3.8000e-004	5.2400e-003	37.0547
Worker	0.0166	0.0117	0.1605	4.8000e-004	0.0602	2.7000e-004	0.0605	0.0160	2.5000e-004	0.0163	0.0000	44.3625	44.3625	1.0400e-003	1.1300e-003	44.7251
Total	**0.0189**	**0.0852**	**0.1894**	**8.5000e-004**	**0.0738**	**8.8000e-004**	**0.0747**	**0.0199**	**8.3000e-004**	**0.0207**	**0.0000**	**79.8466**	**79.8466**	**1.4200e-003**	**6.3700e-003**	**81.7798**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1051	0.8019	0.8910	1.8100e-003		0.0322	0.0322		0.0309	0.0309	0.0000	151.0026	151.0026	0.0309	0.0000	151.7748
Total	**0.1051**	**0.8019**	**0.8910**	**1.8100e-003**		**0.0322**	**0.0322**		**0.0309**	**0.0309**	**0.0000**	**151.0026**	**151.0026**	**0.0309**	**0.0000**	**151.7748**

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3.4 Building Construction - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.2800e-003	0.0735	0.0289	3.7000e-004	0.0135	6.1000e-004	0.0141	3.9000e-003	5.8000e-004	4.4800e-003	0.0000	35.4841	35.4841	3.8000e-004	5.2400e-003	37.0547
Worker	0.0166	0.0117	0.1605	4.8000e-004	0.0602	2.7000e-004	0.0605	0.0160	2.5000e-004	0.0163	0.0000	44.3625	44.3625	1.0400e-003	1.1300e-003	44.7251
Total	**0.0189**	**0.0852**	**0.1894**	**8.5000e-004**	**0.0738**	**8.8000e-004**	**0.0747**	**0.0199**	**8.3000e-004**	**0.0207**	**0.0000**	**79.8466**	**79.8466**	**1.4200e-003**	**6.3700e-003**	**81.7798**

3.4 Building Construction - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0579	0.4383	0.5192	1.0600e-003		0.0164	0.0164		0.0158	0.0158	0.0000	88.6806	88.6806	0.0179	0.0000	89.1286
Total	**0.0579**	**0.4383**	**0.5192**	**1.0600e-003**		**0.0164**	**0.0164**		**0.0158**	**0.0158**	**0.0000**	**88.6806**	**88.6806**	**0.0179**	**0.0000**	**89.1286**

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3.4 Building Construction - 2025

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.3200e-003	0.0428	0.0168	2.1000e-004	7.9500e-003	3.6000e-004	8.3000e-003	2.2900e-003	3.4000e-004	2.6300e-003	0.0000	20.4726	20.4726	2.3000e-004	3.0200e-003	21.3773
Worker	9.1200e-003	6.1700e-003	0.0877	2.7000e-004	0.0354	1.5000e-004	0.0355	9.4000e-003	1.4000e-004	9.5400e-003	0.0000	25.1706	25.1706	5.5000e-004	6.2000e-004	25.3688
Total	**0.0104**	**0.0490**	**0.1045**	**4.8000e-004**	**0.0433**	**5.1000e-004**	**0.0438**	**0.0117**	**4.8000e-004**	**0.0122**	**0.0000**	**45.6432**	**45.6432**	**7.8000e-004**	**3.6400e-003**	**46.7460**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0579	0.4383	0.5192	1.0600e-003		0.0164	0.0164		0.0158	0.0158	0.0000	88.6805	88.6805	0.0179	0.0000	89.1285
Total	**0.0579**	**0.4383**	**0.5192**	**1.0600e-003**		**0.0164**	**0.0164**		**0.0158**	**0.0158**	**0.0000**	**88.6805**	**88.6805**	**0.0179**	**0.0000**	**89.1285**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2025

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.3200e-003	0.0428	0.0168	2.1000e-004	7.9500e-003	3.6000e-004	8.3000e-003	2.2900e-003	3.4000e-004	2.6300e-003	0.0000	20.4726	20.4726	2.3000e-004	3.0200e-003	21.3773
Worker	9.1200e-003	6.1700e-003	0.0877	2.7000e-004	0.0354	1.5000e-004	0.0355	9.4000e-003	1.4000e-004	9.5400e-003	0.0000	25.1706	25.1706	5.5000e-004	6.2000e-004	25.3688
Total	**0.0104**	**0.0490**	**0.1045**	**4.8000e-004**	**0.0433**	**5.1000e-004**	**0.0438**	**0.0117**	**4.8000e-004**	**0.0122**	**0.0000**	**45.6432**	**45.6432**	**7.8000e-004**	**3.6400e-003**	**46.7460**

3.5 Paving - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	2.8700e-003	0.0266	0.0440	7.0000e-005		1.2300e-003	1.2300e-003		1.1400e-003	1.1400e-003	0.0000	5.8868	5.8868	1.8700e-003	0.0000	5.9334
Paving	7.5000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**3.6200e-003**	**0.0266**	**0.0440**	**7.0000e-005**		**1.2300e-003**	**1.2300e-003**		**1.1400e-003**	**1.1400e-003**	**0.0000**	**5.8868**	**5.8868**	**1.8700e-003**	**0.0000**	**5.9334**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Paving - 2025

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	9.0000e-005	4.5000e-003	1.2100e-003	2.0000e-005	7.4000e-004	5.0000e-005	7.9000e-004	2.0000e-004	5.0000e-005	2.5000e-004	0.0000	2.2081	2.2081	4.0000e-005	3.5000e-004	2.3128
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.8000e-004	1.2000e-004	1.7700e-003	1.0000e-005	7.1000e-004	0.0000	7.2000e-004	1.9000e-004	0.0000	1.9000e-004	0.0000	0.5083	0.5083	1.0000e-005	1.0000e-005	0.5123
Total	**2.7000e-004**	**4.6200e-003**	**2.9800e-003**	**3.0000e-005**	**1.4500e-003**	**5.0000e-005**	**1.5100e-003**	**3.9000e-004**	**5.0000e-005**	**4.4000e-004**	**0.0000**	**2.7164**	**2.7164**	**5.0000e-005**	**3.6000e-004**	**2.8250**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	2.8700e-003	0.0266	0.0440	7.0000e-005		1.2300e-003	1.2300e-003		1.1400e-003	1.1400e-003	0.0000	5.8868	5.8868	1.8700e-003	0.0000	5.9334
Paving	7.5000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**3.6200e-003**	**0.0266**	**0.0440**	**7.0000e-005**		**1.2300e-003**	**1.2300e-003**		**1.1400e-003**	**1.1400e-003**	**0.0000**	**5.8868**	**5.8868**	**1.8700e-003**	**0.0000**	**5.9334**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Paving - 2025

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	9.0000e-005	4.5000e-003	1.2100e-003	2.0000e-005	7.4000e-004	5.0000e-005	7.9000e-004	2.0000e-004	5.0000e-005	2.5000e-004	0.0000	2.2081	2.2081	4.0000e-005	3.5000e-004	2.3128
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.8000e-004	1.2000e-004	1.7700e-003	1.0000e-005	7.1000e-004	0.0000	7.2000e-004	1.9000e-004	0.0000	1.9000e-004	0.0000	0.5083	0.5083	1.0000e-005	1.0000e-005	0.5123
Total	**2.7000e-004**	**4.6200e-003**	**2.9800e-003**	**3.0000e-005**	**1.4500e-003**	**5.0000e-005**	**1.5100e-003**	**3.9000e-004**	**5.0000e-005**	**4.4000e-004**	**0.0000**	**2.7164**	**2.7164**	**5.0000e-005**	**3.6000e-004**	**2.8250**

3.6 Architectural Coating - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.4241					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.5000e-003	0.0235	0.0371	6.0000e-005		1.0600e-003	1.0600e-003		1.0600e-003	1.0600e-003	0.0000	5.2342	5.2342	2.9000e-004	0.0000	5.2413
Total	**0.4276**	**0.0235**	**0.0371**	**6.0000e-005**		**1.0600e-003**	**1.0600e-003**		**1.0600e-003**	**1.0600e-003**	**0.0000**	**5.2342**	**5.2342**	**2.9000e-004**	**0.0000**	**5.2413**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Architectural Coating - 2025

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.9000e-004	6.7000e-004	9.5000e-003	3.0000e-005	3.8300e-003	2.0000e-005	3.8500e-003	1.0200e-003	2.0000e-005	1.0300e-003	0.0000	2.7251	2.7251	6.0000e-005	7.0000e-005	2.7465
Total	**9.9000e-004**	**6.7000e-004**	**9.5000e-003**	**3.0000e-005**	**3.8300e-003**	**2.0000e-005**	**3.8500e-003**	**1.0200e-003**	**2.0000e-005**	**1.0300e-003**	**0.0000**	**2.7251**	**2.7251**	**6.0000e-005**	**7.0000e-005**	**2.7465**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.4241					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.5000e-003	0.0235	0.0371	6.0000e-005		1.0600e-003	1.0600e-003		1.0600e-003	1.0600e-003	0.0000	5.2342	5.2342	2.9000e-004	0.0000	5.2413
Total	**0.4276**	**0.0235**	**0.0371**	**6.0000e-005**		**1.0600e-003**	**1.0600e-003**		**1.0600e-003**	**1.0600e-003**	**0.0000**	**5.2342**	**5.2342**	**2.9000e-004**	**0.0000**	**5.2413**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Architectural Coating - 2025

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.9000e-004	6.7000e-004	9.5000e-003	3.0000e-005	3.8300e-003	2.0000e-005	3.8500e-003	1.0200e-003	2.0000e-005	1.0300e-003	0.0000	2.7251	2.7251	6.0000e-005	7.0000e-005	2.7465
Total	**9.9000e-004**	**6.7000e-004**	**9.5000e-003**	**3.0000e-005**	**3.8300e-003**	**2.0000e-005**	**3.8500e-003**	**1.0200e-003**	**2.0000e-005**	**1.0300e-003**	**0.0000**	**2.7251**	**2.7251**	**6.0000e-005**	**7.0000e-005**	**2.7465**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.3825	0.5326	3.5120	8.0400e-003	0.9022	6.5100e-003	0.9087	0.2410	6.1000e-003	0.2471	0.0000	743.7267	743.7267	0.0421	0.0390	756.3997
Unmitigated	0.3825	0.5326	3.5120	8.0400e-003	0.9022	6.5100e-003	0.9087	0.2410	6.1000e-003	0.2471	0.0000	743.7267	743.7267	0.0421	0.0390	756.3997

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Hotel	1,000.00	1,000.00	1000.00	2,386,171	2,386,171
Parking Lot	0.00	0.00	0.00		
Total	1,000.00	1,000.00	1,000.00	2,386,171	2,386,171

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Hotel	16.60	8.40	6.90	19.40	61.60	19.00	58	38	4
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Hotel	0.542916	0.056689	0.174450	0.134041	0.024680	0.006960	0.011589	0.018600	0.000608	0.000298	0.023389	0.001091	0.004689
Parking Lot	0.542916	0.056689	0.174450	0.134041	0.024680	0.006960	0.011589	0.018600	0.000608	0.000298	0.023389	0.001091	0.004689

5.0 Energy Detail

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	563.2237	563.2237	0.0475	5.7600e-003	566.1293
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	563.2237	563.2237	0.0475	5.7600e-003	566.1293
NaturalGas Mitigated	0.0582	0.5290	0.4444	3.1700e-003		0.0402	0.0402		0.0402	0.0402	0.0000	575.9017	575.9017	0.0110	0.0106	579.3240
NaturalGas Unmitigated	0.0582	0.5290	0.4444	3.1700e-003		0.0402	0.0402		0.0402	0.0402	0.0000	575.9017	575.9017	0.0110	0.0106	579.3240

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Hotel	1.0792e+007	0.0582	0.5290	0.4444	3.1700e-003		0.0402	0.0402		0.0402	0.0402	0.0000	575.9017	575.9017	0.0110	0.0106	579.3240
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0582**	**0.5290**	**0.4444**	**3.1700e-003**		**0.0402**	**0.0402**		**0.0402**	**0.0402**	**0.0000**	**575.9017**	**575.9017**	**0.0110**	**0.0106**	**579.3240**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Hotel	1.0792e+007	0.0582	0.5290	0.4444	3.1700e-003		0.0402	0.0402		0.0402	0.0402	0.0000	575.9017	575.9017	0.0110	0.0106	579.3240
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0582**	**0.5290**	**0.4444**	**3.1700e-003**		**0.0402**	**0.0402**		**0.0402**	**0.0402**	**0.0000**	**575.9017**	**575.9017**	**0.0110**	**0.0106**	**579.3240**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Hotel	3.16718e+006	561.6844	0.0474	5.7500e-003	564.5820
Parking Lot	8680	1.5394	1.3000e-004	2.0000e-005	1.5473
Total		**563.2237**	**0.0475**	**5.7700e-003**	**566.1293**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Hotel	3.16718e+006	561.6844	0.0474	5.7500e-003	564.5820
Parking Lot	8680	1.5394	1.3000e-004	2.0000e-005	1.5473
Total		**563.2237**	**0.0475**	**5.7700e-003**	**566.1293**

6.0 Area Detail

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.7421	2.0000e-005	1.9100e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	3.7200e-003	3.7200e-003	1.0000e-005	0.0000	3.9600e-003
Unmitigated	0.7421	2.0000e-005	1.9100e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	3.7200e-003	3.7200e-003	1.0000e-005	0.0000	3.9600e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0845					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.6575					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.8000e-004	2.0000e-005	1.9100e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	3.7200e-003	3.7200e-003	1.0000e-005	0.0000	3.9600e-003
Total	**0.7421**	**2.0000e-005**	**1.9100e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**3.7200e-003**	**3.7200e-003**	**1.0000e-005**	**0.0000**	**3.9600e-003**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0845					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.6575					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.8000e-004	2.0000e-005	1.9100e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	3.7200e-003	3.7200e-003	1.0000e-005	0.0000	3.9600e-003
Total	**0.7421**	**2.0000e-005**	**1.9100e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**3.7200e-003**	**3.7200e-003**	**1.0000e-005**	**0.0000**	**3.9600e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

Apply Water Conservation Strategy

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	7.2178	0.0832	2.0200e-003	9.8990
Unmitigated	9.0223	0.1040	2.5200e-003	12.3737

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Hotel	3.17085 / 0.352316	9.0223	0.1040	2.5200e-003	12.3737
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**9.0223**	**0.1040**	**2.5200e-003**	**12.3737**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Hotel	2.53668 / 0.281853	7.2178	0.0832	2.0200e-003	9.8990
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**7.2178**	**0.0832**	**2.0200e-003**	**9.8990**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

JM Realty Perris Development, Phase 2 - Riverside-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	10.4195	0.6158	0.0000	25.8139
Unmitigated	13.8927	0.8210	0.0000	34.4186

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Hotel	68.44	13.8927	0.8210	0.0000	34.4186
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**13.8927**	**0.8210**	**0.0000**	**34.4186**

JM Realty Perris Development, Phase 2 - Riverside-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Hotel	51.33	10.4195	0.6158	0.0000	25.8139
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**10.4195**	**0.6158**	**0.0000**	**25.8139**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

JM Realty Perris Development, Phase 2 - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

JM Realty Perris Development, Phase 2

Riverside-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	24.80	1000sqft	0.57	24,800.00	0
Hotel	125.00	Room	1.04	181,500.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.4	**Precipitation Freq (Days)**	28
Climate Zone	10			**Operational Year**	2026
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	390.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Phase 2 - 125 room hotel.

Land Use - 125 room future hotel on 1.61 acres, assumed to be 4 story.
Remaining space assumed to be parking/paved/concrete.

Construction Phase - Site vacant, no demolition.
Architectural coating assumed to occur concurrently with the last 2 months of building construction.

Off-road Equipment -

Off-road Equipment - Off-Highway Truck = water truck.

Off-road Equipment - Off-Highway Truck = water truck.

Off-road Equipment -

Off-road Equipment - Off-Highway Truck = water truck.

Off-road Equipment - Equipment for excavation/installation of underground utilites and Line E storm drain.
Off-Highway Truck = water truck.

JM Realty Perris Development, Phase 2 - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Trips and VMT - 43 loads (86 trips) ashpalt/aggregate imported during paving.

Grading - Grading cut/fill balanced onsite.

Architectural Coating - 50 g/L maximum VOC content for exterior and interior flat coatings per SCAQMD Rule 1113.

Vehicle Trips - Trip generation per Traffic Report.

Area Coating - 50 g/L maximum VOC content for exterior and interior flat coatings per SCAQMD Rule 1113.

Construction Off-road Equipment Mitigation - Dust miitigation to comply with SCAQMD Rule 403.

Area Mitigation - 50 g/L maximum VOC content for exterior and interior flat coatings per SCAQMD Rule 1113.

Water Mitigation - 20% water conservation per 2019 CalGreen not accounted for in model defaults.

Waste Mitigation - 25% solid waste diversion per AB 341 not accounted for in model defaults

Fleet Mix -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	100.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	50.00
tblConstructionPhase	NumDays	10.00	41.00
tblConstructionPhase	PhaseEndDate	5/12/2025	4/14/2025
tblConstructionPhase	PhaseStartDate	4/29/2025	2/15/2025
tblLandUse	LotAcreage	4.17	1.04
tblTripsAndVMT	HaulingTripNumber	0.00	86.00
tblVehicleTrips	ST_TR	8.19	8.00
tblVehicleTrips	SU_TR	5.95	8.00
tblVehicleTrips	WD_TR	8.36	8.00

2.0 Emissions Summary

JM Realty Perris Development, Phase 2 - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2024	1.9817	15.5088	17.0271	0.0420	7.2279	0.6328	7.8607	3.4633	0.5822	4.0455	0.0000	4,022.4357	4,022.4357	0.8552	0.1112	4,069.7038
2025	22.7670	14.3541	18.9943	0.0461	1.3802	0.5098	1.8900	0.3710	0.4909	0.8619	0.0000	4,410.3635	4,410.3635	0.5755	0.1117	4,458.0232
Maximum	**22.7670**	**15.5088**	**18.9943**	**0.0461**	**7.2279**	**0.6328**	**7.8607**	**3.4633**	**0.5822**	**4.0455**	**0.0000**	**4,410.3635**	**4,410.3635**	**0.8552**	**0.1117**	**4,458.0232**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2024	1.9817	15.5088	17.0271	0.0420	3.3325	0.6328	3.9653	1.5797	0.5822	2.1618	0.0000	4,022.4357	4,022.4357	0.8552	0.1112	4,069.7038
2025	22.7670	14.3541	18.9943	0.0461	1.3802	0.5098	1.8900	0.3710	0.4909	0.8619	0.0000	4,410.3635	4,410.3635	0.5755	0.1117	4,458.0232
Maximum	**22.7670**	**15.5088**	**18.9943**	**0.0461**	**3.3325**	**0.6328**	**3.9653**	**1.5797**	**0.5822**	**2.1618**	**0.0000**	**4,410.3635**	**4,410.3635**	**0.8552**	**0.1117**	**4,458.0232**

JM Realty Perris Development, Phase 2 - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	45.25	0.00	39.95	49.13	0.00	38.38	0.00	0.00	0.00	0.00	0.00	0.00

JM Realty Perris Development, Phase 2 - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	4.0667	1.4000e-004	0.0153	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0328	0.0328	9.0000e-005		0.0349
Energy	0.3189	2.8987	2.4349	0.0174		0.2203	0.2203		0.2203	0.2203		3,478.4819	3,478.4819	0.0667	0.0638	3,499.1528
Mobile	2.0744	2.9206	18.7650	0.0435	5.0402	0.0358	5.0760	1.3444	0.0336	1.3780		4,436.1027	4,436.1027	0.2563	0.2353	4,512.6228
Total	**6.4600**	**5.8194**	**21.2152**	**0.0609**	**5.0402**	**0.2562**	**5.2964**	**1.3444**	**0.2539**	**1.5984**		**7,914.6173**	**7,914.6173**	**0.3230**	**0.2991**	**8,011.8105**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	4.0667	1.4000e-004	0.0153	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0328	0.0328	9.0000e-005		0.0349
Energy	0.3189	2.8987	2.4349	0.0174		0.2203	0.2203		0.2203	0.2203		3,478.4819	3,478.4819	0.0667	0.0638	3,499.1528
Mobile	2.0744	2.9206	18.7650	0.0435	5.0402	0.0358	5.0760	1.3444	0.0336	1.3780		4,436.1027	4,436.1027	0.2563	0.2353	4,512.6228
Total	**6.4600**	**5.8194**	**21.2152**	**0.0609**	**5.0402**	**0.2562**	**5.2964**	**1.3444**	**0.2539**	**1.5984**		**7,914.6173**	**7,914.6173**	**0.3230**	**0.2991**	**8,011.8105**

JM Realty Perris Development, Phase 2 - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	7/1/2024	7/2/2024	5	2	
2	Grading	Grading	7/3/2024	7/8/2024	5	4	
3	Building Construction	Building Construction	7/9/2024	4/14/2025	5	200	
4	Paving	Paving	4/15/2025	4/28/2025	5	10	
5	Architectural Coating	Architectural Coating	2/15/2025	4/14/2025	5	41	

Acres of Grading (Site Preparation Phase): 1.88

Acres of Grading (Grading Phase): 4

Acres of Paving: 0.57

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 272,250; Non-Residential Outdoor: 90,750; Striped Parking Area: 1,488 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Off-Highway Trucks	1	4.00	402	0.38
Site Preparation	Rubber Tired Dozers	1	7.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Graders	1	8.00	187	0.41
Grading	Off-Highway Trucks	1	4.00	402	0.38

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Building Construction	Cranes	1	6.00	231	0.29
Building Construction	Forklifts	1	6.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Off-Highway Trucks	1	4.00	402	0.38
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Paving	Pavers	1	6.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	4	10.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	5	13.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	8	87.00	34.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	17.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	13.00	0.00	86.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

JM Realty Perris Development, Phase 2 - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Site Preparation - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.2662	0.0000	6.2662	3.0041	0.0000	3.0041			0.0000			0.0000
Off-Road	1.3552	13.5046	8.2569	0.0238		0.5422	0.5422		0.4988	0.4988		2,306.0578	2,306.0578	0.7458		2,324.7035
Total	**1.3552**	**13.5046**	**8.2569**	**0.0238**	**6.2662**	**0.5422**	**6.8084**	**3.0041**	**0.4988**	**3.5029**		**2,306.0578**	**2,306.0578**	**0.7458**		**2,324.7035**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0320	0.0208	0.2779	8.6000e-004	0.1118	5.0000e-004	0.1123	0.0296	4.6000e-004	0.0301		87.1927	87.1927	2.0800e-003	2.2300e-003	87.9092
Total	**0.0320**	**0.0208**	**0.2779**	**8.6000e-004**	**0.1118**	**5.0000e-004**	**0.1123**	**0.0296**	**4.6000e-004**	**0.0301**		**87.1927**	**87.1927**	**2.0800e-003**	**2.2300e-003**	**87.9092**

JM Realty Perris Development, Phase 2 - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Site Preparation - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.8198	0.0000	2.8198	1.3518	0.0000	1.3518			0.0000			0.0000
Off-Road	1.3552	13.5046	8.2569	0.0238		0.5422	0.5422		0.4988	0.4988	0.0000	2,306.0578	2,306.0578	0.7458		2,324.7034
Total	**1.3552**	**13.5046**	**8.2569**	**0.0238**	**2.8198**	**0.5422**	**3.3620**	**1.3518**	**0.4988**	**1.8506**	**0.0000**	**2,306.0578**	**2,306.0578**	**0.7458**		**2,324.7034**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0320	0.0208	0.2779	8.6000e-004	0.1118	5.0000e-004	0.1123	0.0296	4.6000e-004	0.0301		87.1927	87.1927	2.0800e-003	2.2300e-003	87.9092
Total	**0.0320**	**0.0208**	**0.2779**	**8.6000e-004**	**0.1118**	**5.0000e-004**	**0.1123**	**0.0296**	**4.6000e-004**	**0.0301**		**87.1927**	**87.1927**	**2.0800e-003**	**2.2300e-003**	**87.9092**

JM Realty Perris Development, Phase 2 - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Grading - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					7.0826	0.0000	7.0826	3.4247	0.0000	3.4247			0.0000			0.0000
Off-Road	1.5500	15.4817	10.3249	0.0272		0.6322	0.6322		0.5816	0.5816		2,635.7555	2,635.7555	0.8525		2,657.0669
Total	**1.5500**	**15.4817**	**10.3249**	**0.0272**	**7.0826**	**0.6322**	**7.7147**	**3.4247**	**0.5816**	**4.0063**		**2,635.7555**	**2,635.7555**	**0.8525**		**2,657.0669**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0416	0.0271	0.3612	1.1200e-003	0.1453	6.5000e-004	0.1460	0.0385	6.0000e-004	0.0391		113.3505	113.3505	2.7000e-003	2.9000e-003	114.2819
Total	**0.0416**	**0.0271**	**0.3612**	**1.1200e-003**	**0.1453**	**6.5000e-004**	**0.1460**	**0.0385**	**6.0000e-004**	**0.0391**		**113.3505**	**113.3505**	**2.7000e-003**	**2.9000e-003**	**114.2819**

JM Realty Perris Development, Phase 2 - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Grading - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.1872	0.0000	3.1872	1.5411	0.0000	1.5411			0.0000			0.0000
Off-Road	1.5500	15.4817	10.3249	0.0272		0.6322	0.6322		0.5816	0.5816	0.0000	2,635.7555	2,635.7555	0.8525		2,657.0669
Total	**1.5500**	**15.4817**	**10.3249**	**0.0272**	**3.1872**	**0.6322**	**3.8193**	**1.5411**	**0.5816**	**2.1227**	**0.0000**	**2,635.7555**	**2,635.7555**	**0.8525**		**2,657.0669**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0416	0.0271	0.3612	1.1200e-003	0.1453	6.5000e-004	0.1460	0.0385	6.0000e-004	0.0391		113.3505	113.3505	2.7000e-003	2.9000e-003	114.2819
Total	**0.0416**	**0.0271**	**0.3612**	**1.1200e-003**	**0.1453**	**6.5000e-004**	**0.1460**	**0.0385**	**6.0000e-004**	**0.0391**		**113.3505**	**113.3505**	**2.7000e-003**	**2.9000e-003**	**114.2819**

JM Realty Perris Development, Phase 2 - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.6685	12.7278	14.1423	0.0287		0.5105	0.5105		0.4899	0.4899		2,642.0967	2,642.0967	0.5404		2,655.6076
Total	**1.6685**	**12.7278**	**14.1423**	**0.0287**		**0.5105**	**0.5105**		**0.4899**	**0.4899**		**2,642.0967**	**2,642.0967**	**0.5404**		**2,655.6076**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0349	1.1782	0.4675	5.8600e-003	0.2178	9.6400e-003	0.2274	0.0627	9.2200e-003	0.0719		621.7630	621.7630	6.5200e-003	0.0918	649.2865
Worker	0.2783	0.1813	2.4173	7.5000e-003	0.9725	4.3400e-003	0.9768	0.2579	3.9900e-003	0.2619		758.5761	758.5761	0.0181	0.0194	764.8098
Total	**0.3132**	**1.3595**	**2.8848**	**0.0134**	**1.1902**	**0.0140**	**1.2042**	**0.3206**	**0.0132**	**0.3338**		**1,380.3391**	**1,380.3391**	**0.0246**	**0.1112**	**1,414.0962**

JM Realty Perris Development, Phase 2 - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.6685	12.7278	14.1423	0.0287		0.5105	0.5105		0.4899	0.4899	0.0000	2,642.0967	2,642.0967	0.5404		2,655.6076
Total	**1.6685**	**12.7278**	**14.1423**	**0.0287**		**0.5105**	**0.5105**		**0.4899**	**0.4899**	**0.0000**	**2,642.0967**	**2,642.0967**	**0.5404**		**2,655.6076**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0349	1.1782	0.4675	5.8600e-003	0.2178	9.6400e-003	0.2274	0.0627	9.2200e-003	0.0719		621.7630	621.7630	6.5200e-003	0.0918	649.2865
Worker	0.2783	0.1813	2.4173	7.5000e-003	0.9725	4.3400e-003	0.9768	0.2579	3.9900e-003	0.2619		758.5761	758.5761	0.0181	0.0194	764.8098
Total	**0.3132**	**1.3595**	**2.8848**	**0.0134**	**1.1902**	**0.0140**	**1.2042**	**0.3206**	**0.0132**	**0.3338**		**1,380.3391**	**1,380.3391**	**0.0246**	**0.1112**	**1,414.0962**

JM Realty Perris Development, Phase 2 - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5634	11.8458	14.0321	0.0287		0.4437	0.4437		0.4257	0.4257		2,641.9902	2,641.9902	0.5338		2,655.3359
Total	**1.5634**	**11.8458**	**14.0321**	**0.0287**		**0.4437**	**0.4437**		**0.4257**	**0.4257**		**2,641.9902**	**2,641.9902**	**0.5338**		**2,655.3359**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0344	1.1685	0.4624	5.7600e-003	0.2178	9.6500e-003	0.2274	0.0627	9.2300e-003	0.0719		610.8118	610.8118	6.7700e-003	0.0900	637.8052
Worker	0.2608	0.1625	2.2509	7.2500e-003	0.9725	4.1200e-003	0.9766	0.2579	3.7900e-003	0.2617		732.9026	732.9026	0.0163	0.0181	738.7056
Total	**0.2952**	**1.3310**	**2.7133**	**0.0130**	**1.1902**	**0.0138**	**1.2040**	**0.3206**	**0.0130**	**0.3336**		**1,343.7144**	**1,343.7144**	**0.0231**	**0.1081**	**1,376.5107**

JM Realty Perris Development, Phase 2 - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2025

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5634	11.8458	14.0321	0.0287		0.4437	0.4437		0.4257	0.4257	0.0000	2,641.9902	2,641.9902	0.5338		2,655.3359
Total	**1.5634**	**11.8458**	**14.0321**	**0.0287**		**0.4437**	**0.4437**		**0.4257**	**0.4257**	**0.0000**	**2,641.9902**	**2,641.9902**	**0.5338**		**2,655.3359**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0344	1.1685	0.4624	5.7600e-003	0.2178	9.6500e-003	0.2274	0.0627	9.2300e-003	0.0719		610.8118	610.8118	6.7700e-003	0.0900	637.8052
Worker	0.2608	0.1625	2.2509	7.2500e-003	0.9725	4.1200e-003	0.9766	0.2579	3.7900e-003	0.2617		732.9026	732.9026	0.0163	0.0181	738.7056
Total	**0.2952**	**1.3310**	**2.7133**	**0.0130**	**1.1902**	**0.0138**	**1.2040**	**0.3206**	**0.0130**	**0.3336**		**1,343.7144**	**1,343.7144**	**0.0231**	**0.1081**	**1,376.5107**

JM Realty Perris Development, Phase 2 - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Paving - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.5732	5.3259	8.7951	0.0136		0.2465	0.2465		0.2276	0.2276		1,297.8096	1,297.8096	0.4114		1,308.0951
Paving	0.1493					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.7225**	**5.3259**	**8.7951**	**0.0136**		**0.2465**	**0.2465**		**0.2276**	**0.2276**		**1,297.8096**	**1,297.8096**	**0.4114**		**1,308.0951**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0172	0.9038	0.2454	4.5600e-003	0.1505	0.0103	0.1608	0.0413	9.8600e-003	0.0511		487.2517	487.2517	7.9000e-003	0.0768	510.3396
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0390	0.0243	0.3363	1.0800e-003	0.1453	6.2000e-004	0.1459	0.0385	5.7000e-004	0.0391		109.5142	109.5142	2.4400e-003	2.7000e-003	110.3813
Total	**0.0562**	**0.9281**	**0.5817**	**5.6400e-003**	**0.2958**	**0.0109**	**0.3067**	**0.0798**	**0.0104**	**0.0902**		**596.7659**	**596.7659**	**0.0103**	**0.0795**	**620.7209**

JM Realty Perris Development, Phase 2 - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Paving - 2025

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.5732	5.3259	8.7951	0.0136		0.2465	0.2465		0.2276	0.2276	0.0000	1,297.8096	1,297.8096	0.4114		1,308.0951
Paving	0.1493					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.7225**	**5.3259**	**8.7951**	**0.0136**		**0.2465**	**0.2465**		**0.2276**	**0.2276**	**0.0000**	**1,297.8096**	**1,297.8096**	**0.4114**		**1,308.0951**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0172	0.9038	0.2454	4.5600e-003	0.1505	0.0103	0.1608	0.0413	9.8600e-003	0.0511		487.2517	487.2517	7.9000e-003	0.0768	510.3396
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0390	0.0243	0.3363	1.0800e-003	0.1453	6.2000e-004	0.1459	0.0385	5.7000e-004	0.0391		109.5142	109.5142	2.4400e-003	2.7000e-003	110.3813
Total	**0.0562**	**0.9281**	**0.5817**	**5.6400e-003**	**0.2958**	**0.0109**	**0.3067**	**0.0798**	**0.0104**	**0.0902**		**596.7659**	**596.7659**	**0.0103**	**0.0795**	**620.7209**

JM Realty Perris Development, Phase 2 - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Architectural Coating - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	20.6866					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515		281.4481	281.4481	0.0154		281.8319
Total	**20.8574**	**1.1455**	**1.8091**	**2.9700e-003**		**0.0515**	**0.0515**		**0.0515**	**0.0515**		**281.4481**	**281.4481**	**0.0154**		**281.8319**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0510	0.0318	0.4398	1.4200e-003	0.1900	8.0000e-004	0.1908	0.0504	7.4000e-004	0.0511		143.2109	143.2109	3.1900e-003	3.5400e-003	144.3448
Total	**0.0510**	**0.0318**	**0.4398**	**1.4200e-003**	**0.1900**	**8.0000e-004**	**0.1908**	**0.0504**	**7.4000e-004**	**0.0511**		**143.2109**	**143.2109**	**3.1900e-003**	**3.5400e-003**	**144.3448**

JM Realty Perris Development, Phase 2 - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Architectural Coating - 2025

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	20.6866					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515	0.0000	281.4481	281.4481	0.0154		281.8319
Total	**20.8574**	**1.1455**	**1.8091**	**2.9700e-003**		**0.0515**	**0.0515**		**0.0515**	**0.0515**	**0.0000**	**281.4481**	**281.4481**	**0.0154**		**281.8319**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0510	0.0318	0.4398	1.4200e-003	0.1900	8.0000e-004	0.1908	0.0504	7.4000e-004	0.0511		143.2109	143.2109	3.1900e-003	3.5400e-003	144.3448
Total	**0.0510**	**0.0318**	**0.4398**	**1.4200e-003**	**0.1900**	**8.0000e-004**	**0.1908**	**0.0504**	**7.4000e-004**	**0.0511**		**143.2109**	**143.2109**	**3.1900e-003**	**3.5400e-003**	**144.3448**

JM Realty Perris Development, Phase 2 - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	2.0744	2.9206	18.7650	0.0435	5.0402	0.0358	5.0760	1.3444	0.0336	1.3780		4,436.1027	4,436.1027	0.2563	0.2353	4,512.6228
Unmitigated	2.0744	2.9206	18.7650	0.0435	5.0402	0.0358	5.0760	1.3444	0.0336	1.3780		4,436.1027	4,436.1027	0.2563	0.2353	4,512.6228

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Hotel	1,000.00	1,000.00	1000.00	2,386,171	2,386,171
Parking Lot	0.00	0.00	0.00		
Total	1,000.00	1,000.00	1,000.00	2,386,171	2,386,171

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Hotel	16.60	8.40	6.90	19.40	61.60	19.00	58	38	4
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Hotel	0.542916	0.056689	0.174450	0.134041	0.024680	0.006960	0.011589	0.018600	0.000608	0.000298	0.023389	0.001091	0.004689
Parking Lot	0.542916	0.056689	0.174450	0.134041	0.024680	0.006960	0.011589	0.018600	0.000608	0.000298	0.023389	0.001091	0.004689

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.3189	2.8987	2.4349	0.0174		0.2203	0.2203		0.2203	0.2203		3,478.4819	3,478.4819	0.0667	0.0638	3,499.1528
NaturalGas Unmitigated	0.3189	2.8987	2.4349	0.0174		0.2203	0.2203		0.2203	0.2203		3,478.4819	3,478.4819	0.0667	0.0638	3,499.1528

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Hotel	29567.1	0.3189	2.8987	2.4349	0.0174		0.2203	0.2203		0.2203	0.2203		3,478.4819	3,478.4819	0.0667	0.0638	3,499.1528
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.3189**	**2.8987**	**2.4349**	**0.0174**		**0.2203**	**0.2203**		**0.2203**	**0.2203**		**3,478.4819**	**3,478.4819**	**0.0667**	**0.0638**	**3,499.1528**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Hotel	29.5671	0.3189	2.8987	2.4349	0.0174		0.2203	0.2203		0.2203	0.2203		3,478.4819	3,478.4819	0.0667	0.0638	3,499.1528
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.3189**	**2.8987**	**2.4349**	**0.0174**		**0.2203**	**0.2203**		**0.2203**	**0.2203**		**3,478.4819**	**3,478.4819**	**0.0667**	**0.0638**	**3,499.1528**

6.0 Area Detail

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	4.0667	1.4000e-004	0.0153	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0328	0.0328	9.0000e-005		0.0349
Unmitigated	4.0667	1.4000e-004	0.0153	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0328	0.0328	9.0000e-005		0.0349

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.4629					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.6025					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.4000e-003	1.4000e-004	0.0153	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0328	0.0328	9.0000e-005		0.0349
Total	**4.0667**	**1.4000e-004**	**0.0153**	**0.0000**		**5.0000e-005**	**5.0000e-005**		**5.0000e-005**	**5.0000e-005**		**0.0328**	**0.0328**	**9.0000e-005**		**0.0349**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.4629					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.6025					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.4000e-003	1.4000e-004	0.0153	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0328	0.0328	9.0000e-005		0.0349
Total	**4.0667**	**1.4000e-004**	**0.0153**	**0.0000**		**5.0000e-005**	**5.0000e-005**		**5.0000e-005**	**5.0000e-005**		**0.0328**	**0.0328**	**9.0000e-005**		**0.0349**

7.0 Water Detail

7.1 Mitigation Measures Water

Apply Water Conservation Strategy

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Appendix B

Ramona-Indian Warehouse HRA

Ramona-Indian Warehouse Project

Warehouse Operations Health Risk Assessment

May 2022 | 04823.00001.001

Prepared for:

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ACRONYMS AND ABBREVIATIONS

ADMRT	Air Dispersion Modeling and Risk Tool
ADT	average daily trips
AERMAP	AERMOD terrain preprocessor
AERMOD	USEPA gaussian plume air dispersion model
amsl	above mean sea level
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
City	City of Perris
DPM	diesel particulate matter
EIR	Environmental Impact Report
°F	Fahrenheit
GVW	gross vehicle weight
HARP	Hotspots Analysis and Reporting Program
HHDT	heavy heavy-duty trucks with a maximum gross vehicle weight more than 33,000 pounds
HRA	health risk assessment
I-	Interstate
LHDT2	light heavy-duty trucks with a maximum gross vehicle weight of 10,000 to 14,000 pounds
m	meters
MHDT	medium heavy-duty trucks with a maximum gross vehicle weight of 14,000 to 33,000 pounds
MEIR	maximally exposed individual resident
mph	miles per hour
NED	National Elevation Dataset
OEHHA	Office of Environmental Health Hazard Assessment
PVCCSP	Perris Valley Commerce Center Specific Plan
REL	Reference Exposure Limit

ACRONYMS AND ABBREVIATIONS (cont.)

SCAB	South Coast Air Basin
SCAQMD	South Coast Air Quality Management District
SF	square feet
SR-	State Route
T-BACT	Toxics Best Available Control Technology
TACs	toxic air contaminants
USEPA	U.S. Environmental Protection Agency
USGS	U.S. Geological Survey
UTM	Universal Transverse Mercator

EXECUTIVE SUMMARY

This report presents an assessment of the potential for increased cancer and chronic health risks resulting from long-term operation of a proposed warehouse facility included as a component of the Ramona-Indian Warehouse Project (project). The predominant toxic air contaminant (TAC) of concern emitted by the project would be diesel particulate matter (DPM). Future emissions of the TAC DPM were estimated using the trip generation data and truck route provided in the project Traffic Analysis. DPM emissions would result from trucks traveling on public roads and project driveways, truck circulating on the project site, trucks idling at the loading docks and truck/trailer parking area.

Air dispersion modeling was completed for the maximum anticipated truck trips related to project operation. A health risk analysis was completed for the closest existing residential and off-site worker receptors. The increased cancer risk, chronic hazard indices, and cancer burden for the exposed individual residents and off-site workers would be below their respective thresholds. Long-term operation of the proposed warehouse would not result in a significant impact related to the exposure of sensitive receptors to substantial TAC concentrations.

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1.0 INTRODUCTION

This report presents an assessment of the potential for increased cancer and chronic health risks resulting from long-term operation of a proposed warehouse facility included as a component of the Ramona-Indian Warehouse Project (project).

1.1 PROJECT LOCATION

The project site is located at the northeast corner of the intersection of Ramona Expressway and Indian Avenue, in the City of Perris (City) in western Riverside County, California. The project site includes approximately 15 acres and is located approximately 1.4 miles east of Interstate (I-) 215 and approximately 6.5 miles south of State Route (SR-) 60. The project site is within the western Riverside County portion of the South Coast Air Basin (SCAB). Air quality in the project area is under the jurisdiction of the South Coast Air Quality Management District (SCAQMD). See Figure 1, *Regional Location*. The project is located within the Perris Valley Commerce Center Specific Plan (PVCCSP) area.

1.1.1 Existing Site Conditions

The project site is generally characterized as disturbed vacant land that was previously used for agricultural purposes. The project site is generally flat with an elevation between 1,450 and 1,460 feet above mean sea level (amsl). The southern portion of the project site includes a surface-level drainage swale that is owned and maintained by the Riverside County Flood Control and Water Conservation District and runs in an east-west direction. Surrounding land uses include: three single family residences (on parcels with commercial and industrial land use designations), undeveloped area, and commercial development (beyond and undeveloped area to the north); a retail gasoline station abutting the project site to the east; commercial development and undeveloped land to the east across Perris Boulevard; commercial development with residential areas beyond to the southeast across Ramona Expressway and Perris Boulevard; industrial development (beyond undeveloped areas) to the south across Ramona Expressway; industrial development to the southwest (beyond retention basins) across Ramona Expressway and Indian Avenue; and undeveloped land to the east across Indian Avenue. See Figure 2, *Aerial Photo*.

1.2 PROJECT DESCRIPTION

The project would develop light industrial uses and commercial uses in two phases. Phase 1 would develop a 232,575 square feet (SF) multi-tenant distribution building (warehouse) that includes 10,000 SF of internal office space, parking areas and driveways, a pad for future commercial development, storm drains and a water quality management retention basin, all on approximately 15 acres at the northeast corner of Indian Avenue and Ramona Expressway. Development of the commercial pad is not a part of the project. The warehouse would include 39 loading docks. The parking area would include 410 auto/light truck stalls, and 52 truck/trailer stalls. The storm drain system would include construction of the storm drain Line E within the project site. See Figure 3, *Site Plan*. The project would include roadway improvements for Ramona Expressway, Indian Avenue, and Perris Boulevard. Additional improvements would include landscaping, screen walls and fencing, and lighting.

Phase 2 would develop a commercial pad on the 1.61 acres in the northeastern portion of the project site with a 125-room hotel. Until development of the commercial pad occurs, temporary staging

activities may occur in this area to support construction of the light industrial uses described above. Trucks traveling to and from the project hotel would utilize the different routes and entrance driveways than trucks traveling to and from the project warehouse. This HRA only analyzes operational DPM emissions from truck associated with operation of the project warehouse.

2.0 ENVIRONMENTAL SETTING

2.1 TOXIC AIR CONTAMINANTS

Toxic air contaminants (TACs) are a diverse group of air pollutants that may cause or contribute to an increase in deaths or in serious illness or that may pose a present or potential hazard to human health. TACs can cause long-term health effects such as cancer, birth defects, neurological damage, asthma, bronchitis, or genetic damage, or short-term acute effects such as eye watering, respiratory irritation (a cough), runny nose, throat pain, and headaches. TACs are considered either carcinogenic or noncarcinogenic based on the nature of the health effects associated with exposure to the pollutant. For carcinogenic TACs, there is no level of exposure that is considered safe and impacts are evaluated in terms of overall relative risk expressed as excess cancer cases per one million exposed individuals. Noncarcinogenic TACs differ in that there is generally assumed to be a safe level of exposure below which no negative health impact is believed to occur. These levels are determined on a pollutant-by-pollutant basis.

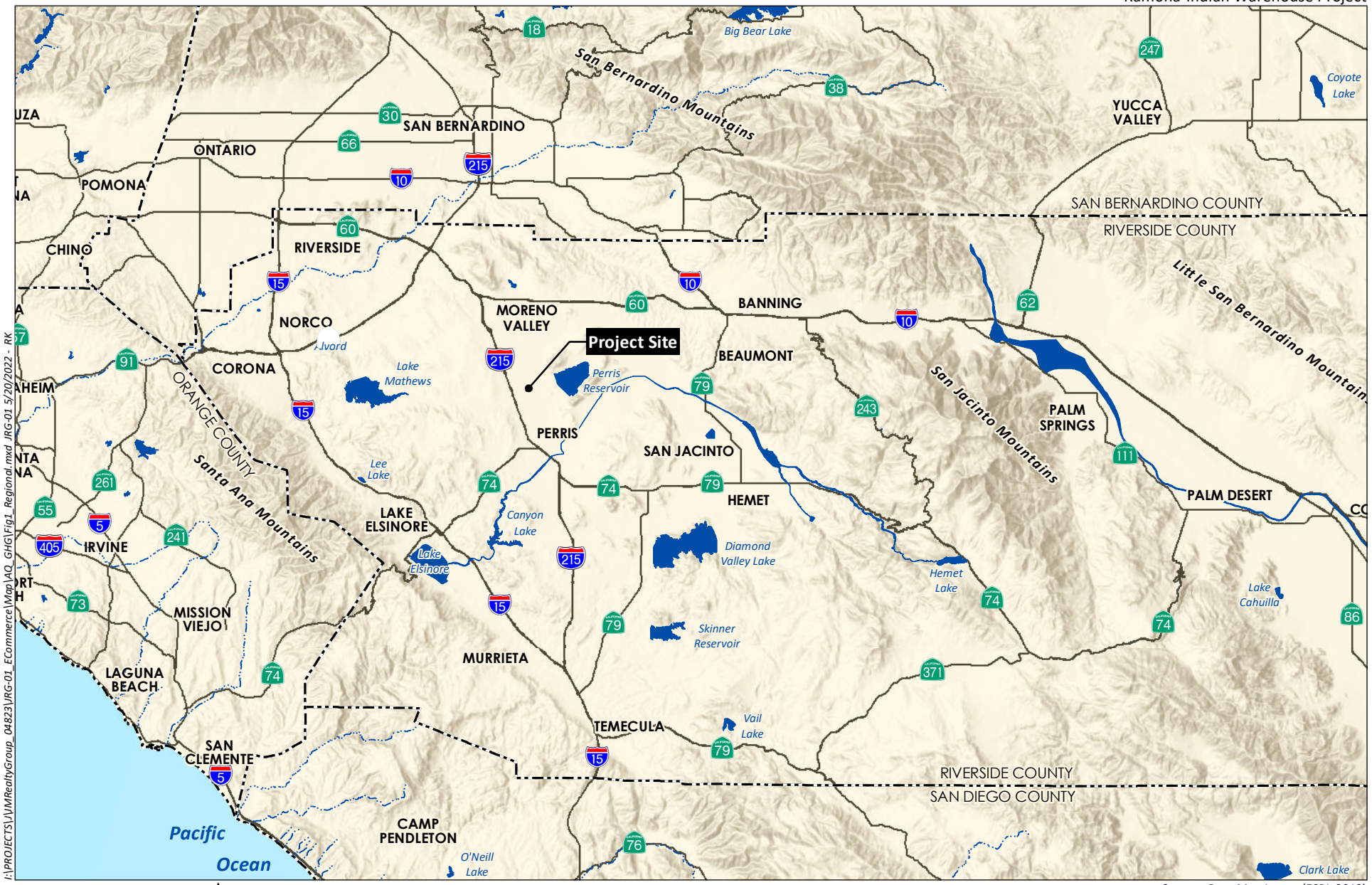
Diesel engines emit a complex mixture of air pollutants, including both gaseous and solid material. The solid material in diesel exhaust is referred to as diesel particulate matter (DPM). Almost all DPM is 10 microns or less in diameter, and 90 percent of DPM is less than 2.5 microns in diameter (California Air Resources Board [CARB] 2021a). Because of their extremely small size, these particles can be inhaled and eventually trapped in the bronchial and alveolar regions of the lung. In 1998, CARB identified DPM as a TAC based on published evidence of a relationship between diesel exhaust exposure and lung cancer and other adverse health effects. DPM has a notable effect on California's population—it is estimated that about 70 percent of total known cancer risk related to air toxics in California is attributable to DPM (CARB 2021a).

2.1.1 Toxics Best Available Control Technology

Diesel powered on-road (highway) trucks are a potential source of DPM. The Toxics Best Available Control Technology (T-BACT) for operation of diesel internal combustion engines is compliance with U.S. Environmental Protection Agency (USEPA) and CARB emissions standards. All heavy-duty diesel powered on-road vehicles manufactured since 2010 are required to meet USEPA emissions standards, including reductions of emissions of DPM by approximately 90 percent compared to unregulated engines (USEPA 2021).

2.2 SENSITIVE RECEPTORS

CARB and the Office of Environmental Health Hazard Assessment (OEHHA) have identified the following groups of individuals as the most likely to be affected by air pollution: adults over 65, children under 14, infants (including in utero in the third trimester of pregnancy), and persons with cardiovascular and chronic respiratory diseases such as asthma, emphysema, and bronchitis (CARB 2005; OEHHA 2015). Some land uses are considered more sensitive to air pollution than others due to the types of population



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Source: Base Map Layers (ESRI, 2013)

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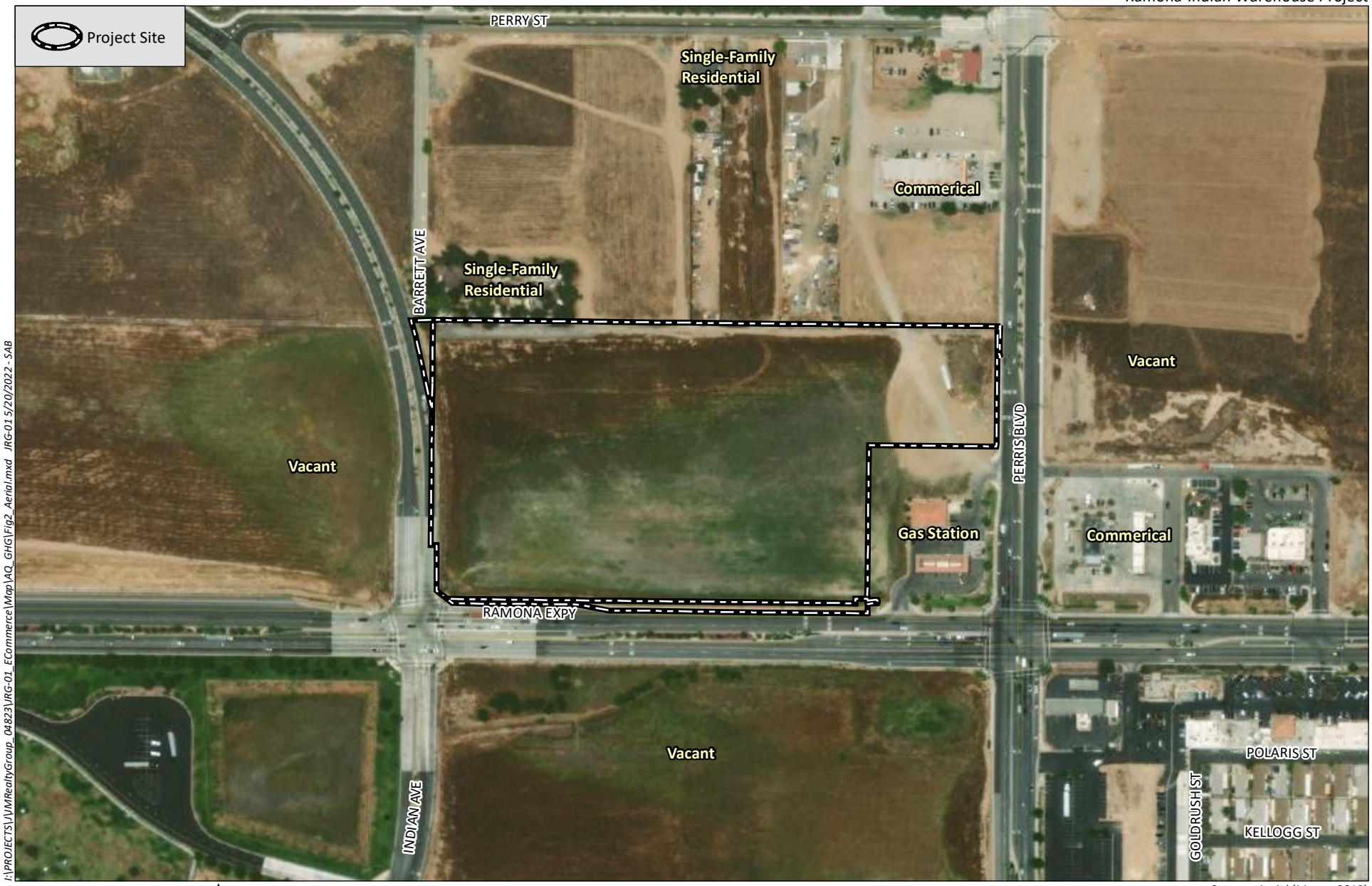
Regional Location

Figure 1



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Source: Aerial (Maxar, 2019)

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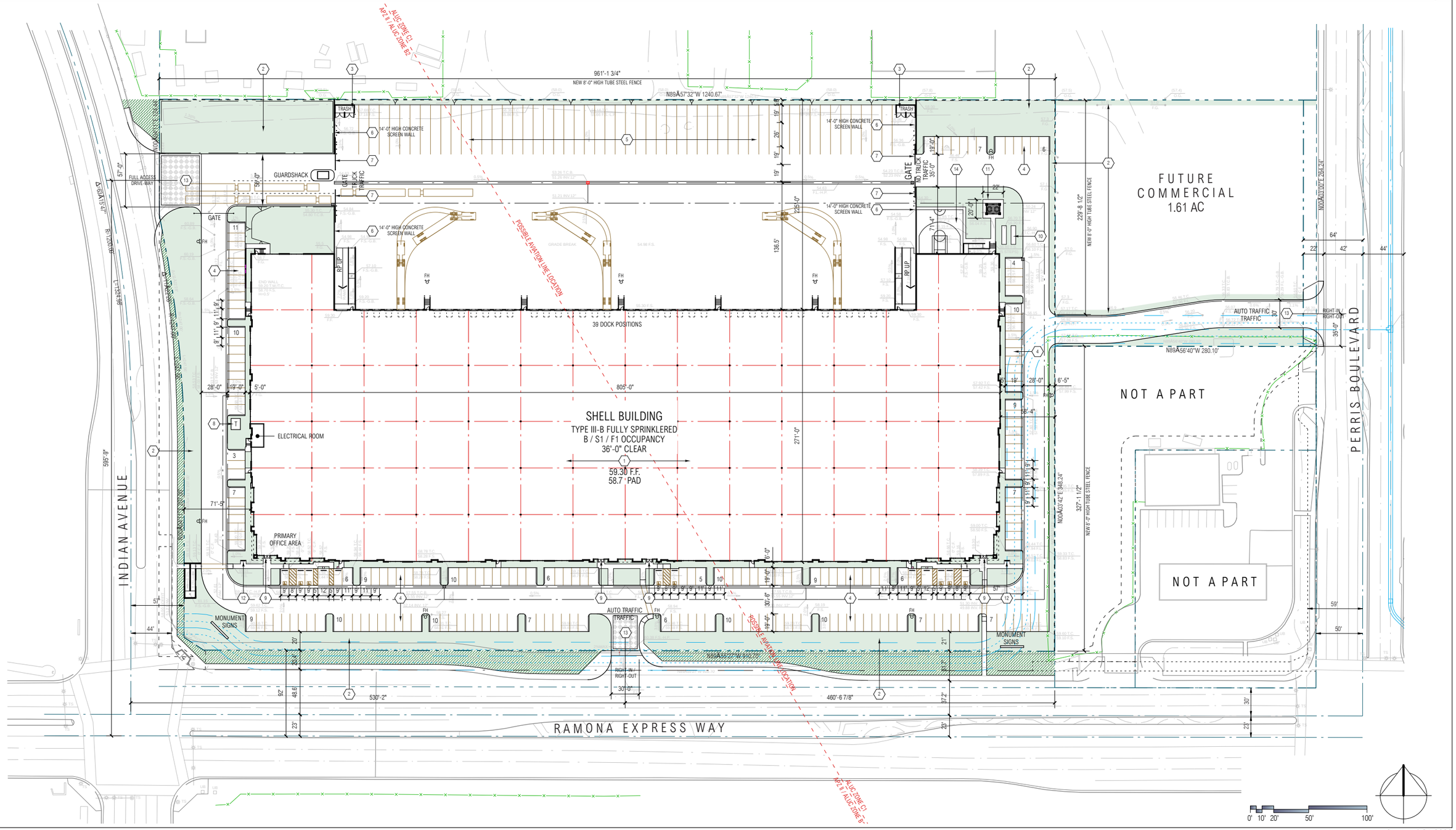
Aerial Photo

Figure 2



Source: RGA 2022

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Site Plan

Figure 3

groups or activities involved and are referred to as sensitive receptor locations. Examples of these sensitive receptor locations are residences, schools, hospitals, and daycare centers. For health risk assessments, the health impacts are analyzed for individual residents assumed to be standing in their primary outdoor spaces closest to the source of TACs, for students assumed to be standing outside of the school buildings or in outdoor recreation areas closest to the source of TACs, and for individual off-site workers assumed to be standing outside of a commercial or industrial building.

The closest existing sensitive receptor locations to the project site are located at three single-family residences on parcels abutting the project site to the north. Even though these parcels are not zoned for residential uses, they are still considered locations where sensitive receptors may be located for extended periods. There are reports that the closest single-family residence to the project site (adjacent to the project northwest corner) has been demolished. However, persons may still be residing at this location in recreational vehicles. To be conservative (health protective) in this analysis, this location is considered a residential site. Additional residential sensitive receptors are located southeast of the project site, across Ramona Expressway and North Perris Boulevard, behind a row of commercial buildings.

3.0 METHODOLOGY

Potential health risks to nearby sensitive receptors from the emission of TACs during operation of the proposed warehouse were analyzed in accordance with applicable portions of the OEHHA *Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments* (OEHHA 2015), and applicable portions of the SCAQMD's *Modeling Guidance for AERMOD* (SCAQMD 2021).

3.1 TAC EMISSIONS

Calculations of DPM emissions were based on the project trip generation estimate (57 trucks entering the site per day) and the truck route (all trucks would use Indian Avenue north of Ramona Expressway) described in the project Traffic Analysis (Urban Crossroads 2021). Trucks on Indian Avenue were assumed be traveling at the posted speed limit of 40 miles pers hour (mph). Trucks entering and exiting the project driveway were assumed to be traveling at 15 mph. Trucks circulating within the project site were assumed to be traveling at 5 mph. All trucks were assumed to idle at the loading docks for the maximum allowable 5 minutes (per California Code of Regulations [CCR] Title 13, Section 2485). In addition, 25 percent of trucks were assumed to stage in the truck/trailer parking area before or after unloading/loading and idle for an additional 5 minutes. Truck idling emissions were assumed to be approximately equivalent to truck emissions at 5 mph.

Emissions of DPM from trucks were calculated using emission factors from CARB's EMFAC2021 version 1.0.1 online database (CARB 2021b). The truck fleet mix was estimated from the project Traffic Analysis which reported average daily trips (ADT; two trips per truck) of 24 two-axle trucks, 30 three-axle trucks, and 88 four or more axle trucks (142 total truck ADT; Urban Crossroads 2021). Two-axle trucks were assumed to be light-heavy duty (LHDT2; 10,000 to 14,000 pounds gross vehicle weight [GVW]). Three-axle trucks were assumed to be medium-heavy duty (MHDT; 14,000 to 33,000 GVR). Four or mor axle trucks were assumed to be heavy-heavy duty (HHDT; greater than 33,000 GVR). The DPM emissions for each source modeled is shown in Table 1, *DPM Emissions*. The complete emissions calculation sheets are included as Appendix A, *DPM Emissions Calculations*, to this report.

Table 1
DPM EMISSIONS

Source	DPM Emissions (pounds/year)	DPM Emissions (pounds/hour)
Trucks traveling northbound on Indian Avenue	0.0947	1.1228E-05
Trucks traveling southbound on Indian Avenue	0.0959	1.1375E-05
Trucks entering the project site	0.0469	5.5019E-06
Trucks exiting the project site	0.0396	4.6422E-06
Trucks circulating within the project site	0.2329	2.7265E-05
Trucks at the loading docks	0.0132	3.6587E-05
Trucks in the parking area	0.0132	3.6587E-05

Source: Emission factors from EMFAC2021 and OFFROAD2021 (CARB 2021b); emissions calculation sheets included in Appendix A.

3.2 DISPERSION MODELING

Localized concentrations of DPM were modeled using Lakes AERMOD View version 10.2.0. The Lakes program utilizes the USEPA's AERMOD gaussian air dispersion model version 19191. Plot files from AERMOD using unitized emissions (one gram per second) for each DPM source were imported into CARB's Hotspots Analysis and Reporting Program (HARP), Air Dispersion Modeling and Risk Tool (ADMRT) version 21118. The ADMRT calculated ground-level concentrations of DPM utilizing the imported plot files and the annual and hourly emissions inventory shown in Table 1. The modeling input and output are included in Appendix B, *HRA Modeling Output*, to this report.

3.2.1 Source Parameters

Trucks traveling on Indian Avenue, the project driveway, and within the project site were modeled as line volume sources following methodology/calculations recommended in the USEPA *Haul Road Workgroup Final Report*, using an average truck height of 4 meters (13.1 feet) and average truck width of 2.6 meters (8.5 feet; USEPA 2011). Trucks parked in the loading dock area and parking area were modeled as volume sources with a 25 meter (82 feet) wide base and a height of 4 meters (13.1 feet). To be conservative in capturing the highest reasonably foreseeable initial plume concentration, half of all trucks were assumed to use the docks on the west end of the dock area with the other half using docks at the east end. Similarly, half of parked trucks were assumed to be concentrated at the west end of the parking area (nearest to the closest sensitive receptor location) with the remaining at the east end. The complete model reports are included in Appendix B to this report.

Emissions of DPM would not be constant throughout the day. The volume of trucks entering and exiting the site would vary by hour of the day and day of the week. However, since the project is assumed to operate 24 hours per day, 7 days per week, the truck volume was assumed to be steady (at peak hour volume) throughout all hours of the day and week. This modeling assumption is generally conservative (health protective).

3.2.2 Meteorological Data

SCAQMD provides pre-processed meteorological data suitable for use with AERMOD (SCAQMD 2017). The available data set most representative of conditions in the project vicinity was from the Perris station, approximately 4 miles south of the project site. A wind rose for the Perris station shows an

average wind speed of 3.7 miles per hour from the northwest (SCAQMD 2017). The wind rose graphics are included in Appendix B to this report. The Perris station set includes 5 years of data collected between 2010 and 2016. Urban dispersion coefficients with a Riverside County population of 2,189,641 were selected in the model in accordance with SCAQMD modeling recommendations (SCAQMD 2021).

3.2.3 Terrain Data

United States Geological Survey (USGS) National Elevation Dataset (NED) files with a 30-meter resolution covering an area approximately one kilometer around the project site were used in the model to cover the analysis area. Terrain data was imported to the model using AERMAP, a terrain preprocessing program for AERMOD.

3.2.4 Receptor Modeling

To develop risk isopleths (linear contours showing equal level of risk), receptors were placed in a cartesian grid 780 meters by 580 meters (approximately 2,560 feet by 1,900 feet), centered on the project site with a grid spacing of 20 meters (66 feet) and a receptor height (flagpole height) of 1.2 meters (4 feet) above the ground. To ensure the area of maximum off-site impact was captured, receptors were placed along the project boundary at 20-meter (66 feet) intervals. Additional discrete receptors were placed at the closest primary outdoor spaces for 3 locations at the closest residence to the northwest, 1 location each for the two residences along Perry Steet to the north, 1 location for the mobile home park to the southeast, and 4 locations for the closest existing worker buildings. See Figure 4, *Receptor Locations*, for the modeled discrete receptor locations relative to the project site and modeled sources.

3.3 RISK DETERMINATION

Health risks resulting from localized concentration of DPM were estimated using the ADMRT. The latest cancer slope factors and chronic Reference Exposure Limits (RELs), and exposure paths for all TACs designated by CARB are included in ADMRT. For the residential cancer risk, an exposure duration of 30 years was selected in accordance with the OEHHA (2015) guidelines. The model conservatively assumes that residents would be standing and breathing outdoors at the location of the property line closest to the project every day between 17 and 21 hours per day (depending on the age group, starting with infants in utero in the third trimester of pregnancy) for 30 years. The Risk Management Policy (RMP) using the derived method for the intake rate percentile was selected in accordance with the SCAQMD guide recommendations (SCAQMD 2021). For off-site worker cancer risk, an exposure duration of 25 years was selected with an assumption of 8 hours per day, 5 days per week of exposure while standing outside with moderate intensity breathing rates, in accordance with the OEHHA guidelines. Because DPM only has an inhalation cancer slope factor and an inhalation chronic REL, only the cancer risk and chronic risk from exposure to DPM was evaluated, and only the inhalations pathway was evaluated. The modeling input and out is included in Appendix B to this report.

Cancer burden evaluates an overall population's increased cancer risk and is defined as the increases in cancer cases in the population due exposure to TACs from a project. Cancer burden is calculated differently from individual risk. Per OEHHA, cancer burden uses a 70-year exposure to evaluate population-wide cancer risk, and the cancer burden only evaluates residential exposure (not worksites). Cancer burden is calculated by multiplying the number of residents exposed to an incremental excess

cancer risk of 1 in 1 million or greater by the estimated incremental excess cancer risk of the maximally exposed individual resident (MEIR).

3.4 SIGNIFICANCE CRITERIA

For a Type A project (siting a new source of emissions), the SCAQMD recommends the following thresholds for the project's incremental contribution to community health risks (SCAQMD 2019):

Cancer Risk – An increased risk of 10 in 1 million for the maximally exposed individual to project emissions.

Cancer Burden – 0.5 excess cancer cases in areas exposed to 1 in 1 million or greater cancer risk from project emissions.

Chronic Health Risk – A Hazard Index of 1 for the maximally exposed individual to project emissions.

4.0 HEALTH RISK IMPACT ANALYSIS

4.1 ANALYSIS IN THE SPECIFIC PLAN EIR

The project is located within the PVCCSP area for which an EIR was certified in 2011. Impacts to sensitive receptors resulting from long-term operation of development within the PVCCSP area were analyzed in the EIR which concluded that, with implementation of mitigation measures, implementation of the PVCCSP would not expose sensitive receptors to substantial pollutant concentrations (EIR; City 2011 pp. 4.2-48 through 4.2-50). The following mitigation measures from the PVCCSP EIR would be applicable to the project and related to the exposure of sensitive receptors to substantial concentrations of DPM from warehouse operations.

MM Air 11: Signage shall be posted at loading docks and all entrances to loading areas prohibiting all on-site truck idling in excess of 5 minutes.

MM AIR 13: In order to promote alternative fuels, and help support "clean" truck fleets, the developer/successor-in-interest of each implementing development project shall provide building occupants information related to SCAQMD's Carl Moyer Program, or other state programs that restrict operations to "clean" trucks, such as 2007 or newer model year or 2010 compliant vehicles.

MM AIR 15: To identify potential implementing development project-specific impacts resulting from the use of diesel trucks, proposed implementing development projects that include in excess of 10 dock doors for a single building, a minimum of 100 truck trips per day, 40 truck trips with TRUs per day, or TRU operations exceeding 300 hours per week, and that are subject to CEQA and are located adjacent to sensitive land uses; shall have a facility-specific Health Risk Assessment performed to assess the diesel particulate matter impacts from mobile-source traffic generated by the that implementing development project. The results of the Health Risk Assessment shall be included in the CEQA documentation for each implementing development project.

This HRA constitutes compliance with MM AIR 15.

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Source: Aerial (Maxar, 2019)

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Receptor Locations

Figure 4

4.2 PROJECT ANALYSIS

The incremental excess cancer risk is an estimate of the chance a person exposed to a specific source of a TAC may have of developing cancer from that exposure beyond the individual's risk of developing cancer from existing background levels of TACs in the ambient air. For context, the average cancer risk from TACs in the ambient air for an individual living in an urban area of California is 830 in 1 million (CARB 2015). Cancer risk estimates do not mean, and should not be interpreted to mean, that a person will develop cancer from estimated exposures to toxic air pollutants.

The maximum estimated community incremental excess cancer risks due to exposure to the project TAC emissions from long term operation are presented in Table 2, *Maximum Incremental Cancer Health Risk*. These estimates are conservative (health protective) and assume that the student, resident, or worker is outdoors for the entire exposure period.

Table 2
MAXIMUM INCREMENTAL CANCER HEALTH RISK

	Maximally Exposed Individual Resident Cancer Risk (per million)	Maximally Exposed Individual Worker Cancer Risk (per million)
Results	1.1	<0.1
Threshold	10	10
Exceed Threshold?	No	No

Source: Lakes AERMOD View version 10.2.0 and CARB ADMRT version 21081. See Appendix B for model inputs, outputs, and risk isopleths.

The estimated incremental excess cancer risk and chronic hazard index due to exposure to the project's TAC emissions for each receptor location (shown in Figure 4) are presented in Table 3, *Discrete Receptor Incremental Cancer and Chronic Health Risk*. The model inputs, outputs, and risk isopleth figures are available in Appendix A to this report.

Table 3
DISCRETE RECEPTOR INCREMENTAL CANCER AND CHRONIC HEALTH RISK

Receptor ID	Type	Location	Cancer Risk (per million)	Chronic Hazard Index
R1	Residential	4111 Barrett Avenue, west	0.7	<0.01
R2	Residential	4111 Barrett Avenue, southwest	0.9	<0.01
R3	Residential	4111 Barrett Avenue, southeast	1.1	<0.01
R4	Residential	111 Perry Street	0.1	<0.01
R5	Residential	91 Perry Street	0.1	<0.01
R6	Residential	Park Place Mobile Home Park, northwest corner	<0.1	<0.01
C1	Commercial	4040 Perris Boulevard, southwest corner	<0.1	<0.01
C2	Commercial	4040 Perris Boulevard, northeast corner	<0.1	<0.01
C3	Commercial	4164 Perris Boulevard	<0.1	<0.01
C4	Commercial	77 Perry Street	<0.1	<0.01

Source: Lakes AERMOD View version 10.2.0 and CARB ADMRT version 211118. See Appendix B for model inputs, outputs, and residential cancer risk isopleths.

For cancer burden, only the residence adjacent to the northwest corner of the project site is within or touching the 1 in 1 million isopleth. Assuming up to 10 residents per residence, the total exposed

population would be 10. The cancer burden would be 1.1 x 10^{-6} (risk at the MEIR using a 70-year exposure) times 10, or 0.00001, below the SCAQMD threshold of 0.5.

The point of maximum off-site impact would be on the project's north boundary at approximately Universal Transverse Mercator (UTM) coordinates Zone 11, 478782 meters East, 3745149 meters North. No students, residents or workers are anticipated to be at the point of maximum impact for prolonged periods. If residents were to be located at the point of maximum impact for 30 years, the estimated incremental excess cancer risk would be 1.5 in 1 million. The point of maximum impact is shown in Figure 4.

As shown in Table 2 and Table 3, the incremental increased cancer risks would not exceed the SCAQMD threshold of 10 in 1 million and the chronic health indices would not exceed the SCAQMD threshold of 1. The estimated incremental excess cancer risk for the MEIR would be 1.1 in 1 million. The residential incremental increased cancer risk isopleths and location of the MEIR are shown in Figure 4. Therefore, community health risks due to exposure to DPM emissions from long term operation of the proposed warehouse would not exceed the SCAQMD thresholds, and long-term operation of the project would not result in a significant impact related to the exposure of sensitive receptors to substantial TAC concentrations.

5.0 LIST OF PREPARERS

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Appendix A

DPM Emissions Calculations

The following section contains content that was obtained from a third party and may not achieve the same level of Americans with Disabilities Act (ADA) and Section 508 accessibility as other parts of this document.

Truck DPM Calculations

Southbound Indian Ave (40 mph)	Emission Factor (lb./mile)	Miles	Peak Hour Trips	ADT	Annual Trips	Max lb./hour	Annual lb./year
2 Axle (LHDT)	3.71326E-05	0.155	0.5	12	4380	2.8778E-06	2.5209E-02
3 Axle (MHDT)	1.08144E-05	0.155	0.5	15	5475	8.3812E-07	9.1774E-03
4 or more Axle (HHDT)	2.47070E-05	0.155	2	44	16060	7.6592E-06	6.1503E-02
Total			**3**	**71**		**1.1375E-05**	**9.5890E-02**

Northbound Indian Ave (40 mph)	Emission Factor (lb./mile)	Miles	Peak Hour Trips	ADT	Annual Trips	Max lb./hour	Annual lb./year
2 Axle (LHDT)	3.71326E-05	0.153	0.5	12	4380	2.8406E-06	2.4884E-02
3 Axle (MHDT)	1.08144E-05	0.153	0.5	15	5475	8.2730E-07	9.0590E-03
4 or more Axle (HHDT)	2.47070E-05	0.153	2	44	16060	7.5603E-06	6.0710E-02
Total			**3**	**71**		**1.1228E-05**	**9.4653E-02**

Entrance Drive (15 mph)	Emission Factor (lb./mile)	Miles	Peak Hour Trips	ADT	Annual Trips	Max lb./hour	Annual lb./year
2 Axle (LHDT)	7.95470E-05	0.064	0.5	12	4380	2.5455E-06	2.2299E-02
3 Axle (MHDT)	9.38922E-06	0.064	0.5	15	5475	3.0045E-07	3.2900E-03
4 or more Axle (HHDT)	2.07497E-05	0.064	2	44	16060	2.6560E-06	2.1327E-02
Total			**3**	**71**		**5.5019E-06**	**4.6916E-02**

Exit Drive (15 mph)	Emission Factor (lb./mile)	Miles	Peak Hour Trips	ADT	Annual Trips	Max lb./hour	Annual lb./year
2 Axle (LHDT)	7.95470E-05	0.054	0.5	12	4380	2.1478E-06	1.8814E-02
3 Axle (MHDT)	9.38922E-06	0.054	0.5	15	5475	2.5351E-07	2.7759E-03
4 or more Axle (HHDT)	2.07497E-05	0.054	2	44	16060	2.2410E-06	1.7995E-02
Total			**3**	**71**		**4.6422E-06**	**3.9585E-02**

Circulation (5 mph)	Emission Factor (lb./mile)	Miles	Peak Hour Trips	ADT	Annual Trips	Max lb./hour	Annual lb./year
2 Axle (LHDT)	1.29091E-04	0.207	0.5	12	4380	1.3361E-05	1.1704E-01
3 Axle (MHDT)	1.40972E-05	0.207	0.5	15	5475	1.4591E-06	1.5977E-02
4 or more Axle (HHDT)	3.00591E-05	0.207	2	44	16060	1.2444E-05	9.9929E-02
Total			**3**	**71**		**2.7265E-05**	**2.3295E-01**

Idling Dock Area 1, 2	Emission Factor (lb./min)	Minutes	Peak Hour Trips	ADT	Annual Trips	Max lb./hour	Annual lb./year
2 Axle (LHDT)	1.07576E-05	5	0.25	6	2190	1.3447E-05	1.1780E-01
3 Axle (MHDT)	1.17477E-06	5	0.25	7.5	2737.5	1.4685E-06	1.6080E-02
4 or more Axle (HHDT)	2.50493E-06	5	1	22	8030	1.2525E-05	1.0057E-01
Total			**1.5**	**35.5**		**1.8293E-05**	**6.6042E-03**

Idling Parking Area 1, 2	Emission Factor (lb./min)	Minutes	Peak Hour Trips	ADT	Annual Trips	Max lb./hour	Annual lb./year
2 Axle (LHDT)	1.07576E-05	5	0.0625	1.5	547.5	3.3618E-06	2.9449E-02
3 Axle (MHDT)	1.17477E-06	5	0.0625	1.9	693.5	3.6711E-07	4.0735E-03
4 or more Axle (HHDT)	2.50493E-06	5	0.25	5.5	2007.5	3.1312E-06	2.5143E-02
Total			**0.375**	**8.9**		**1.8293E-05**	**6.5917E-03**

Notes:
1. Exhaust PM10 emissions factor reported by EMFAC2021 in grams/mile.
2. 1 gram = 0.0022046 pounds.
3. Idling emissions calculated assuming idling emissions are approximately equal to 5 mph emissions.
4. 5 mph = 0.08333 miles per minute.

ADMRT Input

Source ID	Annual (lb/year)	Max Hour (lb/hr)
CIRC	2.32948E-01	2.72645E-05
DOCK1	6.60418E-03	1.82934E-05
DOCK2	6.60418E-03	1.82934E-05
ENTR	4.69160E-02	5.50192E-06
EXIT	3.95853E-02	4.64224E-06
INDN	9.46525E-02	1.12283E-05
INDS	9.58898E-02	1.13751E-05
PARK1	6.59165E-03	1.82934E-05
PARK2	6.59165E-03	1.82934E-05

Source: EMFAC2017 (v1.0.3) Emission Rates
Region Type: Sub-Area
Region: Riverside (SC)
Calendar Year: 2025
Season: Annual
Vehicle Classification: EMFAC2007 Categories
Units: miles/day for VMT, g/mile for RUNEX, mph for Speed

Region	Calendar Year	Vehicle Category	Model Year	Speed	Fuel	VMT	PM10_RUNEX
Riverside (SC)	2025	HHDT	Aggregate	5	Diesel	4359.75653	0.013634738
Riverside (SC)	2025	HHDT	Aggregate	15	Diesel	3476.70988	0.009411992
Riverside (SC)	2025	HHDT	Aggregate	40	Diesel	109406.185	0.011207014
Riverside (SC)	2025	LHDT2	Aggregate	5	Diesel	405.10861	0.058555466
Riverside (SC)	2025	LHDT2	Aggregate	15	Diesel	280.313151	0.036082299
Riverside (SC)	2025	LHDT2	Aggregate	40	Diesel	10842.413	0.01684325
Riverside (SC)	2025	MHDT	Aggregate	5	Diesel	1914.18008	0.006394443
Riverside (SC)	2025	MHDT	Aggregate	15	Diesel	1395.85207	0.00425892
Riverside (SC)	2025	MHDT	Aggregate	40	Diesel	44505.578	0.004905395

Appendix B

HRA Modeling Output

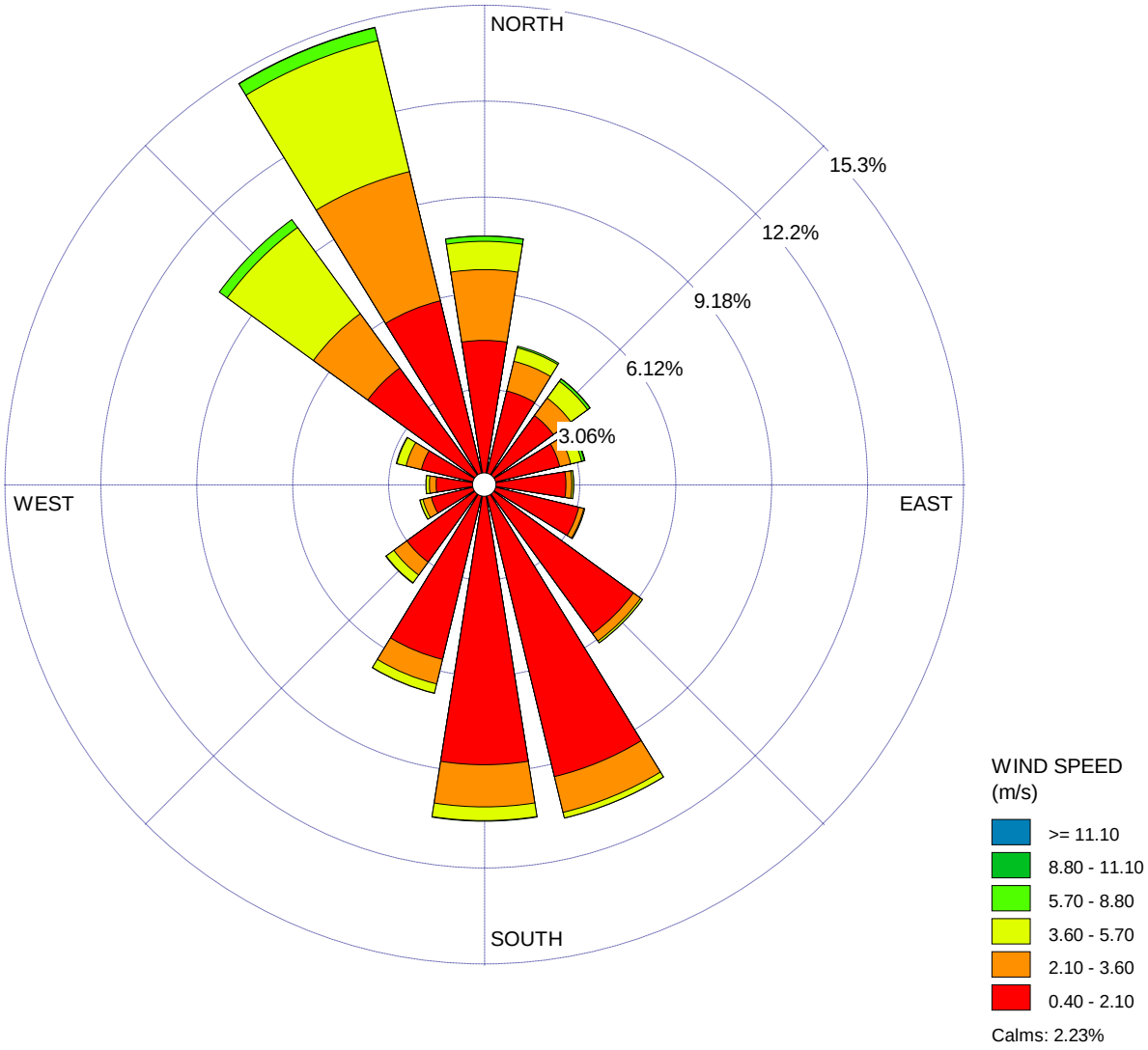
The following section contains content that was obtained from a third party and may not achieve the same level of Americans with Disabilities Act (ADA) and Section 508 accessibility as other parts of this document.

WIND ROSE PLOT:

Station #3171

DISPLAY:

Wind Speed
Direction (blowing from)



COMMENTS:	DATA PERIOD: **Start Date: 1/1/2010 - 00:00** **End Date: 12/31/2016 - 23:59**	COMPANY NAME: **South Coast Air Quality Management District**	
		MODELER: **Melissa Sheffer**	
	CALM WINDS: **2.23%**	TOTAL COUNT: **43476 hrs.**	
	AVG. WIND SPEED: **1.65 m/s**	DATE: **5/25/2017**	PROJECT NO.:

PROJECT TITLE:

Ramona-indina Warehouse
Residential Cancer Risk

PLOT FILE OF PERIOD VALUES FOR SOURCE GROUP: ALL ug/m^3

Max: 2.0 [ug/m^3] at (478780.00, 3745120.00)

1.0 2.0 5.0

COMMENTS: Chance per Million: 1 in 1 million isopleth	SOURCES: **9**	COMPANY NAME: **HELIX Environmenal Planning**	
	RECEPTORS: **1273**		
	OUTPUT TYPE: **Concentration**	SCALE: 1:6,730 0 0.2 km	
	MAX: **2.0 ug/m^3**	DATE: **5/20/2022**	PROJECT NO.:

PROJECT TITLE:

Ramona-indina Warehouse
Cancer Burden

PLOT FILE OF PERIOD VALUES FOR SOURCE GROUP: ALL ug/m^3

Max: 2.4 [ug/m^3] at (478780.00, 3745120.00)

1.0 10.0

COMMENTS: Chance per Million: 1 in 1 million isopleth	SOURCES: **9**	COMPANY NAME: **HELIX Environmenal Planning**	
	RECEPTORS: **1273**		
	OUTPUT TYPE: **Concentration**	SCALE: 1:6,711 0 0.2 km	
	MAX: **2.4 ug/m^3**	DATE: **5/20/2022**	PROJECT NO.:

Control Pathway

AERMOD

Dispersion Options

Titles

C:\Users\martinr\Desktop\Perris ECommerce HRA\Perris EComm\Perris EC

Dispersion Options

- [■] Regulatory Default
- [ ] Non-Default Options

Dispersion Coefficient

Urban

Population:
Name (Optional):
Roughness Length:

Output Type

- [■] Concentration
- [ ] Total Deposition (Dry & Wet)
- [ ] Dry Deposition
- [ ] Wet Deposition

Plume Depletion

- [ ] Dry Removal
- [ ] Wet Removal

Output Warnings

- [ ] No Output Warnings
- [ ] Non-fatal Warnings for Non-sequential Met Data

Pollutant / Averaging Time / Terrain Options

Pollutant Type

OTHER - DPM

Averaging Time Options

Hours

1	2	3	4	6	8	12	24
[■]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]

- [ ] Month
- [■] Period
- [ ] Annual

Exponential Decay

Half-life of 4 hrs will be used

Terrain Height Options

- [ ] Flat
- [■] Elevated

SO: Meters
RE: Meters
TG: Meters

Flagpole Receptors

- [■] Yes
- [ ] No

Default Height = 1.20 m

Control Pathway

Optional Files

Re-Start File	Init File	Multi-Year Analyses	Event Input File	Error Listing File
☐	☐	☐	☐	■

Detailed Error Listing File

Filename: Perris EComm.err

Source Pathway - Source Inputs

Volume Sources

Source Type	Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation (Optional)	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dim. [m]	Initial Vertical Dim. [m]
VOLUME	DOCK1	478775.92 Dock Area 1	3745097.05	444.30	3.60	1.00000	25.00	Surface-Based	5.81	1.86
VOLUME	DOCK2	478907.00 Dock Area 2	3745096.97	444.15	3.60	1.00000	25.00	Surface-Based	5.81	1.86
VOLUME	PARK1	478774.46 Parking Area 1	3745133.84	444.61	3.60	1.00000	25.00	Surface-Based	5.81	1.86
VOLUME	PARK2	478906.71 Parking Area 2	3745133.62	444.45	3.60	1.00000	25.00	Surface-Based	5.81	1.86

Source Pathway - Source Inputs

Line Volume Sources

Source Type: LINE VOLUME

Source: CIRC (Truck Circulation)

Length of Side [m]	Emission Rate [g/ s]	Building Height [m]	X Coordinate for Points [m]	Y Coordinate for points [m]	Base Elevation [m]	Release Height [m]
8.60	1.00000		478746.04	3745120.10	444.51	3.40
			478875.89	3745119.95	444.31	3.40
			478886.94	3745110.35	444.22	3.40
			478889.12	3745100.03	444.18	3.40
			478891.73	3745110.79	444.22	3.40
			478891.88	3745131.58	444.48	3.40
			478771.05	3745131.29	444.60	3.40
			478760.43	3745128.24	444.62	3.40
			478745.89	3745127.95	444.63	3.40

Source Type: LINE VOLUME

Source: ENTR (Entrance Drive)

Length of Side [m]	Emission Rate [g/ s]	Building Height [m]	X Coordinate for Points [m]	Y Coordinate for points [m]	Base Elevation [m]	Release Height [m]
8.60	1.00000		478745.99	3745120.01	444.51	3.40
			478674.94	3745120.01	445.49	3.40
			478666.90	3745150.27	445.62	3.40

Source Type: LINE VOLUME

Source: EXIT (Exist Driveway)

Length of Side [m]	Emission Rate [g/ s]	Building Height [m]	X Coordinate for Points [m]	Y Coordinate for points [m]	Base Elevation [m]	Release Height [m]
8.60	1.00000		478745.75	3745127.80	444.63	3.40
			478685.53	3745127.66	445.62	3.40
			478677.26	3745153.97	445.39	3.40

Source Pathway - Source Inputs

Source Type: LINE VOLUME
Source: INDN (Indian Avenue Northbound)

Length of Side [m]	Emission Rate [g/ s]	Building Height [m]	X Coordinate for Points [m]	Y Coordinate for points [m]	Base Elevation [m]	Release Height [m]
8.60	1.00000		478677.33	3745153.99	445.39	3.40
			478656.87	3745206.97	445.59	3.40
			478622.25	3745262.58	445.69	3.40
			478584.48	3745304.55	445.92	3.40
			478552.48	3745333.40	445.90	3.40
			478532.02	3745346.51	446.15	3.40

Source Type: LINE VOLUME
Source: INDS (Indian Avenue Southbound)

Length of Side [m]	Emission Rate [g/ s]	Building Height [m]	X Coordinate for Points [m]	Y Coordinate for points [m]	Base Elevation [m]	Release Height [m]
8.60	1.00000		478666.84	3745150.84	445.63	3.40
			478646.90	3745200.15	445.70	3.40
			478615.43	3745253.14	445.96	3.40
			478577.66	3745296.68	446.04	3.40
			478532.02	3745332.35	446.08	3.40
			478516.28	3745342.84	446.29	3.40

Source Pathway - Source Inputs

Volume Sources Generated from Line Sources

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
CIRC	L0000236	478750.34	3745120.09	444.52	3.40	0.02564	8.60		4.00	3.16
	L0000237	478758.94	3745120.08	444.51	3.40	0.02564	8.60		4.00	3.16
	L0000238	478767.54	3745120.07	444.50	3.40	0.02564	8.60		4.00	3.16
	L0000239	478776.14	3745120.06	444.49	3.40	0.02564	8.60		4.00	3.16
	L0000240	478784.74	3745120.05	444.48	3.40	0.02564	8.60		4.00	3.16
	L0000241	478793.34	3745120.04	444.47	3.40	0.02564	8.60		4.00	3.16
	L0000242	478801.94	3745120.03	444.45	3.40	0.02564	8.60		4.00	3.16
	L0000243	478810.54	3745120.02	444.44	3.40	0.02564	8.60		4.00	3.16
	L0000244	478819.14	3745120.01	444.43	3.40	0.02564	8.60		4.00	3.16
	L0000245	478827.74	3745120.00	444.42	3.40	0.02564	8.60		4.00	3.16
	L0000246	478836.34	3745119.99	444.41	3.40	0.02564	8.60		4.00	3.16
	L0000247	478844.94	3745119.98	444.40	3.40	0.02564	8.60		4.00	3.16
	L0000248	478853.54	3745119.97	444.40	3.40	0.02564	8.60		4.00	3.16
	L0000249	478862.14	3745119.97	444.39	3.40	0.02564	8.60		4.00	3.16
	L0000250	478870.74	3745119.96	444.38	3.40	0.02564	8.60		4.00	3.16
	L0000251	478878.49	3745117.69	444.35	3.40	0.02564	8.60		4.00	3.16
	L0000252	478884.98	3745112.05	444.29	3.40	0.02564	8.60		4.00	3.16
	L0000253	478888.18	3745104.47	444.21	3.40	0.02564	8.60		4.00	3.16
	L0000254	478890.08	3745103.98	444.21	3.40	0.02564	8.60		4.00	3.16
	L0000255	478891.75	3745112.38	444.29	3.40	0.02564	8.60		4.00	3.16
	L0000256	478891.81	3745120.98	444.37	3.40	0.02564	8.60		4.00	3.16
	L0000257	478891.87	3745129.58	444.45	3.40	0.02564	8.60		4.00	3.16
	L0000258	478885.28	3745131.57	444.48	3.40	0.02564	8.60		4.00	3.16
	L0000259	478876.68	3745131.55	444.48	3.40	0.02564	8.60		4.00	3.16

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
CIRC	L0000260	478868.08	3745131.52	444.49	3.40	0.02564	8.60		4.00	3.16
	L0000261	478859.48	3745131.50	444.50	3.40	0.02564	8.60		4.00	3.16
	L0000262	478850.88	3745131.48	444.51	3.40	0.02564	8.60		4.00	3.16
	L0000263	478842.28	3745131.46	444.52	3.40	0.02564	8.60		4.00	3.16
	L0000264	478833.68	3745131.44	444.52	3.40	0.02564	8.60		4.00	3.16
	L0000265	478825.08	3745131.42	444.53	3.40	0.02564	8.60		4.00	3.16
	L0000266	478816.48	3745131.40	444.54	3.40	0.02564	8.60		4.00	3.16
	L0000267	478807.88	3745131.38	444.55	3.40	0.02564	8.60		4.00	3.16
	L0000268	478799.28	3745131.36	444.56	3.40	0.02564	8.60		4.00	3.16
	L0000269	478790.68	3745131.34	444.57	3.40	0.02564	8.60		4.00	3.16
	L0000270	478782.08	3745131.32	444.59	3.40	0.02564	8.60		4.00	3.16
	L0000271	478773.48	3745131.30	444.60	3.40	0.02564	8.60		4.00	3.16
	L0000272	478765.12	3745129.59	444.59	3.40	0.02564	8.60		4.00	3.16
	L0000273	478756.72	3745128.16	444.59	3.40	0.02564	8.60		4.00	3.16
	L0000274	478748.12	3745127.99	444.60	3.40	0.02564	8.60		4.00	3.16

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
INDS	L0000275	478665.23	3745154.83	445.73	3.40	0.03448	8.60		4.00	3.16
	L0000276	478662.00	3745162.80	445.87	3.40	0.03448	8.60		4.00	3.16
	L0000277	478658.78	3745170.77	445.92	3.40	0.03448	8.60		4.00	3.16
	L0000278	478655.56	3745178.75	445.86	3.40	0.03448	8.60		4.00	3.16
	L0000279	478652.33	3745186.72	445.79	3.40	0.03448	8.60		4.00	3.16
	L0000280	478649.11	3745194.69	445.76	3.40	0.03448	8.60		4.00	3.16
	L0000281	478645.52	3745202.48	445.72	3.40	0.03448	8.60		4.00	3.16
	L0000282	478641.13	3745209.88	445.77	3.40	0.03448	8.60		4.00	3.16

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
INDS	L0000283	478636.73	3745217.27	445.91	3.40	0.03448	8.60		4.00	3.16
	L0000284	478632.34	3745224.66	446.15	3.40	0.03448	8.60		4.00	3.16
	L0000285	478627.95	3745232.06	445.94	3.40	0.03448	8.60		4.00	3.16
	L0000286	478623.56	3745239.45	445.83	3.40	0.03448	8.60		4.00	3.16
	L0000287	478619.16	3745246.85	445.83	3.40	0.03448	8.60		4.00	3.16
	L0000288	478614.59	3745254.11	445.96	3.40	0.03448	8.60		4.00	3.16
	L0000289	478608.95	3745260.60	446.05	3.40	0.03448	8.60		4.00	3.16
	L0000290	478603.31	3745267.10	445.96	3.40	0.03448	8.60		4.00	3.16
	L0000291	478597.68	3745273.59	445.86	3.40	0.03448	8.60		4.00	3.16
	L0000292	478592.04	3745280.09	445.90	3.40	0.03448	8.60		4.00	3.16
	L0000293	478586.41	3745286.59	446.08	3.40	0.03448	8.60		4.00	3.16
	L0000294	478580.77	3745293.08	446.14	3.40	0.03448	8.60		4.00	3.16
	L0000295	478574.63	3745299.04	446.04	3.40	0.03448	8.60		4.00	3.16
	L0000296	478567.85	3745304.34	446.04	3.40	0.03448	8.60		4.00	3.16
	L0000297	478561.08	3745309.64	446.15	3.40	0.03448	8.60		4.00	3.16
	L0000298	478554.30	3745314.93	446.34	3.40	0.03448	8.60		4.00	3.16
	L0000299	478547.53	3745320.23	446.26	3.40	0.03448	8.60		4.00	3.16
	L0000300	478540.75	3745325.52	446.13	3.40	0.03448	8.60		4.00	3.16
	L0000301	478533.97	3745330.82	446.09	3.40	0.03448	8.60		4.00	3.16
	L0000302	478526.93	3745335.74	446.13	3.40	0.03448	8.60		4.00	3.16
	L0000303	478519.77	3745340.51	446.21	3.40	0.03448	8.60		4.00	3.16

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
INDN	L0000304	478675.78	3745158.00	445.49	3.40	0.03448	8.60		4.00	3.16
	L0000305	478672.68	3745166.02	445.53	3.40	0.03448	8.60		4.00	3.16

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
INDN	L0000306	478669.58	3745174.04	445.57	3.40	0.03448	8.60		4.00	3.16
	L0000307	478666.49	3745182.07	445.61	3.40	0.03448	8.60		4.00	3.16
	L0000308	478663.39	3745190.09	445.65	3.40	0.03448	8.60		4.00	3.16
	L0000309	478660.29	3745198.11	445.65	3.40	0.03448	8.60		4.00	3.16
	L0000310	478657.19	3745206.14	445.57	3.40	0.03448	8.60		4.00	3.16
	L0000311	478652.80	3745213.51	445.52	3.40	0.03448	8.60		4.00	3.16
	L0000312	478648.25	3745220.81	445.57	3.40	0.03448	8.60		4.00	3.16
	L0000313	478643.71	3745228.11	445.67	3.40	0.03448	8.60		4.00	3.16
	L0000314	478639.16	3745235.41	445.70	3.40	0.03448	8.60		4.00	3.16
	L0000315	478634.62	3745242.71	445.70	3.40	0.03448	8.60		4.00	3.16
	L0000316	478630.07	3745250.01	445.65	3.40	0.03448	8.60		4.00	3.16
	L0000317	478625.52	3745257.31	445.65	3.40	0.03448	8.60		4.00	3.16
	L0000318	478620.64	3745264.36	445.67	3.40	0.03448	8.60		4.00	3.16
	L0000319	478614.89	3745270.75	445.71	3.40	0.03448	8.60		4.00	3.16
	L0000320	478609.14	3745277.15	445.74	3.40	0.03448	8.60		4.00	3.16
	L0000321	478603.38	3745283.54	445.74	3.40	0.03448	8.60		4.00	3.16
	L0000322	478597.63	3745289.93	445.79	3.40	0.03448	8.60		4.00	3.16
	L0000323	478591.88	3745296.32	445.85	3.40	0.03448	8.60		4.00	3.16
	L0000324	478586.12	3745302.72	445.90	3.40	0.03448	8.60		4.00	3.16
	L0000325	478579.92	3745308.66	445.96	3.40	0.03448	8.60		4.00	3.16
	L0000326	478573.53	3745314.41	446.01	3.40	0.03448	8.60		4.00	3.16
	L0000327	478567.14	3745320.17	446.08	3.40	0.03448	8.60		4.00	3.16
	L0000328	478560.76	3745325.93	446.06	3.40	0.03448	8.60		4.00	3.16
	L0000329	478554.37	3745331.69	446.01	3.40	0.03448	8.60		4.00	3.16
	L0000330	478547.38	3745336.66	445.94	3.40	0.03448	8.60		4.00	3.16

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
INDN	L0000331	478540.14	3745341.31	445.97	3.40	0.03448	8.60		4.00	3.16
	L0000332	478532.90	3745345.95	446.08	3.40	0.03448	8.60		4.00	3.16

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
ENTR	L0000333	478741.69	3745120.01	444.54	3.40	0.08333	8.60		4.00	3.16
	L0000334	478733.09	3745120.01	444.56	3.40	0.08333	8.60		4.00	3.16
	L0000335	478724.49	3745120.01	444.62	3.40	0.08333	8.60		4.00	3.16
	L0000336	478715.89	3745120.01	444.68	3.40	0.08333	8.60		4.00	3.16
	L0000337	478707.29	3745120.01	444.79	3.40	0.08333	8.60		4.00	3.16
	L0000338	478698.69	3745120.01	445.13	3.40	0.08333	8.60		4.00	3.16
	L0000339	478690.09	3745120.01	445.47	3.40	0.08333	8.60		4.00	3.16
	L0000340	478681.49	3745120.01	445.72	3.40	0.08333	8.60		4.00	3.16
	L0000341	478674.41	3745121.99	445.62	3.40	0.08333	8.60		4.00	3.16
	L0000342	478672.20	3745130.30	445.62	3.40	0.08333	8.60		4.00	3.16
	L0000343	478670.00	3745138.61	445.62	3.40	0.08333	8.60		4.00	3.16
	L0000344	478667.79	3745146.92	445.65	3.40	0.08333	8.60		4.00	3.16

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
EXIT	L0000345	478741.45	3745127.79	444.61	3.40	0.10000	8.60		4.00	3.16
	L0000346	478732.85	3745127.77	444.63	3.40	0.10000	8.60		4.00	3.16
	L0000347	478724.25	3745127.75	444.68	3.40	0.10000	8.60		4.00	3.16
	L0000348	478715.65	3745127.73	444.72	3.40	0.10000	8.60		4.00	3.16
	L0000349	478707.05	3745127.71	444.83	3.40	0.10000	8.60		4.00	3.16
	L0000350	478698.45	3745127.69	445.14	3.40	0.10000	8.60		4.00	3.16

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
EXIT	L0000351	478689.85	3745127.67	445.45	3.40	0.10000	8.60		4.00	3.16
	L0000352	478684.25	3745131.75	445.63	3.40	0.10000	8.60		4.00	3.16
	L0000353	478681.67	3745139.95	445.56	3.40	0.10000	8.60		4.00	3.16
	L0000354	478679.09	3745148.15	445.50	3.40	0.10000	8.60		4.00	3.16

Receptor Pathway

Receptor Networks

Note: Terrain Elavations and Flagpole Heights for Network Grids are in Page RE2 - 1 (If applicable)
Generated Discrete Receptors for Multi-Tier (Risk) Grid and Receptor Locations for Fenceline Grid are in Page RE3 - 1 (If applicable)

Uniform Cartesian Grid

Receptor Network ID	Grid Origin X Coordinate [m]	Grid Origin Y Coordinate [m]	No. of X-Axis Receptors	No. of Y-Axis Receptors	Spacing for X-Axis [m]	Spacing for Y-Axis [m]
UCART1	478480.00	3744820.00	40	30	20.00	20.00

Discrete Receptors

Discrete Cartesian Receptors

Record Number	X-Coordinate [m]	Y-Coordinate [m]	Group Name (Optional)	Terrain Elevations	Flagpole Heights [m] (Optional)
1	478700.66	3745175.71		444.93	
2	478714.35	3745152.30		444.79	
3	478774.40	3745152.63		444.70	
4	478875.24	3745278.42		444.90	
5	478894.29	3745296.40		445.01	
6	479206.51	3744874.76		444.42	
7	479012.42	3745021.43		444.32	
8	479037.02	3745038.39		444.24	
9	478989.68	3745239.41		444.63	
10	478934.05	3745302.25		445.00	

Plant Boundary Receptors

Receptor Pathway

Cartesian Plant Boundary

Primary

Record Number	X-Coordinate [m]	Y-Coordinate [m]	Group Name (Optional)	Terrain Elevations	Flagpole Heights [m] (Optional)
1	478687.32	3745149.19	FENCEPRI	445.33	
2	478694.38	3745119.43	FENCEPRI	445.30	
3	478700.93	3745078.25	FENCEPRI	445.04	
4	478701.76	3744986.62	FENCEPRI	444.90	
5	478703.54	3744980.27	FENCEPRI	444.82	
6	478707.98	3744975.46	FENCEPRI	444.69	
7	478712.73	3744973.17	FENCEPRI	444.63	
8	478796.68	3744972.98	FENCEPRI	444.11	
9	478810.83	3744969.91	FENCEPRI	444.14	
10	478981.03	3744970.28	FENCEPRI	443.99	
11	478981.04	3745073.76	FENCEPRI	444.02	
12	479067.48	3745074.04	FENCEPRI	444.21	
13	479067.46	3745149.85	FENCEPRI	444.36	

Intermediate

Record Number	X-Coordinate [m]	Y-Coordinate [m]	Group Name (Optional)	Terrain Elevations	Flagpole Heights [m] (Optional)
1	478690.85	3745134.31	FENCEINT	445.38	
2	478696.56	3745105.70	FENCEINT	445.22	
3	478698.75	3745091.98	FENCEINT	445.13	
4	478701.10	3745059.92	FENCEINT	445.04	
5	478701.26	3745041.60	FENCEINT	445.05	
6	478701.43	3745023.27	FENCEINT	444.99	
7	478701.59	3745004.95	FENCEINT	444.94	
8	478729.52	3744973.13	FENCEINT	444.35	
9	478746.31	3744973.09	FENCEINT	444.22	
10	478763.10	3744973.06	FENCEINT	444.17	
11	478779.89	3744973.02	FENCEINT	444.14	
12	478829.74	3744969.95	FENCEINT	444.11	
13	478848.65	3744969.99	FENCEINT	444.08	
14	478867.56	3744970.03	FENCEINT	444.05	
15	478886.47	3744970.07	FENCEINT	444.03	
16	478905.39	3744970.12	FENCEINT	444.02	
17	478924.30	3744970.16	FENCEINT	444.01	
18	478943.21	3744970.20	FENCEINT	443.98	
19	478962.12	3744970.24	FENCEINT	443.94	
20	478981.03	3744987.53	FENCEINT	443.90	
21	478981.03	3745004.77	FENCEINT	443.89	

22	478981.04	3745022.02	FENCEINT	443.90	
23	478981.04	3745039.27	FENCEINT	443.93	
24	478981.04	3745056.51	FENCEINT	443.97	
25	478998.33	3745073.82	FENCEINT	444.06	
26	479015.62	3745073.87	FENCEINT	444.13	
27	479032.90	3745073.93	FENCEINT	444.14	
28	479050.19	3745073.98	FENCEINT	444.17	
29	479067.48	3745092.99	FENCEINT	444.23	
30	479067.47	3745111.95	FENCEINT	444.27	
31	479067.47	3745130.90	FENCEINT	444.32	
32	479048.45	3745149.82	FENCEINT	444.32	
33	479029.45	3745149.78	FENCEINT	444.33	
34	479010.44	3745149.75	FENCEINT	444.37	
35	478991.43	3745149.72	FENCEINT	444.40	
36	478972.43	3745149.69	FENCEINT	444.44	
37	478953.42	3745149.65	FENCEINT	444.47	
38	478934.41	3745149.62	FENCEINT	444.49	
39	478915.40	3745149.59	FENCEINT	444.51	
40	478896.40	3745149.55	FENCEINT	444.54	
41	478877.39	3745149.52	FENCEINT	444.57	
42	478858.38	3745149.49	FENCEINT	444.58	
43	478839.38	3745149.45	FENCEINT	444.61	
44	478820.37	3745149.42	FENCEINT	444.62	
45	478801.36	3745149.39	FENCEINT	444.65	
46	478782.36	3745149.36	FENCEINT	444.68	
47	478763.35	3745149.32	FENCEINT	444.69	
48	478744.34	3745149.29	FENCEINT	444.72	
49	478725.33	3745149.26	FENCEINT	444.75	
50	478706.33	3745149.22	FENCEINT	444.86	

Receptor Groups

Record Number	Group ID	Group Description
1	FENCEPRI	Cartesian plant boundary Primary Receptors
2	FENCEINT	Cartesian plant boundary Intermediate Receptors

Meteorology Pathway

AERMOD

Met Input Data

Surface Met Data

Filename: PERI_v9.SFC
Format Type: Default AERMET format

Profile Met Data

Filename: PERI_v9.PFL
Format Type: Default AERMET format

Wind Speed

☐ Wind Speeds are Vector Mean (Not Scalar Means)

Wind Direction

Rotation Adjustment [deg]:

Potential Temperature Profile

Base Elevation above MSL (for Primary Met Tower): 442.00 [m]

Meteorological Station Data

Stations	Station No.	Year	X Coordinate [m]	Y Coordinate [m]	Station Name
Surface		2010			
Upper Air		2010			
On-Site		2010			

Data Period

Data Period to Process

Start Date: 1/1/2010 Start Hour: 1 End Date: 12/31/2016 End Hour: 24

Wind Speed Categories

Stability Category	Wind Speed [m/s]	Stability Category	Wind Speed [m/s]
A	1.54	D	8.23
B	3.09	E	10.8
C	5.14	F	No Upper Bound

Output Pathway

Tabular Printed Outputs

Short Term Averaging Period	RECTABLE Highest Values Table										MAXTABLE Maximum Values Table	DAYTABLE Daily Values Table
	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th		
1	■	☐	☐	☐	☐	☐	☐	☐	☐	☐		No

Contour Plot Files (PLOTFILE)

Path for PLOTFILES: Perris EComm.AD

Averaging Period	Source Group ID	High Value	File Name
1	ALL	1st	01H1GALL.PLT
Period	ALL	N/A	PE00GALL.PLT

HARP Proje 0/2022

PROJECT INFORMATION
HARP Version: 22118
Project Name: PERRIS ECOMM RISK
Project Out ers\ma rtinr\Deskt ECommerce HRA\ ECOMM RISK
HARP Database: NA

FACILITY INFORMATION
Origin
X (m):0
Y (m):0
Zone:1
No. of Sources:0
No. of Buildings:0

EMISSION INVENTORY
No. of Pollutants:9
No. of Background Pollutants:0

Emissions

ScrID	ProID	PolID	PolAbbrev	Multi	Annual Ems (lbs/yr)	MaxHr Ems (lbs/hr)	MWAF
CIRC	0	9901	DieselExhPM	1	0.232948	2.73E-05	1
DOCK1	0	9901	DieselExhPM	1	0.00660418	1.83E-05	1
DOCK2	0	9901	DieselExhPM	1	0.00660418	1.83E-05	1
INDS	0	9901	DieselExhPM	1	0.0958898	1.14E-05	1
INDN	0	9901	DieselExhPM	1	0.0946525	1.12E-05	1
ENTR	0	9901	DieselExhPM	1	0.046916	5.50E-06	1
PARK1	0	9901	DieselExhPM	1	0.00659165	1.83E-05	1
PARK2	0	9901	DieselExhPM	1	0.00953242	1.83E-05	1
EXIT	0	9901	DieselExhPM	1	0.0395853	4.64E-06	1

Background

PolID	Conc (ug/m^3)	MWAF

Ground lev s (\gl c\)

9901MAXHR.txt
9901PER.txt

***POLLUT ***
Health Data s\HEAL TH17320.mdb
Health Tabl 13
Official: True

PolID	InhCa	ncer	Or r	AcuteREL	InhChronic L	OralChronic EL	InhChronic8 REL
9901	1.1				5		

Residential Cancer Risk

*HARP - HRACalc v22118 5/20/2022 10:22:51 AM - Cancer Risk -

REC	GRP	NETID	X	Y	RISK_SUM	SCENARIO
1201	ALL	R1	478700.66	3745175.71	7.29E-07	30YrCancerRMP_Inh
1202	ALL	R2	478714.35	3745152.3	9.44E-07	30YrCancerRMP_Inh
1203	ALL	R3	478774.4	3745152.63	1.14E-06	30YrCancerRMP_Inh
1204	ALL	R4	478875.24	3745278.42	1.48E-07	30YrCancerRMP_Inh
1205	ALL	R5	478894.29	3745296.4	1.22E-07	30YrCancerRMP_Inh
1206	ALL	R6	479206.51	3744874.76	2.99E-08	30YrCancerRMP_Inh

Off-Site Worker Cancer Risk

*HARP - HRACalc v22118 5/20/2022 10:23:41 AM - Cancer Risk -

REC	GRP	NETID	X	Y	RISK_SUM	SCENARIO
1207	ALL	C1	479012.42	3745021.43	8.38E-09	25YrCancerDerived_Inh
1208	ALL	C2	479037.02	3745038.39	7.22E-09	25YrCancerDerived_Inh
1209	ALL	C3	478989.68	3745239.41	8.45E-09	25YrCancerDerived_Inh
1210	ALL	C4	478934.05	3745302.25	8.17E-09	25YrCancerDerived_Inh

Residential Non-Cancer Chronic Maximum HI

*HARP - HRACalc v22118 5/20/2022 10:24:05 AM - Chronic Risk -

REC	GRP	NETID	X	Y	SCENARIO	MAXHI
1201	ALL	R1	478700.66	3745175.71	NonCancerChronicDerived_Inh	1.92E-04
1202	ALL	R2	478714.35	3745152.3	NonCancerChronicDerived_Inh	2.49E-04
1203	ALL	R3	478774.4	3745152.63	NonCancerChronicDerived_Inh	3.02E-04
1204	ALL	R4	478875.24	3745278.42	NonCancerChronicDerived_Inh	3.91E-05
1205	ALL	R5	478894.29	3745296.4	NonCancerChronicDerived_Inh	3.21E-05
1206	ALL	R6	479206.51	3744874.76	NonCancerChronicDerived_Inh	7.87E-06

Off-Site Worker Non-Cancer Maximum HI

*HARP - HRACalc v22118 5/20/2022 10:24:30 AM - Chronic Risk -

REC	GRP	NETID	X	Y	SCENARIO	MAXHI
1207	ALL	C1	479012.42	3745021.43	NonCancerChronicDerived_Inh	2.71E-05
1208	ALL	C2	479037.02	3745038.39	NonCancerChronicDerived_Inh	2.33E-05
1209	ALL	C3	478989.68	3745239.41	NonCancerChronicDerived_Inh	2.73E-05
1210	ALL	C4	478934.05	3745302.25	NonCancerChronicDerived_Inh	2.64E-05

Initial Study Appendix B

Health Risk Assessment

The following section contains content that was obtained from a third party and may not achieve the same level of Americans with Disabilities Act (ADA) and Section 508 accessibility as other parts of this document.

Ramona-Indian Warehouse Project

Warehouse Operations Health Risk Assessment

May 2022 | 04823.00001.001

Prepared for:

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ACRONYMS AND ABBREVIATIONS

ADMRT	Air Dispersion Modeling and Risk Tool
ADT	average daily trips
AERMAP	AERMOD terrain preprocessor
AERMOD	USEPA gaussian plume air dispersion model
amsl	above mean sea level
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
City	City of Perris
DPM	diesel particulate matter
EIR	Environmental Impact Report
°F	Fahrenheit
GVW	gross vehicle weight
HARP	Hotspots Analysis and Reporting Program
HHDT	heavy heavy-duty trucks with a maximum gross vehicle weight more than 33,000 pounds
HRA	health risk assessment
I-	Interstate
LHDT2	light heavy-duty trucks with a maximum gross vehicle weight of 10,000 to 14,000 pounds
m	meters
MHDT	medium heavy-duty trucks with a maximum gross vehicle weight of 14,000 to 33,000 pounds
MEIR	maximally exposed individual resident
mph	miles per hour
NED	National Elevation Dataset
OEHHA	Office of Environmental Health Hazard Assessment
PVCCSP	Perris Valley Commerce Center Specific Plan
REL	Reference Exposure Limit

ACRONYMS AND ABBREVIATIONS (cont.)

SCAB	South Coast Air Basin
SCAQMD	South Coast Air Quality Management District
SF	square feet
SR-	State Route
T-BACT	Toxics Best Available Control Technology
TACs	toxic air contaminants
USEPA	U.S. Environmental Protection Agency
USGS	U.S. Geological Survey
UTM	Universal Transverse Mercator

EXECUTIVE SUMMARY

This report presents an assessment of the potential for increased cancer and chronic health risks resulting from long-term operation of a proposed warehouse facility included as a component of the Ramona-Indian Warehouse Project (project). The predominant toxic air contaminant (TAC) of concern emitted by the project would be diesel particulate matter (DPM). Future emissions of the TAC DPM were estimated using the trip generation data and truck route provided in the project Traffic Analysis. DPM emissions would result from trucks traveling on public roads and project driveways, truck circulating on the project site, trucks idling at the loading docks and truck/trailer parking area.

Air dispersion modeling was completed for the maximum anticipated truck trips related to project operation. A health risk analysis was completed for the closest existing residential and off-site worker receptors. The increased cancer risk, chronic hazard indices, and cancer burden for the exposed individual residents and off-site workers would be below their respective thresholds. Long-term operation of the proposed warehouse would not result in a significant impact related to the exposure of sensitive receptors to substantial TAC concentrations.

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1.0 INTRODUCTION

This report presents an assessment of the potential for increased cancer and chronic health risks resulting from long-term operation of a proposed warehouse facility included as a component of the Ramona-Indian Warehouse Project (project).

1.1 PROJECT LOCATION

The project site is located at the northeast corner of the intersection of Ramona Expressway and Indian Avenue, in the City of Perris (City) in western Riverside County, California. The project site includes approximately 15 acres and is located approximately 1.4 miles east of Interstate (I-) 215 and approximately 6.5 miles south of State Route (SR-) 60. The project site is within the western Riverside County portion of the South Coast Air Basin (SCAB). Air quality in the project area is under the jurisdiction of the South Coast Air Quality Management District (SCAQMD). See Figure 1, *Regional Location*. The project is located within the Perris Valley Commerce Center Specific Plan (PVCCSP) area.

1.1.1 Existing Site Conditions

The project site is generally characterized as disturbed vacant land that was previously used for agricultural purposes. The project site is generally flat with an elevation between 1,450 and 1,460 feet above mean sea level (amsl). The southern portion of the project site includes a surface-level drainage swale that is owned and maintained by the Riverside County Flood Control and Water Conservation District and runs in an east-west direction. Surrounding land uses include: three single family residences (on parcels with commercial and industrial land use designations), undeveloped area, and commercial development (beyond and undeveloped area to the north); a retail gasoline station abutting the project site to the east; commercial development and undeveloped land to the east across Perris Boulevard; commercial development with residential areas beyond to the southeast across Ramona Expressway and Perris Boulevard; industrial development (beyond undeveloped areas) to the south across Ramona Expressway; industrial development to the southwest (beyond retention basins) across Ramona Expressway and Indian Avenue; and undeveloped land to the east across Indian Avenue. See Figure 2, *Aerial Photo*.

1.2 PROJECT DESCRIPTION

The project would develop light industrial uses and commercial uses in two phases. Phase 1 would develop a 232,575 square feet (SF) multi-tenant distribution building (warehouse) that includes 10,000 SF of internal office space, parking areas and driveways, a pad for future commercial development, storm drains and a water quality management retention basin, all on approximately 15 acres at the northeast corner of Indian Avenue and Ramona Expressway. Development of the commercial pad is not a part of the project. The warehouse would include 39 loading docks. The parking area would include 410 auto/light truck stalls, and 52 truck/trailer stalls. The storm drain system would include construction of the storm drain Line E within the project site. See Figure 3, *Site Plan*. The project would include roadway improvements for Ramona Expressway, Indian Avenue, and Perris Boulevard. Additional improvements would include landscaping, screen walls and fencing, and lighting.

Phase 2 would develop a commercial pad on the 1.61 acres in the northeastern portion of the project site with a 125-room hotel. Until development of the commercial pad occurs, temporary staging

activities may occur in this area to support construction of the light industrial uses described above. Trucks traveling to and from the project hotel would utilize the different routes and entrance driveways than trucks traveling to and from the project warehouse. This HRA only analyzes operational DPM emissions from truck associated with operation of the project warehouse.

2.0 ENVIRONMENTAL SETTING

2.1 TOXIC AIR CONTAMINANTS

Toxic air contaminants (TACs) are a diverse group of air pollutants that may cause or contribute to an increase in deaths or in serious illness or that may pose a present or potential hazard to human health. TACs can cause long-term health effects such as cancer, birth defects, neurological damage, asthma, bronchitis, or genetic damage, or short-term acute effects such as eye watering, respiratory irritation (a cough), runny nose, throat pain, and headaches. TACs are considered either carcinogenic or noncarcinogenic based on the nature of the health effects associated with exposure to the pollutant. For carcinogenic TACs, there is no level of exposure that is considered safe and impacts are evaluated in terms of overall relative risk expressed as excess cancer cases per one million exposed individuals. Noncarcinogenic TACs differ in that there is generally assumed to be a safe level of exposure below which no negative health impact is believed to occur. These levels are determined on a pollutant-by-pollutant basis.

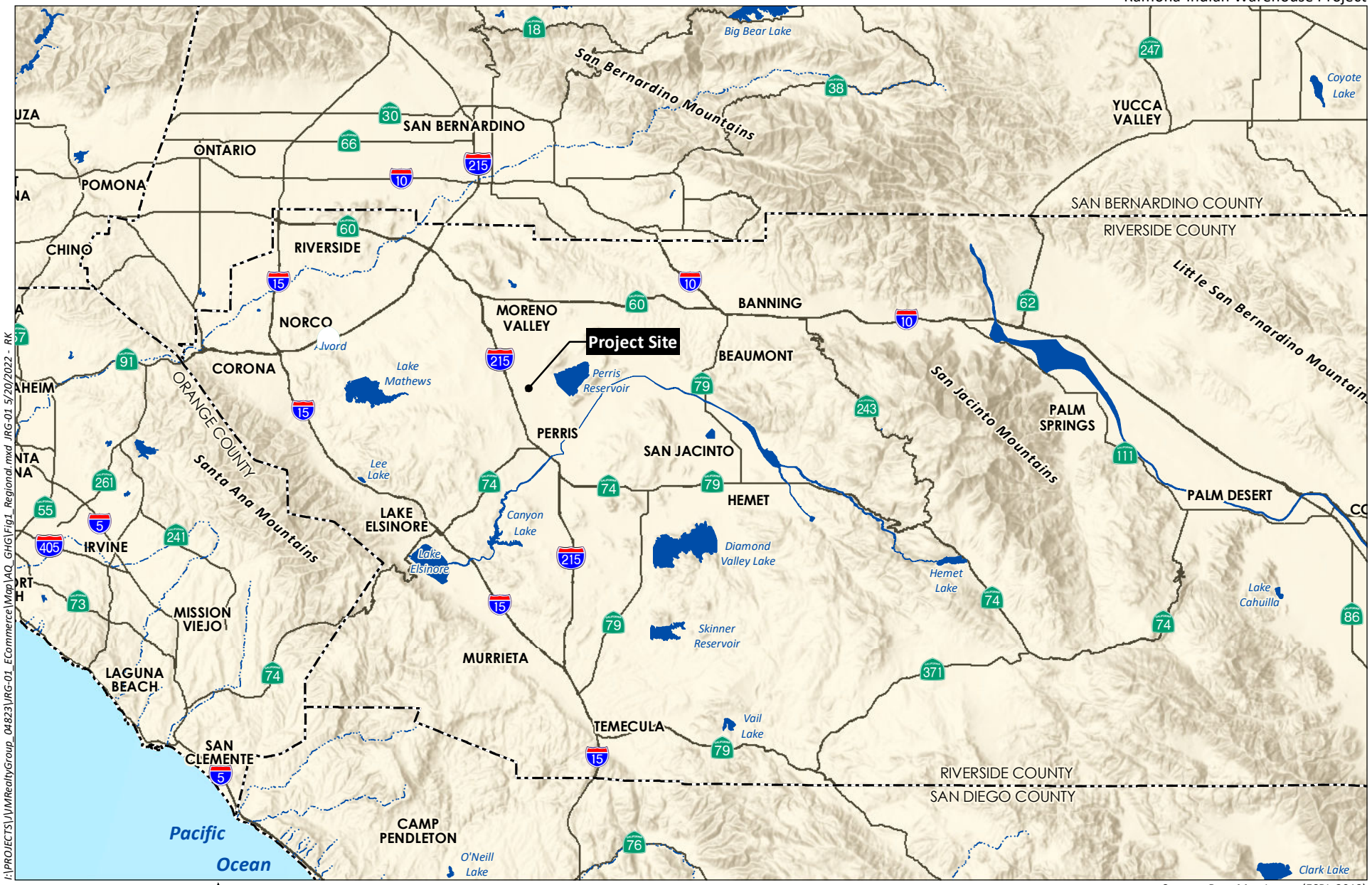
Diesel engines emit a complex mixture of air pollutants, including both gaseous and solid material. The solid material in diesel exhaust is referred to as diesel particulate matter (DPM). Almost all DPM is 10 microns or less in diameter, and 90 percent of DPM is less than 2.5 microns in diameter (California Air Resources Board [CARB] 2021a). Because of their extremely small size, these particles can be inhaled and eventually trapped in the bronchial and alveolar regions of the lung. In 1998, CARB identified DPM as a TAC based on published evidence of a relationship between diesel exhaust exposure and lung cancer and other adverse health effects. DPM has a notable effect on California's population—it is estimated that about 70 percent of total known cancer risk related to air toxics in California is attributable to DPM (CARB 2021a).

2.1.1 Toxics Best Available Control Technology

Diesel powered on-road (highway) trucks are a potential source of DPM. The Toxics Best Available Control Technology (T-BACT) for operation of diesel internal combustion engines is compliance with U.S. Environmental Protection Agency (USEPA) and CARB emissions standards. All heavy-duty diesel powered on-road vehicles manufactured since 2010 are required to meet USEPA emissions standards, including reductions of emissions of DPM by approximately 90 percent compared to unregulated engines (USEPA 2021).

2.2 SENSITIVE RECEPTORS

CARB and the Office of Environmental Health Hazard Assessment (OEHHA) have identified the following groups of individuals as the most likely to be affected by air pollution: adults over 65, children under 14, infants (including in utero in the third trimester of pregnancy), and persons with cardiovascular and chronic respiratory diseases such as asthma, emphysema, and bronchitis (CARB 2005; OEHHA 2015). Some land uses are considered more sensitive to air pollution than others due to the types of population



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Source: Base Map Layers (ESRI, 2013)

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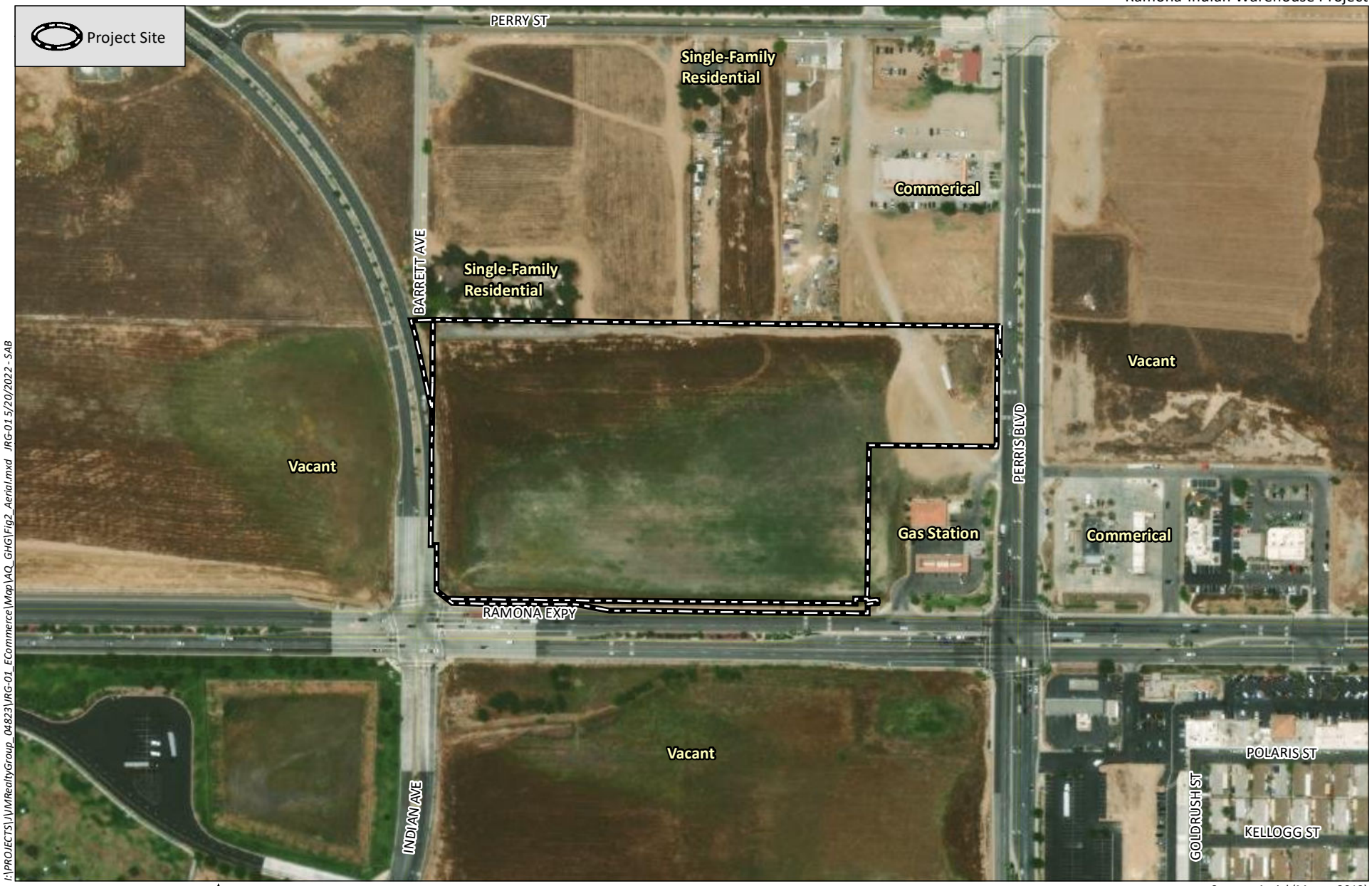
Regional Location

Figure 1



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Source: Aerial (Maxar, 2019)

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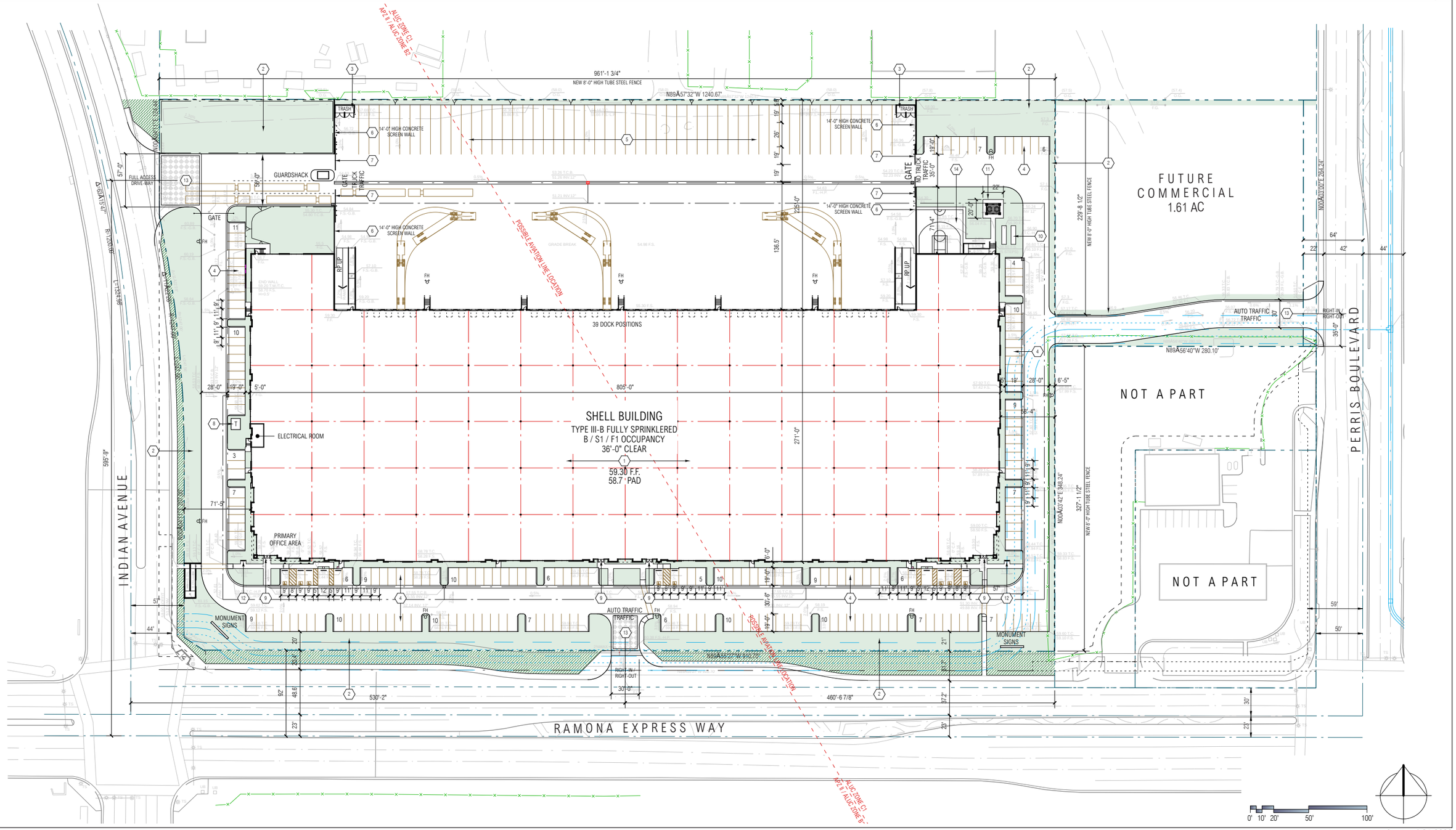
Aerial Photo

Figure 2



Source: RGA 2022

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Site Plan

Figure 3

groups or activities involved and are referred to as sensitive receptor locations. Examples of these sensitive receptor locations are residences, schools, hospitals, and daycare centers. For health risk assessments, the health impacts are analyzed for individual residents assumed to be standing in their primary outdoor spaces closest to the source of TACs, for students assumed to be standing outside of the school buildings or in outdoor recreation areas closest to the source of TACs, and for individual off-site workers assumed to be standing outside of a commercial or industrial building.

The closest existing sensitive receptor locations to the project site are located at three single-family residences on parcels abutting the project site to the north. Even though these parcels are not zoned for residential uses, they are still considered locations where sensitive receptors may be located for extended periods. There are reports that the closest single-family residence to the project site (adjacent to the project northwest corner) has been demolished. However, persons may still be residing at this location in recreational vehicles. To be conservative (health protective) in this analysis, this location is considered a residential site. Additional residential sensitive receptors are located southeast of the project site, across Ramona Expressway and North Perris Boulevard, behind a row of commercial buildings.

3.0 METHODOLOGY

Potential health risks to nearby sensitive receptors from the emission of TACs during operation of the proposed warehouse were analyzed in accordance with applicable portions of the OEHHA *Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments* (OEHHA 2015), and applicable portions of the SCAQMD's *Modeling Guidance for AERMOD* (SCAQMD 2021).

3.1 TAC EMISSIONS

Calculations of DPM emissions were based on the project trip generation estimate (57 trucks entering the site per day) and the truck route (all trucks would use Indian Avenue north of Ramona Expressway) described in the project Traffic Analysis (Urban Crossroads 2021). Trucks on Indian Avenue were assumed be traveling at the posted speed limit of 40 miles pers hour (mph). Trucks entering and exiting the project driveway were assumed to be traveling at 15 mph. Trucks circulating within the project site were assumed to be traveling at 5 mph. All trucks were assumed to idle at the loading docks for the maximum allowable 5 minutes (per California Code of Regulations [CCR] Title 13, Section 2485). In addition, 25 percent of trucks were assumed to stage in the truck/trailer parking area before or after unloading/loading and idle for an additional 5 minutes. Truck idling emissions were assumed to be approximately equivalent to truck emissions at 5 mph.

Emissions of DPM from trucks were calculated using emission factors from CARB's EMFAC2021 version 1.0.1 online database (CARB 2021b). The truck fleet mix was estimated from the project Traffic Analysis which reported average daily trips (ADT; two trips per truck) of 24 two-axle trucks, 30 three-axle trucks, and 88 four or more axle trucks (142 total truck ADT; Urban Crossroads 2021). Two-axle trucks were assumed to be light-heavy duty (LHDT2; 10,000 to 14,000 pounds gross vehicle weight [GVW]). Three-axle trucks were assumed to be medium-heavy duty (MHDT; 14,000 to 33,000 GVR). Four or mor axle trucks were assumed to be heavy-heavy duty (HHDT; greater than 33,000 GVR). The DPM emissions for each source modeled is shown in Table 1, *DPM Emissions*. The complete emissions calculation sheets are included as Appendix A, *DPM Emissions Calculations*, to this report.

Table 1
DPM EMISSIONS

Source	DPM Emissions (pounds/year)	DPM Emissions (pounds/hour)
Trucks traveling northbound on Indian Avenue	0.0947	1.1228E-05
Trucks traveling southbound on Indian Avenue	0.0959	1.1375E-05
Trucks entering the project site	0.0469	5.5019E-06
Trucks exiting the project site	0.0396	4.6422E-06
Trucks circulating within the project site	0.2329	2.7265E-05
Trucks at the loading docks	0.0132	3.6587E-05
Trucks in the parking area	0.0132	3.6587E-05

Source: Emission factors from EMFAC2021 and OFFROAD2021 (CARB 2021b); emissions calculation sheets included in Appendix A.

3.2 DISPERSION MODELING

Localized concentrations of DPM were modeled using Lakes AERMOD View version 10.2.0. The Lakes program utilizes the USEPA's AERMOD gaussian air dispersion model version 19191. Plot files from AERMOD using unitized emissions (one gram per second) for each DPM source were imported into CARB's Hotspots Analysis and Reporting Program (HARP), Air Dispersion Modeling and Risk Tool (ADMRT) version 21118. The ADMRT calculated ground-level concentrations of DPM utilizing the imported plot files and the annual and hourly emissions inventory shown in Table 1. The modeling input and output are included in Appendix B, *HRA Modeling Output*, to this report.

3.2.1 Source Parameters

Trucks traveling on Indian Avenue, the project driveway, and within the project site were modeled as line volume sources following methodology/calculations recommended in the USEPA *Haul Road Workgroup Final Report*, using an average truck height of 4 meters (13.1 feet) and average truck width of 2.6 meters (8.5 feet; USEPA 2011). Trucks parked in the loading dock area and parking area were modeled as volume sources with a 25 meter (82 feet) wide base and a height of 4 meters (13.1 feet). To be conservative in capturing the highest reasonably foreseeable initial plume concentration, half of all trucks were assumed to use the docks on the west end of the dock area with the other half using docks at the east end. Similarly, half of parked trucks were assumed to be concentrated at the west end of the parking area (nearest to the closest sensitive receptor location) with the remaining at the east end. The complete model reports are included in Appendix B to this report.

Emissions of DPM would not be constant throughout the day. The volume of trucks entering and exiting the site would vary by hour of the day and day of the week. However, since the project is assumed to operate 24 hours per day, 7 days per week, the truck volume was assumed to be steady (at peak hour volume) throughout all hours of the day and week. This modeling assumption is generally conservative (health protective).

3.2.2 Meteorological Data

SCAQMD provides pre-processed meteorological data suitable for use with AERMOD (SCAQMD 2017). The available data set most representative of conditions in the project vicinity was from the Perris station, approximately 4 miles south of the project site. A wind rose for the Perris station shows an

average wind speed of 3.7 miles per hour from the northwest (SCAQMD 2017). The wind rose graphics are included in Appendix B to this report. The Perris station set includes 5 years of data collected between 2010 and 2016. Urban dispersion coefficients with a Riverside County population of 2,189,641 were selected in the model in accordance with SCAQMD modeling recommendations (SCAQMD 2021).

3.2.3 Terrain Data

United States Geological Survey (USGS) National Elevation Dataset (NED) files with a 30-meter resolution covering an area approximately one kilometer around the project site were used in the model to cover the analysis area. Terrain data was imported to the model using AERMAP, a terrain preprocessing program for AERMOD.

3.2.4 Receptor Modeling

To develop risk isopleths (linear contours showing equal level of risk), receptors were placed in a cartesian grid 780 meters by 580 meters (approximately 2,560 feet by 1,900 feet), centered on the project site with a grid spacing of 20 meters (66 feet) and a receptor height (flagpole height) of 1.2 meters (4 feet) above the ground. To ensure the area of maximum off-site impact was captured, receptors were placed along the project boundary at 20-meter (66 feet) intervals. Additional discrete receptors were placed at the closest primary outdoor spaces for 3 locations at the closest residence to the northwest, 1 location each for the two residences along Perry Steet to the north, 1 location for the mobile home park to the southeast, and 4 locations for the closest existing worker buildings. See Figure 4, *Receptor Locations*, for the modeled discrete receptor locations relative to the project site and modeled sources.

3.3 RISK DETERMINATION

Health risks resulting from localized concentration of DPM were estimated using the ADMRT. The latest cancer slope factors and chronic Reference Exposure Limits (RELs), and exposure paths for all TACs designated by CARB are included in ADMRT. For the residential cancer risk, an exposure duration of 30 years was selected in accordance with the OEHHA (2015) guidelines. The model conservatively assumes that residents would be standing and breathing outdoors at the location of the property line closest to the project every day between 17 and 21 hours per day (depending on the age group, starting with infants in utero in the third trimester of pregnancy) for 30 years. The Risk Management Policy (RMP) using the derived method for the intake rate percentile was selected in accordance with the SCAQMD guide recommendations (SCAQMD 2021). For off-site worker cancer risk, an exposure duration of 25 years was selected with an assumption of 8 hours per day, 5 days per week of exposure while standing outside with moderate intensity breathing rates, in accordance with the OEHHA guidelines. Because DPM only has an inhalation cancer slope factor and an inhalation chronic REL, only the cancer risk and chronic risk from exposure to DPM was evaluated, and only the inhalations pathway was evaluated. The modeling input and out is included in Appendix B to this report.

Cancer burden evaluates an overall population's increased cancer risk and is defined as the increases in cancer cases in the population due exposure to TACs from a project. Cancer burden is calculated differently from individual risk. Per OEHHA, cancer burden uses a 70-year exposure to evaluate population-wide cancer risk, and the cancer burden only evaluates residential exposure (not worksites). Cancer burden is calculated by multiplying the number of residents exposed to an incremental excess

cancer risk of 1 in 1 million or greater by the estimated incremental excess cancer risk of the maximally exposed individual resident (MEIR).

3.4 SIGNIFICANCE CRITERIA

For a Type A project (siting a new source of emissions), the SCAQMD recommends the following thresholds for the project's incremental contribution to community health risks (SCAQMD 2019):

Cancer Risk – An increased risk of 10 in 1 million for the maximally exposed individual to project emissions.

Cancer Burden – 0.5 excess cancer cases in areas exposed to 1 in 1 million or greater cancer risk from project emissions.

Chronic Health Risk – A Hazard Index of 1 for the maximally exposed individual to project emissions.

4.0 HEALTH RISK IMPACT ANALYSIS

4.1 ANALYSIS IN THE SPECIFIC PLAN EIR

The project is located within the PVCCSP area for which an EIR was certified in 2011. Impacts to sensitive receptors resulting from long-term operation of development within the PVCCSP area were analyzed in the EIR which concluded that, with implementation of mitigation measures, implementation of the PVCCSP would not expose sensitive receptors to substantial pollutant concentrations (EIR; City 2011 pp. 4.2-48 through 4.2-50). The following mitigation measures from the PVCCSP EIR would be applicable to the project and related to the exposure of sensitive receptors to substantial concentrations of DPM from warehouse operations.

MM Air 11: Signage shall be posted at loading docks and all entrances to loading areas prohibiting all on-site truck idling in excess of 5 minutes.

MM AIR 13: In order to promote alternative fuels, and help support "clean" truck fleets, the developer/successor-in-interest of each implementing development project shall provide building occupants information related to SCAQMD's Carl Moyer Program, or other state programs that restrict operations to "clean" trucks, such as 2007 or newer model year or 2010 compliant vehicles.

MM AIR 15: To identify potential implementing development project-specific impacts resulting from the use of diesel trucks, proposed implementing development projects that include in excess of 10 dock doors for a single building, a minimum of 100 truck trips per day, 40 truck trips with TRUs per day, or TRU operations exceeding 300 hours per week, and that are subject to CEQA and are located adjacent to sensitive land uses; shall have a facility-specific Health Risk Assessment performed to assess the diesel particulate matter impacts from mobile-source traffic generated by the that implementing development project. The results of the Health Risk Assessment shall be included in the CEQA documentation for each implementing development project.

This HRA constitutes compliance with MM AIR 15.

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Source: Aerial (Maxar, 2019)

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Receptor Locations

Figure 4

4.2 PROJECT ANALYSIS

The incremental excess cancer risk is an estimate of the chance a person exposed to a specific source of a TAC may have of developing cancer from that exposure beyond the individual's risk of developing cancer from existing background levels of TACs in the ambient air. For context, the average cancer risk from TACs in the ambient air for an individual living in an urban area of California is 830 in 1 million (CARB 2015). Cancer risk estimates do not mean, and should not be interpreted to mean, that a person will develop cancer from estimated exposures to toxic air pollutants.

The maximum estimated community incremental excess cancer risks due to exposure to the project TAC emissions from long term operation are presented in Table 2, *Maximum Incremental Cancer Health Risk*. These estimates are conservative (health protective) and assume that the student, resident, or worker is outdoors for the entire exposure period.

Table 2
MAXIMUM INCREMENTAL CANCER HEALTH RISK

	Maximally Exposed Individual Resident Cancer Risk (per million)	Maximally Exposed Individual Worker Cancer Risk (per million)
Results	1.1	<0.1
Threshold	10	10
Exceed Threshold?	No	No

Source: Lakes AERMOD View version 10.2.0 and CARB ADMRT version 21081. See Appendix B for model inputs, outputs, and risk isopleths.

The estimated incremental excess cancer risk and chronic hazard index due to exposure to the project's TAC emissions for each receptor location (shown in Figure 4) are presented in Table 3, *Discrete Receptor Incremental Cancer and Chronic Health Risk*. The model inputs, outputs, and risk isopleth figures are available in Appendix A to this report.

Table 3
DISCRETE RECEPTOR INCREMENTAL CANCER AND CHRONIC HEALTH RISK

Receptor ID	Type	Location	Cancer Risk (per million)	Chronic Hazard Index
R1	Residential	4111 Barrett Avenue, west	0.7	<0.01
R2	Residential	4111 Barrett Avenue, southwest	0.9	<0.01
R3	Residential	4111 Barrett Avenue, southeast	1.1	<0.01
R4	Residential	111 Perry Street	0.1	<0.01
R5	Residential	91 Perry Street	0.1	<0.01
R6	Residential	Park Place Mobile Home Park, northwest corner	<0.1	<0.01
C1	Commercial	4040 Perris Boulevard, southwest corner	<0.1	<0.01
C2	Commercial	4040 Perris Boulevard, northeast corner	<0.1	<0.01
C3	Commercial	4164 Perris Boulevard	<0.1	<0.01
C4	Commercial	77 Perry Street	<0.1	<0.01

Source: Lakes AERMOD View version 10.2.0 and CARB ADMRT version 211118. See Appendix B for model inputs, outputs, and residential cancer risk isopleths.

For cancer burden, only the residence adjacent to the northwest corner of the project site is within or touching the 1 in 1 million isopleth. Assuming up to 10 residents per residence, the total exposed

population would be 10. The cancer burden would be 1.1 x 10^{-6} (risk at the MEIR using a 70-year exposure) times 10, or 0.00001, below the SCAQMD threshold of 0.5.

The point of maximum off-site impact would be on the project's north boundary at approximately Universal Transverse Mercator (UTM) coordinates Zone 11, 478782 meters East, 3745149 meters North. No students, residents or workers are anticipated to be at the point of maximum impact for prolonged periods. If residents were to be located at the point of maximum impact for 30 years, the estimated incremental excess cancer risk would be 1.5 in 1 million. The point of maximum impact is shown in Figure 4.

As shown in Table 2 and Table 3, the incremental increased cancer risks would not exceed the SCAQMD threshold of 10 in 1 million and the chronic health indices would not exceed the SCAQMD threshold of 1. The estimated incremental excess cancer risk for the MEIR would be 1.1 in 1 million. The residential incremental increased cancer risk isopleths and location of the MEIR are shown in Figure 4. Therefore, community health risks due to exposure to DPM emissions from long term operation of the proposed warehouse would not exceed the SCAQMD thresholds, and long-term operation of the project would not result in a significant impact related to the exposure of sensitive receptors to substantial TAC concentrations.

5.0 LIST OF PREPARERS

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Victor Ortiz	Senior Air Quality Specialist

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Appendix A

DPM Emissions Calculations

The following section contains content that was obtained from a third party and may not achieve the same level of Americans with Disabilities Act (ADA) and Section 508 accessibility as other parts of this document.

Truck DPM Calculations

Southbound Indian Ave (40 mph)	Emission Factor (lb./mile)	Miles	Peak Hour Trips	ADT	Annual Trips	Max lb./hour	Annual lb./year
2 Axle (LHDT)	3.71326E-05	0.155	0.5	12	4380	2.8778E-06	2.5209E-02
3 Axle (MHDT)	1.08144E-05	0.155	0.5	15	5475	8.3812E-07	9.1774E-03
4 or more Axle (HHDT)	2.47070E-05	0.155	2	44	16060	7.6592E-06	6.1503E-02
Total			**3**	**71**		**1.1375E-05**	**9.5890E-02**

Northbound Indian Ave (40 mph)	Emission Factor (lb./mile)	Miles	Peak Hour Trips	ADT	Annual Trips	Max lb./hour	Annual lb./year
2 Axle (LHDT)	3.71326E-05	0.153	0.5	12	4380	2.8406E-06	2.4884E-02
3 Axle (MHDT)	1.08144E-05	0.153	0.5	15	5475	8.2730E-07	9.0590E-03
4 or more Axle (HHDT)	2.47070E-05	0.153	2	44	16060	7.5603E-06	6.0710E-02
Total			**3**	**71**		**1.1228E-05**	**9.4653E-02**

Entrance Drive (15 mph)	Emission Factor (lb./mile)	Miles	Peak Hour Trips	ADT	Annual Trips	Max lb./hour	Annual lb./year
2 Axle (LHDT)	7.95470E-05	0.064	0.5	12	4380	2.5455E-06	2.2299E-02
3 Axle (MHDT)	9.38922E-06	0.064	0.5	15	5475	3.0045E-07	3.2900E-03
4 or more Axle (HHDT)	2.07497E-05	0.064	2	44	16060	2.6560E-06	2.1327E-02
Total			**3**	**71**		**5.5019E-06**	**4.6916E-02**

Exit Drive (15 mph)	Emission Factor (lb./mile)	Miles	Peak Hour Trips	ADT	Annual Trips	Max lb./hour	Annual lb./year
2 Axle (LHDT)	7.95470E-05	0.054	0.5	12	4380	2.1478E-06	1.8814E-02
3 Axle (MHDT)	9.38922E-06	0.054	0.5	15	5475	2.5351E-07	2.7759E-03
4 or more Axle (HHDT)	2.07497E-05	0.054	2	44	16060	2.2410E-06	1.7995E-02
Total			**3**	**71**		**4.6422E-06**	**3.9585E-02**

Circulation (5 mph)	Emission Factor (lb./mile)	Miles	Peak Hour Trips	ADT	Annual Trips	Max lb./hour	Annual lb./year
2 Axle (LHDT)	1.29091E-04	0.207	0.5	12	4380	1.3361E-05	1.1704E-01
3 Axle (MHDT)	1.40972E-05	0.207	0.5	15	5475	1.4591E-06	1.5977E-02
4 or more Axle (HHDT)	3.00591E-05	0.207	2	44	16060	1.2444E-05	9.9929E-02
Total			**3**	**71**		**2.7265E-05**	**2.3295E-01**

Idling Dock Area 1, 2	Emission Factor (lb./min)	Minutes	Peak Hour Trips	ADT	Annual Trips	Max lb./hour	Annual lb./year
2 Axle (LHDT)	1.07576E-05	5	0.25	6	2190	1.3447E-05	1.1780E-01
3 Axle (MHDT)	1.17477E-06	5	0.25	7.5	2737.5	1.4685E-06	1.6080E-02
4 or more Axle (HHDT)	2.50493E-06	5	1	22	8030	1.2525E-05	1.0057E-01
Total			**1.5**	**35.5**		**1.8293E-05**	**6.6042E-03**

Idling Parking Area 1, 2	Emission Factor (lb./min)	Minutes	Peak Hour Trips	ADT	Annual Trips	Max lb./hour	Annual lb./year
2 Axle (LHDT)	1.07576E-05	5	0.0625	1.5	547.5	3.3618E-06	2.9449E-02
3 Axle (MHDT)	1.17477E-06	5	0.0625	1.9	693.5	3.6711E-07	4.0735E-03
4 or more Axle (HHDT)	2.50493E-06	5	0.25	5.5	2007.5	3.1312E-06	2.5143E-02
Total			**0.375**	**8.9**		**1.8293E-05**	**6.5917E-03**

Notes:
1. Exhaust PM10 emissions factor reported by EMFAC2021 in grams/mile.
2. 1 gram = 0.0022046 pounds.
3. Idling emissions calculated assuming idling emissions are approximately equal to 5 mph emissions.
4. 5 mph = 0.08333 miles per minute.

ADMRT Input

Source ID	Annual (lb/year)	Max Hour (lb/hr)
CIRC	2.32948E-01	2.72645E-05
DOCK1	6.60418E-03	1.82934E-05
DOCK2	6.60418E-03	1.82934E-05
ENTR	4.69160E-02	5.50192E-06
EXIT	3.95853E-02	4.64224E-06
INDN	9.46525E-02	1.12283E-05
INDS	9.58898E-02	1.13751E-05
PARK1	6.59165E-03	1.82934E-05
PARK2	6.59165E-03	1.82934E-05

Source: EMFAC2017 (v1.0.3) Emission Rates
Region Type: Sub-Area
Region: Riverside (SC)
Calendar Year: 2025
Season: Annual
Vehicle Classification: EMFAC2007 Categories
Units: miles/day for VMT, g/mile for RUNEX, mph for Speed

Region	Calendar Year	Vehicle Category	Model Year	Speed	Fuel	VMT	PM10_RUNEX
Riverside (SC)	2025	HHDT	Aggregate	5	Diesel	4359.75653	0.013634738
Riverside (SC)	2025	HHDT	Aggregate	15	Diesel	3476.70988	0.009411992
Riverside (SC)	2025	HHDT	Aggregate	40	Diesel	109406.185	0.011207014
Riverside (SC)	2025	LHDT2	Aggregate	5	Diesel	405.10861	0.058555466
Riverside (SC)	2025	LHDT2	Aggregate	15	Diesel	280.313151	0.036082299
Riverside (SC)	2025	LHDT2	Aggregate	40	Diesel	10842.413	0.01684325
Riverside (SC)	2025	MHDT	Aggregate	5	Diesel	1914.18008	0.006394443
Riverside (SC)	2025	MHDT	Aggregate	15	Diesel	1395.85207	0.00425892
Riverside (SC)	2025	MHDT	Aggregate	40	Diesel	44505.578	0.004905395

Appendix B

HRA Modeling Output

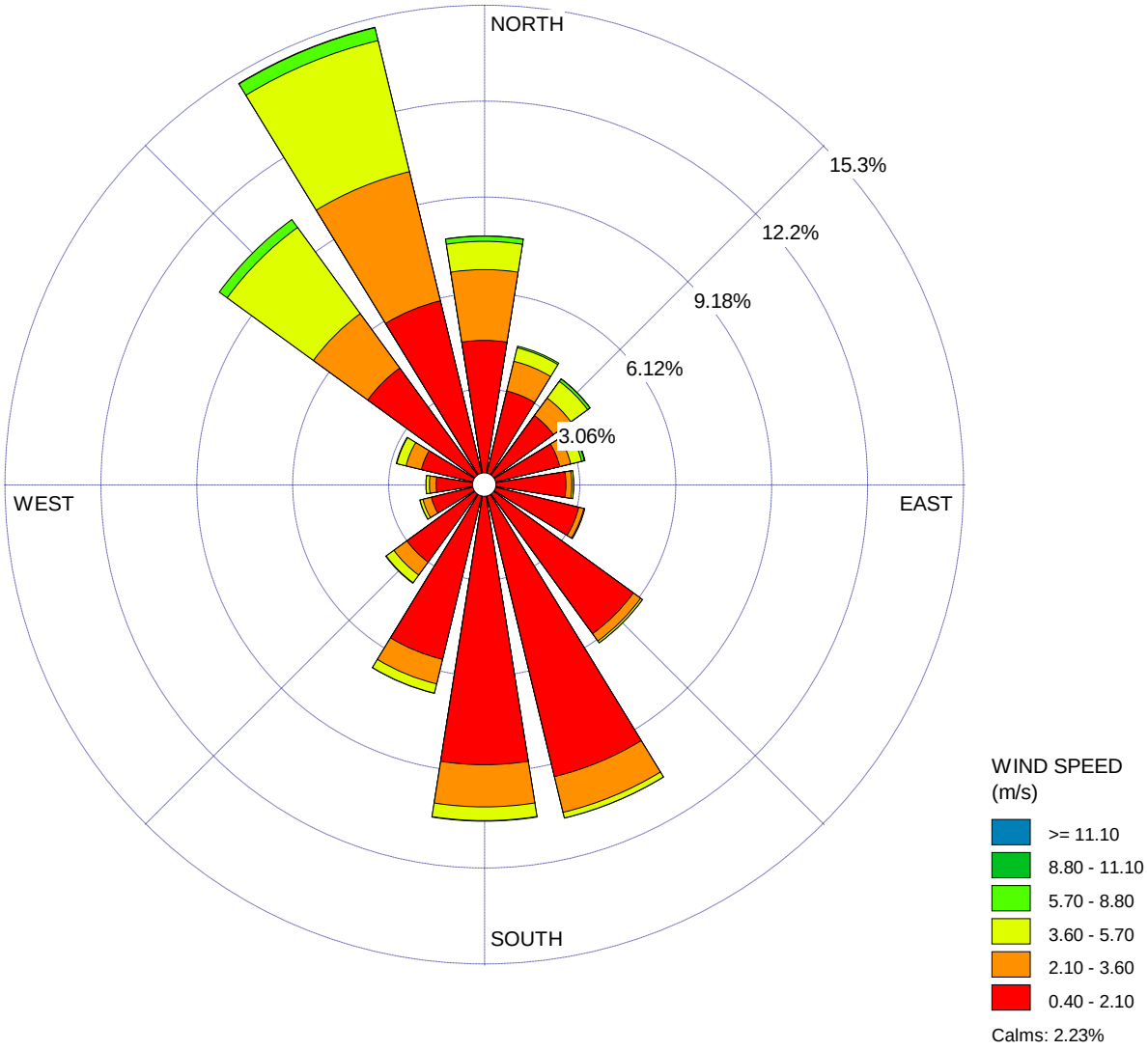
The following section contains content that was obtained from a third party and may not achieve the same level of Americans with Disabilities Act (ADA) and Section 508 accessibility as other parts of this document.

WIND ROSE PLOT:

Station #3171

DISPLAY:

Wind Speed
Direction (blowing from)



COMMENTS:	DATA PERIOD: **Start Date: 1/1/2010 - 00:00** **End Date: 12/31/2016 - 23:59**	COMPANY NAME: **South Coast Air Quality Management District**	
		MODELER: **Melissa Sheffer**	
	CALM WINDS: **2.23%**	TOTAL COUNT: **43476 hrs.**	
	AVG. WIND SPEED: **1.65 m/s**	DATE: **5/25/2017**	PROJECT NO.:

PROJECT TITLE:

Ramona-indina Warehouse
Residential Cancer Risk

PLOT FILE OF PERIOD VALUES FOR SOURCE GROUP: ALL ug/m^3

Max: 2.0 [ug/m^3] at (478780.00, 3745120.00)

1.0 2.0 5.0

COMMENTS: Chance per Million: 1 in 1 million isopleth	SOURCES: **9**	COMPANY NAME: **HELIX Environmenal Planning**	
	RECEPTORS: **1273**		
	OUTPUT TYPE: **Concentration**	SCALE: 1:6,730 0 0.2 km	
	MAX: **2.0 ug/m^3**	DATE: **5/20/2022**	PROJECT NO.:

PROJECT TITLE:

Ramona-indina Warehouse
Cancer Burden

PLOT FILE OF PERIOD VALUES FOR SOURCE GROUP: ALL ug/m^3

Max: 2.4 [ug/m^3] at (478780.00, 3745120.00)

1.0 10.0

COMMENTS: Chance per Million: 1 in 1 million isopleth	SOURCES: **9**	COMPANY NAME: **HELIX Environmenal Planning**	
	RECEPTORS: **1273**		
	OUTPUT TYPE: **Concentration**	SCALE: 1:6,711 0 0.2 km	
	MAX: **2.4 ug/m^3**	DATE: **5/20/2022**	PROJECT NO.:

Control Pathway

AERMOD

Dispersion Options

Titles

C:\Users\martinr\Desktop\Perris ECommerce HRA\Perris EComm\Perris EC

Dispersion Options

- [■] Regulatory Default
- [ ] Non-Default Options

Dispersion Coefficient

Urban

Population:
Name (Optional):
Roughness Length:

Output Type

- [■] Concentration
- [ ] Total Deposition (Dry & Wet)
- [ ] Dry Deposition
- [ ] Wet Deposition

Plume Depletion

- [ ] Dry Removal
- [ ] Wet Removal

Output Warnings

- [ ] No Output Warnings
- [ ] Non-fatal Warnings for Non-sequential Met Data

Pollutant / Averaging Time / Terrain Options

Pollutant Type

OTHER - DPM

Averaging Time Options

Hours

1	2	3	4	6	8	12	24
[■]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]

- [ ] Month
- [■] Period
- [ ] Annual

Exponential Decay

Half-life of 4 hrs will be used

Terrain Height Options

- [ ] Flat
- [■] Elevated

SO: Meters
RE: Meters
TG: Meters

Flagpole Receptors

- [■] Yes
- [ ] No

Default Height = 1.20 m

Control Pathway

Optional Files

Re-Start File	Init File	Multi-Year Analyses	Event Input File	Error Listing File
☐	☐	☐	☐	■

Detailed Error Listing File

Filename: Perris EComm.err

Source Pathway - Source Inputs

Volume Sources

Source Type	Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation (Optional)	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dim. [m]	Initial Vertical Dim. [m]
VOLUME	DOCK1	478775.92 Dock Area 1	3745097.05	444.30	3.60	1.00000	25.00	Surface-Based	5.81	1.86
VOLUME	DOCK2	478907.00 Dock Area 2	3745096.97	444.15	3.60	1.00000	25.00	Surface-Based	5.81	1.86
VOLUME	PARK1	478774.46 Parking Area 1	3745133.84	444.61	3.60	1.00000	25.00	Surface-Based	5.81	1.86
VOLUME	PARK2	478906.71 Parking Area 2	3745133.62	444.45	3.60	1.00000	25.00	Surface-Based	5.81	1.86

Source Pathway - Source Inputs

Line Volume Sources

Source Type: LINE VOLUME

Source: CIRC (Truck Circulation)

Length of Side [m]	Emission Rate [g/ s]	Building Height [m]	X Coordinate for Points [m]	Y Coordinate for points [m]	Base Elevation [m]	Release Height [m]
8.60	1.00000		478746.04	3745120.10	444.51	3.40
			478875.89	3745119.95	444.31	3.40
			478886.94	3745110.35	444.22	3.40
			478889.12	3745100.03	444.18	3.40
			478891.73	3745110.79	444.22	3.40
			478891.88	3745131.58	444.48	3.40
			478771.05	3745131.29	444.60	3.40
			478760.43	3745128.24	444.62	3.40
			478745.89	3745127.95	444.63	3.40

Source Type: LINE VOLUME

Source: ENTR (Entrance Drive)

Length of Side [m]	Emission Rate [g/ s]	Building Height [m]	X Coordinate for Points [m]	Y Coordinate for points [m]	Base Elevation [m]	Release Height [m]
8.60	1.00000		478745.99	3745120.01	444.51	3.40
			478674.94	3745120.01	445.49	3.40
			478666.90	3745150.27	445.62	3.40

Source Type: LINE VOLUME

Source: EXIT (Exist Driveway)

Length of Side [m]	Emission Rate [g/ s]	Building Height [m]	X Coordinate for Points [m]	Y Coordinate for points [m]	Base Elevation [m]	Release Height [m]
8.60	1.00000		478745.75	3745127.80	444.63	3.40
			478685.53	3745127.66	445.62	3.40
			478677.26	3745153.97	445.39	3.40

Source Pathway - Source Inputs

Source Type: LINE VOLUME
Source: INDN (Indian Avenue Northbound)

Length of Side [m]	Emission Rate [g/ s]	Building Height [m]	X Coordinate for Points [m]	Y Coordinate for points [m]	Base Elevation [m]	Release Height [m]
8.60	1.00000		478677.33	3745153.99	445.39	3.40
			478656.87	3745206.97	445.59	3.40
			478622.25	3745262.58	445.69	3.40
			478584.48	3745304.55	445.92	3.40
			478552.48	3745333.40	445.90	3.40
			478532.02	3745346.51	446.15	3.40

Source Type: LINE VOLUME
Source: INDS (Indian Avenue Southbound)

Length of Side [m]	Emission Rate [g/ s]	Building Height [m]	X Coordinate for Points [m]	Y Coordinate for points [m]	Base Elevation [m]	Release Height [m]
8.60	1.00000		478666.84	3745150.84	445.63	3.40
			478646.90	3745200.15	445.70	3.40
			478615.43	3745253.14	445.96	3.40
			478577.66	3745296.68	446.04	3.40
			478532.02	3745332.35	446.08	3.40
			478516.28	3745342.84	446.29	3.40

Source Pathway - Source Inputs

Volume Sources Generated from Line Sources

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
CIRC	L0000236	478750.34	3745120.09	444.52	3.40	0.02564	8.60		4.00	3.16
	L0000237	478758.94	3745120.08	444.51	3.40	0.02564	8.60		4.00	3.16
	L0000238	478767.54	3745120.07	444.50	3.40	0.02564	8.60		4.00	3.16
	L0000239	478776.14	3745120.06	444.49	3.40	0.02564	8.60		4.00	3.16
	L0000240	478784.74	3745120.05	444.48	3.40	0.02564	8.60		4.00	3.16
	L0000241	478793.34	3745120.04	444.47	3.40	0.02564	8.60		4.00	3.16
	L0000242	478801.94	3745120.03	444.45	3.40	0.02564	8.60		4.00	3.16
	L0000243	478810.54	3745120.02	444.44	3.40	0.02564	8.60		4.00	3.16
	L0000244	478819.14	3745120.01	444.43	3.40	0.02564	8.60		4.00	3.16
	L0000245	478827.74	3745120.00	444.42	3.40	0.02564	8.60		4.00	3.16
	L0000246	478836.34	3745119.99	444.41	3.40	0.02564	8.60		4.00	3.16
	L0000247	478844.94	3745119.98	444.40	3.40	0.02564	8.60		4.00	3.16
	L0000248	478853.54	3745119.97	444.40	3.40	0.02564	8.60		4.00	3.16
	L0000249	478862.14	3745119.97	444.39	3.40	0.02564	8.60		4.00	3.16
	L0000250	478870.74	3745119.96	444.38	3.40	0.02564	8.60		4.00	3.16
	L0000251	478878.49	3745117.69	444.35	3.40	0.02564	8.60		4.00	3.16
	L0000252	478884.98	3745112.05	444.29	3.40	0.02564	8.60		4.00	3.16
	L0000253	478888.18	3745104.47	444.21	3.40	0.02564	8.60		4.00	3.16
	L0000254	478890.08	3745103.98	444.21	3.40	0.02564	8.60		4.00	3.16
	L0000255	478891.75	3745112.38	444.29	3.40	0.02564	8.60		4.00	3.16
	L0000256	478891.81	3745120.98	444.37	3.40	0.02564	8.60		4.00	3.16
	L0000257	478891.87	3745129.58	444.45	3.40	0.02564	8.60		4.00	3.16
	L0000258	478885.28	3745131.57	444.48	3.40	0.02564	8.60		4.00	3.16
	L0000259	478876.68	3745131.55	444.48	3.40	0.02564	8.60		4.00	3.16

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
CIRC	L0000260	478868.08	3745131.52	444.49	3.40	0.02564	8.60		4.00	3.16
	L0000261	478859.48	3745131.50	444.50	3.40	0.02564	8.60		4.00	3.16
	L0000262	478850.88	3745131.48	444.51	3.40	0.02564	8.60		4.00	3.16
	L0000263	478842.28	3745131.46	444.52	3.40	0.02564	8.60		4.00	3.16
	L0000264	478833.68	3745131.44	444.52	3.40	0.02564	8.60		4.00	3.16
	L0000265	478825.08	3745131.42	444.53	3.40	0.02564	8.60		4.00	3.16
	L0000266	478816.48	3745131.40	444.54	3.40	0.02564	8.60		4.00	3.16
	L0000267	478807.88	3745131.38	444.55	3.40	0.02564	8.60		4.00	3.16
	L0000268	478799.28	3745131.36	444.56	3.40	0.02564	8.60		4.00	3.16
	L0000269	478790.68	3745131.34	444.57	3.40	0.02564	8.60		4.00	3.16
	L0000270	478782.08	3745131.32	444.59	3.40	0.02564	8.60		4.00	3.16
	L0000271	478773.48	3745131.30	444.60	3.40	0.02564	8.60		4.00	3.16
	L0000272	478765.12	3745129.59	444.59	3.40	0.02564	8.60		4.00	3.16
	L0000273	478756.72	3745128.16	444.59	3.40	0.02564	8.60		4.00	3.16
	L0000274	478748.12	3745127.99	444.60	3.40	0.02564	8.60		4.00	3.16

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
INDS	L0000275	478665.23	3745154.83	445.73	3.40	0.03448	8.60		4.00	3.16
	L0000276	478662.00	3745162.80	445.87	3.40	0.03448	8.60		4.00	3.16
	L0000277	478658.78	3745170.77	445.92	3.40	0.03448	8.60		4.00	3.16
	L0000278	478655.56	3745178.75	445.86	3.40	0.03448	8.60		4.00	3.16
	L0000279	478652.33	3745186.72	445.79	3.40	0.03448	8.60		4.00	3.16
	L0000280	478649.11	3745194.69	445.76	3.40	0.03448	8.60		4.00	3.16
	L0000281	478645.52	3745202.48	445.72	3.40	0.03448	8.60		4.00	3.16
	L0000282	478641.13	3745209.88	445.77	3.40	0.03448	8.60		4.00	3.16

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
INDS	L0000283	478636.73	3745217.27	445.91	3.40	0.03448	8.60		4.00	3.16
	L0000284	478632.34	3745224.66	446.15	3.40	0.03448	8.60		4.00	3.16
	L0000285	478627.95	3745232.06	445.94	3.40	0.03448	8.60		4.00	3.16
	L0000286	478623.56	3745239.45	445.83	3.40	0.03448	8.60		4.00	3.16
	L0000287	478619.16	3745246.85	445.83	3.40	0.03448	8.60		4.00	3.16
	L0000288	478614.59	3745254.11	445.96	3.40	0.03448	8.60		4.00	3.16
	L0000289	478608.95	3745260.60	446.05	3.40	0.03448	8.60		4.00	3.16
	L0000290	478603.31	3745267.10	445.96	3.40	0.03448	8.60		4.00	3.16
	L0000291	478597.68	3745273.59	445.86	3.40	0.03448	8.60		4.00	3.16
	L0000292	478592.04	3745280.09	445.90	3.40	0.03448	8.60		4.00	3.16
	L0000293	478586.41	3745286.59	446.08	3.40	0.03448	8.60		4.00	3.16
	L0000294	478580.77	3745293.08	446.14	3.40	0.03448	8.60		4.00	3.16
	L0000295	478574.63	3745299.04	446.04	3.40	0.03448	8.60		4.00	3.16
	L0000296	478567.85	3745304.34	446.04	3.40	0.03448	8.60		4.00	3.16
	L0000297	478561.08	3745309.64	446.15	3.40	0.03448	8.60		4.00	3.16
	L0000298	478554.30	3745314.93	446.34	3.40	0.03448	8.60		4.00	3.16
	L0000299	478547.53	3745320.23	446.26	3.40	0.03448	8.60		4.00	3.16
	L0000300	478540.75	3745325.52	446.13	3.40	0.03448	8.60		4.00	3.16
	L0000301	478533.97	3745330.82	446.09	3.40	0.03448	8.60		4.00	3.16
	L0000302	478526.93	3745335.74	446.13	3.40	0.03448	8.60		4.00	3.16
	L0000303	478519.77	3745340.51	446.21	3.40	0.03448	8.60		4.00	3.16

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
INDN	L0000304	478675.78	3745158.00	445.49	3.40	0.03448	8.60		4.00	3.16
	L0000305	478672.68	3745166.02	445.53	3.40	0.03448	8.60		4.00	3.16

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
INDN	L0000306	478669.58	3745174.04	445.57	3.40	0.03448	8.60		4.00	3.16
	L0000307	478666.49	3745182.07	445.61	3.40	0.03448	8.60		4.00	3.16
	L0000308	478663.39	3745190.09	445.65	3.40	0.03448	8.60		4.00	3.16
	L0000309	478660.29	3745198.11	445.65	3.40	0.03448	8.60		4.00	3.16
	L0000310	478657.19	3745206.14	445.57	3.40	0.03448	8.60		4.00	3.16
	L0000311	478652.80	3745213.51	445.52	3.40	0.03448	8.60		4.00	3.16
	L0000312	478648.25	3745220.81	445.57	3.40	0.03448	8.60		4.00	3.16
	L0000313	478643.71	3745228.11	445.67	3.40	0.03448	8.60		4.00	3.16
	L0000314	478639.16	3745235.41	445.70	3.40	0.03448	8.60		4.00	3.16
	L0000315	478634.62	3745242.71	445.70	3.40	0.03448	8.60		4.00	3.16
	L0000316	478630.07	3745250.01	445.65	3.40	0.03448	8.60		4.00	3.16
	L0000317	478625.52	3745257.31	445.65	3.40	0.03448	8.60		4.00	3.16
	L0000318	478620.64	3745264.36	445.67	3.40	0.03448	8.60		4.00	3.16
	L0000319	478614.89	3745270.75	445.71	3.40	0.03448	8.60		4.00	3.16
	L0000320	478609.14	3745277.15	445.74	3.40	0.03448	8.60		4.00	3.16
	L0000321	478603.38	3745283.54	445.74	3.40	0.03448	8.60		4.00	3.16
	L0000322	478597.63	3745289.93	445.79	3.40	0.03448	8.60		4.00	3.16
	L0000323	478591.88	3745296.32	445.85	3.40	0.03448	8.60		4.00	3.16
	L0000324	478586.12	3745302.72	445.90	3.40	0.03448	8.60		4.00	3.16
	L0000325	478579.92	3745308.66	445.96	3.40	0.03448	8.60		4.00	3.16
	L0000326	478573.53	3745314.41	446.01	3.40	0.03448	8.60		4.00	3.16
	L0000327	478567.14	3745320.17	446.08	3.40	0.03448	8.60		4.00	3.16
	L0000328	478560.76	3745325.93	446.06	3.40	0.03448	8.60		4.00	3.16
	L0000329	478554.37	3745331.69	446.01	3.40	0.03448	8.60		4.00	3.16
	L0000330	478547.38	3745336.66	445.94	3.40	0.03448	8.60		4.00	3.16

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
INDN	L0000331	478540.14	3745341.31	445.97	3.40	0.03448	8.60		4.00	3.16
	L0000332	478532.90	3745345.95	446.08	3.40	0.03448	8.60		4.00	3.16

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
ENTR	L0000333	478741.69	3745120.01	444.54	3.40	0.08333	8.60		4.00	3.16
	L0000334	478733.09	3745120.01	444.56	3.40	0.08333	8.60		4.00	3.16
	L0000335	478724.49	3745120.01	444.62	3.40	0.08333	8.60		4.00	3.16
	L0000336	478715.89	3745120.01	444.68	3.40	0.08333	8.60		4.00	3.16
	L0000337	478707.29	3745120.01	444.79	3.40	0.08333	8.60		4.00	3.16
	L0000338	478698.69	3745120.01	445.13	3.40	0.08333	8.60		4.00	3.16
	L0000339	478690.09	3745120.01	445.47	3.40	0.08333	8.60		4.00	3.16
	L0000340	478681.49	3745120.01	445.72	3.40	0.08333	8.60		4.00	3.16
	L0000341	478674.41	3745121.99	445.62	3.40	0.08333	8.60		4.00	3.16
	L0000342	478672.20	3745130.30	445.62	3.40	0.08333	8.60		4.00	3.16
	L0000343	478670.00	3745138.61	445.62	3.40	0.08333	8.60		4.00	3.16
	L0000344	478667.79	3745146.92	445.65	3.40	0.08333	8.60		4.00	3.16

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
EXIT	L0000345	478741.45	3745127.79	444.61	3.40	0.10000	8.60		4.00	3.16
	L0000346	478732.85	3745127.77	444.63	3.40	0.10000	8.60		4.00	3.16
	L0000347	478724.25	3745127.75	444.68	3.40	0.10000	8.60		4.00	3.16
	L0000348	478715.65	3745127.73	444.72	3.40	0.10000	8.60		4.00	3.16
	L0000349	478707.05	3745127.71	444.83	3.40	0.10000	8.60		4.00	3.16
	L0000350	478698.45	3745127.69	445.14	3.40	0.10000	8.60		4.00	3.16

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
EXIT	L0000351	478689.85	3745127.67	445.45	3.40	0.10000	8.60		4.00	3.16
	L0000352	478684.25	3745131.75	445.63	3.40	0.10000	8.60		4.00	3.16
	L0000353	478681.67	3745139.95	445.56	3.40	0.10000	8.60		4.00	3.16
	L0000354	478679.09	3745148.15	445.50	3.40	0.10000	8.60		4.00	3.16

Receptor Pathway

Receptor Networks

Note: Terrain Elavations and Flagpole Heights for Network Grids are in Page RE2 - 1 (If applicable)
Generated Discrete Receptors for Multi-Tier (Risk) Grid and Receptor Locations for Fenceline Grid are in Page RE3 - 1 (If applicable)

Uniform Cartesian Grid

Receptor Network ID	Grid Origin X Coordinate [m]	Grid Origin Y Coordinate [m]	No. of X-Axis Receptors	No. of Y-Axis Receptors	Spacing for X-Axis [m]	Spacing for Y-Axis [m]
UCART1	478480.00	3744820.00	40	30	20.00	20.00

Discrete Receptors

Discrete Cartesian Receptors

Record Number	X-Coordinate [m]	Y-Coordinate [m]	Group Name (Optional)	Terrain Elevations	Flagpole Heights [m] (Optional)
1	478700.66	3745175.71		444.93	
2	478714.35	3745152.30		444.79	
3	478774.40	3745152.63		444.70	
4	478875.24	3745278.42		444.90	
5	478894.29	3745296.40		445.01	
6	479206.51	3744874.76		444.42	
7	479012.42	3745021.43		444.32	
8	479037.02	3745038.39		444.24	
9	478989.68	3745239.41		444.63	
10	478934.05	3745302.25		445.00	

Plant Boundary Receptors

Receptor Pathway

Cartesian Plant Boundary

Primary

Record Number	X-Coordinate [m]	Y-Coordinate [m]	Group Name (Optional)	Terrain Elevations	Flagpole Heights [m] (Optional)
1	478687.32	3745149.19	FENCEPRI	445.33	
2	478694.38	3745119.43	FENCEPRI	445.30	
3	478700.93	3745078.25	FENCEPRI	445.04	
4	478701.76	3744986.62	FENCEPRI	444.90	
5	478703.54	3744980.27	FENCEPRI	444.82	
6	478707.98	3744975.46	FENCEPRI	444.69	
7	478712.73	3744973.17	FENCEPRI	444.63	
8	478796.68	3744972.98	FENCEPRI	444.11	
9	478810.83	3744969.91	FENCEPRI	444.14	
10	478981.03	3744970.28	FENCEPRI	443.99	
11	478981.04	3745073.76	FENCEPRI	444.02	
12	479067.48	3745074.04	FENCEPRI	444.21	
13	479067.46	3745149.85	FENCEPRI	444.36	

Intermediate

Record Number	X-Coordinate [m]	Y-Coordinate [m]	Group Name (Optional)	Terrain Elevations	Flagpole Heights [m] (Optional)
1	478690.85	3745134.31	FENCEINT	445.38	
2	478696.56	3745105.70	FENCEINT	445.22	
3	478698.75	3745091.98	FENCEINT	445.13	
4	478701.10	3745059.92	FENCEINT	445.04	
5	478701.26	3745041.60	FENCEINT	445.05	
6	478701.43	3745023.27	FENCEINT	444.99	
7	478701.59	3745004.95	FENCEINT	444.94	
8	478729.52	3744973.13	FENCEINT	444.35	
9	478746.31	3744973.09	FENCEINT	444.22	
10	478763.10	3744973.06	FENCEINT	444.17	
11	478779.89	3744973.02	FENCEINT	444.14	
12	478829.74	3744969.95	FENCEINT	444.11	
13	478848.65	3744969.99	FENCEINT	444.08	
14	478867.56	3744970.03	FENCEINT	444.05	
15	478886.47	3744970.07	FENCEINT	444.03	
16	478905.39	3744970.12	FENCEINT	444.02	
17	478924.30	3744970.16	FENCEINT	444.01	
18	478943.21	3744970.20	FENCEINT	443.98	
19	478962.12	3744970.24	FENCEINT	443.94	
20	478981.03	3744987.53	FENCEINT	443.90	
21	478981.03	3745004.77	FENCEINT	443.89	

22	478981.04	3745022.02	FENCEINT	443.90	
23	478981.04	3745039.27	FENCEINT	443.93	
24	478981.04	3745056.51	FENCEINT	443.97	
25	478998.33	3745073.82	FENCEINT	444.06	
26	479015.62	3745073.87	FENCEINT	444.13	
27	479032.90	3745073.93	FENCEINT	444.14	
28	479050.19	3745073.98	FENCEINT	444.17	
29	479067.48	3745092.99	FENCEINT	444.23	
30	479067.47	3745111.95	FENCEINT	444.27	
31	479067.47	3745130.90	FENCEINT	444.32	
32	479048.45	3745149.82	FENCEINT	444.32	
33	479029.45	3745149.78	FENCEINT	444.33	
34	479010.44	3745149.75	FENCEINT	444.37	
35	478991.43	3745149.72	FENCEINT	444.40	
36	478972.43	3745149.69	FENCEINT	444.44	
37	478953.42	3745149.65	FENCEINT	444.47	
38	478934.41	3745149.62	FENCEINT	444.49	
39	478915.40	3745149.59	FENCEINT	444.51	
40	478896.40	3745149.55	FENCEINT	444.54	
41	478877.39	3745149.52	FENCEINT	444.57	
42	478858.38	3745149.49	FENCEINT	444.58	
43	478839.38	3745149.45	FENCEINT	444.61	
44	478820.37	3745149.42	FENCEINT	444.62	
45	478801.36	3745149.39	FENCEINT	444.65	
46	478782.36	3745149.36	FENCEINT	444.68	
47	478763.35	3745149.32	FENCEINT	444.69	
48	478744.34	3745149.29	FENCEINT	444.72	
49	478725.33	3745149.26	FENCEINT	444.75	
50	478706.33	3745149.22	FENCEINT	444.86	

Receptor Groups

Record Number	Group ID	Group Description
1	FENCEPRI	Cartesian plant boundary Primary Receptors
2	FENCEINT	Cartesian plant boundary Intermediate Receptors

Meteorology Pathway

AERMOD

Met Input Data

Surface Met Data

Filename: PERI_v9.SFC
Format Type: Default AERMET format

Profile Met Data

Filename: PERI_v9.PFL
Format Type: Default AERMET format

Wind Speed

☐ Wind Speeds are Vector Mean (Not Scalar Means)

Wind Direction

Rotation Adjustment [deg]:

Potential Temperature Profile

Base Elevation above MSL (for Primary Met Tower): 442.00 [m]

Meteorological Station Data

Stations	Station No.	Year	X Coordinate [m]	Y Coordinate [m]	Station Name
Surface		2010			
Upper Air		2010			
On-Site		2010			

Data Period

Data Period to Process

Start Date: 1/1/2010 Start Hour: 1 End Date: 12/31/2016 End Hour: 24

Wind Speed Categories

Stability Category	Wind Speed [m/s]	Stability Category	Wind Speed [m/s]
A	1.54	D	8.23
B	3.09	E	10.8
C	5.14	F	No Upper Bound

Output Pathway

Tabular Printed Outputs

Short Term Averaging Period	RECTABLE Highest Values Table										MAXTABLE Maximum Values Table	DAYTABLE Daily Values Table
	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th		
1	■	☐	☐	☐	☐	☐	☐	☐	☐	☐		No

Contour Plot Files (PLOTFILE)

Path for PLOTFILES: Perris EComm.AD

Averaging Period	Source Group ID	High Value	File Name
1	ALL	1st	01H1GALL.PLT
Period	ALL	N/A	PE00GALL.PLT

HARP Proje 0/2022

PROJECT INFORMATION
HARP Version: 22118
Project Name: PERRIS ECOMM RISK
Project Out ers\ma rtinr\Deskt ECommerce HRA\ ECOMM RISK
HARP Database: NA

FACILITY INFORMATION
Origin
X (m):0
Y (m):0
Zone:1
No. of Sources:0
No. of Buildings:0

EMISSION INVENTORY
No. of Pollutants:9
No. of Background Pollutants:0

Emissions

ScrID	ProID	PolID	PolAbbrev	Multi	Annual Ems (lbs/yr)	MaxHr Ems (lbs/hr)	MWAF
CIRC	0	9901	DieselExhPM	1	0.232948	2.73E-05	1
DOCK1	0	9901	DieselExhPM	1	0.00660418	1.83E-05	1
DOCK2	0	9901	DieselExhPM	1	0.00660418	1.83E-05	1
INDS	0	9901	DieselExhPM	1	0.0958898	1.14E-05	1
INDN	0	9901	DieselExhPM	1	0.0946525	1.12E-05	1
ENTR	0	9901	DieselExhPM	1	0.046916	5.50E-06	1
PARK1	0	9901	DieselExhPM	1	0.00659165	1.83E-05	1
PARK2	0	9901	DieselExhPM	1	0.00953242	1.83E-05	1
EXIT	0	9901	DieselExhPM	1	0.0395853	4.64E-06	1

Background

PolID	Conc (ug/m^3)	MWAF

Ground lev s (\gl c\)

9901MAXHR.txt
9901PER.txt

***POLLUT ***
Health Data s\HEAL TH17320.mdb
Health Tabl 13
Official: True

PolID	InhCa	ncer	Or r	AcuteREL	InhChronic L	OralChronic EL	InhChronic8 REL
9901	1.1				5		

Residential Cancer Risk

*HARP - HRACalc v22118 5/20/2022 10:22:51 AM - Cancer Risk -

REC	GRP	NETID	X	Y	RISK_SUM	SCENARIO
1201	ALL	R1	478700.66	3745175.71	7.29E-07	30YrCancerRMP_Inh
1202	ALL	R2	478714.35	3745152.3	9.44E-07	30YrCancerRMP_Inh
1203	ALL	R3	478774.4	3745152.63	1.14E-06	30YrCancerRMP_Inh
1204	ALL	R4	478875.24	3745278.42	1.48E-07	30YrCancerRMP_Inh
1205	ALL	R5	478894.29	3745296.4	1.22E-07	30YrCancerRMP_Inh
1206	ALL	R6	479206.51	3744874.76	2.99E-08	30YrCancerRMP_Inh

Off-Site Worker Cancer Risk

*HARP - HRACalc v22118 5/20/2022 10:23:41 AM - Cancer Risk -

REC	GRP	NETID	X	Y	RISK_SUM	SCENARIO
1207	ALL	C1	479012.42	3745021.43	8.38E-09	25YrCancerDerived_Inh
1208	ALL	C2	479037.02	3745038.39	7.22E-09	25YrCancerDerived_Inh
1209	ALL	C3	478989.68	3745239.41	8.45E-09	25YrCancerDerived_Inh
1210	ALL	C4	478934.05	3745302.25	8.17E-09	25YrCancerDerived_Inh

Residential Non-Cancer Chronic Maximum HI

*HARP - HRACalc v22118 5/20/2022 10:24:05 AM - Chronic Risk -

REC	GRP	NETID	X	Y	SCENARIO	MAXHI
1201	ALL	R1	478700.66	3745175.71	NonCancerChronicDerived_Inh	1.92E-04
1202	ALL	R2	478714.35	3745152.3	NonCancerChronicDerived_Inh	2.49E-04
1203	ALL	R3	478774.4	3745152.63	NonCancerChronicDerived_Inh	3.02E-04
1204	ALL	R4	478875.24	3745278.42	NonCancerChronicDerived_Inh	3.91E-05
1205	ALL	R5	478894.29	3745296.4	NonCancerChronicDerived_Inh	3.21E-05
1206	ALL	R6	479206.51	3744874.76	NonCancerChronicDerived_Inh	7.87E-06

Off-Site Worker Non-Cancer Maximum HI

*HARP - HRACalc v22118 5/20/2022 10:24:30 AM - Chronic Risk -

REC	GRP	NETID	X	Y	SCENARIO	MAXHI
1207	ALL	C1	479012.42	3745021.43	NonCancerChronicDerived_Inh	2.71E-05
1208	ALL	C2	479037.02	3745038.39	NonCancerChronicDerived_Inh	2.33E-05
1209	ALL	C3	478989.68	3745239.41	NonCancerChronicDerived_Inh	2.73E-05
1210	ALL	C4	478934.05	3745302.25	NonCancerChronicDerived_Inh	2.64E-05

Initial Study Appendix C

General Biological Resources Assessment

The following section contains content that was obtained from a third party and may not achieve the same level of Americans with Disabilities Act (ADA) and Section 508 accessibility as other parts of this document.

HELIX Environmental Planning

Ramona-Indian Warehouse Project

General Biological Resource Assessment and Western Riverside County Multiple Species Habitat Conservation Plan Consistency Analysis

May 2022 | 04823.00001.001

Prepared for:

City of Perris
101 North D Street
Perris, CA 92570

JM Realty Group
oe McKay
3535 Inland Empire Boulevard
Ontario, CA 91764

Prepared by:

HELIX Environmental Planning, Inc.
7578 El Cajon Boulevard
La Mesa, CA 91942

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ACRONYMS AND ABBREVIATIONS

APN	Assessor's Parcel Number
BUOW	Burrowing Owl
CASSA	Criteria Area Species Survey Area
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
City	City of Perris
CNPS	California Native Plant Society
County	County of Riverside
CWA	Clean Water Act
Dudek	Dudek & Associates
EPA	Environmental Protection Agency
ESA	Federal Endangered Species Act
HELIX	HELIX Environmental Planning, Inc.
JD	Aquatic Resources Delineation
LDMF	Local Development Mitigation Fee
MBTA	Migratory Bird Treaty Act
MSHCP	Multiple Species Habitat Conservation Plan
NEPSSA	Narrow Endemic Plant Species Survey Area
NPPA	Native Plant Protection Act
NWI	National Wetland Inventory
Project	Perris Development Project
PVCCSP	Perris Valley Commerce Center Specific Plan
PVSD	Perris Valley Storm Drain
RCA	Western Riverside County Regional Conservation Authority
ROW	Right of Way
ROWD	Report of Waste Discharge
RWQCB	Regional Water Quality Control Board
SAA	Streambed Alteration Agreement
sf	square foot
SKRHCP	Stephens' Kangaroo Rat Habitat Conservation Plan

ACRONYMS AND ABBREVIATIONS (cont.)

USACE	U.S. Army Corps of Engineers
USDA	U.S. Department of Agriculture
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geologic Survey
UWIG	Urban/Wildlands Interface Guidelines

Report Date:	May 25, 2022
Title:	General Biological Resources Assessment and Western Riverside Multiple Species Habitat Conservation Plan Consistency Analysis for the Ramona-Indian Warehouse Project
Project Location:	The project is located in the City of Perris (City) in western Riverside County. The project is located west of the Perris Reservoir and east of Interstate 215 within Township 4 South, Range 3 West, in the San Jacinto Nuevo Y Potrero land grant on the U.S. Geological Survey (USGS) 7.5' Perris quadrangle. The approximately 15-acre project site is located at the northwest of the intersection of Perris Boulevard and the Ramona Expressway.
Assessor's Parcel Numbers:	302-060-041
Owner/Applicant:	Joe McKay JM Realty Group 3535 Inland Empire Boulevard Ontario, CA 91764
Principal Investigator:	HELIX Environmental Planning, Inc. 7578 El Cajon Blvd. La Mesa, CA 91942 (619) 462-1515
Report Summary:	The approximately 15.67-acre study area was surveyed for burrowing owl (*Athene cunicularia*), MSHCP Riparian/Riverine and Vernal Pool resources, fairy shrimp, and jurisdictional features. No burrowing owls, MSHCP riparian/riverine or vernal pools, or sensitive fairy shrimp were observed on the study area. Several pools (not vernal) and two drainages occur on the property.
Report Preparers:	Robert Hogenauer (562) 537-2426 Beth Martinez (619) 462-1515
Field Personnel:	Robert Hogenauer (562) 537-2426 Amy Mattson (619) 980-6597

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EXECUTIVE SUMMARY

The Ramona-Indian Warehouse project study area is located within the Mead Valley Area Plan of the Western Riverside Multiple Species Habitat Conservation Plan (MSHCP) but is not with a criteria cell or subunit. Proposed or existing MSHCP Cores and Linkages do not occur within the study area. Surveys conducted within the study area include an aquatic resources delineation, Riparian/Riverine and Vernal Pool habitat assessment, dry and wet fairy shrimp surveys, and a burrowing owl survey. The property is bordered to the south by a concrete brow ditch that parallels Ramona Expressway. Several pools occur on the eastern side of the site and only the common versatile fairy shrimp (*Branchinecta lindahli*) was detected. No sensitive fairy shrimp were detected. No burrowing owl or MSHCP Riparian/Riverine or Vernal pool species were detected on the property.

The project will result in impacts to the aquatic resources on the property. The impacts will be mitigated during the permitting process with the resource agencies, with mitigation proposed to be the purchase of rehabilitation credits at Riverpark Mitigation Bank or another approved mitigation bank.

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1.0 INTRODUCTION

The Ramona-Indian Warehouse project study area is located in the City of Perris, Riverside County (County), California. The purpose of this report is (1) to document the results of a biological resource technical study and (2) analyze the potential impacts of the project pursuant to the requirement of the adopted Western Riverside Multiple Species Habitat Conservation Plan (MSHCP; Dudek and Associates [Dudek] 2003) and the California Environmental Quality Act (CEQA). As the project is located in the City of Perris (City), the City is the CEQA lead agency. The proposed project consists of the development of a multi-tenant warehouse retail and distribution building and associated infrastructure.

1.1 PROJECT AREA

The project study area is located in the City of Perris in western Riverside County (Figure 1, *Regional Location*). The project is located west of the Perris Reservoir and east of Interstate 215 within Township 4 South, Range 3 West, in the San Jacinto Nuevo Y Potrero land grant on the U.S. Geological Survey (USGS) 7.5' Perris quadrangle (Figure 2, *Project Vicinity on Aerial Photograph*). The approximately 15-acre project site is located northwest of the intersection of Perris Boulevard and the Ramona Expressway (Figure 3, *Project Location on Aerial Photograph*).

- The study area is comprised of a single Assessor's Parcel Number (APN 302-060-041).
- The study area covers 15.67 acres. This study area includes the APN plus the Right of Way (ROW) along Ramona Expressway to the south, Perris Boulevard to the east, and Indian Avenue to the west.
- The project impacts do not include off-site staging areas.

1.2 PROJECT DESCRIPTION

The proposed project involves the adoption of a Specific Plan Amendment to the Perris Valley Commerce Center Specific Plan (PVCCSP) and approval of a Development Plan to allow the construction and operation of a warehouse building and commercial development. Warehouse development would occur within the central portion of the project site, while the approximate 1.6 acres in the northeast would provide a pad for future commercial development, such as a hotel. Specifically, the warehouse building would comprise about 232,575 square feet (sf) and include 10,000 sf of planned office area (see Figure 4, *Project Plan*). Three vehicle/truck access points would be provided, including right-in/right-out/left-in access for trucks on Indian Avenue, right-in/right-out access for passenger cars only off Ramona Expressway, and right-in/right-out access for passenger cars only from Perris Boulevard. The site plan includes 215 auto parking stalls, 52 trailer parking stalls, and 39 truck docks. Buildings would not exceed 48 feet in height. Development of the commercial pad is not proposed to occur concurrently with the warehouse. As such, temporary staging activities may occur in this area to support the construction of the light industrial uses described above before development of any future commercial use. As directed by the City, the project plans to construct a portion of the Line E flood control facility as part of this project and also construct a 30-inch diameter lateral pipe that can connect to the existing Perris Valley Lateral Line E-11 in Perris Blvd. Stormwater would be accommodated through an underground water quality basin and the construction of the on-site portion of Line E that is part of the City's storm drain system.

1.3 GENERAL SETTING

The project site is located on a parcel that has been used for agriculture in the past and has been regularly disked. The northeast portion of the parcel has been used as a dirt parking lot. Vegetation associated with non-native grassland or disturbed habitat occurs on the slope along Indian Avenue, located on the western side of the study area. The majority of the property is mostly unvegetated but does include a few ruderal annual species common to the area. The project is directly bordered by a mix of commercial and undeveloped land with residential development to the southeast. The general area is predominantly comprised of commercial development.

The southern edge of the property includes an open brow ditch that connects to the Perris Valley Storm Drain (PVSD). The study is situated approximately 4,000 feet west of the PVSD. Storm drain flows enter the property from a pipe and a box culvert in the southwest corner of the property.

1.4 SOILS

The U.S. Department of Agriculture (USDA) web soil survey was reviewed for the types of soil occurring on the study area (USDA 2020). Soils on the study area are comprised of three types of sandy loam. These soils are Exeter sandy loam, Hanford coarse sandy loam, and Pachappa fine sandy loam.

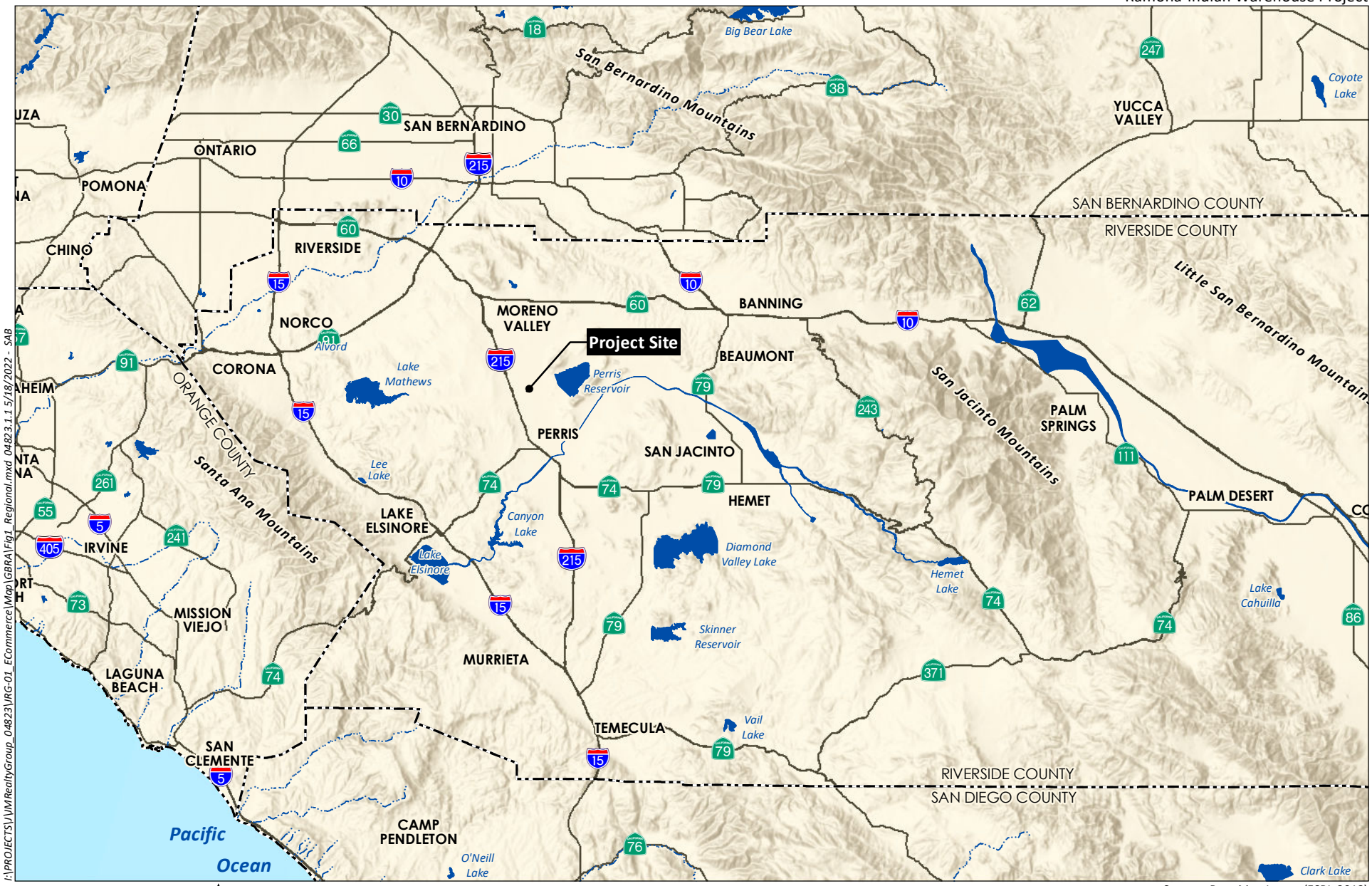
2.0 REGULATORY CONTEXT

2.1 FEDERAL GOVERNMENT

Administered by the U.S. Fish and Wildlife Service (USFWS), the federal Endangered Species Act (ESA) provides the legal framework for the listing and protection of species (and their habitats) identified as being endangered or threatened with extinction. Actions that jeopardize endangered or threatened species and the habitats upon which they rely are considered a "take" under the ESA. Section 9(a) of the ESA defines take as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct." "Harm" and "harass" are further defined in federal regulations and case law to include actions that adversely impair or disrupt a listed species' behavioral patterns.

Sections 4(d), 7, and 10(a) of the federal ESA regulate actions that could jeopardize endangered or threatened species. Section 7 describes a process of federal interagency consultation for use when federal actions may adversely affect listed species. A biological assessment is required for any major construction activity if it may affect a listed species. In this case, take can be authorized via a letter of biological opinion, issued by the USFWS for non-marine related listed species issues. A Section 7 consultation is required when there is a nexus between federally listed species' use of the site and impacts to USACE jurisdictional areas. Section 10(a) allows the issuance of permits for "incidental" take of endangered or threatened species. The term "incidental" applies if the taking of a listed species is incidental to, and not the purpose of, an otherwise lawful activity. The MSHCP is the Section 10(a) permit for this portion of Riverside County, including the City of Perris and the subject property.

All migratory bird species that are native to the United States or its territories are protected under the Migratory Bird Treaty Act (MBTA), as amended under the MBTA of 2004 (FR Doc. 05-5127). This law is generally protective of migratory birds from the direct physical take of the species. Take for the MBTA uses the same definition as above and includes activity that results in the abandonment of a nest.



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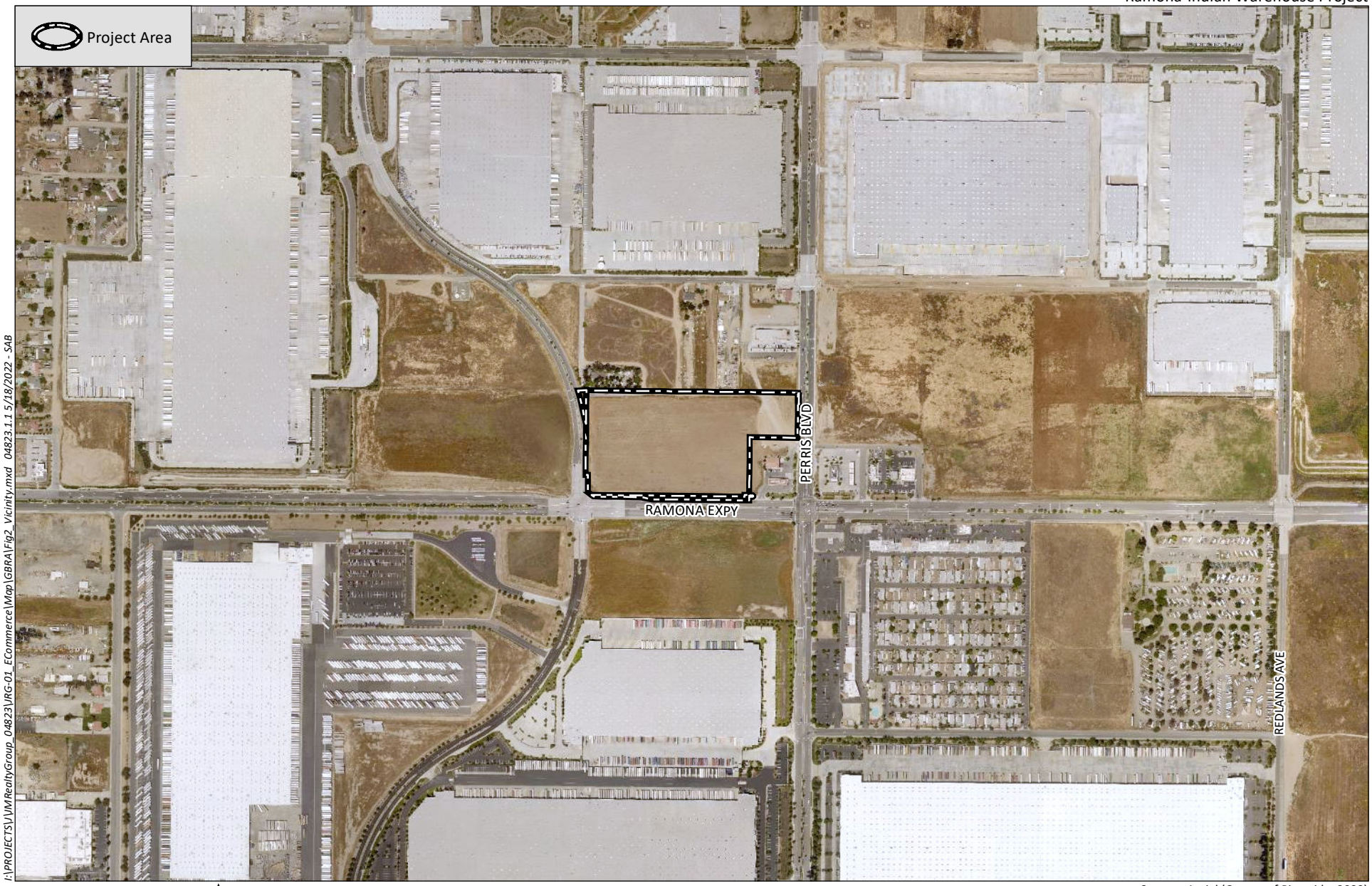
Source: Base Map Layers (ESRI, 2013)

HELIX Environmental Planning

Regional Location

Figure 1



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Source: Aerial (County of Riverside, 2020)

HELIX Environmental Planning

Project Vicinity on Aerial Photograph

Figure 2

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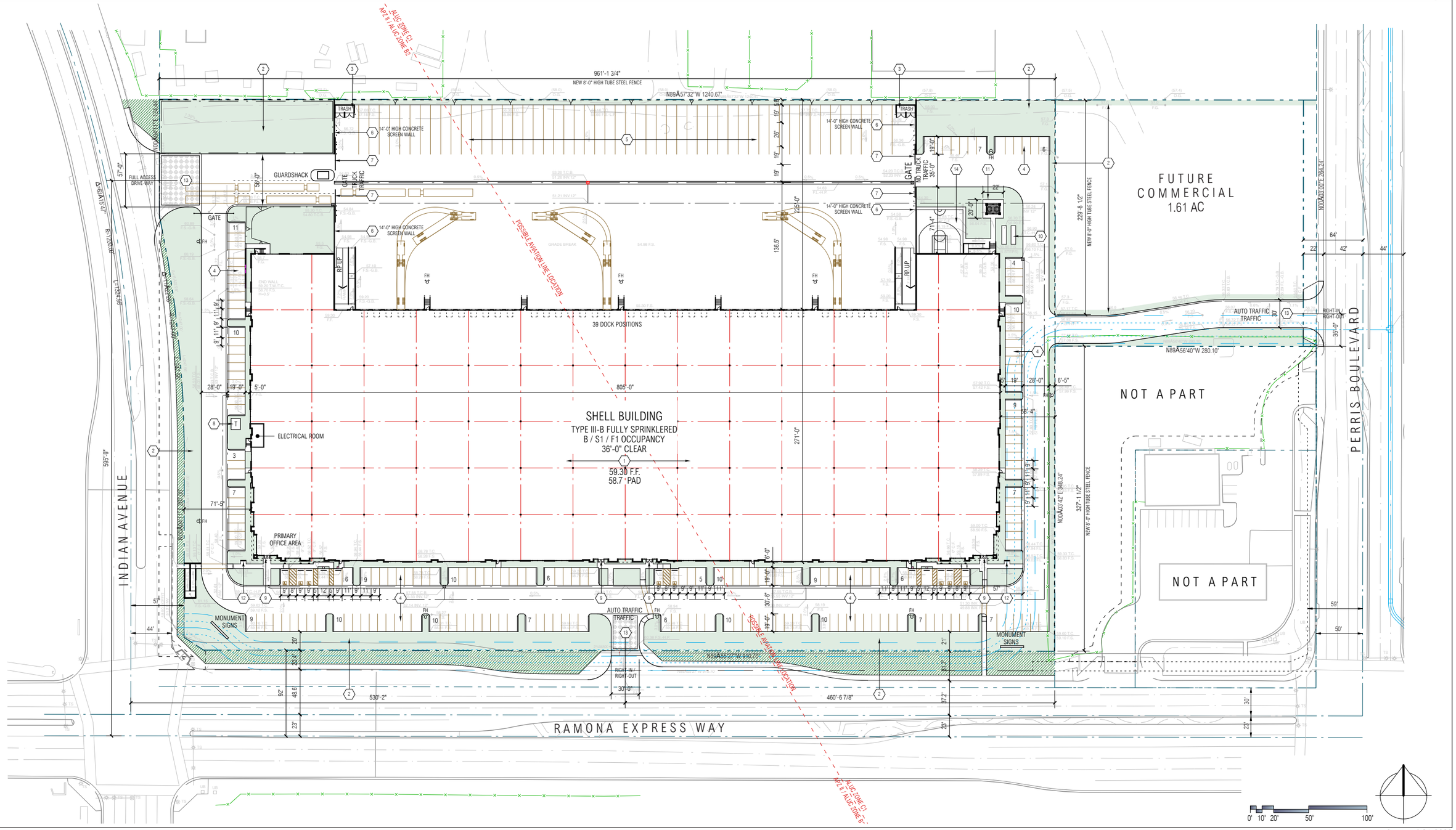
Source: Aerial (County of Riverside, 2020)

HELIX Environmental Planning

Project Location on Aerial Photograph

Figure 3



Source: RGA 2022

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Federal wetland regulation (non-marine issues) is guided by the Rivers and Harbors Act of 1899 and the Clean Water Act (CWA). The Rivers and Harbors Act deals primarily with discharges into navigable waters, while the purpose of the CWA is to restore and maintain the chemical, physical, and biological integrity of all waters of the U.S. Permitting for projects filling waters of the U.S. (including wetlands and vernal pools) is overseen by the USACE under Section 404 of the CWA.

Projects may be permitted on an individual basis or may be covered under one of several approved Nationwide Permits (NWPs). Individual Permits are assessed individually based on the type of action, amount of fill, etc. Individual Permits typically require substantial time (often longer than six months) to review and approve, while Nationwide Permits are pre-approved if a project meets appropriate conditions. A CWA Section 401 Water Quality Certification, which is administered by the State Water Resources Control Board, must be issued prior to any 404 Permit. NWPs are reviewed and republished every five years. The previously renewed NWPs expired in March 2022. Several NWPs, including NWP 39 that applies to Commercial developments, were reissued in 2021. NWP 39 allows for up to 0.5 acre of impacts to waters of the U.S. The updated NWP 39 includes the removal of the previous impact limit to a maximum of 300 linear feet of waters of the U.S.

2.2 STATE OF CALIFORNIA

The California ESA is similar to the federal ESA in that it contains a process for the listing of species and regulating potential impacts to listed species. Section 2081 of the California ESA authorizes the California Department of Fish and Wildlife (CDFW) to enter into a memorandum of agreement for take of listed species for scientific, educational, or management purposes. The MSHCP is the regional section 2081 for this portion of the County, including the City of Perris and the subject property. The golden eagle (*Aquila chrysaetos*) and white-tailed kite are considered State Fully Protected Species. Fully Protected species may not be taken or possessed at any time, and no state licenses or permits may be issued for their take except for collecting these species necessary for scientific research and relocation of the bird species for the protection of livestock (Fish and Game Code Sections 3511, 4700, 5050, and 5515).

The Native Plant Protection Act (NPPA) enacted a process by which plants are listed as rare or endangered. The NPPA regulates the collection, transport, and commerce in plants that are listed.

The California ESA followed the NPPA and covers both plants and animals that are determined to be endangered or threatened with extinction. Plants listed as rare under NPPA were designated threatened under the California ESA.

The California Fish and Game Code (Section 1600 et seq.) requires an agreement with CDFW for projects affecting riparian and wetland habitats through the issuance of a Streambed Alteration Agreement (SAA). The proposed project impacts will require a 1602 SAA from CDFW.

The Regional Water Quality Control Board (RWQCB) regulates impacts to waters under federal jurisdiction via Section 401 of the CWA. When a project no longer is under the jurisdiction of the CWA due to the new rule discussed in the Federal section above, the waters are regulated under the Porter-Cologne Act as waters of the state. A Report of Waste Discharge (ROWD) from the RWQCB will be required for impacts to waters of the state. A ROWD is also referred to as a WDR (Waste Discharge Requirements) permit.

2.3 WESTERN RIVERSIDE MULTIPLE SPECIES HABITAT CONSERVATION PLAN

The MSHCP is a comprehensive multi-jurisdictional effort that includes Riverside County and multiple cities, including the City of Perris in western Riverside County. Rather than address sensitive species on an individual basis, the MSHCP focuses on the conservation of 146 species, proposing a reserve system of approximately 500,000 acres and a mechanism to fund and implement the reserve system (Dudek 2003). Most importantly, the MSHCP allows participating entities to issue take permits for listed species so that individual applicants need not seek their own permits from the USFWS and/or CDFW. The MSHCP was adopted on June 17, 2003, by the Riverside County Board of Supervisors (County 2003). The Incidental Take Permit was issued by both the USFWS and CDFW on June 22, 2004. The City is the lead agency/permittee, as this property occurs in the City of Perris, Riverside County, California.

3.0 MSHCP RESERVE ASSEMBLY ANALYSIS

The study area is not within or adjacent to a Criteria Cell, MSHCP conservation, or other conservation lands. The nearest cell is situated approximately 8,500 feet southwest of the study area and is separated from the study area by commercial development and Interstate 215 (Figure 5, *MSHCP*). The study area is not targeted for conservation.

3.1 PUBLIC QUASI-PUBLIC LANDS

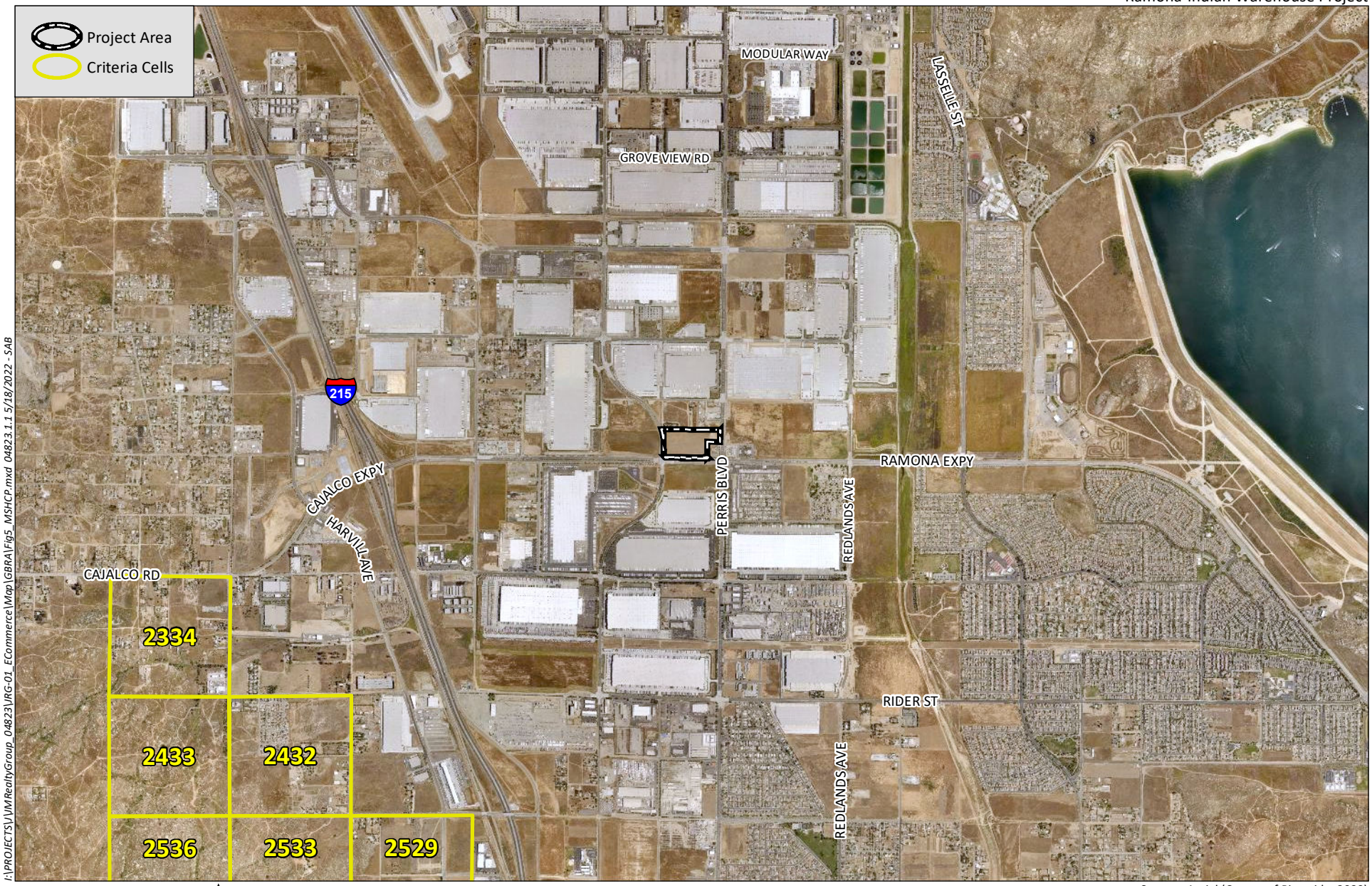
The project study area does not occur on or adjacent to public quasi-public (PQP) lands. No impacts to PQP lands are proposed.

3.2 LOCAL DEVELOPMENT MITIGATION FEE

Projects within the MSCHP plan area are subject to the MSHCP Local Development Mitigation Fee (LDMF). MSHCP reserve land purchase and management are funded by the collection of the LDMF. The LDMF is determined by the Regional Conservation Authority (RCA; 2021) and adjusted annually. These fees are adjusted annually and recently had a significant increase. The current fee for commercial and industrial developments is set at $16,358 per acre.

3.3 STEPHENS' KANGAROO RAT HABITAT CONSERVATION PLAN FEES

Because the project is within the Stephens' Kangaroo Rat Habitat Conservation Plan (SKRHCP) area, the project Proponent is required to pay a Stephens' kangaroo rat mitigation in accordance with the SKRHCP. The SKRHCP fee for the project shall be an amount determined in coordination with the County. The standard fee is $500 per acre (County 1996).



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Source: Aerial (County of Riverside, 2020)

HELIX Environmental Planning

MSHCP

Figure 5

4.0 VEGETATION MAPPING

4.1 METHOD

HELIX Environmental Planning, Inc. (HELIX) biologist Rob Hogenauer mapped the vegetation types and land uses that occur in the study area on October 5, 2020. Mapping was conducted by walking the entire study area and mapping the habitat observed on an aerial photograph of the study area (1 inch = 150 feet scale). Vegetation community classifications follow Holland (1986) and the MSHCP (Dudek 2003). Lists of plant and animal species observed are included as Appendices A and B, respectively.

4.2 RESULTS

The mapping shows that the study area is dominated by agricultural land-fallow. Habitats in the study area include 13.1 acres agriculture-fallow, 0.3 acre of non-native grassland, 2.1 acres disturbed habitat, and 0.17 acre developed land (Table 1, *Existing Vegetation Communities and Land uses in the Perris Development Study Area*; Figure 6, *Vegetation*). The site includes pools that occur on the eastern side of the site. Specifically, 12 pools occur, with 11 occurring on disturbed habitat and one within fallow agriculture.

Table 1
EXISTING VEGETATION COMMUNITIES AND LAND USES IN THE PERRIS DEVELOPMENT STUDY AREA

Habitat/Land Use	MSHCP Equivalent Community	Acres
Agricultural land-fallow	Field Cropland-fallow	13.1
Non-native grassland	Non-native grassland	0.3
Disturbed habitat	Developed/Disturbed Land	2.1
Developed land	Developed/Disturbed Land	0.17
	Total	**15.67**

4.2.1 Non-native Grassland

Non-native grassland is a dense to sparse cover of annual grasses, often associated with numerous species of showy-flowered native annual forbs. Characteristic species include oats (*Avena* spp.), brome grasses (*Bromus* spp.), and mustards (*Brassica* spp., *Hirschfeldia incana*). Most of the annual introduced species within the non-native grassland originated from the Mediterranean region, an area with a long history of agriculture and a climate similar to California. Intensive grazing and agricultural practices combined with severe droughts in California contributed to the successful invasion and establishment of these species, and the replacement of native grasslands with annual-dominated non-native grasslands.

In the study area, non-native grassland occurs primarily on the small slope on the western border along Indian Avenue. This habitat is dominated by a mix of grasses, including red brome (*Bromus madritensis*), short-podded mustard (*Hirschfeldia incana*), tocalote (*Centaurea melitensis*), horseweed (*Erigeron canadensis*), and rancher's fiddleneck (*Amsinckia menziesii*). There is a total of 0.3 acre of non-native grassland in the study area.

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Source: Aerial (County of Riverside, 2020)

HELIX Environmental Planning

Vegetation

Figure 6

4.2.2 Disturbed Habitat

Disturbed land includes land cleared of vegetation (e.g., dirt roads), land dominated by non-native plant species such as ornamentals or ruderal exotic species that take advantage of disturbance (previously cleared or abandoned landscaping), or land showing signs of past or present animal usage that removes any capability of providing viable habitat. Disturbed habitat dominates the study area. The disturbed habitat is mainly comprised of land that is regularly disked, resulting in the removal of vegetation. The disked area has sparse annuals, mostly non-native species including short-podded mustard, horseweed, tocalote, and red brome. There is also a patch of disturbed habitat in the northeast corner that is compacted due to regular vehicle activity. There are 2.1 acres of disturbed habitat in the study area.

4.2.3 Developed Land

Developed land is where permanent structures and/or pavement have been placed, which prevents the growth of vegetation, or where landscaping is clearly tended and maintained. Within the study area, the developed land is comprised of a brow ditch that parallels the Ramona Expressway along the southern border. There is 0.17 acre of developed land in the study area.

4.3 IMPACTS

The project and associated infrastructure propose impacts to the entire study area, as shown in Table 2, *Vegetation Communities and Land Use Impacts for the Perris Development Project*.

Table 2
VEGETATION COMMUNITIES AND LAND USE IMPACTS FOR THE PERRIS DEVELOPMENT PROJECT

Habitat/Land Use	MSHCP Equivalent Community	Acres
Agricultural Land	Field/Cropland	13.1
Non-native grassland	Non-native grassland	0.3
Disturbed habitat	Disturbed/exotic	2.1
Developed land	Developed/Urban	0.17
	Total	**15.67**

5.0 AQUATIC RESOURCES DELINEATION

5.1 METHOD

Prior to beginning fieldwork, aerial photographs (1 inch = 150 feet), USGS quadrangle maps, and National Wetland Inventory (NWI) maps (USFWS 2020; USFWS 2021b) were reviewed to assist in determining the location of potential jurisdictional waters on the study area. Historical aerial photos of the site from 2018, 2014, 2011, 2006, and 1966, were also reviewed to aid in locating potential jurisdictional waters (NETROnline 2021). HELIX biologist Rob Hogenauer conducted an aquatic resources delineation of waters on the on-site study area on October 5, 2020. To properly map the extent of potentially jurisdictional pools on the property. Mr. Hogenauer returned to the site on January 2 and February 5, 2021. Both field visits in 2021 were conducted approximately one week following a significant rain event to ensure the mapping effort did not include short-lived non-jurisdictional puddles.

The effort was conducted to identify jurisdictional waters potentially subject to U.S. Army Corps of Engineers (USACE) jurisdiction pursuant to Section 404 of the CWA, Regional Water Quality Control Board (RWQCB) jurisdiction pursuant to Section 401 of the CWA, and streambed habitats potentially subject to CDFW jurisdiction pursuant to Sections 1600 et seq. of the California Fish and Game Code. Data collection was targeted in areas that were deemed to have the potential to support jurisdictional resources, such as the presence of an ordinary high-water mark, the presence of a bed/bank and streambed associated vegetation, and/or other surface indications of streambed hydrology. Potential jurisdictional features were mapped at a scale of one-hundredth of an acre (0.01 acre).

The criteria used in the Aquatic Resources Delineation (JD) performed by HELIX was originally based on the U.S. Environmental Protection Agency (EPA) definition of waters of the U.S. as defined in the new Ruling by EPA known as the "Navigable Waters Protection Rule: Definition of "Waters of the United States" (EPA 2020)". The New Rule was published in the Federal Register on April 21, 2020 (National Archives 2020). The rule took effect 60 days after publication in the Federal Register, which was June 22, 2020. This new rule excluded ephemeral streams, swales, gullies, rills, and pools from jurisdiction under the CWA, which initially resulted in no federal waters occurring on the property. On August 30, 2021, the new rule was overturned by a U.S. District Judge, and the overturning was upheld on September 21, 2021.

The delineation has been updated to reflect the recent court decision that reverts the definitions of waters of the U.S. back to the pre-2015 regulatory guidance. The current delineation follows the Arid West Supplement to the 1987 Wetland Delineation Manual, which reflects the methods currently accepted by the USACE.

5.2 EXISTING CONDITIONS AND RESULTS

The NWI did not show wetlands as occurring within or adjacent to the study area (USFWS 2021). The project has a concrete brow ditch along the southern border that connects to culverts in the southwest corner of the study area and an off-site culvert near the southeast corner of the study area. The culverts convey storm flows from off-site, through the brow ditch, continuing to the east. Based on a review of historic aerials, the concrete brow ditch was installed between April 2014 and February 2016 (Google Earth 2021). Drainage 1 primarily consists of an eight-foot-wide (top to top) concrete brow ditch parallel to Ramona Expressway that is connected to culverts, consisting of approximately 18" pipes to the east and west. The pipe at the west end of the brow ditch enters from the south. Flows in the brow ditch eventually connect to the Perris Valley Storm Drain (PVSD), located approximately 4,000 feet to the east. The connection from the project site to the PVSD occurs via a series of pipes and open roadside channels.

Drainage 1 also includes a short (47 foot) earthen bottom connection to an approximately eight-foot-wide box culvert under Indian Avenue located in the southwest corner of the property. This box culvert was installed with the improvements to Indian Avenue between March 2011 and June 2012 based on a review of aerial photos (Google Earth 2021). Flows from the box culvert enter the site uncontrolled and are currently directed into the concrete brow ditch by an earthen berm. Prior to the creation of the earthen berm by an unknown entity in January 2021, some of the flow from the box culvert entered the agricultural field. The box culvert, earthen bottom channel, and concrete brow ditch are all storm drain features created in uplands.

Prior to the disturbance from the creation of the dirt berm in January 2021, a small drainage (Drainage 2) flowed from the box culvert into the agriculture field and consisted of a short (23 foot long, 3 feet wide) defined channel that dissipated into sheet flow (55 feet long and 10 feet wide). No additional sign of flow was visible beyond the end of the sheet flow. Drainage 2 does not have a connection to downstream resources.

The City is working on a storm drain plain that includes directing the flows on the site into a subterranean pipe, referred to as Line E. Because the entire length of Line E is not anticipated to be ready for construction by the City before the project construction, the project proponent proposes to construct the portion of Line E that occurs on-site.

The land surrounding the project site has topography similar to the project site. The area is relatively level with a gentle slope from northwest to southeast. A review of historic aerials shows that prior to the development of the surrounding lands and improvements to the Ramona Expressway, potential drainages to the north and northwest of the project site existed but appeared to dissipate as sheet flow in the fields they occurred and lacked a downstream connection. The lack of downstream connection would result in these drainages not being a water of the U.S. but would still be a potential water of the State. The aerials also show that during the development of the surrounding lands between 1978 and 1997, these nearby drainages were removed. It is presumed that these drainages were directed into storm drain features along both Markham Street and Ramona Expressway.

Flows that are collected from the imperviable surfaces constructed west of the current project site are directed to the roadside ditch flood control channel along Ramona Expressway and eventually enter the subject property via the box culvert and pipe in the southwest corner. The flows entering the site include runoff from roads, surrounding development, and landscaping irrigation. As a result, the majority of the flows are human-induced artificial sources and are not naturally occurring.

The study area also has 12 pools on the eastern side of the property that hold water for at least seven days. All of the pools, except pool 12, occur on the disturbed hardpan, gravel-covered surface in the northeast that has been used as a parking lot. The northeast corner of the property was converted from agricultural use to a dirt/gravel parking lot between 1997 and 2002. The manipulation of the land to be used as a parking lot resulted in several low spots that now pool from rainfall. Pools one through eleven on the hardpan surface are essentially unvegetated and disturbed due to vehicle traffic and unauthorized dumping. The pools continue to be regularly impacted by unauthorized vehicle activity, dumping, and use of the site by locals. The various activities change the shape and location of the pools that are essentially puddles in a dirt/gravel parking lot. These are artificial features and not considered jurisdictional, as they are not connected to streams or other upstream or downstream resources, which were formed from human activity.

The large pool (Pool 12) occurs on land that was used as active agriculture through 2005. This pool occurs adjacent to the commercial property located at the northwest corner of Ramona Expressway and Perris Drive. Pool 12 is not naturally occurring but rather the result of the manipulation of the adjacent land. A review of historic aerials shows the first sign of water pooling at Pool 12 in 2011. The construction of the development of the commercial property at the northwest corner of Ramona Expressway and N. Perris Boulevard and adjacent road (Ramona Expressway) at a slighter higher topographic elevation than the subject property caused rainwater and storm water overflows to impound on-site. The main hydrologic connection in Pool 12 is the artificial flows resulting from the increased imperviable surfaces constructed upstream of the site. These storm water flows were not

captured into a controlled feature (such as the planned Line E) but rather allowed to flow onto the site. The artificial storm flows originating from the storm drain culvert resulted in the flooding of the field and the formation of Pool 12. The watershed for the pool is limited to approximately 12 acres of the project site. This small sized watershed is unlikely to support the size of the pool on the property. Although the pool would be smaller if not for the artificially increased flows from the culvert, the pool may still exist from the direct rainfall on the property given the elevation of the development adjacent to the property. As a result, Pool 12 was determined to be a water of the State. No wetland or vernal pool indicator plant species was observed in the pool.

5.2.1 Potential CDFW/RWQCB Jurisdiction

The CDFW jurisdictional boundaries were determined based on the presence of riparian vegetation or regular surface flow. Streambeds within CDFW jurisdiction were delineated based on the definition of streambed as "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 with surface or subsurface flow that supports riparian vegetation" (Title 14, Section 1.72). This definition for CDFW jurisdictional habitat allows for a wide variety of habitat types to be jurisdictional, including some that do not include wetland species (e.g., oak woodland and alluvial fan sage scrub). Jurisdictional limits for CDFW streambeds were defined by the top of bank. Vegetated CDFW habitats were mapped at the limits of streambed-associated vegetation, if present.

The RWQCB limits were mapped in the same manner as the CDFW limits. RWQCB limits include the drip line of riparian vegetation rooted within the channel limits if riparian vegetation was present. For this site, the CDFW and RWQCB limits are the same.

Based on the results of the jurisdictional assessment, the site has two drainages. Drainage 1 is comprised of a short earthen bottom channel that connects to a concrete ditch along the Ramona Expressway that serves as a storm drain, including flows from the box culvert under Indian Avenue and a storm drain under Ramona Expressway. Flow from the box culvert bifurcates with a portion of flows entering Drainage 1 and other flows forming Drainage 2. Drainage 2 flows onto the site for a short distance (23 feet) then transitions to a 10-foot-wide sheet flow. (Table 3, *CDFW/RWQCB Jurisdictional Resources*). Both drainages originate from culverts with flows that primarily are from artificial sources

Pool 12 is also considered jurisdictional as a water of the State. Flows from the box culvert contribute to the ponding of this pool. The flows from the box culvert are partially from the redirection of a naturally occurring stream (waters of the State) but mostly from runoff of the existing developments located north and west of the project site. The artificially increased flows and the increase in elevation from development to the southeast resulted in the formation of Pool 12.

Pools 1-11 are located on a hardpan dirt/gravel parking lot and are artificially created. These pools lack an upstream or downstream connection to a streambed and are not considered jurisdictional. Concurrence from CDFW and RWQCB will be required to confirm these conditions.

Table 3
CDFW/RWQCB JURISDICTIONAL RESOURCES

Habitat Type	On-Site	
	Acres*	Linear feet**
Drainage 1-earthern bottom	0.008	47
Drainage 1 concrete brow ditch	0.17	922
Drainage2- channel	0.002	23
Drainage 2 sheetflow	0.01	55
Pool 12	0.39	520**
TOTALS	**0.58**	**1,047**

* acres are to round to nearest 0.01 acre except for acres less than 0.01
** linear feet of pool not included in total linear feet

5.2.2 Potential USACE Jurisdiction

Based on the aquatic resource delineation, the drainages on-site are not waters of the U.S. jurisdictional to the USACE. The NWI does not show resources occurring on-site (USFWS 2021). The drainages on-site, as described in Section 5.2 above, are storm drain flood control features constructed in uplands and only flow in direct response to precipitation resulting in stormwater runoff. The brow ditch flows in direct response to rainfall runoff, with flows typically lasting from a day to a week depending on the amount and frequency of rainfall. Based on confirmation by USACE staff which included a review of site conditions, the storm drain (Drainage 1) constructed in uplands is not a water of the U.S (pers. com 2021). Since no other waters in the study area have a downstream connection to a water of the U.S., the other waters in the study area are also not waters of the U.S., resulting in no waters of the U.S. occurring in the study area. A request for a formal letter stating no waters of the U.S. occur on the property will be submitted to the USACE as part of the permitting process.

5.3 IMPACTS

The project will result in impacts to all the waters of the State on the property. No impacts to waters of the U.S. are proposed, as none occur on the property.

Impacts to waters of the State will result from the construction of the reach of Line E within the property limits and from the development of the proposed warehouse and associated infrastructure. The storm drain flows will be directed into the reach of Line E, which will connect to an existing storm drain lateral at the western edge of Perris Boulevard to allow flow to continue to the east and connect to the PVSD. This interim proposed connection of Line E will be in place until such time as the City constructs additional downstream sections of the Line E storm drain that are not part of this project.

The proposed project impacts will require an SAA from CDFW and a WDR from RWQCB. The limits of jurisdiction, impacts, and mitigation (discussed below) will be confirmed during the permitting process.

5.4 MITIGATION

Mitigation for impacts to waters of the State is proposed to be accomplished via the purchase of credits at the Riverpark Mitigation Bank or another approved bank. Mitigation is proposed to consist of 2:1 restoration credits for impacts to Pool 12 (Table 4, *CDFW/RWQCB Impacts and Mitigation*). This 2:1 mitigation ratio and mitigation type are proposed, given the flows on-site are mainly artificial and the

adjacent lands resulted in an increase in elevation that contributed to the formation of Pool 12. The Drainage 2 (sheet flow and channel) and the earthen bottom portions of Drainage 1 that are the result of storm drain flows are proposed to be mitigated with 1:1 rehabilitation credit. Purchase of mitigation credits is not proposed for the impacts to the concrete brow ditch portion of Drainage 1, as this will be replaced on-site with the construction of Line E.

Table 4
CDFW/RWQCB IMPACTS AND MITIGATION

Habitat Type	Impacts Acres[1]	Impacts Linear Feet[2]	Mitigation Ratio	Mitigation[3] Rehabilitation
Drainage 1-earthern bottom	0.008	47	1:1	0.008
Drainage 1 concrete brow ditch	0.17	922	NA	-
Drainage2- channel	0.002	23	1:1	0.002
Drainage 2 sheet flow	0.01	55	1:1	0.01
Pool 12	0.39	520**	2:1	0.78
TOTALS	**0.58**	**1,047**		**0.80**

[1] acres are to round to nearest 0.01 acre except for acres less than 0.01.
[2] linear feet of pool not included in total linear feet.
[3] Proposed as credits at Riverpark Mitigation Bank.

Prior to project impacts to the aquatic resources on the project site, authorization for those impacts is required to be obtained from the corresponding regulatory agency. The authorization will determine the extent of authorized impacts and include the associated mitigation required.

6.0 PROTECTION OF SPECIES ASSOCIATED WITH RIPARIAN/RIVERINE AREAS AND VERNAL POOLS (SECTION 6.1.2)

The MSHCP requires that all projects be assessed for Section 6.1.2 resources, including riparian/riverine resources, vernal pools, fairy shrimp, and riparian birds. The goal is to protect resources used by MSHCP-covered species, as well as the existing and future downstream conservation areas.

According to Section 6.1.2 of the MSHCP:

> "**Riparian/Riverine Areas** are lands which contain Habitat dominated by trees, shrubs, persistent emergents, or emergent mosses and lichens, which occur close to or which depend upon soil moisture from a nearby fresh water source; or areas with fresh water flow during all or a portion of the year."
>
> "**Vernal pools** are seasonal wetlands that occur in depression areas that have wetlands indicators of all three parameters (soils, vegetation and hydrology) during the wetter portion of the growing season but normally lack wetlands indicators of hydrology and/or vegetation during the drier portion of the growing season. Obligate hydrophytes and facultative wetlands plant species are normally dominant during the wetter portion of the growing season, while upland species (annuals) may be dominant during the drier portion of the growing season. The

determination that an area exhibits vernal pool characteristics, and the definition of the watershed supporting vernal pool hydrology, must be made on a case-by-case basis. Such determinations should consider the length of the time the area exhibits upland and wetland characteristics and the manner in which the area fits into the overall ecological system as a wetland. Evidence concerning the persistence of an area's wetness can be obtained from its history, vegetation, soils, and drainage characteristics, uses to which it has been subjected, and weather and hydrologic records."

"**Fairy Shrimp**. For Riverside, vernal pool and Santa Rosa fairy shrimp, mapping of stock ponds, ephemeral pools and other features shall also be undertaken as determined appropriate by a qualified biologist.

"With the exception of wetlands created for the purpose of providing wetlands Habitat or resulting from human actions to create open waters or from the alteration of natural stream courses, areas demonstrating characteristics as described above which are artificially created are not included in these definitions."

Note that the MSHCP states that "areas demonstrating characteristics [of riparian/riverine habitat] which are artificially created are not included in these definitions" of riparian/riverine habitat. The identification of Riparian/Riverine and Vernal Pool habitats is based on the potential for the habitat to support Riparian/Riverine and Vernal Pool Covered Species, which are identified in Section 6.1.2 of the MSHCP. These species include Riverside fairy shrimp (*Streptocephalus woottoni*), vernal pool fairy shrimp (*Branchinecta lynchi*), and a suite of other animals and plants outlined in Section 6.1.2 of the MSHCP. During the field survey, the study area was evaluated for habitat that could support animals and/or plants identified by the MSHCP as Riparian/Riverine and Vernal Pool species.

6.1 RIPARIAN/RIVERINE

The MSHCP has a separate definition for "riparian" and for "riverine." Riverine features include those that are natural in origin, as well as part natural features that have been modified and/or redirected and can include features indirectly created through manipulation of the landscape, including channelization of a historic riverine feature. If these features connect to nearby downstream resources that are either existing or described conservation lands, they would be considered riverine. Riverine features are typically unvegetated or include vegetation similar to surrounding uplands. Riparian features are those with vegetation dependent upon a water source such as a stream, drainage, pond, or similar.

6.1.1 Methods

A Riparian/Riverine and Vernal Pool habitat assessment was conducted by Mr. Hogenauer during site visits on October 5, 2020. The assessment was conducted concurrently in the field with the aquatic resources delineation (Section 3.0 above) and updated during additional visits in February and March 2021. The initial evaluation on October 5, 2020, consisted of a directed search for field characteristics indicative of Riparian/Riverine habitats. Field indicators include the presence of certain plant species, drainage courses, drainage patterns, ponded water, changes in soil character, changes in vegetation character, and deposits of water-borne debris. The March 2021 visit consisted of a focused survey for Riparian/Riverine and Vernal Pool plant species.

A review of historic aerials was performed to aid in determining the origin of the drainage. Historic aerials were reviewed dating back to 1966 (NETROnline 2020).

6.1.2 Existing Conditions and Results

No riparian habitat occurs on the site. The site does have two riverine features, labeled as Drainage 1 and Drainage 2. These features are described above in detail in Section 6.2 of this report. Drainage 1 is comprised of the concrete ditch located along the Ramona Expressway and the earthen bottom connection to a box culvert. Drainage 2 originates from a box culvert and flows onto the site for 23 feet, then changes to sheet flow for an additional 55 feet, where it dissipates (Table 5, *Habitats Evaluated for Riparian/Riverine Potential*). Both drainages originate from culverts.

The concrete brow ditch and associated earthen channel, as discussed in section 5.2 above, are storm drain features constructed in uplands. Per the MSHCP, features that are artificially created in uplands do not meet the definition of an MSHCP riverine feature. Based on this MSHCP Riparian/Riverine resources do not occur on the property. Table 5 is for informational purposes only and lists the features that were evaluated as potential MSHCP Riparian/Riverine resources.

Table 5
HABITATS EVALUATED FOR RIPARIAN/RIVERINE POTENTIAL

Riverine habitat	Acre*	Linear Feet
Drainage 1- earthen bottom	0.008	47
Drainage 1 - concreate brow ditch	0.17	922
Drainage 2- channel	0.002	23
Drainage 2 - sheetflow	0.01	55
TOTAL	**0.19**	**1,047**

* acres are to round to nearest 0.01 acre except for acres less than 0.01

6.1.3 Impacts

All features evaluated will be impacted by the construction of Line E, the warehouse, and the associated infrastructure. As the features evaluated were determined to not be MSHCP Riparian/Riverine resources, no impacts on MSHCP Riparian/Riverine habitats will occur.

6.1.4 Mitigation

As no MSHCP Riparian/Riverine features occur on the property, no mitigation is required.

6.2 VERNAL POOLS

6.2.1 Methods

Historical aerial photos of the site from 2018, 2014, 2011, 2006, and 1966 were reviewed to aid in the identification of potential vernal pools (NETROnline 2021). HELIX biologist Rob Hogenauer conducted an initial Riparian/Riverine and Vernal pool resource evaluation on October 5, 2020. Vernal pool indicators searched for include standing water, cracked soil, presence of certain plant species, and changes in soil or vegetation characteristics. Soils information was gathered from the U.S. Department of Agriculture online database (USDA 2020). Due to potential vernal pools (or ephemeral pools) being detected during

the October 5 survey, the site was surveyed again on January 5 and February 5, 2021. Both field visits in 2021 were conducted approximately one week following a significant rain event to ensure the mapping effort did not include short-lived non-jurisdictional puddles.

6.2.2 Existing Conditions and Results

The study area includes 12 pools on the eastern side of the property that hold water for at least seven days. All but one of the pools occur on the hardpan dirt/gravel surface in the northeast that was used as a parking lot in the past. The northeast corner of the property was converted from agriculture to a dirt parking lot between 1997 and 2002. The manipulation of the land to be used as a parking lot resulted in several low spots that now pool from rainfall. These pools (pools 1-11) on the hardpan surface are essentially unvegetated and are disturbed due to vehicle traffic and unauthorized dumping. These are artificial features and not naturally occurring.

One pool, (Pool 12, the largest of the pools), occurs in the southeast area of the site within the fallow agricultural field. Pool 12 occurs on land that was used as active agriculture through 2005. This pool occurs adjacent to the commercial property located at the northwest corner of Ramona Expressway and Perris Drive. This area now pools as a result of the commercial property and adjacent Ramona Expressway being constructed a slighter higher topographic elevation than the subject property. Pool 12 is not naturally occurring, but rather the result of the manipulation of the adjacent land. A review of historic aerials shows the first sign of water pooling at the location of Pool 12 occurs in 2011. Vegetation within Pool 12 is similar to the adjacent land within the fallow agricultural field. No wetland or vernal pool indicator plant species was observed in the pool.

The soil mapped at the location of the pools is Pachappa fine sandy loam. This soil and its minor components are not classified as hydric soils (USDA 2020). Plant species observed in Pool 12 include purple sand spurrey (*Spergularia rubra*), stinknet (*Oncosiphon piluliferum*), prostrate knotweed (*Polygonum aviculare*), short pod mustard (*Hirschfeldia incana*), and mouse barley (*Hordeum murinum*). None of the plants observed in the pools are classified as wetland species. The other 11 pools occur on the hardpan soils in the area used as a parking lot and lack vegetation. The pools do not meet the MSHCP definition of vernal pools since they lack two of the three criteria (soils and vegetation) and were created from artificial manipulation of the land. The acreage of each pool is provided for informational purposes (Table 6, *Areas Evaluated as Potential Vernal Pool Resources*).

Table 6
AREAS EVALATED AS POTENTIAL VERNAL POOL RESOURCES

Pool Number	Acres*	Linear feet**
1	0.004	22
2	0.05	100
3	0.0002	5
4	0.006	22
5	0.0008	7
6	0.047	72
7	0.001	26
8	0.001	49
9	0.098	156
10	0.002	18
11	0.001	17

Pool Number	Acres*	Linear feet**
12	0.393	520
TOTALS	**0.604**	**1,014**

* due to small size of many of the pools the acres is rounded to nearest 0.001 acre, the smallest pools are rounded to nearest 0.0001 acre.

** linear feet measures along the longest axis of the pool

6.2.3 Impacts

The project will not result in an impact to MSHCP vernal pools as none of the pools on the project site meet the MSCHP definition of a vernal pool.

6.2.4 Mitigation

Mitigation for impacts to MSHCP vernal pools is not required as MSHCP vernal pools do not occur on site.

6.3 FAIRY SHRIMP

The project site includes 12 pools resulting from anthropocentric manipulation of the land. The pools were determined to include potential habitat for fairy shrimp. Both a wet and a dry season survey were conducted. The dry season survey was conducted in eight areas suspected of being potential fairy shrimp habitat. The wet season survey was expanded to twelve pools. Surveys reports are included as Appendices C and D.

6.3.1 Survey Method

Wet Season

HELIX permitted biologists Amy Mattson and Erica Harris (Permit TE778195-14) conducted the wet season survey according to USFWS protocol (USFWS 2017) to determine the presence/absence of vernal pool and Riverside fairy shrimp (Appendix C). A total of 12 features were sampled for this survey (Figure 7, *Sensitive Resources*). Fourteen survey visits and a ponding check were conducted within the survey area for this focused survey.

The first substantial rainfall of the season occurred on December 28, 2020 (1.04 inches; Weather Currents 2021a). A ponding check was conducted by HELIX biologist Dane Van Tamelen on December 30, 2020. The first survey visit with observed ponding occurred on January 5, 2021, which followed rain events on December 24 (0.04 inch) and 27, 2021 (1.04 inches). Subsequent visits occurred on January 12, 19, and 25, February 3, 9, 16, and 23, March 2, 9, 16, 23, and 30, and April 6, 2021. None of these visits were exclusively ponding checks; all visits were survey visits. No features were ponded on April 6, 2021, the last visit for this report.

The water-holding features were sampled using fine mesh aquarium nets. If fairy shrimp were present, an attempt to identify netted fairy shrimp to species occurred in the field. Following identification, individuals identified in the field were immediately returned to their pool of origin. Fairy shrimp that were not able to be identified to species in the field were collected and identified using the key in Eriksen and Belk (1999) with the aid of a dissecting scope. When “take” of fairy shrimp occurred, no more than 20 specimens of each species from each feature, or less than 50 percent of the estimated

subpopulation for each feature, were collected (whichever was the lesser amount). Care was taken to ensure that nets were cleaned after each feature was sampled. Feature depth, area, water temperature, air temperature, habitat condition, and species present were noted and recorded on USFWS vernal pool data sheets.

Dry Season

HELIX permitted biologist Amy Mattson (Permit TE778195-14) conducted the dry season sampling in accordance with USFWS protocol (USFWS 2017). Eight features were identified as potential basins using readily available aerial imagery from a known wet year for the region (Google Earth dated December 2, 2018). These were sampled for the presence of fairy shrimp eggs. Soil was collected from these features on October 15, 2020, by Ms. Mattson (Appendix D).

Following soil collection, the samples were transferred to the HELIX laboratory for processing by Ms. Mattson. Samples were processed in February 2021. Samples were prepared by dissolving the soil samples in water and sequentially sieving the material through 710- and 75 µm pore size screens. The small size of these screens ensures that eggs from the target fairy shrimp species are retained. The portion of each sample retained in the screen was dispersed in a brine solution to separate the organic from the inorganic material. The organic fraction was decanted, dried, and examined under a microscope by Ms. Mattson. Eggs were identified to genus level based on surface characteristics. Multiple species of the *Branchinecta* genus can occur in Riverside County but cannot be identified past genus level based on egg characteristics. Eggs of each genus were counted within each soil sample, and egg abundance was estimated for each feature and is provided in the Results section, according to the guidelines provided in the USFWS Survey Guidelines: none (no eggs found in sample); low abundance (estimate of 1 to 10 eggs/100 milliliters [mL] soil); medium abundance (estimate of 11 to50 eggs/100 mL soil); and high abundance (estimate of more than 50 eggs/100 mL of soil). Basins were re-labeled to match those sampled during the 2020-2021 wet season fairy shrimp survey.

6.3.2 Results

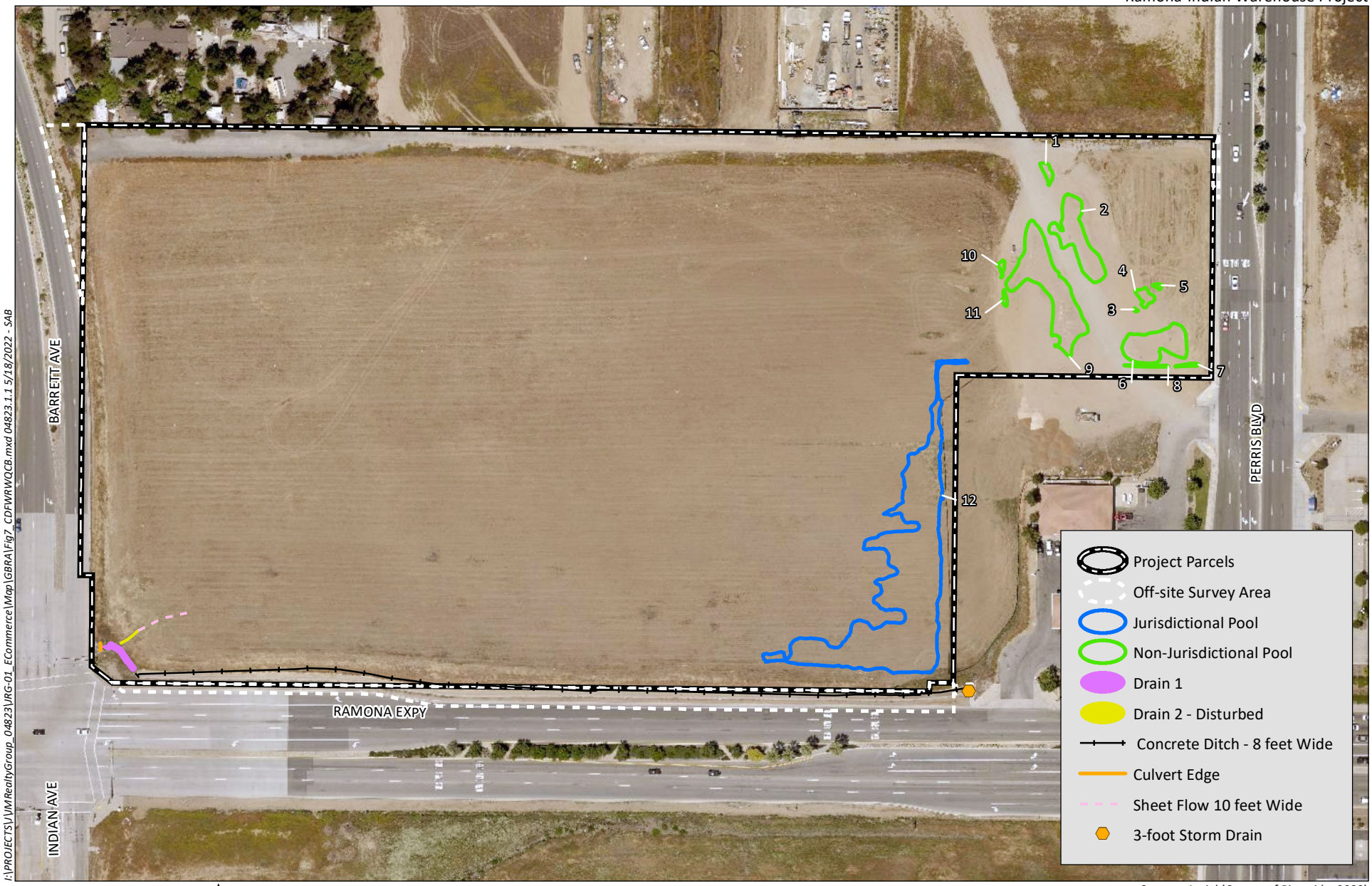
No sensitive fairy shrimp were detected. The non-sensitive versatile fairy shrimp were observed within six of the 12 pools: 1, 2, 6, 9, 11, and 12 (Figure 7). Immature fairy shrimp were additionally observed within Feature 4.

6.3.3 Impacts

No impacts to sensitive fairy shrimp are proposed as none occur on the site.

6.3.4 Mitigation

As there are no impacts to sensitive fairy shrimp no mitigation is required.



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Source: Aerial (County of Riverside, 2020)

HELIX Environmental Planning

CDFW/RWQCB

Figure 7

6.4 RIPARIAN BIRDS

6.4.1 Methods

The vegetation in the study area was mapped on October 5, 2020, with an additional assessment conducted on February 3, 2021. The study area was determined not to have habitat with the potential to support MSHCP riparian bird species (including least Bell's vireo [LBVI; *Vireo bellii pusillus*], southwestern willow flycatcher [SWFL; *Empidonax traillii extimus*], or yellow-billed cuckoo [YBCU; *Coccyzus americanus*]). The site lacks riparian habitat but does have a streambed and pools. The aforementioned riparian bird species utilize willow riparian or similar woodland or forest habitats that are layered. The preferred habitat for the riparian bird species does not occur in the study area.

Other MSHCP riparian bird species are bald eagle (*Haliaeetus leucocephalus*) and peregrine falcon (*Falco peregrinus*). These species primarily occur adjacent to open water habitats, with the peregrine falcon possibly occurring in riparian woodland and forest habitats. Suitable nesting habitat for these species do not occur in the study area.

The study area does not include habitat with the potential to support MSHCP riparian birds. No impacts are proposed to occur to riparian bird habitat; therefore, no surveys or mitigation is required.

6.4.2 Results

Habitat for sensitive riparian bird does not occur in or adjacent to the study area. Sensitive riparian bird species do not occur in the study area.

6.4.3 Impacts

No impacts are proposed to sensitive riparian birds as they do not occur on-site.

6.4.4 Mitigation

No mitigation is required for riparian birds as no impacts are proposed.

6.5 PLANTS

6.5.1 Plants

The MSHCP lists 23 sensitive plant species that have the potential to occur in Riparian/Riverine and Vernal Pool habitats. These species are:

- California black walnut (*Juglans californica* var. *californica*),
- Engelmann oak (*Quercus engelmannii*),
- Coulter's matilija poppy (*Romneya coulteri*),
- San Miguel savory (*Clinopodium chandleri*),

- spreading navarretia (*Navarretia fossalis*),
- graceful tarplant (*Holocarpha virgata* ssp. *elongata*),
- California Orcutt grass (*Orcuttia californica*),
- prostrate navarretia (*Navarretia prostrata*),
- San Diego button-celery (*Eryngium aristulatum* var. *parishii*),
- Orcutt's brodiaea (*Brodiaea orcuttii*),
- thread-leaved brodiaea (*Brodiaea filifolia*),
- Fish's milkwort (*Polygala cornuta* var. *fishiae*),
- lemon lily (*Lilium parryi*),
- San Jacinto Valley crownscale (*Atriplex coronata* var. *notatior*),
- ocellated Humboldt lily (*L. humboldtii* ssp. *ocellatum*),
- Mojave tarplant (*Deinandra mohavensis*),
- vernal barley (*Hordeum intercedens*),
- Parish's meadowfoam (*Limnanthes gracilis* var. *parishii*),
- slender-horned spineflower (*Dodecahema leptoceras*),
- Santa Ana River woolly-star (*Eriastrum densifolium* ssp. *sanctorum*),
- Brand's phacelia (*Phacelia stellaris*),
- mud nama (*Nama stenocarpum*), and
- smooth tarplant (*Centromadia pungens* ssp. *laevis*)

6.5.2 Methods

Focused surveys for MSHCP Riparian/Riverine plant species were conducted on March 9 and 22, 2020, by HELIX biologist Rob Hogenauer. Mr. Hogenauer walked transects throughout the entire site searching for Riparian/Riverine and vernal pool plant species. Additionally, biologist Amy Mattson surveyed the pools for riparian plant species during the fairy shrimp survey.

6.5.3 Results

The study area has limited habitat with the potential to support Riparian/Riverine species and Vernal pool plant species. Prior agricultural use of the site has removed the naturally occurring vegetation. The

plant species associated with Riparian/Riverine and Vernal Pool areas were confirmed to be absent from the study area.

A number of the species, including California Orcutt grass, spreading navarretia, thread-leaved brodiaea, San Miguel savory, graceful tarplant, prostrate navarretia, Orcutt's brodiaea, and vernal barley, and occur in vernal pool or similar habitats. The pools on-site were repeatedly observed for this species during the fairy shrimp survey, along with the focused survey by Mr. Hogenauer. Other species, such as San Diego button-celery, Fish's milkwort, lemon lily, San Jacinto Valley crownscale, Mojave tarplant, Brand's phacelia, Santa Ana River woolly-star, and Parish's meadowfoam, have distributions well outside of the study area.

The remaining species have a distribution that includes the study area or occurs in habitats found on the study area and are discussed in greater detail below.

Engelmann oak is a conspicuous tree species associated with alluvial fans and slopes with a mesic aspect. Coast live oak trees occur on the study area. No Engelmann oaks were observed, and this species is presumed to be absent from the study area.

Mud nama is restricted to muddy embankments of marshes and swamps and within lake margins and riverbanks (CNPS 2021). Three populations are known from Riverside County, with two occurring along the San Jacinto River (Dudek 2003). This species was not observed and is presumed to be absent from the study area.

Smooth tarplant is found in southwestern California and northwestern Baja California, Mexico (Baja), and occurs in San Bernardino, Riverside, and San Diego counties. This species occurs in open spaces within a variety of habitats, including alkali scrub and playas, riparian woodland, watercourses, and grasslands with alkaline affinities (Dudek 2003; CNPS 2021). This species was not observed and is presumed to be absent from the study area.

Coulter's Matilija poppy occurs in dry washes and canyons below 3,600 feet. It often occurs within sage scrub and chaparral habitats. Dense shrub cover may limit the expansion of this species (Dudek 2003). This species is easily detected when present. It was not observed and is presumed absent from the study area.

Ocellated Humboldt lily is associated with riparian corridors in coniferous forest and chaparral habitats. Within Western Riverside County, ocellated Humboldt lily is restricted to canyons along the east slope of the Santa Ana Mountains and the north slope of the Palomar Mountains. The study area does not include riparian habitats. This species was not observed and is presumed to be absent from the study area.

Slender-horned spineflower is typically found in mature alluvial scrub with sandy soils but is also found in rocky soils and open chamise chaparral. Ideal habitat is thought to be benches or terraces that receive overbank flow every 50 to 100 years. Habitat for this species does not occur on the study area. This species was not observed and is presumed to be absent from the study area.

None of the 23 MSHCP Riparian/Riverine and Vernal pool plant species were observed on the study area, and none are expected to occur within the study area. A list of plant species observed during the field surveys is provided as Appendix A.

6.5.4 Impacts

No impacts to MSHCP Riparian/Riverine plant species are proposed.

6.5.5 Mitigation

No mitigation for impacts to MSHCP Riparian/Riverine plant species is required, as no impacts are proposed.

6.6 OTHER SECTION 6.1.2 SPECIES

Section 6.1.2 of the MSHCP also includes the protection of fish and amphibian species.

6.6.1 Fish

The Santa Ana sucker is restricted to the Santa Ana River watershed with year-round flows. This species generally lives in small shallow streams less than seven meters wide with various current strengths. They require permanent streams with a gravel bottom preferred. They prefer cool, clear water but can tolerate turbid waters. Habitat for this species is not present on the study area; thus, this species is not expected to occur.

6.6.2 Amphibians

The MSHCP Section 6.1.2 includes the protection of three amphibian species, arroyo toad, mountain yellow-legged frog, and California red-legged frog. Arroyo toad occurs in streams that have breeding pools that are shallow with minimal current. Requirements also include sandy banks with areas of minimal vegetative cover. A minimal amount of streambed does occur in the study area. However, it is ephemeral and primarily occurs as a concrete brow ditch. Mountain yellow-legged frog and California red-legged frog are not known to occur on or adjacent to the study area. The mountain yellow-legged frog occurs in mountain streams and is currently only known within the County in the San Jacinto Mountains. The California red-legged frog is only known within the County on the Santa Rosa Plateau. It requires deep water with adjacent uplands to move between breeding sites. Habitat for these species does not occur on the study area; thus, none of the MSHCP sensitive amphibian species are expected to occur.

7.0 PROTECTION OF NARROW ENDEMIC PLANT SPECIES (SECTION 6.1.3)

The study area is not located within an MSHCP Section 6.1.3 Narrow Endemic Plant Species Survey Area (NEPSSA). Sensitive plant surveys are not required, and focused plant surveys were not conducted.

7.1 METHODS

Mr. Hogenauer conducted several visits to the property to conduct an aquatic resource assessment and burrowing owl surveys. During these visits, a list of plant species observed was recorded.

7.2 EXISTING CONDITIONS AND RESULTS

The survey resulted in the observation of 17 plant species. Dominant plant species observed include stinknet, short pod mustard, purple sand spurrey, prostrate knotweed, mouse barley, red brome, and red stem filaree (*Erodium cicutarium*). All species are typical of disturbed areas.

None of the plants observed are NEPSSA plants.

7.3 IMPACTS

No NEPSSA Species occur; therefore, no impacts are anticipated.

7.4 MITIGATION

Due to a lack of NEPSSA species resulting in a lack of impacts, no mitigation is required.

8.0 ADDITIONAL SURVEY NEEDS AND PROCEDURES (SECTION 6.3.2)

8.1 CRITERIA AREA PLANT SPECIES

The study area is not within a Criteria Area Plant Species Survey Area (CASSA). Surveys for CASSA species are not required and were not conducted.

8.2 AMPHIBIANS

The study area is not within an amphibian survey area. Amphibian surveys are not required and were not conducted.

8.3 BURROWING OWL

The study area is located within the survey area for burrowing owl. A habitat assessment and protocol burrowing owl survey was conducted in accordance with the MSHCP Burrowing Owl Survey Instructions (RCA 2006).

8.3.1 Methods

The survey was conducted according to the Burrowing Owl Survey Instructions for the Western Riverside MSHCP Area (County 2006). This survey included a habitat assessment (Step I) and focused surveys (Step II). Step II surveys are made up of focused burrow surveys (Part A) and focused burrowing owl surveys (Part B) and are required when potential burrowing owl habitat is observed during the initial habitat assessment. This report is intended to comply with reporting requirement Step III. The specific survey information is provided below in Table 7, *BUOW Survey Information.* Details regarding the habitat assessment and focused burrow and BUOW surveys are described further below.

The Step I survey was conducted on foot and included the entire project area, along with a visual survey for potential burrowing owl habitat within a 150-meter (approximately 500-foot) buffer zone around the periphery of the study area (survey area). The survey area was slowly walked and assessed for suitable BUOW habitat, including:

- disturbed low-growing vegetation within grassland and shrublands (less than 30 percent canopy cover);
- gently rolling or level terrain;
- areas with abundant small mammal burrows, especially California ground squirrel burrows (*Otospermophilus beecheyi*);
- fence posts, rocks, or other low perching locations; and
- artificial structures, such as earthen berms, debris piles, and cement culverts.

Because suitable habitat was observed during the Step I habitat assessment, Step II surveys were conducted on March 9, 22, 31, and April 6, 2021, by Mr. Hogenauer. Step II surveys, which consist of a focused burrow survey (Part A) and four focused BUOW surveys (Part B), were conducted to determine whether the survey area supports suitable burrows and/or BUOW. Step II surveys were conducted during the breeding season for BUOW (March 1 to August 31) during weather conducive to observing owls outside their burrows and detecting burrowing owl sign, within one hour before sunrise to two hours after sunrise. As required by the survey instructions, it had not rained within five days prior to the surveys, which could have obscured owl sign. In accordance with the survey protocol, the focused burrow survey was conducted concurrently with the first BUOW survey.

All potential burrows were checked for signs of recent owl occupation. Signs of occupation include:

- pellets/casting (regurgitated fur, bones, and/or insect parts);
- whitewash (excrement); and/or
- feathers.

The biologist walked transects spaced no greater than 30 meters apart (approximately 100 feet) to allow for 100 percent visual coverage of all suitable habitat within the survey area. The biologists walked slowly and methodically, closely checking suitable habitat within the survey area for suitable burrows, BUOW diagnostic sign (e.g., molted feathers, pellets/castings, or whitewash at or near a burrow entrance), and individual BUOW. Inaccessible areas of the survey area were visually assessed using binoculars. Where detected, all suitable burrows, burrow surrogates, BUOW sign, and/or BUOW observations were recorded using a handheld Global Positioning System (GPS) unit.

Table 7
BUOW SURVEY INFORMATION

Survey Number	Survey Date	Start/Stop Time	Start/Stop Weather Conditions	Focus	Survey Results
HA	2/3/21	0900-1030	N/A	Step I – Habitat Assessment	Suitable habitat occurs, potential burrows are present.
1[1]	3/9/21	0555-0645	45°F, wind 1-3 mph, 100% clouds 47°F, wind 1-3 mph, 100% clouds	Step II Parts A and B - Burrows and owls	Suitable habitat, a few burrows observed; no BUOW detected.
2	3/22/21	0710-0845	40°F, wind 0-1 mph, 0% clouds 43°F, wind 0-1 mph, 0% clouds	Step II Part B - owls	No BUOW detected.
3	3/31/21	0645-0730	66°F, wind 2-5 mph, 0% clouds 67°F, wind 4-8 mph, 0% clouds	Step II Part B - owls	No BUOW detected.
4	4/6/21	0650-0720	53°F, wind 1-2 mph, 100% clouds 54°F, wind 0-2 mph, 100% clouds	Step II Part B - owls	No BUOW detected.

8.3.2 Existing Conditions and Results

The study area consists of an open disturbed field dominated by low-the growing annual plant species. Burrows with the potential to be utilized by burrowing owl were only observed along the western edge Figure 8, *Burrows Suitable for Use by BUOW*. In addition to the potential burrowing on the west side of the study area, some debris piles occur on the northeast corner of the study area, but these debris piles lacked holes for burrowing owl use. Additionally, the debris piles were being used as a human encampment, which would highly discourage the use of the debris by burrowing owl. The majority of the study area lacked burrows with the potential to support burrowing owl.

No sign of burrowing owl or use by burrowing owl was observed in the study area. Burrowing owl are presumed not to occur in the study area.

8.3.3 Impacts

Burrowing owl were not observed in the study area and are not expected to occur. No impacts to burrowing owl are anticipated.

8.3.4 Mitigation

Although burrowing owl were not present during the focused surveys and are not expected to occur on the study area, PVCCSP mitigation measure MM Bio 2 is required. This requires a pre-construction survey to occur no more than 30 days prior to the initiation of ground disturbance (e.g., vegetation clearing, clearing and grubbing, tree removal, site watering).

Source: Aerial (County of Riverside, 2020)

HELIX Environmental Planning

Burrows Suitable for Use by BUOW

Figure 8

MM Bio 2 Project-specific habitats assessments and focused surveys for burrowing owls will be conducted for implementing development or infrastructure projects within burrowing owl survey areas. A pre-construction survey for resident burrowing owls will also be conducted by a qualified biologist within 30 days prior to commencement of grading and construction activities within those portions of implementing project sites containing suitable burrowing owl habitat and for those properties within an implementing project site where the biologist could not gain access,. If ground-disturbing activities in these areas are delayed or suspended for more than 30 days after the pre-construction survey, the area shall be resurveyed for owls. The pre-construction survey and any relocation activity will be conducted in accordance with the current Burrowing Owl Instruction for the Western Riverside MSHCP.

If active nests are identified on an implementing project site during the pre-construction survey, the nests shall be avoided or the owls actively or passively relocated. To adequately avoid active nests, no grading or heavy equipment activity shall occur within at least 250 feet of an active nest during the breeding season (February 1 through August 31), and 160 feet during the non-breeding season.

If burrowing owls occupy any implementing project site and cannot be avoided, active or passive relocation shall be used to exclude owls from their burrows, as agreed to by the City of Perris Planning Department and the CDFG. Relocation shall be conducted outside the breeding season or once the young are able to leave the nest and fly. Passive relocation is the exclusion of owls from their burrows (Outside the breeding season or once the young are able to leave the nest and fly) by installing one-way doors in burrow entrances. These one-way doors allow the owl to exit the burrow, but not enter it. These doors shall be left in place for 48 hours to ensure owls have left the burrow. Artificial burrows shall be provided nearby. The implementing project area shall be monitored daily for one week to confirm owl use of burrows before excavating burrows in the impact area. Burrows shall be excavated using hand tools and refilled to prevent reoccupation. Sections of flexible pipe shall be inserted into the tunnels during excavation to maintain an escape route for any animals inside the burrow. The CDFG shall be consulted prior to any active relocation to determine acceptable receiving sites available where this species has a greater chance of successful long-term relocation. If avoidance is infeasible, then a DBESP will be required, including the associated relocation of burrowing owls. If conservation is not required, then owl relocation will still be required following accepted protocols. Take of active nests will be avoided, so it is strongly recommended that any relocation occurs outside the nesting season.

In accordance with Objective 5 of the MSHCP for burrowing owl, if the project site (including adjacent areas) supports three or more pairs of burrowing owl, is greater than 35 acres of suitable habitat, and is non-contiguous with MSHCP conservation land, at least 90 percent of the area with long-term conservation value will be conserved on-site. Based on the small size of the study area and surrounding development and land uses, the study area does not represent land with a long-term conservation value for burrowing owl, and this Objective does not apply.

8.4 MAMMALS

The study area does not fall within a mapped survey area for mammal species. Surveys for mammal species are not required.

9.0 INFORMATION ON OTHER SPECIES

9.1 SPECIES NOT ADEQUATELY CONSERVED

The MSHCP includes a table (MSHCP Table 9-3) of 28 species that are not adequately conserved under the MSHCP. These species were not observed on the property during the various site visits conducted on the property.

9.2 SPECIAL STATUS PLANT SPECIES

The study area was evaluated for the potential for sensitive plant species to occur. A total of 30 sensitive plant species known to occur in the general vicinity of the study area were evaluated (Appendix E). None of the 30 species were observed in the study area. Six of the species evaluated are listed at either the federal or state level, with five of the six listed at both the federal and state level. Three of the listed species have low potential to occur but were not observed. They are the federal threatened and state endangered thread-laved brodiaea (*Brodiaea filifolia*), federal endangered San Jacinto valley crownscale (*Atriplex coronata var. notatior*), and the federal threatened spreading navarretia (*Navarretia fossalis*).

An additional three sensitive (but not listed) species also have low potential to occur in the study area. They are vernal barley (Hordeum intercedens), paniculate tarplant (*Deinandra paniculata*), and smooth tarplant (*Centromadia pungens laevis*). Although these three species were assessed as having a low potential to occur, they were not observed during the various surveys are presumed absent.

9.3 SPECIAL STATUS ANIMAL SPECIES

The study area was evaluated for the potential for sensitive animal species to occur. Species evaluated are comprised of four invertebrates, two amphibians, eight reptiles, seventeen birds, and ten mammals (Appendix F).

One species, California horned lark (*Eremophila alpestris actia*), was observed foraging on-site. Potential impacts to this species are covered via compliance with the MSHCP. Payment of the LDMF and compliance with the MSCHP are the required mitigation for this species.

There are two species with low potential to occur (Appendix F). They are western spadefoot (*Spea hammondii*) and burrowing owl (*Athene cunicularia*). The pools on-site represent potential habitat for western spadefoot, but no tadpoles (of any species) were observed during the fairy shrimp or other surveys on the property. Focused surveys for burrowing owl were conducted, and burrowing owl was not observed. Western spadefoot and burrowing owl are considered to be absent from the site.

9.3.1 Nesting Birds

In addition to the above sensitive animal species, nesting birds are protected under the Migratory Bird Treaty Act (MBTA) and under the CDFW code. The MBTA is interpreted as protecting nesting birds from direct impacts, while the CDFW code protects nests from direct and indirect impacts. To avoid impacts to nesting birds, PVCCSP mitigation measure MM Bio-1 should be implemented.

MM Bio-1 In order to avoid violation of the MBTA and the California Fish and Game Code, site preparation activities (removal of trees and vegetation) for all PVCC implementing development and infrastructure projects shall be avoided, to the greatest extent possible, during the nesting season (generally February 1 to August 31) of potentially occurring native and migratory bird species.

If site-preparation activities for an implementing project are proposed during the nesting/breeding season (February 1 to August 31), a pre-activity field survey shall be conducted by a qualified biologist prior to the issuance of grading permits for such project, to determine if active nests of species protected by the MBTA or the California Fish and Game Code are present in the construction zone. If active nests are not located within the implementing project site, and an appropriate buffer of 500 feet of an active listed species or raptor nest, 300 feet of other sensitive or protected bird nests (non-listed), or 100 feet of sensitive or protected songbird nests, construction may be conducted during the nesting/breeding season. However, if active nests are located during the pre-activity field survey, no grading or heavy equipment activity shall take place within at least 500 feet of an active listed species or raptor nest, 300 feet of other sensitive or protected (under MBTA or California Fish and Game Code) bird nests (non-listed), or within 100 feet of sensitive or protected songbird nests until the nest is no longer active.

10.0 GUIDELINES PERTAINING TO THE URBAN/WILDLANDS INTERFACE (SECTION 6.1.4)

Proposed projects within the MSHCP plan area are required to address indirect effects to the MSHCP Conservation area when the project is in proximity to a conservation area. This is addressed in the MSHCP under the Urban/Wildlands Interface Guidelines (UWIG). MSHCP conservation, public quasi-public, or other conservation land does not occur on or adjacent to the study area. The nearest MSHCP cell occurs approximately 8,500 feet southwest of the project site and is separated from the study area by residential and commercial development along with Interstate 215. The nearest existing conservation occurs at Perris Valley Storm Drain approximately 4,000 feet east of the project site. The project is not adjacent to an MSHCP conservation area and is therefore not subject to the UWIG. Project landscaping should not include invasive plant species as seeds from invasive plants can be washed downstream via storm drains and potentially affect downstream MSHCP conservation (Appendix G).

The project will collect runoff into an underground water quality basin located near the northeast corner of the industrial development. The runoff will enter this first flush basin prior to being discharged into pipes that will connect to Line E being installed with the project. Both the basin and Line E will connect to the existing lateral in Perris Boulevard until the rest of Line E to the east is constructed by the City.

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Appendix A

Plant Species Observed

Family	Scientific Name*,†	Common Name	Habitat[1]
Dicots			
Anacardiaceae	*Schinus molle**	Peruvian pepper tree	NNG
Asteraceae	*Oncosiphon pilulifer*	stinknet	NNG
	Erigeron canadensis	Horseweed	NNG, DH
	*Lactuca serriola**	Wild lettuce	DH, NNG
	*Sonchus asper**	Prickly sow-thistle	NNG
	Helianthus annuus	Annual Sunflower	NNG, DH
Boraginaceae	*Amsinckia menziesii* var. *menziesii*	Menzies' fiddleneck	DH, NNG
Brassicaceae	*Hirschfeldia incana **	short pod mustard	DH, NNG
Caryophyllaceae	*Spergularia rubra*	Purple sand spurrey	DH
Geraniaceae	*Erodium cicutarium**	Red-stem filaree	DH
Malvaceae	*Malva parviflora **	Cheeseweed	DH
Polygonaceae	*Rumex crispus **	Curly dock	DH
	Polygonum aviculare	Prostrate knotweed	DH
Portulacaceae	*Portulaca oleracea**	Purslane	DH
Salicaceae	*Salix lasiolepis*	Arroyo willow	DH (inside culvert)
Monocots			
Poaceae	*Bromus madritensis* ssp. *rubens**	red brome	DH, NNG
	*Hordeum murinum**	Mouse barley	DH, NNG

* Non-native

† Sensitive

[1] DH=Disturbed habitat; NNG=Non-native grassland; Pool=seasonal/vernal pool

Appendix B

Animal Species Observed or Detected

Taxon Order	Taxon Family	Scientific Name	Common Name
INVERTEBRATES			
Anostraca	Branchinectidae	*Branchinecta lindahli*	Versatile fairy shrimp
VERTEBRATES			
Amphibians and Reptiles			
Squamata	Phrynosomatidae	*Uta stansburiana*	side-blotched lizard
Birds			
Accipitriformes	Accipitridae	*Buteo jamaicensis*	red-tailed hawk
Charadriiformes	Laridae	*Larus sp.*	Gull
Passeriformes	Icteridae	*Sturnella neglecta*	western meadowlark
	Passeridae	*Passer domesticus*	house sparrow
	Tyrannidae	*Sayornis nigricans*	black phoebe
	Alaudidae	*Eremophila alpestris actia*†	California horned lark
Mammals			
Lagomorpha	Leporidae	*Sylvilagus audubonii*	desert cottontail
Rodentia	Sciuridae	*Spermophilus beecheyi*	California ground squirrel

† Sensitive

Appendix C

Wet Season Fairy Shrimp Report

HELIX Environmental Planning, Inc.
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June 16, 2021 04823.00001.001

Ms. Stacey Love
U.S. Fish and Wildlife Service
2177 Salk Avenue, Suite 250
Carlsbad, CA 92008

Subject: 2020-2021 Wet Season Fairy Shrimp Survey Report for the JM Realty Perris Development Project

Dear Ms. Love:

This letter presents the results of a U.S. Fish and Wildlife Service (USFWS) protocol (USFWS 2017) presence/absence wet season survey for vernal pool and Riverside fairy shrimp by HELIX Environmental Planning, Inc. (HELIX) for the JM Realty Perris Development Project (project), formerly referred to as the Ramona E-Commerce Park Project. This report describes the survey methods and results. It is being submitted to the USFWS as a condition of HELIX's Threatened and Endangered Species Permit TE778195-14.

The purpose of this survey was to determine the presence/absence of the federally listed threatened vernal pool fairy shrimp (*Branchinecta lynchi*) and federally listed endangered Riverside fairy shrimp (*Streptocephalus woottoni*) within 12 features located within the survey area. These features are comprised of shallow depressions and tire tracks. HELIX is not aware of previous surveys for fairy shrimp in the study area.

PROJECT LOCATION

The project site is located in the City of Perris, Riverside County (County), California (Figure 1, *Regional Location*). It is depicted in Section 6, Township 4 South, Range 3 West, as shown on the California U.S. Geological Survey (USGS) 7.5-minute Perris quadrangle map (Figure 2, *USGS Topography*). More specifically, the project is east of Interstate 215 and south of State Route 60, northwest of the intersection of Ramona Expressway and Perris Boulevard (Figure 3, *Project Vicinity on Aerial Photograph*).

Species Information

There are three species of fairy shrimp with potential to occur on-site: vernal pool fairy shrimp, Riverside fairy shrimp, and versatile fairy shrimp (*Branchinecta lindahli*). Vernal pool fairy shrimp are federally listed as threatened and Riverside fairy shrimp are federally listed as endangered, while versatile fairy shrimp are relatively common and are not listed or considered sensitive. Vernal pool fairy shrimp are found in southern Oregon and in California, south to Riverside County. This species occurs in vernal pools and other ephemeral ponds or basins. Riverside fairy shrimp can be found in Riverside, Orange, and San Diego counties and occur in vernal pools and other ephemeral basins with long inundation times. The versatile fairy shrimp are common in pools throughout California and can co-occur with both vernal pool and Riverside fairy shrimp.

METHODS

HELIX permitted biologists Amy Mattson and Erica Harris (Permit TE778195-14) conducted the wet season survey according to U.S. Fish and Wildlife Service (USFWS) protocol (USFWS 2017) to determine the presence/absence of vernal pool and Riverside fairy shrimp. A total of 12 features were sampled for this survey (Figure 4, *Sampled Features*). Fourteen survey visits and a ponding check were conducted within the survey area for this focused survey.

The first substantial rainfall of the season occurred on December 28, 2020 (1.04 inches; Weather Currents 2021a). A ponding check was conducted by HELIX biologist Dane Van Tamelen on December 30, 2020. The first survey visit with ponding occurred on January 5, 2021, which followed rain events on December 24 (0.04 inch) and 27, 2021 (1.04 inches). Subsequent visits occurred on January 12, 19, and 25, February 3, 9, 16, and 23, March 2, 9, 16, 23, and 30, and April 6, 2021. None of these visits were exclusively ponding checks; all visits were survey visits. No features were ponded on April 6, 2021, the last visit for this report.

The water-holding features were sampled using fine mesh aquarium nets. If fairy shrimp were present, an attempt to identify netted fairy shrimp to species occurred in the field. Following identification, individuals identified in the field were immediately returned to their pool of origin. Fairy shrimp that were not able to be identified to species in the field were collected and identified using the key in Eriksen and Belk (1999) with the aid of a dissecting scope. When "take" of fairy shrimp occurred, no more than 20 specimens of each species from each feature, or less than 50 percent of the estimated subpopulation for each feature, were collected (whichever was the lesser amount). Care was taken to ensure that nets were cleaned after each feature was sampled. Feature depth, area, water temperature, air temperature, habitat condition, and species present were noted and recorded on USFWS vernal pool data sheets (Attachment A). Representative site photos are included in Attachment B.

RESULTS

Fairy Shrimp

No sensitive fairy shrimp were detected. The non-sensitive versatile fairy shrimp were observed within six of the 12 features: 1, 2, 6, 9, 11, and 12 (Figure 4; Table 1, *2020-2021 Wet Season Survey Results for the JM Realty Perris Development Project*). Immature fairy shrimp were additionally observed within Feature 4.

Rainfall

Based on the WeatherCurrents.com precipitation summary for Perris, the precipitation total for the 2020-2021 rain season is 5.15 inches, and the average precipitation for the region is 9.40 inches (Weather Currents 2021b). This translates to a precipitation total that is 4.25 inches below average, or 55 percent of the average for the region.

Table 1
2020-2021 WET SEASON SURVEY RESULTS FOR THE JM REALTY PERRIS DEVELOPMENT PROJECT

FEATURE	UTM	2021													
		1/5	1/12	1/19	1/25	2/3	2/9	2/16	2/23	3/2	3/9	3/16	3/23	3/30	4/6
1	479014.641246, 3745137.06376	---	Dry	Dry	Dry	BR sp.	BRLI	Dry	Dry	Dry	Dry	---	BRLI	Dry	Dry
2	479025.126253, 3745114.76624	---	BRLI	BRLI	---	---	BRLI	BRLI, BR sp.	BRLI	Dry	Dry	---	BRLI	BRLI	Dry
3	479044.485509, 3745091.1595	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	---	Dry	Dry	Dry
4	479047.629551, 3745095.56251	---	Dry	Dry	Dry	BR sp.	Dry	Dry	Dry	Dry	Dry	---	Dry	Dry	Dry
5	479051.897514, 3745099.17255	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	---	Dry	Dry	Dry
6	479051.31063, 3745079.5522	---	---	Dry	Dry	---	BRLI	BRLI, BR sp.	BRLI	Dry	Dry	---	BRLI	BRLI	Dry
7	479062.265899, 3745072.88744	Dry	Dry	Dry	Dry	---	Dry	Dry	Dry	Dry	Dry	---	Dry	Dry	Dry
8	479048.683988, 3745072.4621	Dry	Dry	Dry	Dry	---	Dry	Dry	Dry	Dry	Dry	---	Dry	Dry	Dry
9	479015.660801, 3745098.23329	---	BRLI	BRLI	---	---	BRLI	BRLI, BR sp.	BRLI	---	---	---	BRLI	BRLI	Dry
10	478999.65542, 3745105.33967	Dry	Dry	Dry	Dry	---	Dry	Dry	Dry	Dry	Dry	---	Dry	Dry	Dry
11	479000.67353, 3745094.4098	Dry	Dry	Dry	Dry	---	Dry	BRLI, BR sp.	Dry	Dry	Dry	---	Dry	Dry	Dry
12	478965.909277, 3745000.15997	---	Dry	Dry	Dry	---	BRLI	BRLI, BR sp.	Dry	Dry	Dry	BR sp.	BRLI	Dry	Dry

--- : Feature sampled, but no fairy shrimp observed
BRLI – Versatile Fairy Shrimp (Branchinecta lindahli)
BR sp. – Branchinecta species. Identification to species level did not occur because shrimp were immature, were not collected, and could not be identified in the field.

DISCUSSION

The Palmer Drought Severity Index (NOAA 2021) categorizes precipitation into ranges that fall either above or below what is classified as average precipitation. The region where the survey occurred was in a period classified as mid-range from July 2020 to November 2020, and moderate drought from December 2020 and January 2021. Data for February 2021 to present are not available. Areas are considered to be mid-range when precipitation ranges from 1.99 inches below average to 1.99 inches above average. Areas are considered to be moderate drought when precipitation ranges from

2.99 inches below average to 2.00 inches above average. According to the 2017 USFWS protocol, a wet season survey may be considered unreliable if moderate to extreme drought conditions persist through the wet season as determined by this index. A mid-range classification for part of the season, therefore, successfully meets the 2017 USFWS protocol as a reliable survey. Although location-specific data obtained by WeatherCurrents.com puts the precipitation total 4.25 inches below normal, or extreme drought, there was enough rainfall to identify fairy shrimp in twelve features.

It is my opinion that this survey meets protocol. This determination is made based on:

- Features on-site held water long enough to sample for fairy shrimp; and
- The Palmer Drought Severity Index was classified as mid-range for a portion of the 2020-2021 rain season.

No federally listed as endangered Riverside fairy shrimp or federally listed as threatened vernal pool fairy shrimp were observed during the protocol 2020-2021 wet season fairy shrimp survey.

CERTIFICATION

I certify that the information in this survey report and attached exhibits fully and accurately represents my work.

Amy Mattson
Senior Scientist
TE778195-14

Erica Harris
Senior Scientist
TE778195-14

Attachments:

Figure 1: Project Location
Figure 2: USGS Topography
Figure 3: Project Vicinity on Aerial Photograph
Figure 4: Sampled Features
Attachment A: Data Sheets
Attachment B: Representative Site Photos

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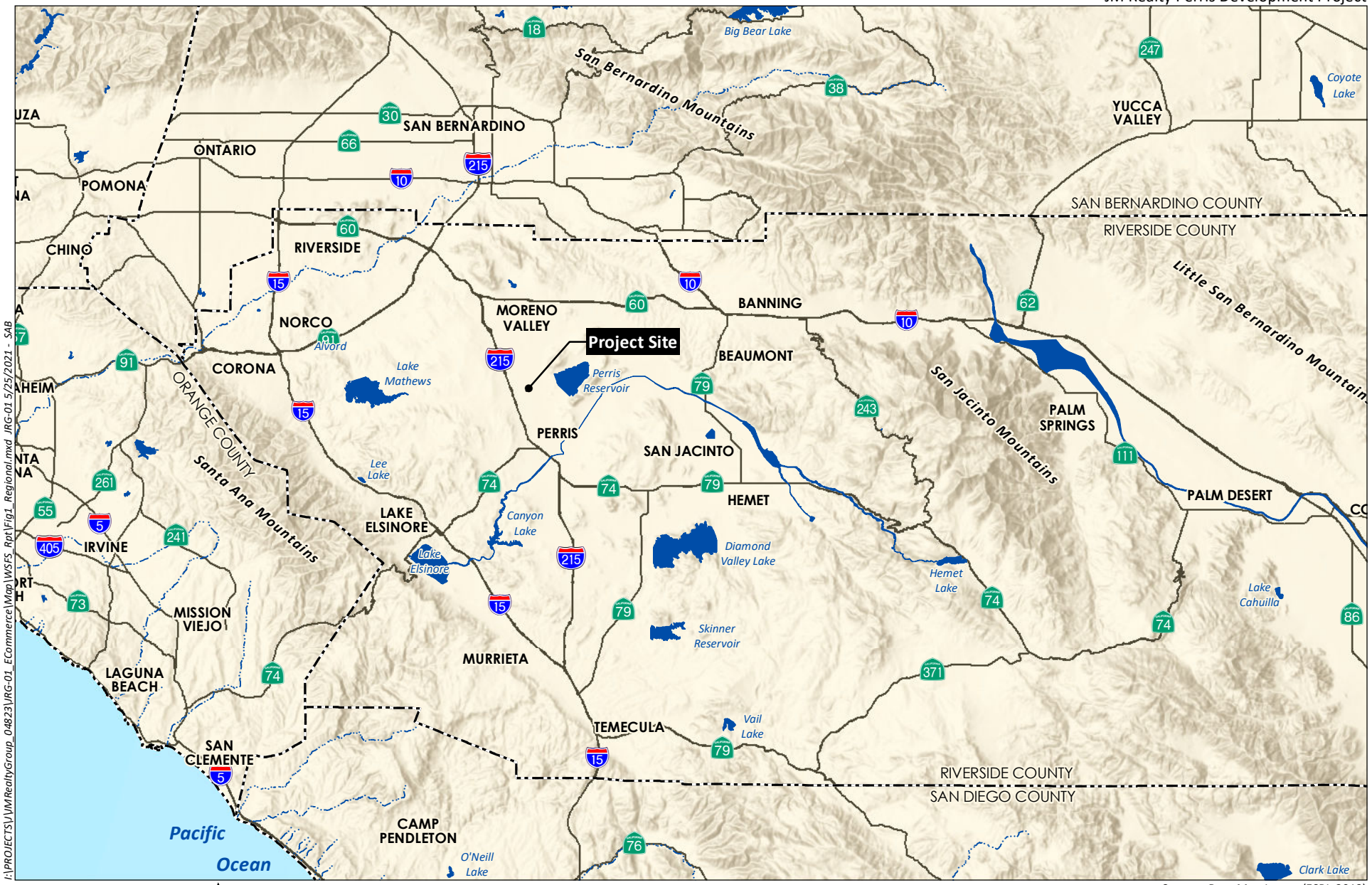

I:\PROJECTS\VJM RealtyGroup_04823\IRG-01_ECommerce\Map\WSFS_Rpt\Fig1_Regional.mxd IRG-01 5/25/2021 - SAB

Source: Base Map Layers (ESRI, 2013)

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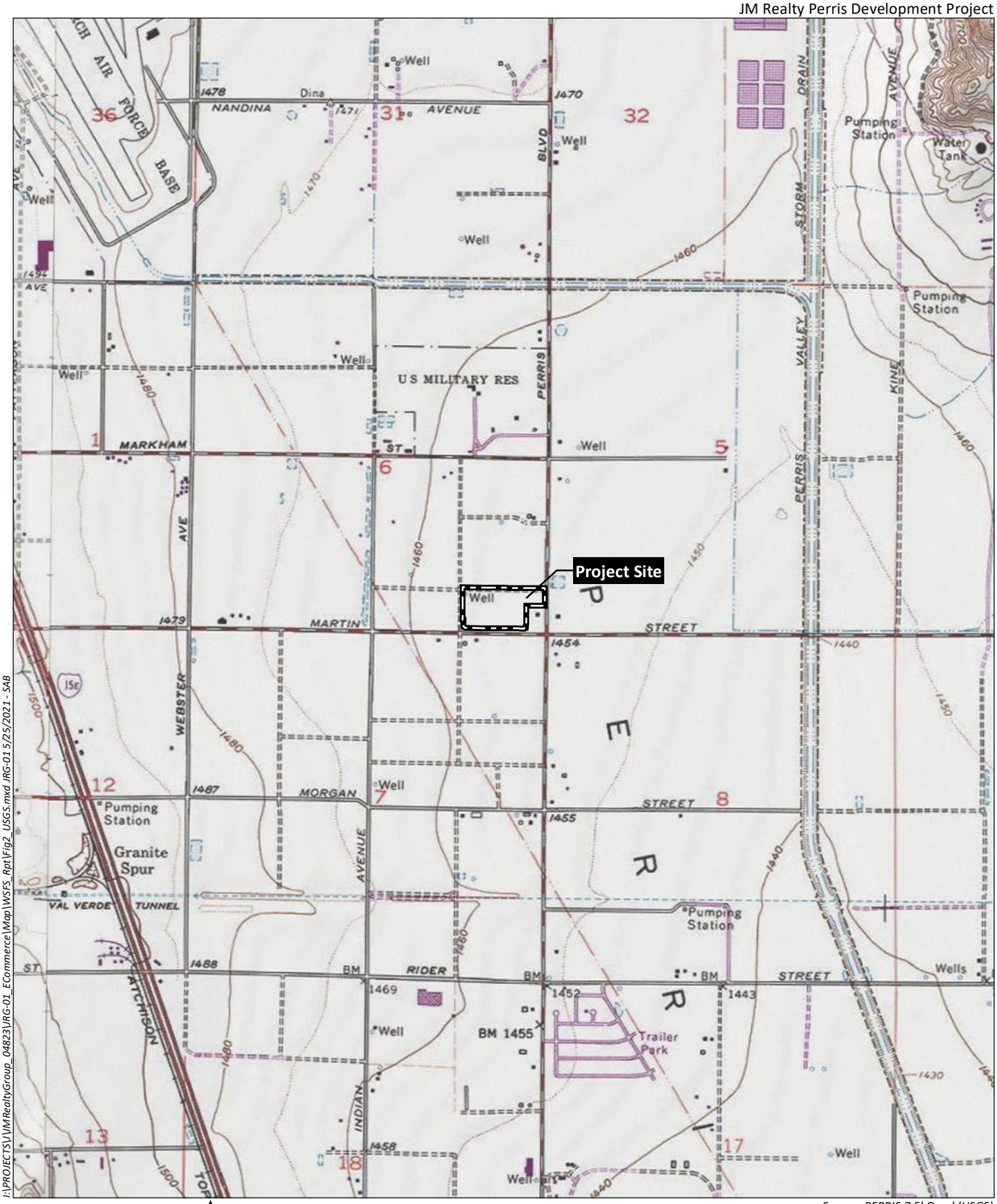
Regional Location

Figure 1



I:\PROJECTS\JM RealtyGroup_04823\RG-01_ECommerce\Map\WSFS_Rpt\Fig2_USGS.mxd JRG-01 5/25/2021 - SAB

0 2,000 Feet

Source: PERRIS 7.5' Quad (USGS)

HELIX Environmental Planning

USGS Topography

Figure 2

I:\PROJECTS\JVMRealtyGroup_04823\JRG-01_ECommerce\Map\WSFS_Rpt\Fig3_Aerial.mxd JRG-01 5/25/2021 - SAB

Source: Aerial (Maxar, 2019)

HELIX Environmental Planning

Project Vicinity on Aerial Photograph

Figure 3

I:\PROJECTS\JVMRealtyGroup_04823\IRG-01_ECommerce\Map\WSFS_Rpt\Fig4_Features.mxd IRG-01 5/25/2021 - SAB

Source: Aerial (Maxar, 2019)

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Sampled Features

Figure 4

APPENDIX 1. U.S. Fish and Wildlife Service – Data Sheet for Wet Season Surveys for Listed Large Branchiopods *PAGE 1 of 1*

Site or Project Name: JM Realty Perris Development Project	County: Riverside	Quad: Perris	Township: 4S	Range: 3W	Section: 6

SURVEYOR/Permit Number: A.Mattson / TE778195-14

Date: 1/5/21 | Time: 1152-1312 | Weather Conditions: 18-21 deg C, 1% clouds (high, wispy), 0 mph

Feature ID #	UTM (Northing, Easting, Datum) *See Table 1 of report*	Temp (°C)		Depth (cm)		Surface Area (m x m)		Crustaceans					Insects				Platyhelminths (flatworms)	Habitat Condition	Notes/Voucher Information
		Air	Water	Average	Est. Max.	Present	Est. Max	Anostracans	Notostracans	Copepods	Ostrachods	Cladocera	Coleoptera	Hemiptera	Diptera Culicidae	Diptera Chironomidae			
6		18	17.0	10	25	26.5x8.5	175x175	-	-	-	-	-	-	-	-	-	-	TT,T	Ponded in low lying areas
4		19	19.9	3	25	2x2	175x175	-	-	-	-	-	-	-	-	-	-	TT,T	1s-10s, immature
1		20	16.3	8	25	4x3	175x175	-	-	-	-	-	-	-	-	-	-	TT,T	
2		21	16.8	10	25	38x9	175x175	-	-	-	-	-	-	-	-	-	-	TT,T	
9		22	16.5	11	25	48.5x7	175x175	-	-	-	-	-	-	-	-	-	-	TT,T	
9		23	20.5	3	25	1x0.2	175x175	-	-	-	-	-	-	-	-	-	-	TT,T	
12		23	16.9	12	25	57x10	175x175	-	-	-	-	-	-	-	-	-	-	TT,T, P	
12		24	20.8	3	25	2x1	175x175	-	-	-	-	-	-	-	-	-	-	TT, P	
12		24	21	3	25	3x3	175x175	-	-	-	-	-	-	-	-	-	-	TT, P	

Notes: Fill in abbreviated names of Anostricans and Notostracans, for all others indicate presence with a check mark. Anostracan and Notostracan Abbreviations: Use first two letters of genus and species name (e.g., LIOC = *Linderiella occidentalis*, BRLI = *Branchinecta lindahli*).
For habitat conditions use two letter abbreviation as follows: NP = Natural Pool, CP = Constructed Pool, UD = undisturbed, D = disturbed: with TT = tire tracks, T = trash, P = plowed; UG = ungrazed, G = grazed by: C = cattle, H = horses, S = sheep; AB = Algal blooms present.
(estimate grazing regime by height of grasses and forbs and density of hoof prints) LG = light grazing, MG = moderate grazing, HG = heavy grazing.

APPENDIX 1. U.S. Fish and Wildlife Service – Data Sheet for Wet Season Surveys for Listed Large Branchiopods *PAGE 1 of 1*

Site or Project Name: JM Realty Perris Development Project | County: Riverside | Quad: Perris | Township: 4S | Range: 3W | Section: 6

SURVEYOR/Permit Number: A.Mattson / TE778195-14

Date: 1/12/21 | Time: 1015-1125 | Weather Conditions: 17-20 deg C, 1% clouds (clear, slight haze), 0 mph

Feature ID #	UTM (Northing, Easting, Datum) *See Table 1 of report*	Temp (°C)		Depth (cm)		Surface Area (m x m)		Crustaceans					Insects				Platyhelminths (flatworms)	Habitat Condition	Notes/Voucher Information
		Air	Water	Average	Est. Max.	Present	Est. Max	Anostracans	Notostracans	Copepods	Ostrachods	Cladocera	Coleoptera	Hemiptera	Diptera Culicidae	Diptera Chironomidae			
6		17	14.3	5.5	25	14x4.5	175x175	-	-	-	-	-	-	-	-	-	-	TT,T	
9		18	12.0	5	25	22x5	175x175	BRLI	-	-	-	-	-	-	-	-	-	TT,T	10s
		18	10.7	7	25	5x3	175x175		-	-	-	-	-	-	-	-	-	TT,T	
		18	12.7	4.5	25	4x1.5	175x175		-	-	-	-	-	-	-	-	-	TT,T	
2		20	9	7	25	13x7	175x175	BRLI	-	-	-	-	-	-	-	-	-	TT,T	10s

Notes: Fill in abbreviated names of Anostricans and Notostracans, for all others indicate presence with a check mark. Anostracan and Notostracan Abbreviations: Use first two letters of genus and species name (e.g., LIOC = *Linderiella occidentalis*, BRLI = *Branchinecta lindahli*).

For habitat conditions use two letter abbreviation as follows: NP = Natural Pool, CP = Constructed Pool, UD = undisturbed, D = disturbed: with TT = tire tracks, T = trash, P = plowed; UG = ungrazed, G = grazed by: C = cattle, H = horses, S = sheep; AB = Algal blooms present.

(estimate grazing regime by height of grasses and forbs and density of hoof prints) LG = light grazing, MG = moderate grazing, HG = heavy grazing.

APPENDIX 1. U.S. Fish and Wildlife Service – Data Sheet for Wet Season Surveys for Listed Large Branchiopods *PAGE 1 of 1*

Site or Project Name: JM Realty Perris Development Project	County: Riverside	Quad: Perris	Township: 4S	Range: 3W	Section: 6

SURVEYOR/Permit Number: A.Mattson / TE778195-14

Date: 1/19/21 | Time: 0928-0947 | Weather Conditions: 17 deg C, 75% clouds, 10-15 mph

Feature ID #	UTM (Northing, Easting, Datum) *See Table 1 of report*	Temp (°C)		Depth (cm)		Surface Area (m x m)		Crustaceans					Insects				Platyhelminths (flatworms)	Habitat Condition	Notes/Voucher Information
		Air	Water	Average	Est. Max.	Present	Est. Max	Anostracans	Notostracans	Copepods	Ostrachods	Cladocera	Coleoptera	Hemiptera	Diptera Culicidae	Diptera Chironomidae			
9		17	6.4	7	25	10x2	175x175	BRLI	-	-	-	-	-	-	-	-	-	TT,T	1s, lots birds present
2		17	7.9	3	25	5x3	175x175	BRLI	-	-	-	-	-	-	-	-	-	TT,T	1s, lots birds present

Notes: Fill in abbreviated names of Anostricans and Notostracans, for all others indicate presence with a check mark. Anostracan and Notostracan Abbreviations: Use first two letters of genus and species name (e.g., LIOC = *Linderiella occidentalis*, BRLI = *Branchinecta lindahli*).
For habitat conditions use two letter abbreviation as follows: NP = Natural Pool, CP = Constructed Pool, UD = undisturbed, D = disturbed: with TT = tire tracks, T = trash, P = plowed; UG = ungrazed, G = grazed by: C = cattle, H = horses, S = sheep; AB = Algal blooms present.
(estimate grazing regime by height of grasses and forbs and density of hoof prints) LG = light grazing, MG = moderate grazing, HG = heavy grazing.

APPENDIX 1. U.S. Fish and Wildlife Service – Data Sheet for Wet Season Surveys for Listed Large Branchiopods *PAGE 1 of 1*

Site or Project Name: JM Realty Perris Development Project	County: Riverside	Quad: Perris	Township: 4S	Range: 3W	Section: 6

SURVEYOR/Permit Number: A.Mattson / TE778195-14

Date: 1/25/21 | Time: 1020-1055 | Weather Conditions: 9 deg C, 20% clouds, 10-20 mph, sunny but has been raining

Feature ID #	UTM (Northing, Easting, Datum) *See Table 1 of report*	Temp (°C)		Depth (cm)		Surface Area (m x m)		Crustaceans					Insects				Platyhelminths (flatworms)	Habitat Condition	Notes/Voucher Information
		Air	Water	Average	Est. Max.	Present	Est. Max	Anostracans	Notostracans	Copepods	Ostrachods	Cladocera	Coleoptera	Hemiptera	Diptera Culicidae	Diptera Chironomidae			
2		9	8.0	9	25	37x8	175x175	-	-	-	-	-	-	-	-	-	-	TT,T	
9		9	7.2	11	25	48x10	175x175	-	-	-	-	-	-	-	-	-	-	TT,T	
Additional areas wet, but it's been raining since Friday. Will check these for shrimp next visit.																			

Notes: Fill in abbreviated names of Anostricans and Notostracans, for all others indicate presence with a check mark. Anostracan and Notostracan Abbreviations: Use first two letters of genus and species name (e.g., LIOC = *Linderiella occidentalis*, BRLI = *Branchinecta lindahli*).
For habitat conditions use two letter abbreviation as follows: NP = Natural Pool, CP = Constructed Pool, UD = undisturbed, D = disturbed: with TT = tire tracks, T = trash, P = plowed; UG = ungrazed, G = grazed by: C = cattle, H = horses, S = sheep; AB = Algal blooms present.
(estimate grazing regime by height of grasses and forbs and density of hoof prints) LG = light grazing, MG = moderate grazing, HG = heavy grazing.

APPENDIX 1. U.S. Fish and Wildlife Service – Data Sheet for Wet Season Surveys for Listed Large Branchiopods *PAGE 1 of 2*

Site or Project Name: JM Realty Perris Development Project | County: Riverside | Quad: Perris | Township: 4S | Range: 3W | Section: 6

SURVEYOR/Permit Number: A.Mattson / TE778195-14

Date: 2/3/21 | Time: 0910-1100 | Weather Conditions: 15-21 deg C, 10% clouds, 0-5 mph

Feature ID #	UTM (Northing, Easting, Datum) *See Table 1 of report*	Temp (°C)		Depth (cm)		Surface Area (m x m)		Crustaceans					Insects				Platyhelminths (flatworms)	Habitat Condition	Notes/Voucher Information
		Air	Water	Average	Est. Max.	Present	Est. Max	Anostracans	Notostracans	Copepods	Ostrachods	Cladocera	Coleoptera	Hemiptera	Diptera Culicidae	Diptera Chironomidae			
1		15	11.2	14	25	7x4	175x175	BRsp	-	-	-	-	-	-	-	-	-	TT,T, AB	1s, small
2		15	13.9	11	25	38x5	175x175	-	-	-	X	-	-	-	-	-	-	TT,T, AB	
2		16	15.1	6	25	4x3	175x175	-	-	-	-	-	-	-	-	-	-	TT,T	
2		16	13.6	5	25	6x3	175x175	-	-	-	-	-	-	-	-	-	-	TT,T	
9		17	13.1	14	25	59x33	175x175	-	-	-	X	-	-	-	-	-	-	TT,T	
10		17	12.0	6	25	6x2.5	175x175	-	-	-	-	-	-	-	-	-	-	TT,T	
11		18	12.8	5	25	4.5x1.2	175x175	-	-	-	-	-	-	-	-	-	-	TT,T	
4		19	14.2	6	25	6.5x3	175x175	BRsp	-	-	-	-	-	-	-	-	-	TT,T, AB	1s, very small
6		19	12.5	13	25	161x27	175x175	-	-	-	-	-	-	-	-	-	-	TT,T, AB	
7		20	10.7	4	25	5x0.6	175x175	-	-	-	-	-	-	-	-	-	-	D (graded)	

Notes: Fill in abbreviated names of Anostricans and Notostracans, for all others indicate presence with a check mark. Anostracan and Notostracan Abbreviations: Use first two letters of genus and species name (e.g., LIOC = *Linderiella occidentalis*, BRLI = *Branchinecta lindahli*).

For habitat conditions use two letter abbreviation as follows: NP = Natural Pool, CP = Constructed Pool, UD = undisturbed, D = disturbed: with TT = tire tracks, T = trash, P = plowed; UG = ungrazed, G = grazed by: C = cattle, H = horses, S = sheep; AB = Algal blooms present.

(estimate grazing regime by height of grasses and forbs and density of hoof prints) LG = light grazing, MG = moderate grazing, HG = heavy grazing.

APPENDIX 1. U.S. Fish and Wildlife Service – Data Sheet for Wet Season Surveys for Listed Large Branchiopods *PAGE 2 of 2*

Site or Project Name: JM Realty Perris Development Project	County: Riverside	Quad: Perris	Township: 4S	Range: 3W	Section: 6

SURVEYOR/Permit Number: A.Mattson / TE778195-14

Date: 2/3/21 | Time: 0910-1100 | Weather Conditions: 15-21 deg C, 10% clouds, 0-5 mph

Feature ID #	UTM (Northing, Easting, Datum) *See Table 1 of report*	Temp (°C)		Depth (cm)		Surface Area (m x m)		Crustaceans					Insects				Platyhelminths (flatworms)	Habitat Condition	Notes/Voucher Information
		Air	Water	Average	Est. Max.	Present	Est. Max	Anostracans	Notostracans	Copepods	Ostrachods	Cladocera	Coleoptera	Hemiptera	Diptera Culicidae	Diptera Chironomidae			
8		20	12.1	4	25	16.5x0.3	175x175	-	-	-	-	-	-	-	-	-	-	D (graded)	
12		21	13.1	11	25	11x3	175x175	-	-	-	-	-	-	-	-	-	-	D (graded)	
12		21	11.5	11	25	100x54	175x175	-	-	-	-	-	-	-	-	-	-	D (graded)	

Notes: Fill in abbreviated names of Anostricans and Notostracans, for all others indicate presence with a check mark. Anostracan and Notostracan Abbreviations: Use first two letters of genus and species name (e.g., LIOC = *Linderiella occidentalis*, BRLI = *Branchinecta lindahli*).
For habitat conditions use two letter abbreviation as follows: NP = Natural Pool, CP = Constructed Pool, UD = undisturbed, D = disturbed: with TT = tire tracks, T = trash, P = plowed; UG = ungrazed, G = grazed by: C = cattle, H = horses, S = sheep; AB = Algal blooms present.
(estimate grazing regime by height of grasses and forbs and density of hoof prints) LG = light grazing, MG = moderate grazing, HG = heavy grazing.

APPENDIX 1. U.S. Fish and Wildlife Service – Data Sheet for Wet Season Surveys for Listed Large Branchiopods *PAGE 1 of 1*

Site or Project Name: JM Realty Perris Development Project	County: Riverside	Quad: Perris	Township: 4S	Range: 3W	Section: 6

SURVEYOR/Permit Number: A.Mattson / TE778195-14

Date: 2/9/21 | Time: 0920-1050 | Weather Conditions: 10-11 deg C, 100% clouds, 0-1 mph

Feature ID #	UTM (Northing, Easting, Datum) *See Table 1 of report*	Temp (°C)		Depth (cm)		Surface Area (m x m)		Crustaceans					Insects				Platyhelminths (flatworms)	Habitat Condition	Notes/Voucher Information
		Air	Water	Average	Est. Max.	Present	Est. Max	Anostracans	Notostracans	Copepods	Ostrachods	Cladocera	Coleoptera	Hemiptera	Diptera Culicidae	Diptera Chironomidae			
2		10	10.2	9	25	25x7	175x175	BRLI	-	-	-	-	-	-	-	-	-	TT,T	10s-100s
1		10	10.3	7	25	4x3	175x175	BRLI	-	-	-	-	-	-	-	-	-	TT,T	10s
9		10	11.0	19	25	48x19	175x175	BRLI	-	-	-	-	-	-	-	-	-	TT,T	1s-10s
6		11	12.4	11	25	24x7.5	175x175	BRLI	-	-	X	-	-	-	-	-	-	TT,T	10s
12		11	11.6	9	25	109x37	175x175	BRLI	-	-	-	-	-	-	-	-	-	TT,T	1s-10s

Notes: Fill in abbreviated names of Anostricans and Notostracans, for all others indicate presence with a check mark. Anostracan and Notostracan Abbreviations: Use first two letters of genus and species name (e.g., LIOC = *Linderiella occidentalis*, BRLI = *Branchinecta lindahli*).

For habitat conditions use two letter abbreviation as follows: NP = Natural Pool, CP = Constructed Pool, UD = undisturbed, D = disturbed: with TT = tire tracks, T = trash, P = plowed; UG = ungrazed, G = grazed by: C = cattle, H = horses, S = sheep; AB = Algal blooms present.

(estimate grazing regime by height of grasses and forbs and density of hoof prints) LG = light grazing, MG = moderate grazing, HG = heavy grazing.

APPENDIX 1. U.S. Fish and Wildlife Service – Data Sheet for Wet Season Surveys for Listed Large Branchiopods *PAGE 1 of 1*

Site or Project Name: JM Realty Perris Development Project | County: Riverside | Quad: Perris | Township: 4S | Range: 3W | Section: 6

SURVEYOR/Permit Number: A.Mattson / TE778195-14

Date: 2/16/21 | Time: 0915-1025 | Weather Conditions: 10-11 deg C, 100% clouds, 0-1 mph

Feature ID #	UTM (Northing, Easting, Datum) *See Table 1 of report*	Temp (°C)		Depth (cm)		Surface Area (m x m)		Crustaceans					Insects				Platyhelminths (flatworms)	Habitat Condition	Notes/Voucher Information
		Air	Water	Average	Est. Max.	Present	Est. Max	Anostracans	Notostracans	Copepods	Ostrachods	Cladocera	Coleoptera	Hemiptera	Diptera Culicidae	Diptera Chironomidae			
6		13	13.2	9	25	18x5.1	175x175	BRLI, BRsp	-	-	-	X	X	-	-	-	-	TT,T	1s, gravid
2		13	13.0	6	25	10x5.5	175x175	BRLI, BRsp	-	-	-	-	-	-	-	-	-	TT,T	1s, gravid
9		13	13.9	13	25	49.5x13	175x175	BRLI, BRsp	-	-	-	X	-	-	-	-	-	TT,T	1s, gravid
11		13	15.2	5	25	4x1.5	175x175	BRLI, BRsp	-	-	-	X	-	-	-	-	-	TT	1s, gravid
9		13	14.4	5	25	7x3	175x175	BRLI, BRsp	-	-	-	X	-	-	-	-	-	TT,T	1s, gravid
12		13	18.0	1-2	25	19x0.4 15x0.8 5x0.2 2x0.1 1x0.1 0.5x0.1	175x175	BRLI, BRsp	-	-	-	X	-	-	-	-	-	P,T	100s, gravid, dried to 6 puddles

Notes: Fill in abbreviated names of Anostricans and Notostracans, for all others indicate presence with a check mark. Anostracan and Notostracan Abbreviations: Use first two letters of genus and species name (e.g., LIOC = *Linderiella occidentalis*, BRLI = *Branchinecta lindahli*).

For habitat conditions use two letter abbreviation as follows: NP = Natural Pool, CP = Constructed Pool, UD = undisturbed, D = disturbed: with TT = tire tracks, T = trash, P = plowed; UG = ungrazed, G = grazed by: C = cattle, H = horses, S = sheep; AB = Algal blooms present.

(estimate grazing regime by height of grasses and forbs and density of hoof prints) LG = light grazing, MG = moderate grazing, HG = heavy grazing.

APPENDIX 1. U.S. Fish and Wildlife Service – Data Sheet for Wet Season Surveys for Listed Large Branchiopods *PAGE 1 of 1*

Site or Project Name: JM Realty Perris Development Project | County: Riverside | Quad: Perris | Township: 4S | Range: 3W | Section: 6

SURVEYOR/Permit Number: A.Mattson / TE778195-14

Date: 2/23/21 | Time:1000-1050 | Weather Conditions: 16-19 deg C, 0% clouds, 0-3 mph

Feature ID #	UTM (Northing, Easting, Datum) *See Table 1 of report*	Temp (°C)		Depth (cm)		Surface Area (m x m)		Crustaceans					Insects				Platyhelminths (flatworms)	Habitat Condition	Notes/Voucher Information
		Air	Water	Average	Est. Max.	Present	Est. Max	Anostracans	Notostracans	Copepods	Ostrachods	Cladocera	Coleoptera	Hemiptera	Diptera Culicidae	Diptera Chironomidae			
6		16	17.0	1	25	1x0.6	175x175	BRLI, BRsp	-	-	-	X	-	-	-	-	-	TT,T	1s, gravid
2		17	18.2	2	25	4x3	175x175	BRLI, BRsp	-	-	-	X	-	-	-	-	-	TT,T	1s, gravid
9		18	17.1	9	25	20x5	175x175	BRLI, BRsp	-	-	-	X	-	-	-	-	-	TT,T	1s, gravid
9		19	17.6	6	25	5x2.5	175x175	BRLI, BRsp	-	-	-	X	-	-	-	-	-	TT, T	1s, gravid
9		19	17.9	5	25	5x2	175x175	BRLI, BRsp	-	-	-	X	-	-	-	-	-	TT,T	1s, gravid

Notes: Fill in abbreviated names of Anostricans and Notostracans, for all others indicate presence with a check mark. Anostracan and Notostracan Abbreviations: Use first two letters of genus and species name (e.g., LIOC = *Linderiella occidentalis*, BRLI = *Branchinecta lindahli*).
For habitat conditions use two letter abbreviation as follows: NP = Natural Pool, CP = Constructed Pool, UD = undisturbed, D = disturbed: with TT = tire tracks, T = trash, P = plowed; UG = ungrazed, G = grazed by: C = cattle, H = horses, S = sheep; AB = Algal blooms present.
(estimate grazing regime by height of grasses and forbs and density of hoof prints) LG = light grazing, MG = moderate grazing, HG = heavy grazing.

APPENDIX 1. U.S. Fish and Wildlife Service – Data Sheet for Wet Season Surveys for Listed Large Branchiopods *PAGE 1 of 1*

Site or Project Name: JM Realty Perris Development Project	County: Riverside	Quad: Perris	Township: 4S	Range: 3W	Section: 6

SURVEYOR/Permit Number: A.Mattson / TE778195-14

Date: 3/2/21 | Time:0900-0940 | Weather Conditions: 17 deg C, 1% clouds, 0-3 mph

Feature ID #	UTM (Northing, Easting, Datum) *See Table 1 of report*	Temp (°C)		Depth (cm)		Surface Area (m x m)		Crustaceans					Insects				Platyhelminths (flatworms)	Habitat Condition	Notes/Voucher Information
		Air	Water	Average	Est. Max.	Present	Est. Max	Anostracans	Notostracans	Copepods	Ostrachods	Cladocera	Coleoptera	Hemiptera	Diptera Culicidae	Diptera Chironomidae			
9		17	9.0	6	25	6.5x3	175x175	-	-	-	X	-	-	-	-	-	-	TT,T	

Notes: Fill in abbreviated names of Anostricans and Notostracans, for all others indicate presence with a check mark. Anostracan and Notostracan Abbreviations: Use first two letters of genus and species name (e.g., LIOC = *Linderiella occidentalis*, BRLI = *Branchinecta lindahli*).
For habitat conditions use two letter abbreviation as follows: NP = Natural Pool, CP = Constructed Pool, UD = undisturbed, D = disturbed: with TT = tire tracks, T = trash, P = plowed; UG = ungrazed, G = grazed by: C = cattle, H = horses, S = sheep; AB = Algal blooms present.
(estimate grazing regime by height of grasses and forbs and density of hoof prints) LG = light grazing, MG = moderate grazing, HG = heavy grazing.

APPENDIX 1. U.S. Fish and Wildlife Service – Data Sheet for Wet Season Surveys for Listed Large Branchiopods *PAGE 1 of 1*

Site or Project Name: JM Realty Perris Development Project	County: Riverside	Quad: Perris	Township: 4S	Range: 3W	Section: 6

SURVEYOR/Permit Number: A.Mattson / TE778195-14

Date: 3/9/21 | Time:0854-0925 | Weather Conditions: 12 deg C, 75% clouds, 0-1 mph

Feature ID #	UTM (Northing, Easting, Datum) *See Table 1 of report*	Temp (°C)		Depth (cm)		Surface Area (m x m)		Crustaceans					Insects				Platyhelminths (flatworms)	Habitat Condition	Notes/Voucher Information
		Air	Water	Average	Est. Max.	Present	Est. Max	Anostracans	Notostracans	Copepods	Ostrachods	Cladocera	Coleoptera	Hemiptera	Diptera Culicidae	Diptera Chironomidae			
9		12	13.4	5	25	3x2	175x175	-	-	-	X	-	-	-	-	-	-	TT,T	

Notes: Fill in abbreviated names of Anostricans and Notostracans, for all others indicate presence with a check mark. Anostracan and Notostracan Abbreviations: Use first two letters of genus and species name (e.g., LIOC = *Linderiella occidentalis*, BRLI = *Branchinecta lindahli*).
For habitat conditions use two letter abbreviation as follows: NP = Natural Pool, CP = Constructed Pool, UD = undisturbed, D = disturbed: with TT = tire tracks, T = trash, P = plowed; UG = ungrazed, G = grazed by: C = cattle, H = horses, S = sheep; AB = Algal blooms present.
(estimate grazing regime by height of grasses and forbs and density of hoof prints) LG = light grazing, MG = moderate grazing, HG = heavy grazing.

APPENDIX 1. U.S. Fish and Wildlife Service – Data Sheet for Wet Season Surveys for Listed Large Branchiopods *PAGE 1 of 2*

Site or Project Name: JM Realty Perris Development Project	County: Riverside	Quad: Perris	Township: 4S	Range: 3W	Section: 6

SURVEYOR/Permit Number: A.Mattson / TE778195-14

Date: 3/16/21 | Time:0930-1040 | Weather Conditions: 7-10 deg C, 0% clouds, 0-2 mph

Feature ID #	UTM (Northing, Easting, Datum) *See Table 1 of report*	Temp (°C)		Depth (cm)		Surface Area (m x m)		Crustaceans					Insects				Platyhelminths (flatworms)	Habitat Condition	Notes/Voucher Information
		Air	Water	Average	Est. Max.	Present	Est. Max	Anostracans	Notostracans	Copepods	Ostrachods	Cladocera	Coleoptera	Hemiptera	Diptera Culicidae	Diptera Chironomidae			
9		7	6.4	18	25	49x34	175x175	-	-	-	-	-	-	-	-	-	-	TT,T	
6		7	7.4	14	25	25x10	175x175	-	-	-	-	-	-	-	-	-	-	TT,T, AB	
7		7	9.8	5	25	7x0.6	175x175	-	-	-	-	-	-	-	-	-	-	T, AB, CP (graded)	
8		7	8.8	8	25	16x1	175x175	-	-	-	-	-	-	-	-	-	-	CP (graded)	
4		7	10.3	10	25	7.5x6	175x175	-	-	-	-	-	-	-	-	-	-	TT,T, AB	
5		8	12.6	3	25	5x3	175x175	-	-	-	-	-	-	-	-	-	-	TT,T, AB	
3		8	9.6	3	25	3x1	175x175	-	-	-	-	-	-	-	-	-	-	TT	
2		8	7.3	13	25	37x15	175x175	-	-	-	-	-	-	-	-	-	-	TT,T, AB	
1		8	6.3	17	25	9x4	175x175	-	-	-	-	-	-	-	-	-	-	TT,T, AB	

Notes: Fill in abbreviated names of Anostricans and Notostracans, for all others indicate presence with a check mark. Anostracan and Notostracan Abbreviations: Use first two letters of genus and species name (e.g., LIOC = *Linderiella occidentalis*, BRLI = *Branchinecta lindahli*).
For habitat conditions use two letter abbreviation as follows: NP = Natural Pool, CP = Constructed Pool, UD = undisturbed, D = disturbed: with TT = tire tracks, T = trash, P = plowed; UG = ungrazed, G = grazed by: C = cattle, H = horses, S = sheep; AB = Algal blooms present.
(estimate grazing regime by height of grasses and forbs and density of hoof prints) LG = light grazing, MG = moderate grazing, HG = heavy grazing.

APPENDIX 1. U.S. Fish and Wildlife Service – Data Sheet for Wet Season Surveys for Listed Large Branchiopods *PAGE 2 of 2*

Site or Project Name: JM Realty Perris Development Project	County: Riverside	Quad: Perris	Township: 4S	Range: 3W	Section: 6

SURVEYOR/Permit Number: A.Mattson / TE778195-14

Date: 3/16/21 Time:0930-1040 Weather Conditions: 7-10 deg C, 0% clouds, 0-2 mph

Feature ID #	UTM (Northing, Easting, Datum) *See Table 1 of report*	Temp (°C)		Depth (cm)		Surface Area (m x m)		Crustaceans					Insects				Platyhelminths (flatworms)	Habitat Condition	Notes/Voucher Information
		Air	Water	Average	Est. Max.	Present	Est. Max	Anostracans	Notostracans	Copepods	Ostrachods	Cladocera	Coleoptera	Hemiptera	Diptera Culicidae	Diptera Chironomidae			
10		9	7.9	8	25	6.5x2.5	175x175	-	-	-	-	-	-	-	-	-	-	TT,T	
11		9	9.5	4	25	4x2	175x175	-	-	-	-	-	-	-	-	-	-	TT,T, AB	
12		9	9.6	7	25	10x3	175x175	BRsp	-	-	-	-	-	-	-	-	-	100s, very tiny, TT, T, AB	
12		10	10.7	6	25	8x1	175x175		-	-	-	-	-	-	-	-	-		
12		10	5.8	12	25	98.5x5	175x175		-	-	-	-	-	-	-	-	-		
12		10	10.6	5	25	41x2	175x175		-	-	-	-	-	-	-	-	-		

Notes: Fill in abbreviated names of Anostricans and Notostracans, for all others indicate presence with a check mark. Anostracan and Notostracan Abbreviations: Use first two letters of genus and species name (e.g., LIOC = *Linderiella occidentalis*, BRLI = *Branchinecta lindahli*).
For habitat conditions use two letter abbreviation as follows: NP = Natural Pool, CP = Constructed Pool, UD = undisturbed, D = disturbed: with TT = tire tracks, T = trash, P = plowed; UG = ungrazed, G = grazed by: C = cattle, H = horses, S = sheep; AB = Algal blooms present.
(estimate grazing regime by height of grasses and forbs and density of hoof prints) LG = light grazing, MG = moderate grazing, HG = heavy grazing.

APPENDIX 1. U.S. Fish and Wildlife Service – Data Sheet for Wet Season Surveys for Listed Large Branchiopods *PAGE 1 of 1*

Site or Project Name: JM Realty Perris Development Project | County: Riverside | Quad: Perris | Township: 4S | Range: 3W | Section: 6

SURVEYOR/Permit Number: E.Harris / TE778195-14

Date: 3/23/21 | Time:0950 | Weather Conditions: 18 deg C, 0% clouds, 0-2 mph

Feature ID #	UTM (Northing, Easting, Datum) *See Table 1 of report*	Temp (°C)		Depth (cm)		Surface Area (m x m)		Crustaceans					Insects				Platyhelminths (flatworms)	Habitat Condition	Notes/Voucher Information
		Air	Water	Average	Est. Max.	Present	Est. Max	Anostracans	Notostracans	Copepods	Ostrachods	Cladocera	Coleoptera	Hemiptera	Diptera Culicidae	Diptera Chironomidae			
1		18	20.2	2	25	1.5x1	175x175	BRLI	-	-	-	-	-	-	-	-	-	TT,T	10s, collected 3 males
2		18	15.9	4	25	18x4	175x175	BRLI	-	-	-	-	-	-	-	-	-	TT,T	10s, collected 3 males
9		18	12.6	4	25	22x6	175x175	BRLI	-	-	-	-	-	-	-	-	-	TT, T	100s, collected 9 males
9		18	16.8	2	25	2x1	175x175	BRLI	-	-	-	-	-	-	-	-	-	TT, T	10s, collected 4 males
6		18	14.4	4	25	12x8	175x175	BRLI	-	-	-	-	-	-	-	-	-	P, T	10s, collected 3 males
12		18	15.2	3	25	12x1	175x175	BRLI	-	-	-	-	-	-	-	-	-	P, T	100s, collected 3 males
9		18	16.1	2	25	3x1	175x175	BRLI	-	-	-	-	-	-	-	-	-	TT, T	10s, collected 3 males

Notes: Fill in abbreviated names of Anostricans and Notostracans, for all others indicate presence with a check mark. Anostracan and Notostracan Abbreviations: Use first two letters of genus and species name (e.g., LIOC = *Linderiella occidentalis*, BRLI = *Branchinecta lindahli*).
For habitat conditions use two letter abbreviation as follows: NP = Natural Pool, CP = Constructed Pool, UD = undisturbed, D = disturbed: with TT = tire tracks, T = trash, P = plowed; UG = ungrazed, G = grazed by: C = cattle, H = horses, S = sheep; AB = Algal blooms present.
(estimate grazing regime by height of grasses and forbs and density of hoof prints) LG = light grazing, MG = moderate grazing, HG = heavy grazing.

APPENDIX 1. U.S. Fish and Wildlife Service – Data Sheet for Wet Season Surveys for Listed Large Branchiopods *PAGE 1 of 1*

Site or Project Name: JM Realty Perris Development Project | County: Riverside | Quad: Perris | Township: 4S | Range: 3W | Section: 6

SURVEYOR/Permit Number: A.Mattson / TE778195-14

Date: 3/30/21 | Time:0935-1025 | Weather Conditions: 17 deg C, 0% clouds, 0-1 mph

Feature ID #	UTM (Northing, Easting, Datum) *See Table 1 of report*	Temp (°C)		Depth (cm)		Surface Area (m x m)		Crustaceans					Insects				Platyhelminths (flatworms)	Habitat Condition	Notes/Voucher Information
		Air	Water	Average	Est. Max.	Present	Est. Max	Anostracans	Notostracans	Copepods	Ostrachods	Cladocera	Coleoptera	Hemiptera	Diptera Culicidae	Diptera Chironomidae			
6		17	16.7	4	25	2x5x2	175x175	BRLI	-	-	-	-	-	-	-	-	-	TT,T	10s-100s
2		17	20.1	1	25	1x0.5	175x175	BRLI	-	-	-	-	-	-	-	-	-	TT,T	10s, driven through
9		17	19.3 17.2	3	25	3x2 17x3	175x175	BRLI	-	-	X	-	-	-	-	-	-	TT,T	10s, 2 ponded areas

Notes: Fill in abbreviated names of Anostricans and Notostracans, for all others indicate presence with a check mark. Anostracan and Notostracan Abbreviations: Use first two letters of genus and species name (e.g., LIOC = *Linderiella occidentalis*, BRLI = *Branchinecta lindahli*).
For habitat conditions use two letter abbreviation as follows: NP = Natural Pool, CP = Constructed Pool, UD = undisturbed, D = disturbed: with TT = tire tracks, T = trash, P = plowed; UG = ungrazed, G = grazed by: C = cattle, H = horses, S = sheep; AB = Algal blooms present.
(estimate grazing regime by height of grasses and forbs and density of hoof prints) LG = light grazing, MG = moderate grazing, HG = heavy grazing.

Photo 1. Overview. Pan to north from north of ARCO lot. 1-25-21. AM.

Photo 2. Overview. Looking north from drainage ditch along Ramona Expwy, next to ARCO. 1-25-21. AM.

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Photo 3. Looking southeast at Feature 2. 2-3-21. AM.

Photo 4. Looking southwest at Feature 12. 2-3-21. AM.

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Photo 5. Looking north at Feature 9. 3-16-21. AM.

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Appendix D

Dry Season Fairy Shrimp Report

JM Realty Perris Development Project

2020 Dry Season Survey Report

May 2021 | 04823.00001.001

Prepared for:

JM Realty Group, Inc.
3535 Inland Empire Boulevard
Ontario, CA 91764

Prepared by:

HELIX Environmental Planning, Inc.
7578 El Cajon Boulevard
La Mesa, CA 91942

JM Realty Perris Development Project

2020 Dry Season Survey Report

Prepared for:

JM Realty Group, Inc.
3535 Inland Empire Boulevard
Ontario, CA 91764

Prepared by:

HELIX Environmental Planning, Inc.
7578 El Cajon Boulevard
La Mesa, CA 91942

May 2021 | 04823.00001.001

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1.0 INTRODUCTION

This report presents the findings of the 2020 dry season fairy shrimp sampling conducted by HELIX Environmental Planning, Inc. (HELIX) for the JM Realty Perris Development Project (project), formerly referred to as the Ramona E-Commerce Park Project, which will be provided to the U.S. Fish and Wildlife Service (USFWS). The site is located in the City of Perris, Riverside County (County), California (Figure 1, *Regional Location*). It is depicted in Section 6, Township 4 South, Range 3 West, as shown on the California U.S. Geological Survey 7.5-minute Perris quadrangle map (Figure 2, *USGS Topography*). More specifically, the project is east of Interstate 215 and south of State Route 60, northwest of the intersection of Ramona Expressway and Perris Boulevard (Figure 3, *Project Vicinity on Aerial Photograph*). Eight basins identified on historical Google Earth aerial imagery were sampled for this survey (Google Earth 2021).

1.1 SPECIES INFORMATION

There are three species of fairy shrimp with potential to occur on-site: vernal pool fairy shrimp (*Branchinecta lynchi*), Riverside fairy shrimp (*Streptocephalus woottoni*), and versatile fairy shrimp (*Branchinecta lindahli*) (Erikson and Belk 1999; California Natural Diversity Database 2020). Vernal pool fairy shrimp are federally listed as threatened and Riverside fairy shrimp are federally listed as endangered, whereas the versatile fairy shrimp is relatively common and is not listed or considered sensitive. Vernal pool fairy shrimp have the widest geographic range of the federally listed vernal pool crustaceans occurring from southern Oregon to northern and central California, generally west of the Sierra Nevada, to southern California. The species' range extends south to Orange and Los Angeles counties and east to western Riverside County, but is generally absent from San Diego County. Vernal pool fairy shrimp are found in vernal pools and other vernal pool-like habitats such as ephemeral ponds or basins that can be formed from anthropogenic events such as tire ruts. Riverside fairy shrimp can be found in Riverside, Orange, and San Diego counties and occur in vernal pools and other ephemeral basins with long inundation times. The versatile fairy shrimp is common in pools throughout California and can co-occur with both vernal pool and Riverside fairy shrimp.

Fairy shrimp are adapted for variable and uncertain rainfall patterns. When fertilized by males of their species, female fairy shrimp produce "resting eggs," which are dormant embryos surrounded by hard-shelled membranes capable of remaining viable in the soil for long periods of time. Dry season fairy shrimp surveys are designed to detect, collect, and identify eggs present in the soil. The surface characteristics of these eggs can be used to differentiate the genus and potentially the species of fairy shrimp. Certain fairy shrimp, such as *B. lindahli* and B. *lynchi*, cannot be identifiable to the species level by examination of the eggs alone. For these species, a wet season fairy shrimp survey or authorized hatching would be required to identify individuals to species level.

2.0 METHODS

HELIX permitted biologist Amy Mattson (Permit TE778195-14) conducted the dry season sampling in accordance with USFWS protocol (USFWS 2017). Eight features were identified as potential basins using readily available aerial imagery from a known wet year for the region (Google Earth dated December 2, 2018). These were sampled for the presence of fairy shrimp eggs (Figure 4, *Dry Season Survey Results*). Soil was collected from these features on October 15, 2020 by Ms. Mattson.

Following soil collection, the samples were transferred to the HELIX laboratory for processing by Ms. Mattson. Samples were processed in February 2021. Samples were prepared by dissolving the soil samples in water and sequentially sieving the material through 710- and 75 µm pore size screens. The small size of these screens ensures that eggs from the target fairy shrimp species are retained. The portion of each sample retained in the screen was dispersed in a brine solution to separate the organic from the inorganic material. The organic fraction was decanted, dried, and examined under a microscope by Ms. Mattson. Eggs were identified to genus level based on surface characteristics. Multiple species of the *Branchinecta* genus can occur in Riverside County, but cannot be identified past genus level based on egg characteristics. Eggs of each genus were counted within each soil sample, and egg abundance was estimated for each feature and is provided in the Results section, according to the guidelines provided in the USFWS Survey Guidelines: none (no eggs found in sample); low abundance (estimate of 1-10 eggs/100 milliliters [mL] soil); medium abundance (estimate of 11-50 eggs/100 mL soil); and high abundance (estimate of more than 50 eggs/100 mL of soil). Basins were re-labeled to match those sampled during the 2020-2021 wet season fairy shrimp survey.

3.0 RESULTS

Branchinecta eggs were observed in all of the eight sampled features (Table 1, *Dry Season Results*). The *Branchinecta* sp. eggs would require hatching to positively identify the eggs to the species level. These are expected to be versatile fairy shrimp, given that only versatile fairy shrimp were observed in samples collected between January 5 and April 30, 2021 during the 2020-2021 wet season fairy shrimp survey (HELIX 2021). Versatile fairy shrimp is not listed. The USFWS Data Sheet for Dry Season Sample Analysis for Listed Large Branchiopods is included as Appendix A.

Table 1
DRY SEASON RESULTS

Feature	*Branchinecta* sp. Present	Abundance*	*Streptocephalus* sp. Present	Abundance*
1	Yes	High	No	---
2	Yes	Medium	No	---
4	Yes	Medium	No	---
5	Yes	Low	No	---
6	Yes	High	No	---
9	Yes	Medium	No	---
12	Yes	Medium	No	---
13	Yes	High	No	---

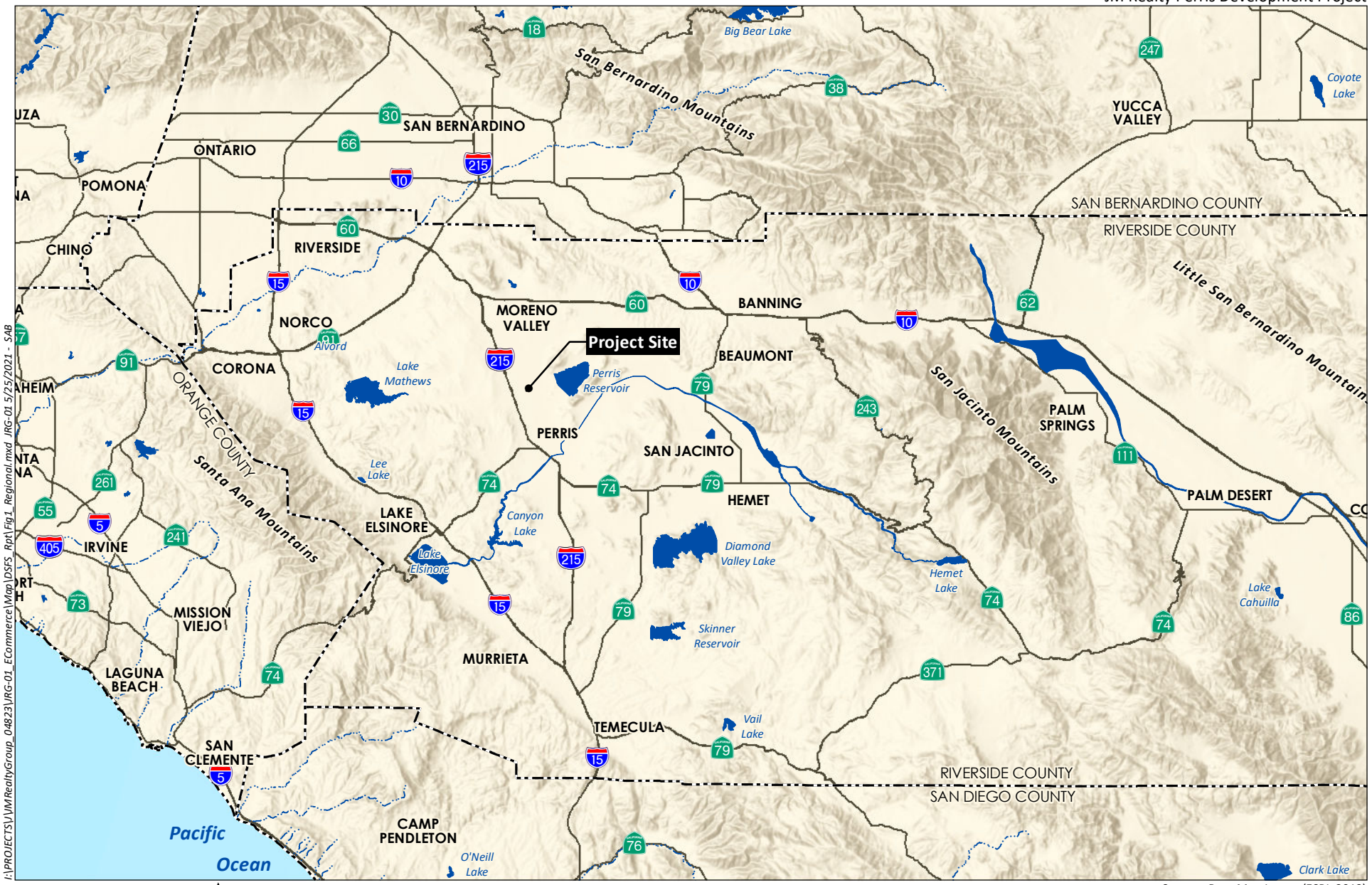
*Based on abundance categories found within the 2017 U.S. Fish and Wildlife Service Survey Guidelines for the Listed Large Branchiopods.

4.0 CERTIFICATION

I certify that the information in this survey report and attached exhibits fully and accurately represents my work.

Amy Mattson, Biologist
TE778195-14

HELIX Environmental Planning



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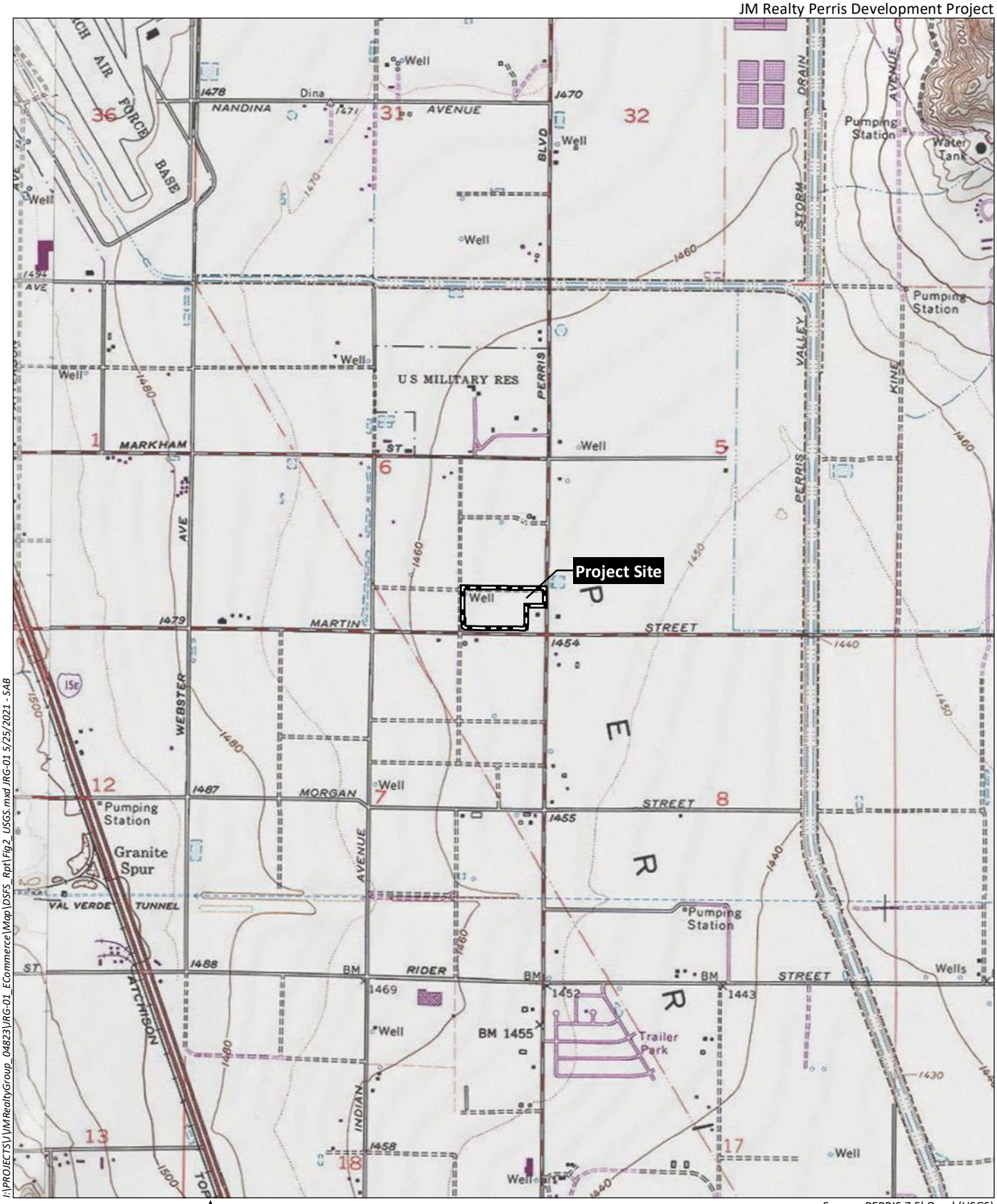
Source: Base Map Layers (ESRI, 2013)

HELIX Environmental Planning

Regional Location

Figure 1



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0 2,000 Feet

Source: PERRIS 7.5' Quad (USGS)

HELIX Environmental Planning

USGS Topography

Figure 2

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Source: Aerial (Maxar, 2019)

HELIX Environmental Planning

Project Vicinity on Aerial Photograph

Figure 3

Source: Aerial (Maxar, 2019)

HELIX Environmental Planning

Dry Season Survey Results

Figure 4

5.0 REFERENCES

California Department of Fish and Wildlife (CDFW), 2020. California Natural Diversity Database (CNDDB). RareFind Database Program.

Erikson, C.H. and D. Belk. 1999. Fairy Shrimps of California's Puddles, Pools, and Playas. Mad River Press. Eureka, California. 196 pp.

Google Earth. 2021. https://earth.google.com/web/.

HELIX Environmental Planning, Inc. (HELIX). 2021. 2020/2021 Wet Season Survey Report for the JM Realty Perris Development Project. June.

U.S. Fish and Wildlife Service (USFWS). 2017. Survey Guidelines for the Listed Large Branchiopods. Revised November 13.

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Appendix A

USFWS Data Sheets for Dry Season Sampling for Large Branchiopods

Appendix 2. U.S. Fish and Wildlife Service – Data Sheet for Dry Season Sample Analysis for Listed Large Branchiopods

Project Information

Project Name: Ramona E. Commerce
USFWS Project Number:
County: Riverside
Lat: approx. 33°50'44.47" N
Long: approx. 117°13'36.09" W
Quad: Perris
Township: 4 South
Range: 3 West
Section: 6

Biologist Information

Name of Person(2) Who Conducted the Following Tasks and Permit Number(s):
Soil Collection: Amy Mattson TE-778195-14
Soil Processing: Amy Mattson
Soil Analysis/Cysts ID: Amy Mattson
Soil Collection Date: October 15, 2020

Pool/ Habitat/ Basin No.	Invertebrates Present (X)															Other Species	Comments
	Insect Exo-Skeletons	Micro-Turbellaria Cysts	Cladocera Ephippia	Ostracods Live/Cysts/ Carapaces	Copepods Live/Cysts	Number of Large Branchiopod Cysts						Hydracarina Live	Nematoda	Collembola		
						Branchinecta sp.	*Lepidurus packardi*	*Streptocephalus wootoni*	*Linderiella occidentalis*	*Lynceus brachyurus*	*Cyzicus californicus*					
1	X					X		–								
2	X			X		X		–								
4	X		X			X		–								
5						X		–								
6	X		X	X		X		–								
9	X		X	X		X		–								
12	X		X	X		X		–								
13	X			X		X		–								

Appendix E

Sensitive Plant Species Potential to Occur

Scientific Name	Common Name	Status[1,2]	Habit, Ecology and Life History	Potential to Occur[3]
chaparral sand verbena	*Abronia villosa aurita*	--/-- CNPS Rank 1B.1	Sandy soils, requires bare ground, not tolerant of weeds.	Not likely to occur. Soils are loam and weedy.
Munz's onion	*Allium munzii*	FE/ST CNPS Rank 1B.1	Clay soils, opening in grassland, sage scrub.	Not likely to occur. Soils are loam and highly disturbed.
San Jacinto Valley crownscale	*Atriplex coronata* var. *notatior*	FE/-- CNPS Rank 1B.1	Occurs in playas, chenopod scrub, valley and foothill grassland, and vernal pools. From 1,250 to 1,805 feet in elevation.	Low. Pools occur on site by are disturbed.
south coast saltscale	*Atriplex pacifica*	--/-- CNPS Rank 1B.2	Xeric site, disturbed areas, usually around scrub vegetation.	Not likely to occur. No scrub vegetation on site.
Parish's brittlescale	*Atriplex parishii*	--/-- CNPS Rank 1B.1	Alkaline lowlands with saline soil.	Not likely to occur. Specific habitat not present.
Marsh sandwort	*Arenaria paludicola*	FE/SE CNPS Rank 1B.1	Marshes and Swamps	Not likely to occur. No marshes and swamps on site.
Salt marsh bird's-beak	*Sidalcea neomexicana*	FE/SE CNPS 1B.2	Coastal dunes, marshes and swamps, Often in saline areas.	Not likely to occur. Specific habitat not present.
Davidson's saltscale	*Atriplex serenana* var. *davidsonii*	--/-- CNPS Rank 1B.2	Alkaline lowlands with saline soil.	Not likely to occur. Specific habitat not present.
Nevin's barberry	*Berberis nevinii*	FE/SE CNPS Rank 1B.2	Occurs in chaparral, woodland, coastal and riparian scrub communities and cismontane woodland, in gravelly soils. Associated with steep.	Not likely to occur. Specific habitat not present.
thread-leaved brodiaea	*Brodiaea filifolia*	FT/SE CNPS Rank 1B.1	Occurs in chaparral, cismontane woodlands, coastal scrub, playas, vernal pools, and valley and foothill grasslands, usually in clay soils. From 80 to 2,820 feet in elevation.	Low. Pools do occur on site but are disturbed.
Plummer's mariposa lily	*Calochortus plummerae*	--/-- CNPS Rank 4.2	Rocky and sandy soils, in scrub, chaparral, woodland and grassland.	Not likely to occur. Specific habitat not present.
Peninsular spineflower	*Chorizanthe leptotheca*	--/-- CNPS Rank 4.2	Alluvial fans with granitic soils and chaparral, coastal scrub or coniferous forest habitats.	Not likely to occur. Specific habitat not present.

Scientific Name	Common Name	Status[1,2]	Habit, Ecology and Life History	Potential to Occur[3]
Payson's jewel-flower	*Caulanthus simulans*	--/-- CNPS Rank 4.2	Pinyon-juniper woodland, chaparral and sage scrub. Typically, on slopes and ridgelines with sandy granitic soil.	Not likely to occur. Specific habitat not present.
smooth tarplant	*Centromadia pungens* spp. *laevis*	--/-- CNPS Rank 1B.1	Riparian/watercourses, grassland, alkali scrub.	**Low potential to occur**. Species easily identified and was not observed. Species known to occur in disturbed agriculture areas.
Parry's spineflower	*Chorizanthe parryi* var. *parryi*	--/-- CNPS Rank 1B.1	Openings in chaparral and sage scrub, sandy, or rocky soil.	Not likely to occur. Specific habitat not present.
long-spined spineflower	*Chorizanthe polygonoides* var. *longispina*	--/-- CNPS Rank 1B	Chaparral, sage scrub, grassland, often in clay soils	Not likely to occur. Specific habitat not present.
Small-flowering morning-glory	*Convolvulus simulans*	--/-- CNPS Rank 4.2	Clay soils, seeps, in chaparral, coastal scrub and grasslands.	Not likely to occur. No clay soils or seeps, site disturbed.
Snake cholla	*Cylindropuntia californica* var. *californica*	--/-- CNPS Rank 1B.1	Chaparral and coastal scrub	Not likely to occur. Specific habitat not present.
Paniculate tarplant	*Deinandra paniculata*	--/-- CNPS Rank 4.2	Usually found in vernally mesic areas and sometimes sandy areas within coastal scrub, grassland and vernal pools.	**Low potential to occur**. Species easily detected and was not observed. Pools are present.
Palmer's grapplinghook	*Harpagonella palmeri*	--/-- CNPS Rank 4.2	Clay soil, chaparral, sage scrub and grassland.	Not likely to occur. Specific habitat not present.
vernal barley	*Hordeum intercedens*	--/-- CNPS Rank 3.2	mesic grasslands, vernal pools, and large saline flats or depressions.	**Low potential to occur**. Pools present but are disturbed.
Coulter's goldfields	*Lasthenia glabrata* ssp. *coulteri*	--/-- CNPS Rank 1B.1	Alkaline habitats associated w/Travers soil.	Not expected. No travers soils on site.
Robinson's pepper-grass	*Lepidium virginicum* var. *robinsonii*	--/-- CNPS Rank 4.3	Openings in chaparral and sage scrub, typically dry sites	Not likely to occur. Specific habitat not present.
Little mousetail	*Myosurus minimus* ssp. *apus*	--/-- CNPS Rank 3.1	Alkaline vernal pools in grassland.	Not expected. Although pools occur, habitat is not alkaline and pools are disturbed.
spreading navarretia	*Navarretia fossalis*	FT/-- CNPS Rank 1B.1	Vernal pools.	**Low potential to occur**. Pools present but are disturbed.
Coulter's matilija poppy	*Romneya coulteri*	--/-- CNPS Rank 4.2	Often in burns, chaparral, coastal scrub.	Not likely to occur. Specific habitat not present.

Scientific Name	Common Name	Status[1,2]	Habit, Ecology and Life History	Potential to Occur[3]
Chaparral ragwort	*Senecio aphanactis*	--/-- CNPS Rank 2B.2	Chaparral, woodland and coastal scrub.	Not likely to occur. Specific habitat not present.
San Bernardino aster	*Symphyotrichum defoliatum*	--/-- CNPS Rank 1B.2	Near ditches, streams, seeps, marshes in grassland, scrub, forest.	Not expected to occur. Stream on site is concrete lined and site is disturbed.
Woven spored lichen	*Texosporium sancti-jacobi*	--/-- CNPS Rank 3	Chaparral openings, usually on animal pellets, dead twigs or detritus rich soil.	Not likely to occur. Specific habitat not present.
Wright's trichocoronis	*Trichocoronis wrightii* var. *Wrightii*	--/-- CNPS 2B.1	Vernal pools, marshes, meadows and other alkaline riparian habitats.	Not expected to occur. Pools present but disturbed.

[1] Listing is as follows: F = Federal; S = State of California; E = Endangered; T = Threatened; R = Rare

[2] CNPS = California Native Plant Society Rare Plant Rank: 1A–presumed extirpated in California and either rare or extinct elsewhere; 1B–rare, threatened, or endangered in California and elsewhere; 2A–presumed extirpated in California, but more common elsewhere; 2B–rare, threatened, or endangered in California, but more common elsewhere; 3–more information needed; 4–watch list for species of limited distribution. Extension codes: .1–seriously endangered; .2–moderately endangered; .3–not very endangered.

[3] the potential to occur status is based on the property being active agriculture through 2005 and disked regularly from 2006 to present.

Not Likely to Occur–There are no present or historical records of the species occurring on or in the immediate vicinity, (within 3 miles) of the Project Site and the diagnostic habitats strongly associated with the species do not occur on or in the immediate vicinity of the Site.
Low Potential to Occur–There is a historical record of the species in the vicinity of the Project Site and potentially suitable habitat on Site, but existing conditions, such as density of cover, prevalence of non-native species, evidence of disturbance, limited habitat area, isolation, substantially reduce the possibility that the species may occur. The Site is above or below the recognized elevation limits for this species.
Moderate Potential to Occur–The diagnostic habitats associated with the species occur on or in the immediate vicinity of the Project Site, but there is not a recorded occurrence of the species within the immediate vicinity (within 3 miles). Some species that contain extremely limited distributions may be considered moderate, even if there is a recorded occurrence in the immediate vicinity.
High Potential to Occur–There is both suitable habitat associated with the species and a historical record of the species on or in the immediate vicinity of the Project Site (within 3 miles).
Species Present–The species was observed on the Project Site at the time of the survey or during a previous biological survey

Appendix F

Special Status Animal Species Potential to Occur

Scientific Name	Common Name	Status	Habitat Associations	Potential to Occur
INVERTEBRATES				
Insects				
Bombus crotchii	Crotch bumblebee	--/--	Scrub and grassland habitats. Uses sage, sunflowers, and similar species for nectar.	Not Likely to Occur. The site is disturbed and lacks nectar resources.
Ceratochrysis longimala	Desert cuckoo wasp	--/--	Possibly, sage scrub, specific unknown. Last CNDDB record in Riverside County from 1915. Possibly extirpated.	Not likely to occur. Habitat does not occur; species may no longer occur in Riverside County.
Euphydryas editha quino	Quino checkerspot butterfly	FE/SC	Open areas, sparse vegetation, flowers. Host plants include *Plantago* spp., *Antirrhinum coulterianum*, *Cordylanthus rigidus.*	Not likely to occur. Host plants not observed. Site disturbed.
Streptocephalus wootoni	Riverside fairy shrimp	FE/--	Endemic to Western Riverside, Orange, and San Diego Counties. Found in deep long lasting seasonal vernal pools, ephemeral ponds and similar habitats.	Not likely to occur. Surveys conducted for fairy shrimp and species was not detected.
VERTEBRATES				
Amphibians and Reptiles				
Arizona elegans occidentalis	California glossy snake	--/SC	Scrub and grassland habitats, usually with loose or sandy soils. A generalist.	Not Likely to Occur. Site is disturbed and does not have sandy soils.
Phrynosoma coronatum blainvillei	coast horned lizard	--/SC	Grassland, scrub, chaparral, woodland with a supply of prey (ants).	Not likely to occur. Soils disturbed regularly reducing supply of prey.
Salvadora hexalepis virgultea	coast patch-nosed snake	--/SC	Coastal and desert scrub, chaparral, washes. A generalist.	Not likely to occur. Site disturbed, lacking shrub species.
Aspidoscelis tigris stenjnegeri	coastal western whiptail	--/SC	Open rocky areas with sparse vegetation usually scrub or grassland.	Not likely to occur. Site has been previously cleared of rocks and lacks shrub vegetation.
Cnemidophorus hyperthrus	orange-throated whiptail	--/SC	Chaparral, sage scrub, grassland, woodland, riparian areas.	Not likely to occur. Site has been previously cleared of rocks and lacks shrub vegetation.
Crotalus ruber	red-diamond rattlesnake	--/SC	Heavy brush, boulders, can use a variety of habitats. Prey density a determining factor.	Not likely to occur. Site has been previously cleared of rocks and lacks shrub vegetation.

Scientific Name	Common Name	Status	Habitat Associations	Potential to Occur
Diadophis punctatus modestus	San Bernardino ringneck snake	--/--	Moist habitats. woodlands, farms, grassland, chaparral.	Not likely to occur. Site is disturbed and lacks a significant vegetation layer.
Anniella stebbinsi	Southern California legless lizard	--/SC	Coastal dune, sandy washed, alluvial fans, oak woodlands, conifer forest, sandy soils.	Not likely to occur. Site has loam soils, lack appropriate vegetation.
Actinemys marmorata pallida	western pond turtle	--/SC	Slow-moving streams, ponds, reservoirs, other water bodies deeper than 6 feet with logs or other submerged cover.	Not likely to occur. Pools occur on site but are less than 1 foot deep and lacks significant vegetation.
Spea hammondii	western spadefoot	--/SC	Grassland, sage scrub or occasionally chaparral. Standing water, puddles, vernal pools, needed for reproduction.	Low. Pools occur on site. Eggs, tadpoles, or adults not observed during fairy shrimp surveys.
Birds				
Accipiter cooperi	Cooper's hawk	--/WL	This raptor species requires mature forest, open woodlands, and river groves habitat.	Not Likely to Occur. The project site does not contain suitable habitat to support this species.
Haliaeetus leucocephalus	Bald eagle	DL/SE	Large bodies of open water for foraging, Nearby trees for nesting and roosting.	Not likely to occur. No large open bodies of water occur on site.
Artemisiospiza belli belli	Bell's sage sparrow	--/WL	Evenly spaced sage scrub	Not likely to occur. No shrubs on site.
Athene cunicularia	Burrowing owl	--/SC	Grassland, fallow agriculture, and areas of sparse cover, preferably with burrows of fossorial mammals.	Low. Not observed during focused survey. Burrows with potential to support limited to slope adjacent to Indian Avenue.
Laterallus jamaicensis coturniculus	California black rail	--/ST	Salt marshes, freshwater marsh, wet meadows, and mesic grasslands.	Not likely to occur. Species habitat does not occur on site.
Eremophila alpestris actia	California horned lark	--/WL	Grassland, agriculture fields, and disturbed fields.	**Present.** Species relative common on open field in area.
Polioptila californica californica	coastal California gnatcatcher	FT/SC	Coastal sage and other low scrub.	Not likely to occur. Shrub habitat does not occur.
Buteo regalis	ferruginous hawk	--/SC	Large areas of open grassland or shrub with elevated nest sites.	Not likely to occur. Site lacks significant vegetation and elevated nest sites.

Scientific Name	Common Name	Status	Habitat Associations	Potential to Occur
Spinus lawrencei	Lawrence's goldfinch	--/--	Arid open woodlands, near chaparral, weed fields and small bodies of water.	Not likely to occur. Site lacks significant vegetation. Pools on site are temporary in nature.
Vireo bellii pusillus	least Bell's vireo	FE/SE	Riparian areas with dense ground cover and stratified canopy, prefers willows.	Not likely to occur. No willow or other riparian canopy on site.
Lanius ludovicianus	loggerhead shrike	--/SC	Open grassland or shrubland with trees, utility poles, fence post or other perch sites.	Not likely to occur. Site disturbed and lacks, shrubs, trees and other perch sites.
Aimophila ruficeps canescens	southern California rufous-crowned sparrow	--/SC	Hillsides, with grassland, sage scrub, or chaparral.	Not likely to occur. No hillsides and site lacks significant vegetative cover.
Onychomys torridus ramona	southern grasshopper mouse	--/SC	Grassland and sparse sage scrub.	Not likely to occur. Grassland limited to short slope on west side. Site lacks significant vegetative cover.
Agelaius tricolor	tricolored blackbird	--/SC	Wetland with dense cattails, tall grasses or thickets of willows.	Not likely to occur. Cattails, tall grasses, and willows thickets lacking on site.
Coccyzus americanus occidentalis	western yellow-billed cuckoo	FT/SE	Dense, thick riparian with willows, dense understory, slow-moving watercourses.	Not likely to occur. Riparian habitat does not occur on site.
Elanus leucurus	white-tailed kite	--/-- Fully protected	Grassland, agriculture with nearby woodland for nesting.	Low. Site has fallow agriculture, but trees nearby are in developed areas and not suitable for nesting.
Icteria virens	Yellow breasted chat	--/SC	Wide riparian woodland, dense willow thickets, with well-developed understory.	Not likely to occur. Riparian habitat does not occur on site.
Mammals				
Taxidea Taxus	American badger	--/SC	Upland grasslands, meadows, field.	Not Likely to Occur. Site disturbed and does not support burrows of appropriate size for species.
Chaetodipus fallax fallax	San Diego pocket mouse	--/SC	Sage scrub and grassland, sandy soils.	Not likely to occur. Soils are loam, and site lacks significant vegetation.

Scientific Name	Common Name	Status	Habitat Associations	Potential to Occur
Nyctinomops femorosaccus	Pocketed free-tailed bat	--/SC	Desert scrub, roosts in cliffs, rocky crevices in small colonies.	Not likely to occur. Roost locations do not occur on site.
Asio otus	long-eared owl	--/SC	Dense vegetation adjacent to open grassland or shrubland, and open forests.	Not likely to occur. Site lacks significant vegetation.
Dipodomys merriami parvus	San Bernardino kangaroo rat	FE/SC	Sage scrub, sandy soils, alluvial fans, floodplains.	Not likely to occur. Soils are loam. Site lacks shrubs.
Lepus californicus bennettii	San Diego black-tailed jackrabbit	--/SC	Primarily open scrub with short grasses.	Not likely to occur. Site lacks shrubs.
Neotoma lepida	San Diego desert woodrat	--/SC	Scrub and desert, rock outcrops, or areas of dense cover.	Not likely to occur. No scrub habitats or other dense cover. Neotoma middens not observed.
Dipodomys stephensi	Stephen's kangaroo rat	FE/ST	Open areas with sparse perennial cover and loose soil.	Not likely to occur. Loose soils and perennial cover not present.
Eumops perotis californicus	Western mastiff bat	--/SC	Roosts on cliffs, foraging over open areas with washes.	Not likely to occur. Washes and roosting habitat not present.
Lasiurus xanthinus	western yellow bat	--/SC	Desert grassland and scrub with an associated water feature.	Not likely to occur. Site lacks significant vegetation, water feature ephemeral.

[1] Listing codes are as follows: FE = Federally Endangered; FT = Federally Threatened; FC= Federal Candidate species; BCC = Birds of Conservation Concern; SE = State of California Endangered; FP = State of California Fully Protected; WL = State of California Wait-Listed; SC = State of California Species of Special Concern.

[2] County of San Diego Sensitive Animal List: Group 1 = Animals that have a very high level of sensitivity, either because they are listed as threatened or endangered or because they have very specific natural history requirements that must be met; Group 2 = Animals that are becoming less common, but are not yet so rare that extirpation or extinction is imminent without immediate action; these species tend to be prolific within their suitable habitat types.

Not Likely to Occur - There are no present or historical records of the species occurring on or in the immediate vicinity, (within 3 miles) of the Project Site and the diagnostic habitats strongly associated with the species do not occur on or in the immediate vicinity of the Site.

Low Potential to Occur - There is a historical record of the species in the vicinity of the Project Site and potentially suitable habitat on Site, but existing conditions, such as density of cover, prevalence of non-native species, evidence of disturbance, limited habitat area, isolation, substantially reduce the possibility that the species may occur. The Site is above or below the recognized elevation limits for this species.

Moderate Potential to Occur - The diagnostic habitats associated with the species occur on or in the immediate vicinity of the Project Site, but there is not a recorded occurrence of the species within the immediate vicinity (within 3 miles). Some species that contain extremely limited distributions may be considered moderate, even if there is a recorded occurrence in the immediate vicinity.

High Potential to Occur - There is both suitable habitat associated with the species and a historical record of the species on or in the immediate vicinity of the Project Site (within 3 miles).

Species Present - The species was observed on the Project Site at the time of the survey or during a previous biological survey

Appendix G

MSHCP Table 6-2

BOTANICAL NAME	COMMON NAME
Acacia spp. (all species)	acacia
Achillea millefolium	var. *millefolium* common yarrow
Ailanthus altissima	tree of heaven
Aptenia cordifolia	red apple
Arctotheca calendula	cape weed
Arctotis spp. (all species & hybrids)	African daisy
Arundo donax	giant reed or arundo grass
Asphodelus fistulosus	asphodel
Atriplex glauca	white saltbush
Atriplex semibaccata	Australian saltbush
Carex spp. (all species*)	sedge
Carpobrotus chilensis	ice plant
Carpobrotus edulis	sea fig
Centranthus ruber	red valerian
Chrysanthemum coronarium	annual chrysanthemum
Cistus ladanifer	(incl. hybrids/varieties) gum rockrose
Cortaderia jubata [*syn.C. Atacamensis*]	jubata grass, pampas grass
Cortaderia dioica [syn. *C. sellowana*]	pampas grass
Cotoneaster spp. (all species)	cotoneaster
Cynodon dactylon	(incl. hybrids varieties) Bermuda grass
Cyperus spp. (all species*)	nutsedge, umbrella plant
Cytisus spp. (all species)	broom
Delosperma 'Alba'	white trailing ice plant
Dimorphotheca spp. (all species)	African daisy, Cape marigold
Drosanthemum floribundum	rosea ice plant
Drosanthemum hispidum	purple ice plant
Eichhornia crassipes	water hyacinth
Elaeagnus angustifolia	Russian olive
Eucalyptus spp. (all species)	eucalyptus or gum tree
Eupatorium coelestinum [syn. Ageratina sp.]	mist flower
Festuca arundinacea	tall fescue
Festuca rubra	creeping red fescue
Foeniculum vulgare	sweet fennel
Fraxinus uhdei	(and cultivars) evergreen ash, shamel ash
Gaura (spp.) (all species)	gaura
Gazania spp. (all species & hybrids)	gazania
Genista spp. (all species)	broom
Hedera canariensis	Algerian ivy
Hedera helix	English ivy
Hypericum spp. (all species)	St. John's Wort
Ipomoea acuminata	Mexican morning glory
Lampranthus spectabilis	trailing ice plant
Lantana camara	common garden lantana
Lantana montevidensis [syn. *L. sellowiana*]	lantana
Limonium perezii	sea lavender
Linaria bipartita	toadflax
Lolium multiflorum	Italian ryegrass
Lolium perenne	perennial ryegrass
Lonicera japonica	(incl. 'Halliana') Japanese honeysuckle

BOTANICAL NAME	COMMON NAME
Lotus corniculatus	birdsfoot trefoil
Lupinus arboreus	yellow bush lupine
Lupinus texanus	Texas blue bonnets
Malephora crocea	ice plant
Malephora luteola	ice plant
Mesembryanthemum nodiflorum	little ice plant
Myoporum laetum	myoporum
Myoporum pacificum	shiny myoporum
Myoporum parvifolium	(incl. 'Prostratum') ground cover myoporum
Oenothera berlandieri	Mexican evening primrose
Olea europaea	European olive tree
Opuntia ficus-indica	Indian fig
Osteospermum spp. (all species)	trailing African daisy, African daisy,
Oxalis pes-caprae	Bermuda buttercup
Parkinsonia aculeata	Mexican palo verde
Pennisetum clandestinum	Kikuyu grass
Pennisetum setaceum	fountain grass
Phoenix canariensis	Canary Island date palm
Phoenix dactylifera	date palm
Plumbago auriculata	cape plumbago
Polygonum spp. (all species)	knotweed
Populus nigra 'italica	' Lombardy poplar
Prosopis spp. (all species)*	mesquite
Ricinus communis	castor bean
Robinia pseudoacacia	black locust
Rubus procerus	Himalayan blackberry
Sapium sebiferum	Chinese tallow tree
Saponaria officinalis	bouncing bet, soapwort
Schinus molle	Peruvian pepper tree, California pepper
Schinus terebinthifolius	Brazilian pepper tree
Spartium junceum	Spanish broom
Tamarix spp. (all species)	tamarisk, salt cedar
Trifolium fragiferum	strawberry clover
Tropaeolum majus	garden nasturtium
Ulex europaeus	prickly broom
Vinca major	periwinkle
Yucca gloriosa	Spanish dagger

An asterisk (*) indicates some native species of the genera exist that may be appropriate.

Sources: California Exotic Pest Plant Council, United States Department of Agriculture-Division of Plant Health and Pest Prevention Services, California Native Plant Society, Fremontia Vol. 26 No. 4, October 1998, The Jepson Manual; Higher Plants of California, and County of San Diego-Department of Agriculture.

Initial Study Appendix D

Cultural Resources Assessment

The following section contains content that was obtained from a third party and may not achieve the same level of Americans with Disabilities Act (ADA) and Section 508 accessibility as other parts of this document.

Ramona-Indian Warehouse Project

Cultural Resources Survey

July 2022 | 04823.00001.001

Submitted to:

City of Perris
5510 135 North D Street
City of Perris, CA 92570

Prepared for:

JM Realty Group, Inc.
3535 Inland Empire Boulevard
Ontario, CA 91764

Mary Robbins-Wade
Cultural Resources Group Manager

Prepared by:

HELIX Environmental Planning, Inc.
7578 El Cajon Boulevard
La Mesa, CA 91942

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National Archaeological Database Information

Authors:	Mary Robbins Wade, M.A., RPA and James Turner, M.A., RPA, with contributions by Theodore G. Cooley, M.A., RPA
Firm:	HELIX Environmental Planning, Inc.
Client/Project:	JM Realty Group, Inc. / Ramona-Indian Warehouse Project
Report Date:	July 2022
Report Title:	Cultural Resources Survey for the Ramona-Indian Warehouse Project Riverside County, California
Submitted to:	City of Perris
Type of Study:	Cultural Resources Survey
New Sites:	None
Updated Sites:	None
USGS Quad:	Perris 7.5' Quadrangle
Acreage:	Approximately 15 acres
Key Words:	Riverside County; Township 4 South, Range 3 West; Perris; Ramona Expressway; Perris Boulevard; archaeological survey; no archaeological resources found.

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ACRONYMS AND ABBREVIATIONS

AB	Assembly Bill
AMSL	above mean sea level
APN	Assessor's Parcel Number
BP	Before Present
BPO	Business/Professional Office
CCR	California Code of Regulations
CEQA	California Environmental Quality Act
CHRIS	California Historical Resources Information System
CRHR	California Register of Historical Resources
EIC	Eastern Information Center
HELIX	HELIX Environmental Planning, Inc.
NAHC	Native American Heritage Commission
NRHP	National Register of Historic Places
OHP	Office of Historic Preservation
PRC	Public Resources Code
SHPO	State Historic Preservation Officer
USGS	U.S. Geological Survey

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EXECUTIVE SUMMARY

HELIX Environmental Planning, Inc. (HELIX) was contracted by JM Realty Group, Inc. to provide cultural resources services for the Ramona-Indian Warehouse Project (project) in the City of Perris, Riverside County, California. The project is a proposed approximately 15-acre development of a multi-tenant warehouse retail and distribution building. A cultural resources study including a records search, Sacred Lands File search, Native American outreach, a review of historic aerial photographs and maps, and a pedestrian survey was conducted for the project area. This report details the methods and results of the cultural resources study and has been prepared to comply with the California Environmental Quality Act (CEQA).

The records search requested from the Eastern Information Center Information Center (EIC) on October 12, 2020 and received January 15, 2021 indicated that 48 previous cultural resources studies have been conducted within one mile of the project area, three of which overlap with the project area. The records search results also indicated that a total of 13 cultural resources have been previously recorded within one mile of the project area; however, no sites have been recorded within the project site.

The field investigations included intensive pedestrian survey of the study area by a HELIX archaeologist and a Native American monitor from the Soboba Band of Luiseño Indians on October 8, 2020. The survey did not result in the identification of any cultural material within the project area.

As such, no impacts to cultural resources are anticipated. However, the project site is located within alluvial soils, where there is a potential for buried cultural resources. In addition, the Rincon Band of Luiseño Indians and the Soboba Band of Luiseño Indians identified the area as culturally significant to their Tribes. Based on this, it is recommended that an archaeological and Native American monitoring program be implemented for ground-disturbing activities. The monitoring program would include attendance by the archaeologist and Native American monitor at a preconstruction meeting with the grading contractor and the presence of archaeological and Native American monitors during initial ground disturbing activities on site. Both archaeological and Native American monitors would have the authority to temporarily halt or redirect grading and other ground-disturbing activity in the event that cultural resources are encountered. If significant cultural material is encountered, the project archaeologist will coordinate with the Monitoring Tribe, the applicant, and City staff to develop and implement appropriate treatment or mitigation measures.

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1.0 INTRODUCTION

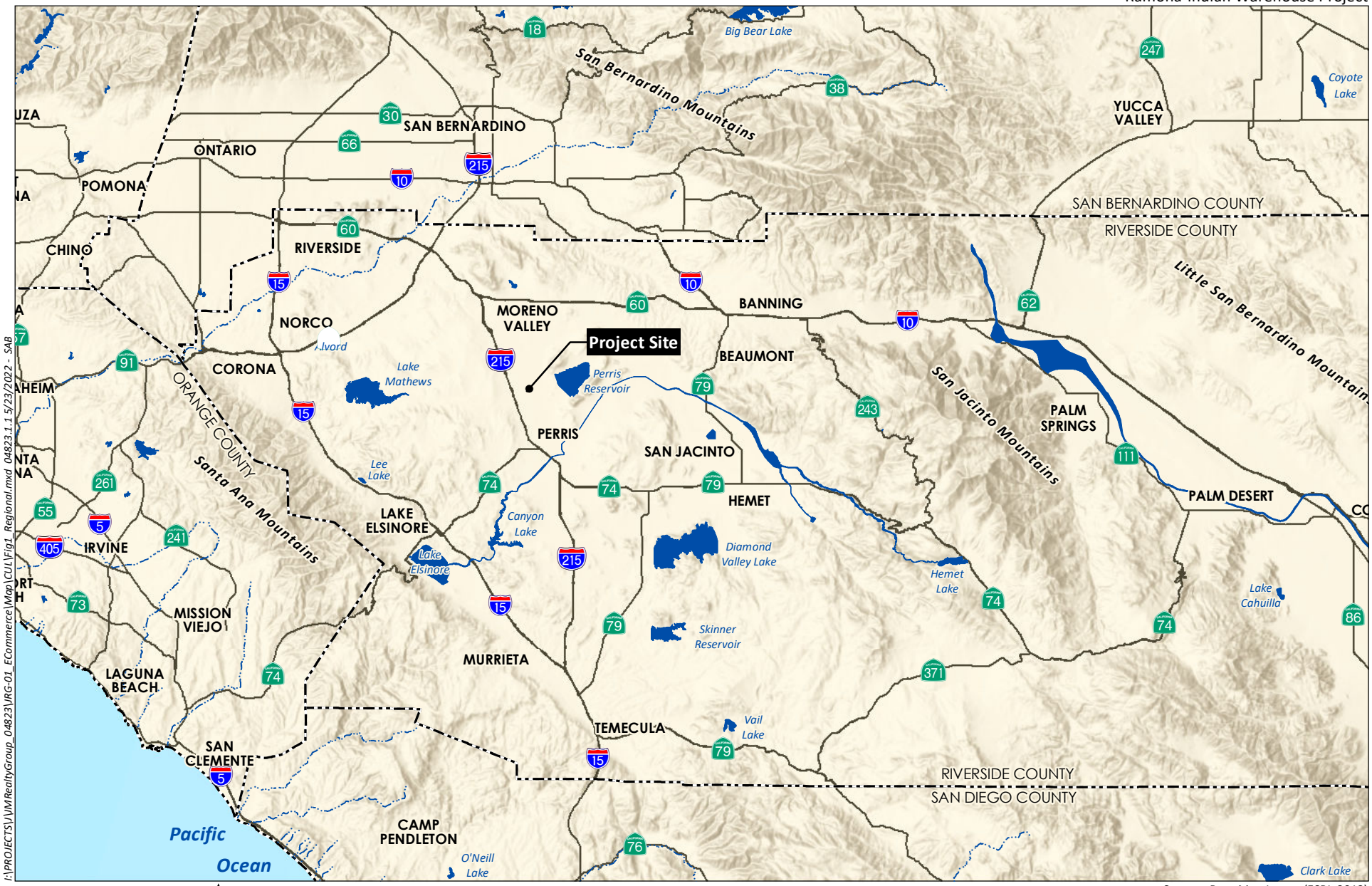
HELIX Environmental Planning, Inc. (HELIX) was contracted by JM Realty Group, Inc. to provide cultural resources services for the Ramona-Indian Warehouse Project (project) in the City of Perris (City), Riverside County, California. The project proposes to develop a multi-tenant warehouse retail and distribution building on an approximately 15-acre property. A cultural resources study including a records search, Sacred Lands File search, Native American outreach, a review of historic aerial photographs and maps, and a pedestrian survey was conducted for the project. This report details the methods and results of the cultural resources study and has been prepared to comply with the California Environmental Quality Act (CEQA) and the guidelines of the City.

1.1 PROJECT LOCATION

The project is located in the City in western Riverside County (Figure 1, *Regional Location*). The project is located west of the Perris Reservoir and east of Interstate 215 within Township 4 South, Range 3 West, in the San Jacinto Nuevo Y Potrero land grant on the U.S. Geological Survey (USGS) 7.5' Perris quadrangle (Figure 2, *USGS Topography*). The approximately 15-acre project site is located within Assessor's Parcel Number (APN) 302-060-041, northwest of the intersection of Perris Boulevard and the Ramona Expressway, bounded on the west by Barrett Avenue (Figure 3, *Aerial Photograph of Project Location*).

1.2 PROJECT DESCRIPTION

The proposed project involves the adoption of a Specific Plan Amendment to the Perris Valley Commerce Center Specific Plan (PVCCSP) and approval of a Development Plan to allow the construction and operation of a warehouse building and commercial development. Warehouse development would occur within the central portion of the project site, while the approximate 1.6 acres in the northeast would provide a pad for future commercial development, such as a hotel. Specifically, the warehouse building would comprise about 232,575 square feet and include 10,000 square feet of planned office area. Three vehicle/truck access points would be provided, including right-in/right-out/left-in access for trucks on Indian Avenue, right-in/right-out access for passenger cars only off Ramona Expressway, and right-in/right-out access for passenger cars only from Perris Boulevard. The site plan includes 215 auto parking stalls, 52 trailer parking stalls, and 39 truck docks. Buildings would not exceed 48 feet in height. Development of the commercial pad is not proposed to occur concurrently with the warehouse. As such, temporary staging activities may occur in this area to support the construction of the light industrial uses described above before any future commercial use is developed. As directed by the City, the project plans to construct a portion of the Line E flood control facility as part of this project and also construct a 30-inch diameter lateral pipe that can connect into the existing Perris Valley Lateral Line E-11 in Perris Blvd. Stormwater would be accommodated through an underground water quality basin and the construction of the on-site portion of Line E that is part of the City's storm drain system.



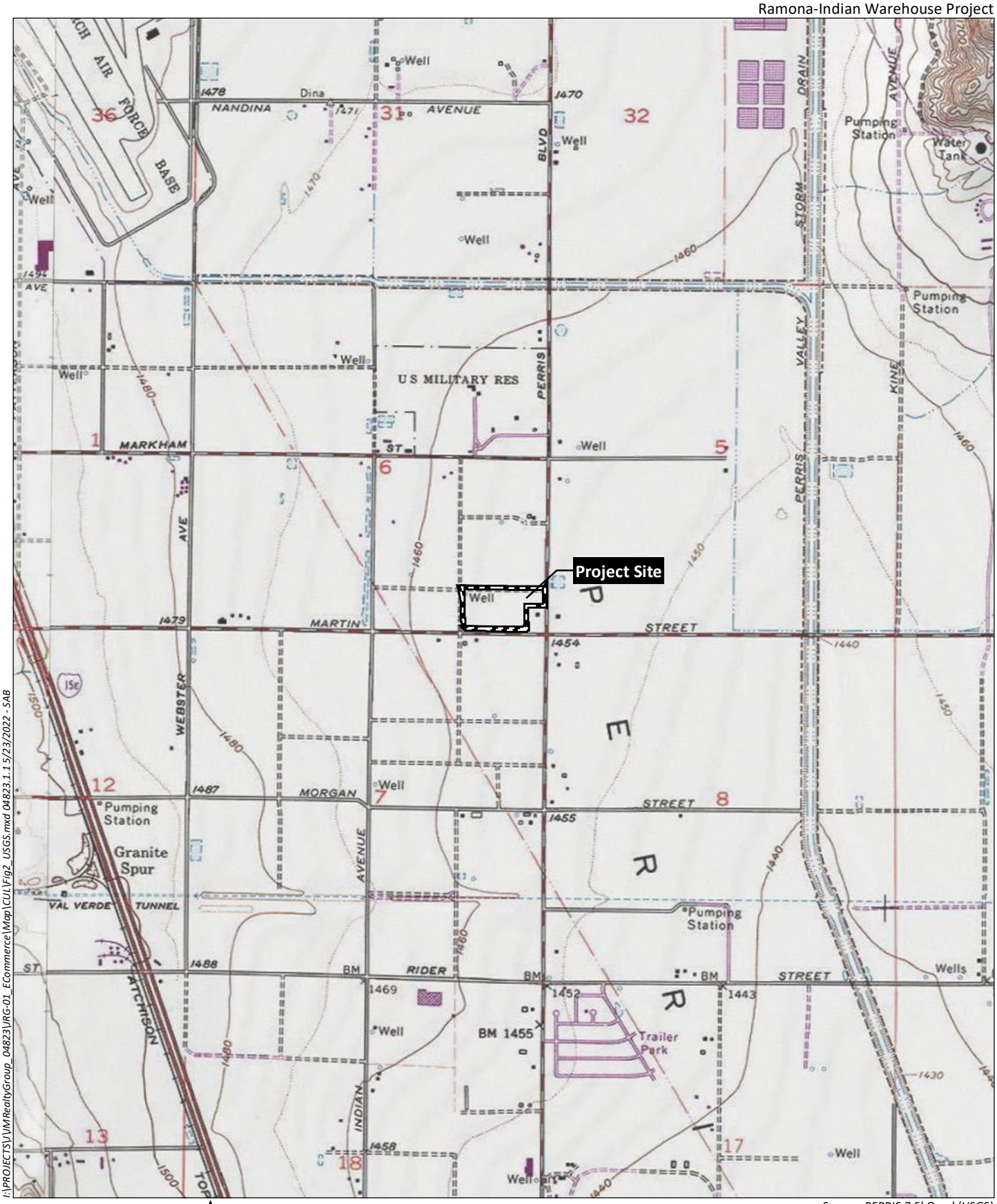
0 10 Miles

Source: Base Map Layers (ESRI, 2013)

HELIX Environmental Planning

Regional Location

Figure 1



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0 2,000 Feet

Source: PERRIS 7.5' Quad (USGS)

HELIX Environmental Planning

USGS Topography

Figure 2

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0 200 Feet

Source: Aerial (Maxar, 2019)

HELIX Environmental Planning

Aerial Photograph of Project Location

Figure 3

1.3 REGULATORY FRAMEWORK

1.3.1 California Environmental Quality Act

Cultural resources are defined as buildings, sites, structures, or objects, each of which may have historical, architectural, archaeological, cultural, and/or scientific importance. Significant resources under CEQA are those resources which have been found eligible to the California Register of Historical Resources (CRHR).

CEQA Public Resources Code (PRC) 21084.1, and California Code of Regulations (CCR) Title 14 Section 15064.5, address determining the significance of impacts to archaeological and historic resources and discuss significant cultural resources as "historical resources," which are defined as:

- resource(s) listed or determined eligible by the State Historical Resources Commission for listing in the CRHR (14 CCR Section 15064.5[a][1])

- resource(s) either listed in the National Register of Historic Places (NRHP) or in a "local register of historical resources" or identified as significant in a historical resource survey meeting the requirements of Section 5024.1(g) of the PRC, unless "the preponderance of evidence demonstrates that it is not historically or culturally significant" (14 CCR Section 15064.5[a][2])

- resources determined by the Lead Agency to meet the criteria for listing on the CRHR (14 CCR Section 15064.5[a][3])

For listing in the CRHR, a historical resource must be significant at the local, state, or national level under one or more of the following four criteria:

1. It is associated with events that have made a significant contribution to the broad patterns of local or regional history, or the cultural heritage of California or the United States;

2. It is associated with the lives of persons important to local, California, or national history;

3. It embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of a master or possesses high artistic values; and/or

4. It has yielded or has the potential to yield information important to the prehistory or history of the local area, California, or the nation.

Under 14 CCR Section 15064.5(a)(4), a resource may also be considered a "historical resource" for the purposes of CEQA at the discretion of the lead agency.

All resources that are eligible for listing in the CRHR must have integrity, which is the authenticity of a historical resource's physical identity evidenced by the survival of characteristics that existed during the resource's period of significance. Resources, therefore, must retain enough of their historic character or appearance to be recognizable as historical resources and to convey the reasons for their significance. Integrity is evaluated with regard to the retention of location, design, setting, materials, workmanship, feeling, and association. In an archaeological deposit, integrity is assessed with reference to the preservation of material constituents and their culturally and historically meaningful spatial

relationships. A resource must also be judged with reference to the particular criteria under which it is proposed for nomination.

California State Assembly Bill (AB) 52 revised PRC Section 21074 to include Tribal Cultural Resources (TCRs) as an area of CEQA environmental impact analysis. Further, per new PRC Section 21080.3, a CEQA lead agency must consult with any California Native American tribe that requests consultation and that is traditionally and culturally affiliated with the geographic area of a proposed project to identify resources of cultural or spiritual value to the tribe, even if such resources are already eligible as historical resources as a result of cultural resources studies.

1.3.2 City of Perris General Plan

The Conservation Element of the City's General Plan (2005) includes a Cultural Resource Sensitivity map (Exhibit CN 6), with sensitive zones found in areas of exposed bedrock, at the center of the City, and along historic road alignments (City of Perris 2005). The Perris Valley Historical Association, along with the Riverside County Office of Historic Preservation, have identified historic sites and structures within the City of Perris, all of which occur in the downtown area of the City.

Within the project area, the cultural resources sensitivity is indicated as low on the Cultural Resource Sensitivity map, with a density of one or fewer sites being probable over a quarter-mile area. Cultural resources sensitivity levels are higher, however, within the Motte Rimrock Reserve located to the north of the project area, where a large area of medium density site probability exists (City of Perris 2005: Exhibit CN 6).

1.4 PROJECT PERSONNEL

Mary Robbins-Wade, M.A., RPA served as principal investigator and is co-author of this technical report. Ms. Robbins-Wade meets the qualifications of the Secretary of Interior's Standards and Guidelines for archaeology. James Turner, M.A., RPA is a coauthor of this technical report, and Theodore G. Cooley, M.A., RPA contributed to the report. Mary Villalobos, B.A. conducted the field survey. Alex Lopez from the Soboba Band of Mission Indians (Soboba) participated in the pedestrian survey. Resumes for key project personnel are presented in Appendix A.

2.0 PROJECT SETTING

2.1 NATURAL SETTING

The project area is located within the Perris Valley, along the elevated northwestern part of the San Jacinto River watershed system. The San Jacinto River is approximately three miles to the southeast of the project area; Lake Elsinore, the terminus of the river, is approximately 13 miles to the southwest.

Site topography is relatively flat within the project area - elevation ranges from about 1,455 feet above mean sea level (AMSL) to approximately 1,460 feet AMSL.

The project area is characterized by land used primarily for agricultural uses. Geologically, the project site is mapped as being underlain by very old alluvial-fan deposits dating to the early Pleistocene (Morton n.d.). Soil series mapped for the project area include the Pachappa, Exeter, and Hanford soil series (United States Department of Agriculture 2017). In the western side of the property, the soil type

is Exeter sandy loam, 0 to 2 percent slopes, eroded. Most of the eastern side of the property consists of Pachappa fine sandy loam, 0 to 2 percent slopes, while the northeastern corner of the project area contains Hanford coarse sandy loam, 0 to 2 percent slopes. The Pachappa soils constitute roughly 80 percent of the property, while the Exeter and Hanford soils make up the remaining 20 percent. The three soils develop from alluvium; while the Pachappa soils formed in moderately coarse-textured alluvium, the Hanford and Exeter soils formed in alluvium from granitic sources (Natural Resources Conservation Service 1999, 2003, and 2006).

The project vicinity would have likely supported coastal sage scrub habitat, which includes vegetation such as California sagebrush, California buckwheat, and purple sage, with intermittent areas of native grassland (California Native Plant Society 1997). Plants of these native vegetation communities and possibly other native vegetation supported by the soils on-site would have been used by the Luiseño people for food, medicine, tools, shelter, ceremonial, and other uses (Bean and Shipek 1978; Sparkman 1908). Many of the animal species found living within this habitat (such as rabbits, deer, small mammals, and birds) would have been used by native populations as well.

2.2 PREHISTORIC CONTEXT

Moratto (1984) has previously defined eight archaeological regions and 16 subregions for California. The location of the project places it within the boundary of the San Diego subregion of the Southern Coast Region, but it is also located adjacent to the boundary with the Colorado River subregion of the Desert Region (Moratto 1984: 148, Figure 4.13). The following culture history outlines and briefly describes the known prehistoric cultural Traditions and chronology of archaeological sites in the vicinity of the project. The approximately 10,000 years of documented prehistory of the region has often been divided into three periods: Early Prehistoric Period (San Dieguito Tradition/complex), Archaic Period (Milling Stone Horizon, Encinitas Tradition, La Jolla and Pauma complexes), and Late Prehistoric Period (Cuyamaca and San Luis Rey complexes).

Prior to 1984, when Moratto defined the San Diego subregion, little archaeological investigation had occurred in the westernmost Riverside and San Bernardino counties portion of this subregion. This paucity of archaeological information limited the ability of researchers to assess the cultural and temporal associations for the archaeological resources in this part of the subregion. One of the few early studies to occur in this area prior to 1984 was conducted near Temecula in the early the 1950s at a site identified as the ethnohistoric village of Temeku (McCown 1955). The investigation produced a substantial, primarily Late Prehistoric Period, artifact assemblage, but with some possible late Archaic materials as well. Another study, conducted in the 1970s, for the construction of the nearby Perris Reservoir (O'Connell et al. 1974, eds.), consisted of investigations at several sites and was, perhaps, the most extensive study conducted in the area prior to 1984. The results, which included several radiocarbon dates, indicated a predominance of occupation at the sites during the Late Prehistoric Period, after about 500 years ago, but with some limited evidence for occupation as early as 2,400 years ago (Bettinger 1974:159-162). During the last approximately 35 years since 1984, several substantial archaeological studies have occurred that have served to substantially augment the archaeological record for the area (e.g., Applied Earth Works, Inc. 2001; Grenda 1997). Based on the information provided by these and other subsequent studies in the area, Sutton and Gardner (2010) and others have recently begun to define the prehistory of this area of the San Diego subregion and how it fits in with the previously better-known areas of the subregion. The three chronological periods defined for the prehistory of the San Diego subregion are described below.

2.2.1 Early Prehistoric Period

The Early Prehistoric Period represents the time of the entrance of the first known human inhabitants into California. In some areas of California, it is referred to as the Paleo-Indian period and is associated with the Big-Game-Hunting activities of the peoples of the last Ice Age, occurring during the Terminal Pleistocene (pre-10,000 years ago) and the Early Holocene (beginning circa 10,000 years ago) (Erlandson 1994, 1997; Erlandson et al. 2007). In the western United States, the most substantial evidence for the Paleo-Indian or Big-Game-Hunting peoples, derives from finds of large, fluted spear and projectile points (Fluted-Point Tradition) at sites in places such as Clovis and Folsom in the Great Basin and the Desert Southwest (Moratto 1984:79–88). In California, most of the evidence for the Fluted-Point Tradition derives principally from areas along the western margins of the Great Basin including the eastern Sierras and the Mojave Desert, and in the southern Central Valley (Dillon 2002; Rondeau et al. 2007). Elsewhere in California, with the exception of a site in the north coast ranges in northwestern California, CA-LAK-36, only isolated occurrences of fluted spear points have occurred, scattered around the state (Dillon 2002; Rondeau et al. 2007). These isolated occurrences have, however, included two fluted points or fluted point fragments discovered in, or in close proximity to, the San Diego subregion; one in the mountainous eastern area of San Diego County approximately 60 miles to the southeast of the project area (Kline and Kline 2007) and another along the coast approximately 40 miles to the southwest of the project area in adjacent Orange County (Fitzgerald and Rondeau 2012). Two examples have also been discovered to the south in Baja California (Des Lauriers 2008; Hyland and Gutierrez 1995). Despite these isolated occurrences of fluted points in the San Diego subregion and Baja California, none have been found to date in the western Riverside or San Bernardino counties area (Dillon 2002; Rondeau et al. 2007).

The earliest sites in the San Diego subregion, documented to be over 9,000 years old, belong to the San Dieguito Tradition (Warren et al. 1998; Warren and Ore 2011). The San Dieguito Tradition, with an artifact assemblage distinct from that of the Fluted Point Tradition, has been documented mostly in the coastal and near coastal areas in San Diego County (Carrico et al. 1993; Rogers 1966; True and Bouey 1990; Warren 1966; Warren and True 1961), as well as in the southeastern California deserts (Rogers 1939, 1966; Warren 1967). The content of the earliest component of the C.W. Harris site (CA-SDI-149/316/4935B), located along the San Dieguito River in San Diego County, formed the basis upon which Warren and others (Rogers 1966; Warren 1966, 1967; Warren and True 1961) identified the “San Dieguito complex,” which Warren later reclassified as the San Dieguito Tradition (1968). This Tradition is characterized by an artifact inventory consisting almost entirely of flaked stone biface and scraping tools, but lacking the fluted points associated with the Fluted-Point Tradition. Diagnostic artifact types and categories associated with the San Dieguito Tradition include elongated bifacial knives; scraping tools; crescentics; and Silver Lake, Lake Mojave, and leaf-shaped projectile points (Knell and Becker 2017; Rogers 1939; Vaughan 1982; Warren 1967). Some researchers interpret the San Dieguito Tradition/complex as having a primarily, but not exclusively, hunting subsistence orientation, but sufficiently hunting-oriented as to be distinct from the more gathering-oriented complexes of traits that were to follow in the Archaic Period (Warren 1968; Warren et al. 1998). Other researchers see the San Dieguito subsistence system as less focused on hunting and more diversified, and, therefore, possibly ancestral to or a developmental stage for the subsequent, predominantly gathering-oriented, Encinitas Tradition, denoted in the San Diego area as the “La Jolla/Pauma complex” (cf. Bull 1983; Ezell 1987; Gallegos 1985, 1987, 1991; Koerper et al. 1991). While little definite evidence for the San Dieguito Tradition has been discovered in other coastal and near-coastal areas of southern California outside of San Diego County, some evidence for it has been recently discovered in the eastern mountains of San

Diego County (Pigniolo 2005) and in a coastal area to the west in Los Angeles County (Sutton and Grenda 2012).

2.2.2 Archaic Period

During the subsequent Archaic Period, artifact assemblages of the Milling Stone Horizon/Encinitas Tradition occur at a range of coastal and adjacent inland sites and, in contrast to those of the previous Early Prehistoric Period, are relatively common in the study area region. These assemblages appear to indicate that a relatively stable, sedentary, predominantly gathering complex, possibly associated with one people, was present in the coastal and immediately inland areas of southern California for more than 7,000 years (Grenda 1997; Sutton and Gardner 2010; Warren 1968; Warren et al. 1998).

Warren has proposed that during the Archaic Period in the south coastal region, the Encinitas Tradition began circa 8,500 years ago and extended essentially unchanged until circa 1,500 years ago (Warren 1968:2; Warren et al. 1998). Also, during the Archaic Period in the coastal region, beginning somewhere north of San Diego and extending to Santa Barbara, a fourth cultural assemblage, variously described as the Intermediate Horizon (Wallace 1955) or Campbell Tradition (Warren 1968), has been delineated and distinguished, following the Milling Stone Horizon/Encinitas Tradition. This assemblage is distinguished from earlier Archaic assemblages by the presence of large projectile points and milling tools such as the mortar and pestle. The time period of this assemblage is viewed as beginning circa 4,800 years ago and continuing to as late as 1,300 years ago (Warren 1968). While still a matter of some debate, Warren and others (1998) have subsequently termed the time period encompassing the extent of the Intermediate/ Campbell cultural assemblage, in the southernmost coastal region, as the Final Archaic Period.

In the vicinity of the project area (approximately five miles to the northeast), archaeological investigations conducted in Perris Valley for the Perris Reservoir project produced a single radiocarbon date of circa 2200 years before present (BP) and a few diagnostic artifacts as the only evidence for a late Archaic Period occupation at the archaeological sites investigated (Bettinger 1974:159-162). More recently, the Eastside Reservoir (subsequently renamed Diamond Valley Lake) Project involved construction of a large new reservoir within the Domenigoni and Diamond valleys, located approximately 13.5 miles southeast of the study area. Prior to construction of the reservoir, large-scale archaeological investigations were conducted for the project (Goldberg 2001; Robinson 2001). Based on the results from this project, the researchers developed a local chronology specific to the Domenigoni and Diamond valleys based on projectile point style changes and associated radiocarbon dates (Robinson 2001). The terminology in this chronology resembles that already presented above with the period from 9,500 to 7,000 years ago designated as the Early Archaic period, the period from 7,000 to 4,000 years ago as the Middle Archaic, and the period from 4,000 to 1,500 years ago as the Late Archaic. In the Eastside Reservoir Project, only two components could be firmly dated to the Early Archaic, but sparse evidence of Early Archaic activity was noted in six other localities. One site did, however, produce two radiocarbon dates of 9190±50 and 9310±60 BP (McDougall 2001). For the Middle Archaic, firm evidence was documented in 14 locations, with other traces at four other sites. During the Late Archaic, a profusion of activity and occupation was evident, with 23 firmly dated site components and sparse evidence at eight other localities (Goldberg 2001:524).

Another archaeological investigation conducted in proximity to the project area has also produced evidence for prehistoric occupation in the western Riverside County region during the earliest part of the Archaic Period. This investigation occurred at Lake Elsinore, located approximately 10 miles to the southwest of the study area (Grenda 1997). This natural lake is situated in a fault-created basin whose

principal source of water in prehistoric times was the San Jacinto River (Grenda 1997:3). Archaeological investigations conducted at a site located along the old lake shoreline indicated occupation as early as 8,500 years ago (Grenda 1997). Thus, prehistoric occupation during the Archaic Period in the study area vicinity is documented to have occurred possibly as early as 9,300 years ago and remained present to the end of the period, approximately 1,500 years ago. While this temporal extent correlates with Warren's original proposed extent of the Encinitas Tradition, refinement of his characterization of the Tradition as being a relatively stable, sedentary, predominantly gathering complex, possibly associated with one people, and with an extent mostly restricted to the San Diego County area, may now, based on new information available, be subject to some revision (cf. Sutton and Gardner 2010).

2.2.3 Late Prehistoric Period

The beginning of the Late Prehistoric Period, circa 1,500 years ago, is seen as marked by a number of rather abrupt changes. The magnitude of these changes and the short period of time within which they took place are reflected in significant alteration of previous subsistence practices and the adoption of significant new technologies. As discussed further below, some of this change may have been as a result of significant variations in the climatic conditions. Subsistence and technological changes that occurred include a shift from hunting using atlatl and dart to the bow and arrow; a de-emphasizing of shellfish gathering along some areas of the coast (possibly due to silting-in of the coastal lagoons); and an increase in the storage of crops, such as acorns and pinyon nuts. Other new traits introduced during the Late Prehistoric Period include the production of pottery and cremation of the dead, and, in the western Riverside County area, a shift in settlement pattern is apparent (cf. Wilke 1974).

This shift in settlement is first noted during the early part of the period from 1,500 to 750 years ago, and is evidenced, locally, in the results from the Eastside Reservoir Project by a rather sudden decline in occupation in the local area during the initial part of the period. This 750-year period was termed by the Eastside Reservoir researchers as the Saratoga Springs Period, following Warren's (1984) desert terminology. This period can also be seen to partially coincide with a warm and arid period known as the Medieval Warm Period, documented to have occurred between approximately 1,100 and 600 years ago (Jones et al. 1999; Kennett and Kennett 2000; Stine 1994). During this period, at least two episodes of severe drought have also been demonstrated, the first calibrated to between 1060 and 840 BP and the second between 740 and 650 BP (Goldberg 2001; Stine 1994). Goldberg (2001) hypothesized that the Medieval Warm Period could account for the decline in sites occurring in the Eastside Reservoir Project area during the Saratoga Springs Period (1500 to 750 BP), claiming that desert and inland areas of western Riverside County, such as where the Eastside Reservoir Project and the current study area are located, would no longer be suitable to support residential bases. Goldberg (2001) further hypothesized that settlements would possibly be clustered at more suitable water sources during this time, such as at the coast, Lake Cahuilla, or Lake Elsinore (cf. Wilke 1974). While a decline was noted during the initial part of the Saratoga Springs Period, subsequently, during the latter part of the period, during the time of the Medieval Warm Period, a reoccupation began to occur (Goldberg 2001:578). According to Goldberg, "When components dating to the Medieval Warm segment of the Saratoga Springs Period are segregated and combined with Medieval Warm components from the Late Prehistoric Period, it shows that the frequency of refuse deposits and artifact and toolstone caches during the Medieval Warm is slightly higher than during the Late Archaic and much higher than during the later portion of the Late Prehistoric Period" (2001:578).

In the Eastside Reservoir Project, the Late Prehistoric Period was defined as extending from the end of the Saratoga Springs Period (750 BP) to 410 BP. A subsequent Protohistoric Period was also defined as

extending from 410 to 150 BP. The Late Prehistoric (750–410 BP) was characterized by the presence of Cottonwood points, although research indicated that Cottonwood points had actually begun to appear in the Eastside Reservoir Project study area as early as 950 BP. Ceramics and abundant obsidian begin to appear around the time of the Cabrillo exploration in AD 1542; thus, this date (i.e., circa 410 BP) until the establishment of the mission system in the late 1700s was defined as the Protohistoric Period (Robinson 2001). It should also be noted that the end of the Saratoga Springs Period and the beginning of the Late Prehistoric Period, 750 BP, also coincides with the onset of the Little Ice Age, generally dated from 750 to 150 BP (Goldberg 2001; Sutton et al. 2007). During this period, the climate was cooler and moister, and the sites identified within the Eastside Reservoir Project study area reflected a substantial increase in number and diversity, longer occupation periods, and more sedentary land use. Similar intensification of land use also occurred during this time in neighboring San Gorgonio Pass (Bean et al. 1991) and Perris Valley (Wilke 1974).

2.3 ETHNOGRAPHIC CONTEXT

While some ethnographers place the area of the project within or adjacent to a transitional area between two related cultural groups, the Cahuilla and Luiseño (Bean 1972, 1978; Bean and Shipek 1978), Kroeber places it firmly within the traditional territory of the Luiseño people (1925: Plate 57). The Luiseño and Cahuilla, along with the nearby Gabrielino, Juaneño, and Cupeño people, comprise the Cupan group of the Takic subfamily of the Uto-Aztecan linguistic stock (Bean and Vane 1979; Miller 1986; Shipley 1978).

2.3.1 Cahuilla

The Cahuilla term *ʔivi?lyuʔatum* (or *īvīatim*) refers to those who speak the Cahuilla language and is also a recognition of a commonly shared cultural tradition (Bean 1972; Strong 1929). Prehistorically, the Cahuilla territory was topographically diverse, occupying elevations from 11,000 feet in the San Bernardino Mountains to below sea level at the Salton Sea (Bean 1978). The Cahuilla are thought to have been in part distinguished from other Uto-Aztecan-speaking groups by mountain ranges and plains, but they are known to have interacted regularly with these and other groups through trade, intermarriage, ritual, and war. Cahuilla villages were commonly situated within canyons extending into mountain ranges or on nearby alluvial fans, typically near sources of water and food (Bean 1978; Bean et al. 1991). The diverse habitat of the Cahuilla enabled a wide variety of plant and animal species to be used for food, goods manufacture, and medicine (Bean 1978).

2.3.2 Luiseño

The name Luiseño derives from Mission San Luis Rey de Francia and has been used to refer to the Native people associated with the mission. The Luiseño followed a seasonal gathering cycle, with bands occupying a series of campsites within their territory (Bean and Shipek 1978; White 1963). The Luiseño lived in semi-sedentary villages usually located along major drainages, in valley bottoms, and also on the coastal strand, with each family controlling gathering areas (Bean and Shipek 1978; Sparkman 1908; White 1963). True (1990) has indicated that the predominant determining factor for placement of villages and campsites was locations where water was readily available, preferably on a year-round basis. While most of the major Luiseño villages known ethnographically were located closer to the coast along the Santa Margarita River Valley and the San Luis Rey River Valley (Bean and Shipek 1978; Kroeber 1925; White 1963), Kroeber (1925) does indicate general locations for three Luiseño villages in more inland areas. He places the village of *Panache* in proximity to Lake Elsinore and the confluence of the

San Jacinto River and Temescal Creek, approximately 10 miles to the southwest of the project area, and the villages of *Temeku* and *Meha* in the vicinity of the confluence of the upper Santa Margarita River and Temecula Creek, approximately 23 miles to the southeast of the project area (Kroeber 1925: Plate 57; McCown 1955:1). Kroeber also indicates a general location for the Gabrielino village of *Pahav* along Temescal Creek approximately 12 miles to the west of the project area (Kroeber 1925: Plate 57).

It must be noted that interpretation by archaeologists and linguistic anthropologists may differ from the beliefs and traditional knowledge of the Luiseño people. The Luiseño creation story indicates that the Luiseño people have always been here, not migrating from elsewhere. The creation story of the Pechanga Band of the Luiseño tells that the world was created at Temecula. "The Káamalam [first people] moved to a place called Nachíivo Pomíisavo, but it was too small, so they moved to a place called 'exva Teméeku,' this place you know now as Temeku. Here they settled while everything was still in darkness (DuBois 1908)" (Masiel-Zamora 2013:2). A traditional Luiseño story tells of a great flood, and the people went to higher ground, where they were saved. The San Luis Rey Band of Mission Indians say that this higher ground where the people were saved is Morro Hill. Some Luiseño informants indicated the place in this story is a hill just east of Highway 395 in the San Luis Rey River Valley (Cupples and Hedges 1977).

2.4 HISTORICAL BACKGROUND

2.4.1 Spanish Period

While Juan Rodriguez Cabrillo visited San Diego briefly in 1542, the beginning of the historic period in the San Diego area is generally given as 1769. In the mid-eighteenth century, Spain had escalated its involvement in California from exploration to colonization (Weber 1992), and in that year a Spanish expedition headed by Gaspar de Portolá and Junípero Serra established the Royal Presidio of San Diego. Portolá then traveled north from San Diego seeking suitable locations to establish military presidios and religious missions in order to extend the Spanish Empire into Alta California. Initially, both a mission and a military presidio were located on Presidio Hill overlooking the San Diego River. A small pueblo, now known as Old Town San Diego, developed below the presidio. The Mission San Diego de Alcalá was constructed in its current location five years later. The missions and presidios stood, literally and figuratively, as symbols of Spanish colonialism, importing new systems of labor, demographics, settlement, and economies to the area. Cattle ranching, animal husbandry, and agriculture were the main pursuits of the missions.

The first documented Spanish contact in what is now Riverside County was by Spanish military captain Juan Bautista de Anza who led expeditions in 1774 and 1775 from Sonora to Monterey (Bolton 1930). Anza embarked on the initial expedition to explore a land route northward through California from Sonora, with the second expedition bringing settlers across the land route to strengthen the colonization of San Francisco (Rolle 1963). Anza's route led from the San Jacinto Mountains northwest through the San Jacinto Valley, which was named "San José" by Anza. Little documentation exists of Anza's route being used after the two expeditions, although it was likely used to bring Spanish supplies into the newly colonized Alta California (Lech 2004). In 1781, the Spanish government closed the route due to uprisings by the Yuman Indians. However, by that time, the missions were established and self-sufficient; thus, the need for Spanish supplies from Sonora had begun to diminish.

Although Riverside County proved to be too far inland to include any missions within its limits, Missions San Juan Capistrano and San Luis Rey de Francia, established in 1776 and 1798 respectively, claimed a

large part of southwestern Riverside County. Due to the inland geographical location of the Cahuilla territory, the Spanish missions did not have as direct an effect on them as it did on the Luiseño who lived along the coast (Bean 1978). On the coast, the Luiseño were moved into the Mission environment, where living conditions and diseases promoted the decline of the Luiseño population (Bean and Shipek 1978). However, throughout the Spanish Period, the influence of the Spanish progressively spread further from the coast and into the inland areas of southern California as Missions San Luis Rey and San Gabriel extended their influence into the surrounding regions and used the lands for grazing cattle and other animals.

In the 1810s, ranchos and mission outposts called asistencias were established, increasing the amount of Spanish contact in the region. An asistencia was established in Pala in 1818 and in San Bernardino in 1819. Additionally, Rancho San Jacinto was established for cattle grazing in the San Jacinto Valley to the east of the project area (Brigandi 1999). In 1820, Father Payeras, a senior mission official, promoted the idea that the San Bernardino and Pala asistencias be developed into full missions in order to establish an inland mission system (Lech 2004). However, Mexico won its independence from Spain in 1821, bringing an end to the Spanish Period in California.

2.4.2 Mexican Period

Although Mexico gained its independence from Spain in 1821, Spanish patterns of culture and influence remained for a time. The missions continued to operate as they had in the past, and laws governing the distribution of land were also retained in the 1820s. Following secularization of the missions in 1834, large ranchos were granted to prominent and well-connected individuals, ushering in the Rancho Era, with the society making a transition from one dominated by the church and the military to a more civilian population, with people living on ranchos or in pueblos. With the numerous new ranchos in private hands, cattle ranching expanded and prevailed over agricultural activities.

In order to obtain a rancho, an applicant submitted a petition containing personal information and a land description and map (diseño). In 1846, Rancho San Jacinto Nuevo y Potrero was given to Miguel Pedrorena by Governor Pio Pico; Pedrorena was married to Antonia Estudillo, the daughter of Jose Antonio Estudillo, the grantee of Rancho San Jacinto Viejo located to the east (Ogden 1862). The project area is within the 48,861-acre Rancho San Jacinto Nuevo y Potrero land grant.

2.4.3 American Period

American governance began in 1848, when Mexico signed the Treaty of Guadalupe Hidalgo, ceding California to the United States at the conclusion of the Mexican–American War. A great influx of settlers to California occurred during the American Period, resulting from several factors, including the discovery of gold in the state in 1848, the end of the Civil War, the availability of free land through passage of the Homestead Act, and later, the importance of San Diego County as an agricultural area supported by roads, irrigation systems, and connecting railways. The increase in American and European populations quickly overwhelmed many of the Spanish and Mexican cultural traditions, and greatly increased the rate of population decline among Native American communities.

Initially southern California was divided into only two counties: Los Angeles and San Diego. In 1853, San Bernardino County was added, placing what is now Riverside County primarily within San Diego County and partially within San Bernardino County. Riverside County was formed in 1893.

Rancho San Jacinto Nuevo y Potrero was initially part of San Diego County. As required by the Land Act of 1851, a claim was filed for the Rancho, and the grant was patented to T.W. Sutherland, the guardian of the minor children of Miquel Pedrorena in 1883 (Willey 1886).

2.4.4 City of Perris

Southern California was developed by Americans and other immigrants who migrated to the western frontier in pursuit of gold and other mining, agriculture, trade, and land speculation (Lech 2004). This population growth during the early years of the American Period brought a need for mail and freight travel.

Although the first transcontinental railroad was completed in 1869 to northern California, in the 1870s the Southern Pacific Railroad Company, incorporated in 1865 and consolidated in 1870, began to construct a southern route that would traverse the state (Fickewirth 1992). In the early 1880s, the California Southern Railway (CSR), a subsidiary of the Atchison, Topeka and Santa Fe Railway Company (Santa Fe), was completed and allowed for travel through the Cajon Pass to Barstow to a junction of the Atlantic and Pacific Railroad and down to San Diego through western Riverside County. New depots were needed along the CSR route; surveys for both the railway and depot locations were led by CSR chief engineer Fred Perris. CSR purchased land from Southern Pacific Railroad in the Pinacate Valley (Perris Valley) for one of the new depots and town site. Local citizens offered to erect a depot, dig a well, and donate a number of lots to the railroad in exchange for establishing a station at the new town site (City of Perris n.d.). The townsite and station were named after Mr. Perris.

In 1887, Santa Fe officials consolidated their family of railroads in southern California, forming the California Central Railway. Although the CSR remained an individual subsidiary at that time, it consolidated with the California Central Railway and the Redondo Beach Railway two years later, in 1889. The resulting corporation was the Southern California Railway Company, wholly owned by Santa Fe (Price 1988). In 1906, all of lines of Southern California Railway Company were deeded to the Atchison, Topeka and Santa Fe Railway Company.

On April 1, 1886, Perris became an official station along the Santa Fe transcontinental route. By 1887, six passenger trains and two freight trains stopped at Perris daily, and rapid growth followed for several years. In the 1890s the railway through Temecula gorge (south of Perris) to San Diego was discontinued due to repeated flood damage. This meant fewer people would be traveling through Perris. In response the town had to shift its economic growth towards agriculture (The Perris Valley Historical & Museum Association 2016).

In 1892, the Perris Indian Industrial Training School (Perris Indian School) was founded in the town of Perris. This was the first Indian boarding school not located on a reservation. Students came from a variety of tribes from as far north as the Tule River agency. Students consisted of all ages between 5 and 20 years old. The 80-acre site was at the corner of today's Perris Boulevard and Morgan Street. The main subjects taught were agricultural and domestic science. Due to an inadequate water supply to conduct these subjects at the school, a better location was sought. By 1901 a site in the City of Riverside was found on the corner of Magnolia and Jackson Streets. On July 19, 1901, the cornerstone was laid for the new school building of Sherman Institute. Perris Indian School remained in operation until December 1904, when the remaining students were transferred to the Riverside School site (Sherman Indian Museum n.d.).

The lack of water prompted the need for local government in the unincorporated rural community. In early 1911, Perris residents submitted a petition to Riverside County supervisors seeking incorporation. On April 18, 1911, the community voted on the petition; 101 votes were cast, a majority for cityhood. On May 26, 1911, Perris became an officially incorporated city. It is estimated that the City's population in 1911 was about 300 people. By 1920, the City had grown to 499 people (City of Perris n.d.).

In the early 1950s the Eastern Municipal Water district brought much needed water to Perris. Alfalfa, King potato, and sugar beets were the primary crops during the twentieth century. The annual Rods, Rails and Potato festival in June celebrates the valley's agricultural past (City of Perris n.d.).

The construction of Lake Perris in the late 1960s and early 1970s made Perris a recreational destination for Riverside County residents. Hot air ballooning and skydiving are also popular recreational activities in the City (City of Perris n.d.).

3.0 ARCHIVAL RESEARCH AND CONTACT PROGRAM

3.1 RECORDS SEARCH

HELIX requested a record search of the California Historical Resources Information System (CHRIS) from the Eastern Information Center (EIC) on October 12, 2020. Due to COVID-19, the University of California, Riverside campus was closed, causing a delay in processing records searches by EIC staff. The records search results were received on January 15, 2021. The records search covered a one-mile radius around the project area and included the identification of previously recorded cultural resources and locations and citations for previous cultural resources studies. A review of the California Historical Resources, the state Office of Historic Preservation (OHP) historic properties directories, and the NRHP was also conducted. The records search summary and map are included as Appendix B (Confidential Appendices, bound separately).

3.1.1 Previous Surveys

The records search results identified 48 previous cultural resource studies within the record search limits, three of which overlap with the project area (Table 1, *Previous Studies within One Mile of the Project Area*). Of the three studies, one is a cultural resource study for a storm drain and street improvement project that crossed the current project area (Love and Tang 1999); one is a cultural resources technical report for the North Perris Industrial Specific Plan (Tang et al. 2007); and the third is a monitoring plan for a roadway project, which did not include fieldwork (Fulton 2014). While the North Perris Industrial Specific Plan cultural resources study did include the current area, an intensive field survey was not included as part of that study (Tang et al. 2007). Thus, only a small corridor across the project area has been previously surveyed for cultural resources.

Table 1
PREVIOUS STUDIES WITHIN ONE MILE OF THE PROJECT AREA

Report Number (RI-)	Year	Author	Report Title
000146	1974	Smith, Joan	Archaeological Impact Evaluation: Eastern Water District, Sewage Pipeline, Maripose Avenue to Existing Reclamation Facility, Sun City
000186	1975	Wells, Helen	Archaeological Impact Report: Eastern Municipal Water District, Riverside County, California: PL 984 Water Systems Addition
002171	1987	McCarthy, Daniel	Cultural Resources Inventory for the City of Moreno Valley, Riverside County, California
002323	1988	Scientific Resource Surveys, Inc.	Archaeological Assessment Form: May Project
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Report Number (RI-)	Year	Author	Report Title
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Report Number (RI-)	Year	Author	Report Title
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009621	2014	Puckett, Heather	Cultural Resources Summary for the Proposed Verizon Wireless, Inc., Property at the Periwinkle Site, 57 Business Park Drive, Perris, Riverside County, California
009660	2012	Brewster, Brad	Perris Dam Seismic Improvements Project Historic Resources Evaluation Report
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009806	2016	Kraft, Jennifer, and Brian F. Smith	A Phase I Cultural Resources Survey for the Proficiency HKR, LLC Perris Project, Perris, California
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010199*	2014	Fulton, Phil	Discovery and Monitoring Plan for the Mid County Parkway
010251	2017	Smith, Brian F.	A Phase I Cultural Resources Survey for the First Perry Logistics Center Project and Off-Site Improvements, Perris, California

Report Number (RI-)	Year	Author	Report Title
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010415	2017	Castells, Justin, and Joan George	Cultural Resource Assessment for the Markham/Perris Project, City of Perris, Riverside County, California
010759	2019	Miller, Andrew	Phase I Cultural Resource Assessment for the Duke Perry & Barret Project, City of Perris, Riverside County, California
010764	2019	Smith, Brian F.	Cultural Resources Monitoring Report for the Duke Warehouse Project, PM No. 37187, City of Perris, Riverside County, California
010788	2018	Smith, Brian F.	Cultural Resources Monitoring Report for the Rider Distribution Center III Project, PM 35268, City of Perris, Riverside County, California

* Overlaps project area

3.1.2 Previously Recorded Resources

The EIC has a record of 13 previously recorded cultural resources within a one-mile radius of the project, but none have been recorded within the project area (Table 2, *Previously Recorded Resources within One Mile of the Project Area*). All but one of the resources are historic, consisting mainly of sites associated with water conveyance and agriculture. The location of the Val Verde Elementary School, the remains of a house, and several structural and building foundation features possibly related to the Perris Indian School were recorded within one mile of the project area. The lone prehistoric resource recorded within the records search buffer consists of a bedrock milling feature and associated lithic artifacts. P-33-008699, the remains of a reservoir and a standpipe, is mapped just east of the project area, and P-33-028621, a small concrete slab for a well and a galvanized steel pipe spigot, is mapped just west of the project site.

Table 2
PREVIOUSLY RECORDED RESOURCES WITHIN ONE MILE OF THE PROJECT AREA

Primary Number (P-33-##)	Trinomial (CA-RIV-#)	Age	Description	Recorder, Date
005775	5516H	Historic	A well house and pump station built in the 1940s.	Diehl and Montijo, 1994; Tetra Tech, 1999
007674	---	Historic	A single-story building built in 1911 that served as the Val Verde Elementary School.	Harmon, 1982; Love, 1999
008699	---	Historic	An earthen reservoir and adjoining square standpipe.	Love, 1999
008703	---	Historic	The remains of a house that was constructed prior to 1939.	Love, 1999
011265	6726H	Historic	A section of the Colorado River Aqueduct, constructed between 1933-1939.	Neves and Goodman, 2000; Dice, 2001; Boggs, 2003; Beedle, 2005; DeGiovine et al., 2009; Kremkau, 2011; Loftus, 2016
014109	7744	Historic	Several structural and building foundation features, some of which possibly related to the Perris Indian School and some that may be related to farming. Site dates to 1892-1900.	Chandler and Cotterman, 2004; Cotterman, Sander, and Chandler, 2004
014136	7758	Prehistoric	Bedrock milling features and associated lithic artifacts.	Clifford, 2005; Goodwin, 2012
015853	8222	Historic	Ten features, including concrete pads for structures and the remains of an agricultural irrigation system.	Sanka and Aislin-Kay, 2007
015854	---	Historic	Isolate consists of a concrete standpipe and the fragmented concrete remains of a well.	Sanka, 2007
016078	8312	Historic	The remnants of a water conveyance system possibly built in the 1950s consisting of two concrete pads, a water trough, and a rectangular water reservoir.	Strudwick et al., 2005
016238	8389	Historic	Several pieces of historic farming equipment spread across two loci.	Lawson, Ewers, and Aron, 2005
028621	12883	Historic	A small concrete slab for a well and a galvanized steel pipe spigot.	Garrison, 2019
029118	13010	Historic	A section of the Perris Valley Storm Drain constructed in 1955 by the Riverside County Flood Control and Water Conservation District.	Garrison, 2020

3.2 OTHER ARCHIVAL RESEARCH

Various archival sources were also consulted, including historic topographic maps and aerial imagery (NETR Online 2020). The purpose of this research was to identify historic structures and land use in the area and assess the potential historic archaeological resources.

The historic USGS topographic maps examined include the 1953, 1967, 1973, and 1979 Perris (1:24,000); the 1901 Elsinore (1:125,000); and the 1942 Perris (1:62,500) topographic maps. While no buildings or structures appear within or adjacent to the project area on any of the topographic maps from before 1967, a well and a structure first appear on the 1967 Perris (1:24,000) map and are present on the 1973 and 1979 Perris (1:24,000) maps. The well is shown as existing in the northwest corner of the project area, while the structure is located just west of Perris Boulevard, adjacent to but outside of the project area.

The historic aerials consulted include photographic images dating to 1966, 1967, 1978, 1997, and 2002 (NETR Online 2020). The area surrounding the intersection of the Ramona Expressway and Perris Boulevard, including the project area, appear to have been used primarily for agricultural purposes; the structure seen on the 1967 topographic map and visible on the aerials beginning in 1966 (the earliest available) appears to have been related to the agricultural activity (NETR Online 2020). By the time of the 2002 aerial, the currently existing gas station complex is shown in the area of these former agricultural buildings. The well shown on the 1967 topographic map was not visible in any of the consulted aerial photographs, likely due to its small size.

3.3 NATIVE AMERICAN CONTACT PROGRAM

HELIX contacted the Native American Heritage Commission (NAHC) on October 12, 2020 for a Sacred Lands File search and list of Native American contacts for the project area. The NAHC indicated in a response dated October 13, 2020 that no known sacred lands or Native American cultural resources are within the project area, but that "the absence of specific site information in the [Sacred Lands File] does not indicate the absence of cultural resources in any project area." Letters were sent on October 27, 2020 to Native American representatives and interested parties identified by the NAHC. Four responses have been received to date (Table 3, *Native American Contact Program Responses)*. In a response dated November 3, 2020, the Augustine Band of Cahuilla Indians stated that the Tribe is unaware of specific cultural resources that may be affected by the project. The Agua Caliente Band of Cahuilla Indians stated in a response received November 5, 2020 that the project site is not located within the Tribe's Traditional Use Area. As such, they defer to local tribes. The Rincon Band of Luiseño Indians responded in a letter dated November 23, 2020 that the project location is within the Territory of the Luiseño people and within Rincon's specific area of Historic interest. "Embedded in the Luiseño territory are Rincon's history, culture and identity. The proposed project site is located in a culturally significant area." The Rincon Band recommended that an archaeological record search be conducted and asked to receive a copy of this cultural resources survey report. The Soboba Band of Luiseño Indians responded in a letter sent via email on November 25, 2020 that the project area falls within the bounds of Soboba's Tribal Traditional Use Areas. "This project location is in proximity to known sites, is a shared use area that was used in ongoing trade between the tribes and is considered to be culturally sensitive by the people of Soboba." The Tribe indicated they wish to initiate consultation with the project proponents and lead agency and requested that "Native American Monitor(s) from the Soboba Band of Luiseño Indians Cultural Resource Department to be present during any ground disturbing proceedings." If any

additional responses are received, they will be forwarded to City staff. Native American correspondence is included as Appendix C (Confidential Appendices, bound separately).

Table 3
NATIVE AMERICAN CONTACT PROGRAM RESPONSES

Contact/Tribe	Response
Augustine Band of Cahuilla Indians	Responded in a letter sent dated November 3, 2020 that the Tribe is unaware of specific cultural resources that may be affected by the project; however, if cultural resources are discovered, the office should be contacted immediately.
Agua Caliente Band of Cahuilla Indians (ACBCI)	Responded via email on November 5, 2020: "A records check of the Tribal Historic preservation office's cultural registry revealed that this project is not located within the Tribe's Traditional Use Area. Therefore, we defer to the other tribes in the area. This letter shall conclude our consultation efforts."
Rincon Band of Luiseño Indians (Rincon)	Responded in a letter dated November 23, 2020 that the project location is within the Territory of the Luiseño people, and is also within Rincon's specific area of Historic interest. "Embedded in the Luiseño territory are Rincon's history, culture and identity. The proposed project site is located in a culturally significant area. We recommend that an archaeological record search be conducted and ask that a copy of the results and a copy of the cultural resources survey be provided to the Rincon Band."
Soboba Band of Luiseño Indians (Soboba)	Responded in a letter sent via email on November 25, 2020: "The information provided to us on said project has been assessed through our Cultural Resource Department, where it was concluded that although it is outside the existing reservation, the project area does fall within the bounds of our Tribal Traditional Use Areas. This project location is in proximity to known sites, is a shared use area that was used in ongoing trade between the tribes and is considered to be culturally sensitive by the people of Soboba." "Soboba Band of Luiseño Indians is requesting the following: 1. To initiate a consultation with the project proponents and lead agency. 2. The transfer of information to the Soboba Band of Luiseño Indians regarding the progress of this project should be done as soon as new developments occur. 3. Soboba Band of Luiseño Indians continues to act as a consulting tribal entity for this project. 4. Working in and around traditional use areas intensifies the possibility of encountering cultural resources during the construction/excavation phase. For this reason, the Soboba Band of Luiseño Indians requests that Native American Monitor(s) from the Soboba Band of Luiseño Indians Cultural Resource Department to be present during any ground disturbing proceedings. Including surveys and archaeological testing. 5. Request that proper procedures be taken, and requests of the tribe be honored."

Per AB 52, a CEQA lead agency must consult with California Native American tribes that request consultation and that are traditionally and culturally affiliated with the geographic area of a proposed project to identify resources of cultural or spiritual value to the tribe, even if such resources are already eligible as historical resources as a result of cultural resources studies. The City has initiated consultation

with the registered tribes, separate from this contact program; the consultation results will be addressed in the environmental document for the project.

4.0 FIELD SURVEY

A pedestrian survey of the project site was conducted on October 8, 2020 by HELIX staff archaeologist Mary Villalobos and Alex Lopez from Soboba. The project area was walked in transects spaced approximately 10 to 15 feet (3 to 5 meters) apart.

Ground visibility was excellent for the project area; with the exception of the northwest corner of the project area, visibility was 100 percent (Plates 1 and 2). The visibility in the northwestern corner of the project area was approximately 50 percent, due to the presence of grasses (Plate 3). A small portion on the east, adjacent to and north of the gas station had been graded and the soil contained gravel (Plate 2). Soil in the remainder of the property consisted of medium brown sandy silt with no rocks. Modern trash and construction debris were scattered around the entire property.

No cultural resources (prehistoric or historic) were observed within the project site during the field survey.

Plate 1. Overview of the project area from the northeast corner of the property; view to the southwest.

Plate 2. Graded area in the southeast corner of the project area, north of the gas station; view to the south.

Plate 3. Overview from the western side of the project area; view to the east.

5.0 SUMMARY AND MANAGEMENT RECOMMENDATIONS

A study was undertaken to identify cultural resources in the Ramona-Indian Warehouse Project area and to determine the effects of the project on historical resources as defined by CEQA. The cultural resources survey did not identify any cultural resources within the project area; therefore, no impacts to cultural resources/historical resources are anticipated.

The project area appears to have been used primarily for agricultural purposes since the late nineteenth century. Modern trash and construction debris were scattered around the entire property.

5.1 MANAGEMENT RECOMMENDATIONS

Based on the results of the current study, no cultural resources/historical resources will be affected by the Ramona-Indian Warehouse Project. While no archaeological or specific Native American cultural resources have been identified within the project area, the Rincon Band of Luiseño Indians indicated that the project is in a culturally significant area, and the Soboba Band of Luiseño Indians stated that the "project location is in proximity to known sites, is a shared use area that was used in ongoing trade between the tribes and is considered to be culturally sensitive by the people of Soboba."

In addition, the project area is located within alluvial soils, where there is a potential for buried cultural resources. As such, there is a potential for subsurface cultural resources to be present within the project area.

Due to this potential, it is recommended that an archaeological and Native American monitoring program be implemented. The monitoring program would include attendance by the archaeologist and Native American monitor at a preconstruction meeting with the grading contractor, and the presence of archaeological and Native American monitors during ground-disturbing activities on site. Both archaeological and Native American monitors would have the authority to temporarily halt or redirect grading and other ground-disturbing activity in the event that cultural resources are encountered. If significant cultural material is encountered, the project archaeologist will coordinate with the Monitoring Tribe, the applicant, and City staff to develop and implement appropriate treatment or mitigation measures.

In the event that human remains are discovered, the County Coroner shall be contacted. If the remains are determined to be of Native American origin, the Most Likely Descendant, as identified by the NAHC, shall be contacted in order to determine proper treatment and disposition of the remains. All requirements of Health & Safety Code §7050.5 and PRC §5097.98 shall be followed.

Should the project limits change to incorporate new areas of proposed disturbance, archaeological survey of these areas will be required.

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Appendix A

Resumes

Mary Robbins-Wade, RPA

Cultural Resources Group Manager

HELIX Environmental Planning

Summary of Qualifications

Ms. Robbins-Wade has 41 years of extensive experience in both archaeological research and general environmental studies. She oversees the management of all archaeological, historic, and interpretive projects; prepares and administers budgets and contracts; designs research programs; supervises personnel; and writes reports. Ms. Robbins-Wade has managed or participated in hundreds of projects under the California Environmental Quality Act (CEQA), as well as numerous archaeological studies under various federal jurisdictions, addressing Section 106 compliance and National Environmental Policy Act (NEPA) issues. She has excellent relationships with local Native American communities and the Native American Heritage Commission (NAHC), as well as has supported a number of local agency clients with Native American consultation under State Bill 18 and assistance with notification and Native American outreach for Assembly Bill 52 consultation. Ms. Robbins-Wade is a Registered Professional Archaeologist (RPA) and meets the U.S. Secretary of the Interior's Professional Qualifications for prehistoric and historic archaeology.

Selected Project Experience

12 Oaks Winery Resort. Project Manager/ Principal Investigator for a cultural resources survey of approximately 650 acres for a proposed project in the County of Riverside. Oversaw background research, field survey, site record updates, Native American coordination, and report preparation. Met with Pechanga Cultural Resources staff to discuss Native American concerns. Worked with applicant and Pechanga to design the project to avoid impacts to cultural resources. Work performed for Standard Portfolio Temecula, LLC.

28th Street between Island Avenue and Clay Avenue Utilities Undergrounding Archaeological Monitoring. Project Manager/Principal Investigator for a utilities undergrounding project in a historic neighborhood of East San Diego. Responsible for project management; coordination of archaeological and Native American monitors; coordination with forensic anthropologist, Native American representative/Most Likely Descendent, and City staff regarding treatment of possible human remains; oversaw identification of artifacts and cultural features, report preparation, and resource documentation. Work performed for the City of San Diego.

Archaeological Testing F11 Project. Project Manager for a cultural resources study for a proposed mixed-use commercial and residential tower in downtown San Diego. Initial work included an archaeological records search and a historic study, including assessment of the potential for historic archaeological resources. Subsequent work included development and implementation of an archaeological testing plan, as well as construction monitoring and the assessment of historic archaeological resources encountered. Work performed for the Richman Group of Companies.

Education

Master of Arts, Anthropology, San Diego State University, California, 1990

Bachelor of Arts, Anthropology, University of California, Santa Barbara, 1981

Registrations/ Certifications

Caltrans, Professionally Qualified Staff-Equivalent Principal Investigator for prehistoric archaeology, , Bureau of Land Management Statewide Cultural Resource Use Permit (California), permit #CA-18-35, , Register of Professional Archaeologists #10294, 1991

County of San Diego, Approved CEQA Consultant for Archaeological Resources, 2007 , Orange County Approved Archaeologist, 2016

Blended Reverse Osmosis (RO) Line Project. Project Manager/ Principal Investigator for cultural resources monitoring during construction of a 24-inch recycled water pipeline in the City of Escondido. Oversaw monitoring program, including Worker Environmental Awareness Training; responsible for Native American outreach/coordination, coordination with City staff and construction crews, and general project management. Work performed for the City of Escondido.

Buena Sanitation District Green Oak Sewer Replacement Project. Project Manager/Principal Investigator for a cultural resources testing program in conjunction with a proposed sewer replacement project for the City of Vista. Oversaw background research, fieldwork, site record update, Native American coordination, and report preparation. Work performed for Harris & Associates, Inc., with the City of Vista as the lead agency.

Cactus II Feeder Transmission Pipeline IS/MND. Cultural Resources Task Lead for this project in the City of Moreno Valley. Eastern Municipal Water District proposed to construct approximately five miles of new 30-inch to 42 inch-diameter pipeline; the project would address existing system deficiencies within the City and provide supply for developing areas. Oversaw background research, field survey, and report preparation. Responsible for Native American outreach for cultural resources survey. Assisted District with Native American outreach and consultation under AB 52. Work performed under an as-needed contract for Eastern Municipal Water District.

Dale 2199C Pressure Zone Looping Pipeline Project. Cultural Resources Task Lead for this project in Moreno Valley. Eastern Municipal Water District proposed construction of a new pipeline to connect two existing pipelines in the District's 2199C Pressure Zone. The pipeline would consist of an 18-inch-diameter pipeline between Kitching Street and Alta Vista Drive that would connect to an existing 12-inch-diameter pipeline in the northern end of Kitching Street and to an existing 18-inch-diameter pipeline at the eastern end of Alta Vista Drive. The project will improve reliability and boost the Dale Pressure Zone's baseline pressure and fire flow availabilities. Four potential alignments were under consideration; three of these bisect undeveloped land to varying degrees, while the other is entirely situated within developed roadways. Oversaw background research and field survey. Responsible for Native American outreach for cultural resources survey and co-authored technical report. Work performed under an as-needed contract for Eastern Municipal Water District.

Downtown Riverside Metrolink Station Track & Platform Project. Cultural Resources Task Lead for this project involving changes to and expansion of the Downtown Riverside Metrolink Station. Overseeing records search and background information, archaeological survey, and report preparation. Responsible for coordination with Native American Heritage Commission, Riverside County Transportation Commission (RCTC), and Federal Transportation Authority (FTA) on Native American outreach. Work performed for Riverside County Transportation Commission as a subconsultant to HNTB Corporation.

James Turner, RPA

Staff Archaeologist

Summary of Qualifications

Mr. Turner is a Registered Professional Archaeologist (RPA) with a Master's degree in Anthropology and field and college-level teaching experience in archaeology. He is experienced in Section 106, the Native American Graves Protection and Repatriation Act (NAGPRA), and writing detailed reports. Mr. Turner has archaeological research and fieldwork expertise throughout southern California. He has also received training in identifying and analyzing animal remains in archaeological contexts, historic artifact identification, and technical writing. Mr. Turner's experience meets the Secretary of the Interior's Professional Qualification Standards for archaeology.

Selected Project Experience

eTS 43472 "Gold Mine" Monitoring (2020). Archaeologist for an erosion control and repair project in the community of Julian. Conducted cultural resource monitoring and report preparation. Work performed for San Diego Gas & Electric.

Aliso Creek Canyon Restoration Project (2020). Archaeologist for an erosion repair project in Lake Forest. Conducted a field survey of the project area, performed background research, and produced a cultural resources report. Work performed for the Orange County Department of Public Works.

Broadway Channel Improvements - Phase A (2020 -). Archaeologist for an earthen channel improvement project in the city of El Cajon. Performed background research and prepared cultural resource survey report. Work performed for City of El Cajon.

Clairemont Community Plan Update EIR Ph1 (2020). Archaeologist for the Clairemont Community Plan Update. Performed background research and assisted with preparing the Community Plan Update cultural resources section. Work performed for the City of San Diego.

Cordial Road Pipeline (2020). Archaeologist for a pipeline replacement project in the unincorporated portion of the City of El Cajon. Performed background research and field survey. Other responsibilities included the production of a letter report detailing the methods and results of the survey, as well as the completion of a site record update to submit to the South Coastal Information Center. Work performed for the Padre Dam Municipal Water District.

Carmel Mountain Road Life Sciences Project (2020). Archaeologist for a proposed commercial development project in the Torrey Hills Community Plan area.

Education

Master of Arts, Anthropology, San Diego State University, 2018

Bachelor of Arts, Biology and Anthropology, San Diego State University, 2015

Registrations/ Certifications

Registered Professional Archaeologist #17338

Professional Affiliations

Society for Historical Archaeology

Society for California Archaeology

Responsibilities included performing background and archival research and producing an archaeological resources report. Work performed for Allen Matkins Leck Gabme Mallory & Natsis, LLP.

Draft EIS/Overseas EIS - Disposal of Decommissioned, Defueled Ex-Enterprise (CVN 65) & Associated Naval Reactor Plants (2020 -). Archaeologist for the Draft EIS for the disposal of the Navy ex-Enterprise. Responsible for background research and citation management and assisted with document preparation. Work performed for the United States Navy as a subconsultant to ManTech.

Eastlake Village Park (2020). Archaeologist for a telecommunication project in the community of Eastlake in the City of Chula Vista. Conducted cultural resource monitoring for the drilling of a cassion hole. Work performed for Terracon.

General Coatings (2020). Archaeologist for a due diligence project for the possible future expansion of the General Coatings property. Conducted background research, which included analyzing a records search and viewing historic maps and aerial photographs of the project area. Additional responsibilities included performing a field survey of the project area and producing a cultural resources due diligence report. Work performed for General Coatings.

Lake Rancho Viejo Environmental Consulting (2020). Archaeologist for a cultural resources survey for a proposed housing development in the community of Fallbrook in northern San Diego County. Conducted background research and report preparation. Work performed for Q Technology Direct LLC with County of San Diego as the lead agency.

Mtn View Connector Pipeline - Cultural (2020). Archaeologist for a waterline replacement project in the community of Alpine. Conducted cultural resource monitoring and prepared the final monitoring report. Work performed for Padre Dam Municipal Water District.

Salt Bay Design District Specific Plan EIR (2020). Archaeologist for a mixed-use development project, which proposes to include wholesale/retail shopping and light industrial uses. Participated in an archaeological testing program and produced artifact tables for report. Work performed for M & A Gabaee.

Santa Ysabel Trail (2020 -). Staff Archaeologist for a proposed 3 mile hiking trail in the unincorporated community of Julian. Performed background research, participated in the cultural resource survey, and contributed to the cultural resources survey report. Work performed for the County of San Diego Parks and Recreation Department.

Mary Villalobos

Staff Archaeologist

HELIX Environmental Planning

Summary of Qualifications

Ms. Villalobos serves as a field archaeologist on a number of cultural resource projects in southern California, including surveys, testing programs, and monitoring. She has also served as a laboratory assistant for major universities, museums, and archaeological centers. She has expertise in cultural resource surveying, cataloging site excavation data, and monitoring. Ms. Villalobos' experience includes international work for a key archaeological project in Peru focused on a temple excavation.

Selected Project Experience

1125 S. Cleveland Street -Cultural & Native American Monitoring (2016). Archaeological monitor for a housing project in the City of Oceanside, CA. Responsible for field monitoring, coordination with construction crew and Native American monitors, identification of artifacts and cultural features, and daily field notes. Work performed for Hallmark Communities. Lead agency was City of Oceanside.

12 Oaks Winery Resort (2015 - 2018). Field Archaeologist for survey of an approximately 600-acre project near Temecula in Riverside County, CA. Responsibilities included identification of cultural material during field survey. Work performed for Standard Portfolio Temecula, LLC, with County of Riverside as the lead agency.

28th Street between Island Avenue and Clay Avenue Archaeological Monitoring (2016 - 2018). Archaeological Monitor for a utilities undergrounding project in a historic neighborhood of East San Diego, CA. Responsible for field monitoring, coordination with construction crew and Native American monitors, identification of artifacts and cultural features, and daily field notes. Work performed for the City of San Diego.

4th & J Project (2017). Archaeological monitor for a residential project in a historic neighborhood in the City of San Diego, CA. Responsible for field monitoring, coordination with construction crew and Native American monitors, identification of artifacts and cultural features, and daily field notes. Work performed for Legacy Partners, lead agency is City of San Diego.

Oceanside As-Needed Environmental Consulting Services (2015 - 2016). Archaeological Monitor for construction of a new facility at the Mission Basin Desalting Facility near the San Luis Rey River, in the City of Oceanside, CA. Responsible for field monitoring, coordination with construction crew and Native American monitors, identification of artifacts and cultural features, and daily field notes. Work performed for the City of Oceanside.

Education

Bachelor of Arts, Anthropology, concentration in Archaeology, University of California San Diego, CA, 2013

Registrations/ Certifications

Technical Safety Institute, HAZWOPER 40 Hour, Issue No. F183292: Hazardous Waste Operations and Emergency Response, 2018

City of San Diego As-Needed Permitting Assistance for O & M Activities and Emergencies (2016 - 2016). Archaeological monitor for the removal of sediment at culvert outlets at Hotel Circle, in the City of San Diego, CA, to help alleviate flooding in the area. Responsible for field monitoring, coordination with construction crew and Native American monitors, identification of artifacts and cultural features, and daily field notes. Work performed for the City of San Diego

Storage Buildings Construction Monitoring, San Marcos Campus (2017). Archaeological monitor for the construction of storage facilities on the campus of Palomar College in the City of San Marcos, California. Cultural resources are located near the project area. Responsible for field monitoring, coordination with construction crew and Native American monitors, identification of artifacts and cultural features, and daily field notes. Work performed for Palomar College.

Cemetery Area Water Pipeline Replacement (2015 - 2016). Archaeological Monitor for a water pipeline replacement project in eastern Escondido, CA. Responsible for field monitoring, coordination with construction crew and Native American monitors, identification of artifacts and cultural features, and daily field notes. Work performed for the City of Escondido.

Da Vinci (2018). Archaeological monitor during potholing to find existing utilities for the construction of a telecommunication tower. Responsible for field monitoring, coordination with construction crew, identification of artifacts and cultural features, and daily monitoring notes. Work performed for Terracon. Lead agency is Verizon.

DePratti, Inc. Telespan Lake Wohlford (2017). Field archaeologist for a testing program to determine the northern extent of an important archaeological site near Lake Wohlford in the community of Bear Valley in the County of San Diego, California. Responsibilities included excavation of test units, identification of cultural material, and preparation of field notes. Work performed for DePratti, Inc. Lead agency is County of San Diego.

El Camino Real Road Widening-Archaeological Monitoring (2016). Archaeological Monitor for a road widening project in an area with archaeological and cultural sensitivity in the City of Carlsbad, CA. Responsible for field monitoring, coordination with construction crew and Native American monitors, identification of artifacts and cultural features, and daily field notes. Work performed for the City of Carlsbad.

Magnolia Trails (2016). Archaeological Monitor for a residential development in the City of El Cajon, CA. Responsible for field monitoring, coordination with construction crew and Native American monitors, identification of artifacts and cultural features, and daily field notes. Work performed for KB Home. Lead agency was City of El Cajon.

Initial Study Appendix E

Geotechnical Report

The following section contains content that was obtained from a third party and may not achieve the same level of Americans with Disabilities Act (ADA) and Section 508 accessibility as other parts of this document.

Geotechnical Engineering Investigation
Proposed Industrial Warehouse Development
Northeast Corner of Indian Avenue
and Ramona Expressway
Perris, California

Bombay Partners L.P.
3535 Inland Empire Boulevard
Ontario, California 91764

Attn: Ms. Joe McKay

Project Number 22243-20
December 21, 2020

NorCal Engineering

NorCal Engineering

Soils and Geotechnical Consultants
10641 Humbolt Street Los Alamitos, CA 90720
(562) 799-9469 Fax (562) 799-9459

December 21, 2020 Project Number 22243-20

Bombay Partners L.P.
3535 Inland Empire Boulevard
Ontario, California 91764

Attn: Ms. Joe McKay

RE: **Geotechnical Engineering Investigation** - Proposed Industrial Warehouse Development - Located at the Northeast Corner of Indian Avenue and Ramona Expressway, in the City of Perris, California

Dear Mr. McKay:

Pursuant to your request, this firm has performed a Geotechnical Engineering Investigation for the above referenced project in accordance with your approval of our proposal dated November 18, 2020. The purpose of this investigation is to evaluate the geotechnical conditions of the subject site and to provide recommendations for the proposed industrial warehouse development.

The scope of work included the following: 1) site reconnaissance; 2) subsurface geotechnical exploration and sampling; 3) laboratory testing; 4) soil infiltration testing; 5) engineering analysis of field and laboratory data; 5) preparation of a geotechnical engineering report. It is the opinion of this firm that the proposed development is feasible from a geotechnical standpoint provided that the recommendations presented in this report are followed in the design and construction of the project.

1.0 Project Description

It is proposed to construct an industrial warehouse development consisting of approximately 240,000 square feet building as shown on the attached Site Plan by SDH and Associates. The proposed concrete tilt-up building will be supported by a conventional slab-on-grade foundation system with perimeter-spread footings and isolated interior footings. Other improvements will include asphalt and concrete pavement areas, hardscape and landscaping. It is assumed that the proposed grading for the development will include cut and fill procedures on the order of a few feet to achieve finished grade elevations. Final building plans shall be reviewed by this firm prior to submittal for city approval to determine the need for any additional study and revised recommendations pertinent to the proposed development, if necessary.

2.0 Site Description

The 14.93-acre subject property is located at the northeast corner of Indian Street and Ramona Expressway, bordered by Perris Boulevard to the east, in the City of Perris. The generally rectangular-shaped parcel is elongated in an east to west direction with topography of the relatively level descending slightly from a north to south direction on the order of a few feet. The site is undeveloped parcel covered with a moderate vegetation growth of natural grasses and weeds.

3.0 Site Exploration

The investigation consisted of the placement of ten (10) subsurface exploratory trenches by a backhoe to depths ranging between 5 and 20 feet below current ground elevations. The explorations were visually classified and logged by a field engineer with locations of the subsurface explorations shown on the attached plan. The exploratory trenches revealed the existing earth materials to consist of fill and natural soil. Detailed descriptions of the subsurface conditions are listed on the trench logs in Appendix A. It should be noted that the transition from one soil type to another as shown on the trench logs is approximate and may in fact be a gradual transition. The soils encountered are described as follows:

Fill: A fill soil classifying as a brown, clayey SILT was encountered across the site to depth of one foot below ground surface. These soils were noted to be soft and damp.

Natural: A natural undisturbed soil classifying as a brown, clayey SILT was encountered beneath the upper fill soils. The native soils as encountered were observed to be stiff and dam to moist. Deeper soils encountered consisted of sandy to clayey SILT which were noted to be stiff and moist.

The overall engineering characteristics of the earth material were relatively uniform with each excavation. Groundwater was not encountered to the depth of our trenches and no caving occurred.

4.0 Laboratory Tests

Relatively undisturbed samples of the subsurface soils were obtained to perform laboratory testing and analysis for direct shear, consolidation tests, and to determine in-place moisture/densities. These relatively undisturbed ring samples were obtained by driving a thin-walled steel sampler lined with one-inch long brass rings with an inside diameter of 2.42 inches into the undisturbed soils. Bulk bag samples were obtained in the upper soils for expansion index tests and maximum density tests. All test results are included in Appendix B, unless otherwise noted.

4.1 **Field Moisture Content** (ASTM: D 2216) and the dry density of the ring samples were determined in the laboratory. This data is listed on the logs of explorations.

4.2 **Maximum Density tests** (ASTM: D 1557) were performed on typical samples of the upper soils. Results of these tests are shown on Table I.

4.3 **Expansion Index tests** (ASTM: D 4829) were performed on remolded samples of the upper soils to determine expansive characteristics. Results of these tests are provided on Table II.

4.4 **Atterberg Limits** (ASTM: D 4318) consisting of liquid limit, plastic limit and plasticity index were performed on representative soil samples. Results are shown on Table III.

4.5 **Corrosion tests** consisting of sulfate, pH, resistivity and chloride analysis to determine potential corrosive effects of soils on concrete and underground utilities. Test results are provided on Table IV.

4.6 **R-Value test** per California Test Method 301 was performed on a representative sample, which may be anticipated to be near subgrade to determine pavement design. Results are provided within the pavement design section of the report.

4.7 **Direct Shear tests** (ASTM: D 3080) were performed on undisturbed and/or remolded samples of the subsurface soils. The test is performed under saturated conditions at loads of 1,000 lbs./sq.ft., 2,000 lbs./sq.ft., and 3,000 lbs./sq.ft. with results shown on Plates A and B.

4.8 **Consolidation tests** (ASTM: D 2435) were performed on undisturbed samples to determine the differential and total settlement which may be anticipated based upon the proposed loads. Water was added to the samples at a surcharge of one KSF and the settlement curves are plotted on Plates C and D.

5.0 Seismicity Evaluation

The proposed development lies outside of any Alquist Priolo Special Studies Zone and the potential for damage due to direct fault rupture is considered unlikely. The site is situated in an area of high regional seismicity and the San Jacinto (San Jacinto Valley) fault is located about 10 kilometers from the site. Ground shaking originating from earthquakes along other active faults in the region is expected to induce lower horizontal accelerations due to smaller anticipated earthquakes and/or greater distances to other faults.

The seismic design parameters are provided below and are based on the 2019 California Building Code (CBC) Standard ASCE/SEI 7-16. The data was obtained from the American Society of Civil Engineers (ASCE) website, https://asce7hazardtool.online/. The ASCE 7 Hazards Report is attached in Appendix C.

Seismic Design Acceleration Parameters

Latitude	33.845
Longitude	-117.228
Site Class	D
Risk Category	II/III
Mapped Spectral Response Acceleration	S_S = 1.500 S_1 = 0.580
Adjusted Maximum Acceleration	S_{MS} = 1.500
Design Spectral Response Acceleration Parameters	S_{DS} = 1.000
Peak Ground Acceleration	PGA_M = 0.552

Use of these values is dependent on requirements of ASCE 7-16, 11-4.8, Exception 2 that requires the value of the seismic response coefficient C_s be determined by Equation 12.8.2 for values of $T \leq 1.5T_s$ and taken as equal to 1.5 times the value computed in accordance with either 12.8-3 for $T_L \geq T \geq 1.5T_s$ or Equation 12.8-4 for $T > T_L$. Computations and verification of these conditions is referred to the structural engineer.

6.0 Liquefaction Evaluation

The site is expected to experience ground shaking and earthquake activity that is typical of Southern California area. It is during severe ground shaking that loose, granular soils below the groundwater table can liquefy. Based on review of the *City of Perris General Plan – Liquefaction Hazards,* the site is situated in an area of low generalized liquefaction susceptibility. The analysis indicates the potential for liquefaction at this site to be low due to groundwater in excess of 50 feet based on review with the State of California Department of Water Resources of nearby water wells. Thus, the design of the proposed construction in conformance with the latest Building Code provisions for earthquake design is expected to provide mitigation of ground shaking hazards that are typical to Southern California.

7.0 Infiltration Characteristics

Infiltration tests within the site were performed to provide preliminary infiltration rates for the purpose of planning and design of an on-site water disposal system. The infiltration tests consisted of the double ring infiltration test per ASTM Method D 3385. The field infiltration rate was computed using a reduction factor – R_f based on the field measurements with our calculations given in Appendix D. Based upon the results of our testing, the soils encountered in the planned on-site drainage disposal system area exhibit the following infiltration rates.

Trench/Test No.	Depth	Soil Classification	Field Infiltration Rate	Design Rate
T-1/TH-1	5'	Clayey SILT	1.14 in/hr	0.38 in/hr
T-2/TH-2	10'	Clayey SILT	0.74 in/hr	0.25 in/hr

The correction factors CF_t, CF_v and CF_s are given below based on soils at 5 to 10 feet from our field tests.

a) $CF_t = Rf = 1.0$ for our double ring infiltration test holes.

b) $CF_v = 1.0$ based on uniform soils encountered in three (3) trenches for infiltration tests.

c) $CF_s = 3.0$ for long-term siltation, plugging and maintenance. The subsurface soils are likely to have some plugging and regular maintenance of storm water discharge devices is required.

Based on the results of our field testing, the subsurface soils encountered in the proposed on-site drainage disposal system at 5 to 10 feet below ground surface and into very stiff fine-grained clayey soils which are not favorable for seepage pits at the site. All systems must meet the latest county specifications and the California Regional Water Quality Control Board (CRWQCB) requirements.

It is recommended that foundations shall be setback a minimum distance of 10 feet from the drainage disposal system and the bottom of footing shall be a minimum of 10 feet from the expected zone of saturation. The boundary of the zone of saturation may be assumed to project downward from the top of the permeable portion of the disposal system at an inclination of 1 to 1 or flatter, as determined by the geotechnical engineer.

8.0 Conclusions and Recommendations

Based upon our evaluations, the proposed development is acceptable from a geotechnical engineering standpoint. By following the recommendations and guidelines set forth in our report, the structures will be safe from excessive settlements under the anticipated design loadings and conditions. The proposed development shall meet all requirements of the City Building Ordinance and will not impose any adverse effect on existing adjacent structures.

The following recommendations are based upon soil conditions encountered in our field investigation; these near-surface soil conditions could vary across the site. Variations in the soil conditions may not become evident until the commencement of grading operations for the proposed development and revised recommendations from the soils engineer may be necessary based upon the conditions encountered.

It is recommended that site inspections be performed by a representative of this firm during all grading and construction of the development to verify the findings and recommendations documented in this report. Any unusual conditions which may be encountered in the course of the project development may require the need for additional study and revised recommendations.

8.1 Site Grading Recommendations

Any vegetation and/or demolition debris shall be removed and hauled from proposed grading areas prior to the start of grading operations. Existing vegetation shall not be mixed or disced into the soils. Any removed soils may be reutilized as compacted fill once any deleterious material or oversized materials (in excess of eight inches) is removed. Grading operations shall be performed in accordance with the attached *Specifications for Placement of Compacted Fill.*

8.1.1 **Removal and Recompaction Recommendations**

All disturbed soils and/or fill (about one foot below ground surface) shall be removed to competent native material, the exposed surface scarified to a depth of 12 inches, brought to within 2% of optimum moisture content and compacted to a minimum of 90% of the laboratory standard (ASTM: D 1557) prior to placement of any additional compacted fill soils, foundations, slabs-on-grade and pavement. Grading shall extend a minimum of five horizontal feet outside the edges of foundations or equidistant to the depth of fill placed, whichever is greater.

It is possible that isolated areas of undiscovered fill not described in this report are present on site; if found, these areas should be treated as discussed earlier. A diligent search shall also be conducted during grading operations in an effort to uncover any underground structures, irrigation or utility lines. If encountered, these structures and lines shall be either removed or properly abandoned prior to the proposed construction.

Any imported fill material should be preferably soil similar to the upper soils encountered at the subject site. All soils shall be approved by this firm prior to importing at the site and will be subjected to additional laboratory testing to assure concurrence with the recommendations stated in this report.

If placement of slabs-on-grade and pavement is not completed immediately upon completion of grading operations, additional testing and grading of the areas may be necessary prior to continuation of construction operations. Likewise, if adverse weather conditions occur which may damage the subgrade soils, additional assessment by the soils engineer as to the suitability of the supporting soils may be needed.

Care should be taken to provide or maintain adequate lateral support for all adjacent improvements and structures at all times during the grading operations and construction phase. Adequate drainage away from the structures, pavement and slopes should be provided at all times.

8.1.2 **Fill Blanket Recommendations**

Due to the potential for differential settlement of foundations placed on compacted fill and native materials, it is recommended that all foundations including floor slab areas be underlain by a uniform compacted fill blanket at least two feet in thickness. This fill blanket shall extend a minimum of five horizontal feet outside the edges of foundations or equidistant to the depth of fill placed, whichever is greater.

8.2 **Shrinkage and Subsidence**

Results of our in-place density tests reveal that the soil shrinkage will be less than 5 to 10% due to excavation and recompaction, based upon the assumption that the fill is compacted to 92% of the maximum dry density per ASTM standards. Subsidence should be 0.2 feet die to earthwork operations. The volume change does not include any allowance for vegetation or organic stripping, removal of subsurface improvements, or topographic approximations. Although these values are only approximate, they represent our best estimate of lost yardage, which will likely occur during grading. If more accurate shrinkage and subsidence factors are needed, it is recommended that field testing the actual equipment and grading techniques should be conducted.

8.3 **Temporary Excavations**

Temporary unsurcharged excavations in the existing site materials may be made at vertical inclinations up to 4 feet in height unless cohesionless soils are encountered. In areas where soils with little or no binder are encountered, where adverse geological conditions are exposed, or where excavations are adjacent to existing structures, shoring or flatter excavations may be required. The temporary cut slope gradients given above do not preclude local raveling and sloughing. All excavations shall be made in accordance with the requirements of the soils engineer, CAL-OSHA and other public agencies having jurisdiction. Care should be taken to provide or maintain adequate lateral support for all adjacent improvements and structures at all times during the grading operations and construction phase.

8.4 **Foundation Design**

All foundations may be designed utilizing the following allowable bearing capacities for an embedded depth of 24 inches into approved engineered fill with the corresponding widths:

Allowable Bearing Capacity (psf)		
Width (feet)	Continuous Foundation	Isolated Foundation
1.5	2000	2500
2.0	2075	2575
4.0	2375	2875
6.0	2500	3000

The bearing value may be increased by 500 psf for each additional foot of depth in excess of the 24-inch minimum depth, up to a maximum of 4,000 psf. A one-third increase may be used when considering short-term loading and seismic forces. Any foundations located along property line may utilize an allowable bearing capacity of 1,500 psf and embedded into competent native soils. All foundations shall be reinforced a minimum of one, No. 4 bar, top and bottom. A representative of this firm shall inspect all foundation excavations prior to pouring concrete.

8.5 **Settlement Analysis**

Resultant pressure curves for the consolidation tests are shown on Plates C and D. Computations utilizing these curves and the recommended allowable soil bearing capacities reveal that the foundations will experience settlements on the order of ¾ inch and differential settlements of less than ¼ inch.

8.6 **Lateral Resistance**

The following values may be utilized in resisting lateral loads imposed on the structure. Requirements of the California Building Code should be adhered to when the coefficient of friction and passive pressures are combined.

Coefficient of Friction - 0.35

Equivalent Passive Fluid Pressure = 200 lbs./cu.ft.

Maximum Passive Pressure = 2,000 lbs./cu.ft.

The passive pressure recommendations are valid only for approved compacted fill soils or competent native materials.

8.7 **Retaining Wall Design Parameters**

Active earth pressures against retaining walls will be equal to the pressures developed by the following fluid densities. These values are for **approved granular backfill material** placed behind the walls at various ground slopes above the walls.

Surface Slope of Retained Materials (Horizontal to Vertical	Equivalent Fluid Density (lb./cu.ft.)
Level	30
5 to 1	35
4 to 1	38
3 to 1	40
2 to 1	45

Any applicable short-term construction surcharges and seismic forces should be added to the above lateral pressure values. An equivalent fluid pressure of 45 pcf may be utilized for the restrained wall condition with a level grade behind the wall.

The seismic-induced lateral soil pressure for walls greater than 6 feet may be computed using a triangular pressure distribution with the maximum value at the top of the wall. The maximum lateral pressure of (20 pcf) H where H is the height of the retained soils above the wall footing should be used in final design of retaining walls. Sliding resistance values and passive fluid pressure values may be increased by 1/3 during short-term wind and seismic loading conditions.

All walls shall be waterproofed as needed and protected from hydrostatic pressure by a reliable permanent subdrain system. The granular backfill to be utilized immediately adjacent to retaining walls shall consist of an approved select granular soil with a sand equivalency greater than 30. This backfill zone of free draining material shall consist of a wedge beginning a minimum of one horizontal foot from the base of the wall extending upward at an inclination of no less than ¾ to 1 (horizontal to vertical).

8.8 **Slab Design**

All concrete slabs shall be a minimum of six inches in thickness in the proposed warehouse areas and four inches in office and hardscape both reinforced a minimum of No. 3 bars, sixteen inches in each direction and positioned in the center of slab and placed on approved subgrade soils. Additional reinforcement requirements and an increase in thickness of the slabs-on-grade may be necessary based upon soils expansion potential and proposed loading conditions in the structures and should be evaluated further by the project engineers and/or architect. All subgrade soils shall be moisture conditioned to 3% over optimum moisture content to a depth eighteen inches.

A vapor retarder (10-mil minimum thickness) should be utilized in areas which would be sensitive to the infiltration of moisture. This retarder shall meet requirements of ASTM E 96, *Water Vapor Transmission of Materials* and ASTM E 1745, *Standard Specification for Water Vapor Retarders used in Contact with Soil or Granular Fill Under Concrete Slabs.* The vapor retarder shall be installed in accordance with procedures stated in ASTM E 1643, *Standard practice for Installation of Water Vapor Retarders used in Contact with Earth or Granular Fill Under Concrete Slabs.*

The moisture retarder may be placed directly upon compacted subgrade soils conditioned to near optimum moisture levels, although one to two inches of sand beneath the membrane is desirable. The subgrade upon which the retarder is placed shall be smooth and free of rocks, gravel or other protrusions which may damage the retarder. Use of sand above the retarder is under the purview of the structural engineer; if sand is used over the retarder, it should be placed in a dry condition.

8.9 **Pavement Section Design**

The table on the following page provides a preliminary pavement design based upon an R-Value of 20 for the subgrade soils for the proposed pavement areas. Final pavement design may need to be based on R-Value testing of the subgrade soils near the conclusion of site grading to assure that these soils are consistent with those assumed in this preliminary design.

The recommendations are based upon estimated traffic loads. Client should submit any other anticipated traffic loadings to the geotechnical engineer, if necessary, so that pavement sections may be reviewed to determine adequacy to support the proposed loadings.

Type of Traffic	Traffic Index	Asphalt (in.)	Base Material (in.)
Automobile Parking Stalls	4.0	3.0	6.0
Light Vehicle Circulation Areas	5.5	3.5	9.5
Heavy Truck Access Areas	7.0	4.0	14.0

Any concrete slab-on-grade in pavement areas shall be a minimum of seven inches in thickness and may be placed on approved subgrade soils. All pavement areas shall have positive drainage toward an approved outlet from the site. Drain lines behind curbs and/or adjacent to landscape areas should be considered by client and the appropriate design engineers to prevent water from infiltrating beneath pavement. If such infiltration occurs, damage to pavement, curbs and flow lines, especially on sites with expansive soils, may occur during the life of the project.

Any approved base material shall consist of a Class II aggregate or equivalent and should be compacted to a minimum of 95% relative compaction. All pavement materials shall conform to the requirements set forth by the City of Perris. The base material; and asphaltic concrete should be tested prior to delivery to the site and during placement to determine conformance with the project specifications. A pavement engineer shall designate the specific asphalt mix design to meet the required project specifications.

8.10 Utility Trench and Excavation Backfill

Trenches from installation of utility lines and other excavations may be backfilled with on-site soils or approved imported soils compacted to a minimum of 90% relative compaction. All utility lines shall be properly bedded with clean sand having a sand equivalency rating of 30 or more. This bedding material shall be thoroughly water jetted around the pipe structure prior to placement of compacted backfill soils.

8.11 **Corrosion Design Criteria**

Representative samples of the surficial soils, typical of the subgrade soils expected to be encountered within foundation excavations and underground utilities were tested for corrosion potential. The minimum resistivity value obtained for the samples tested is representative of an environment that may be severely corrosive to metals. The soil pH value was considered mildly alkaline and may not have a significant effect on soil corrosivity. Consideration should be given to corrosion protection systems for buried metal such as protective coatings, wrappings or the use of PVC where permitted by local building codes.

According to Table 4.3.1 of ACI 318 Building Code and Commentary, these contents revealed negligible sulfate concentrations. Therefore, a Type II cement according to latest CBC specifications may be utilized for building foundations at this time. It is recommended that additional sulfate tests be performed at the completion of site grading to assure that the as graded conditions are consistent with the recommendations stated in this design. Corrosion test results may be found on the attached Table IV.

8.12 **Expansive Soil**

Since expansive soils were encountered, special attention should be given to the project design and maintenance. The attached *Expansive Soil Guidelines* should be reviewed by the engineers, architects, owner, maintenance personnel and other interested parties and considered during the design of the project and future property maintenance.

9.0 Closure

The recommendations and conclusions contained in this report are based upon the soil conditions uncovered in our test excavations. No warranty of the soil condition between our excavations is implied. NorCal Engineering should be notified for possible further recommendations if unexpected to unfavorable conditions are encountered during construction phase. It is the responsibility of the owner to ensure that all information within this report is submitted to the Architect and appropriate Engineers for the project.

A preconstruction conference should be held between the developer, general contractor, grading contractor, city inspector, architect, and geotechnical engineer to clarify any questions relating to the grading operations and subsequent construction. Our representative should be present during the grading operations and construction phase to certify that such recommendations are complied within the field.

This geotechnical investigation has been conducted in a manner consistent with the level of care and skill exercised by members of our profession currently practicing under similar conditions in the Southern California area. No other warranty, expressed or implied is made.

We appreciate this opportunity to be of service to you. If you have any further questions, please do not hesitate to contact the undersigned.

Respectfully submitted,
NORCAL ENGINEERING

Keith D. Tucker
Project Engineer
R.G.E. 841

REGISTERED PROFESSIONAL ENGINEER
KEITH D. TUCKER
No. 841
Exp. 12/31/2020
GEOTECHNICAL
STATE OF CALIFORNIA

Scott D. Spensiero
Project Manager

SPECIFICATIONS FOR PLACEMENT OF COMPACTED FILL

Excavation

Any existing low-density soils and/or saturated soils shall be removed to competent natural soil under the inspection of the Geotechnical Engineering Firm. After the exposed surface has been cleansed of debris and/or vegetation, it shall be scarified until it is uniform in consistency, brought to the proper moisture content and compacted to a minimum of 90% relative compaction (in accordance with ASTM: D 1557).

In any area where a transition between fill and native soil or between bedrock and soil are encountered, additional excavation beneath foundations and slabs will be necessary in order to provide uniform support and avoid differential settlement of the structure.

Material for Fill

The on-site soils or approved import soils may be utilized for the compacted fill provided they are free of any deleterious materials and shall not contain any rocks, brick, asphaltic concrete, concrete or other hard materials greater than eight inches in maximum dimensions. Any import soil must be approved by the Geotechnical Engineering firm a minimum of 72 hours prior to importation of site.

Placement of Compacted Fill Soils

The approved fill soils shall be placed in layers not excess of six inches in thickness. Each lift shall be uniform in thickness and thoroughly blended. The fill soils shall be brought to within 2% of the optimum moisture content, unless otherwise specified by the Soils Engineering firm. Each lift shall be compacted to a minimum of 90% relative compaction (in accordance with ASTM: D 1557) and approved prior to the placement of the next layer of soil. Compaction tests shall be obtained at the discretion of the Geotechnical Engineering firm but to a minimum of one test for every 500 cubic yards placed and/or for every 2 feet of compacted fill placed.

The minimum relative compaction shall be obtained in accordance with accepted methods in the construction industry. The final grade of the structural areas shall be in a dense and smooth condition prior to placement of slabs-on-grade or pavement areas. No fill soils shall be placed, spread or compacted during unfavorable weather conditions. When the grading is interrupted by heavy rains, compaction operations shall not be resumed until approved by the Geotechnical Engineering firm.

Grading Observations

The controlling governmental agencies should be notified prior to commencement of any grading operations. This firm recommends that the grading operations be conducted under the observation of a Soils Engineering firm as deemed necessary. A 24-hour notice must be provided to this firm prior to the time of our initial inspection.

Observation shall include the clearing and grubbing operations to assure that all unsuitable materials have been properly removed; approve the exposed subgrade in areas to receive fill and in areas where excavation has resulted in the desired finished grade and designate areas of overexcavation; and perform field compaction tests to determine relative compaction achieved during fill placement. In addition, all foundation excavations shall be observed by the Geotechnical Engineering firm to confirm that appropriate bearing materials are present at the design grades and recommend any modifications to construct footings.

EXPANSIVE SOIL GUIDELINES

The following expansive soil guidelines are provided for your project. The intent of these guidelines is to inform you, the client, of the importance of proper design and maintenance of projects supported on expansive soils. ***You, as the owner or other interested party, should be warned that you have a duty to provide the information contained in the soil report including these guidelines to your design engineers, architects, landscapers and other design parties in order to enable them to provide a design that takes into consideration expansive soils.***

In addition, you should provide the soil report with these guidelines to any property manager, lessee, property purchaser or other interested party that will have or assume the responsibility of maintaining the development in the future.

Expansive soils are fine-grained silts and clays which are subject to swelling and contracting. The amount of this swelling and contracting is subject to the amount of fine-grained clay materials present in the soils and the amount of moisture either introduced or extracted from the soils. Expansive soils are divided into five categories ranging from "very low" to "very high". Expansion indices are assigned to each classification and are included in the laboratory testing section of this report. *If the expansion index of the soils on your site, as stated in this report, is 21 or higher, you have expansive soils.* The classifications of expansive soils are as follows:

Classification of Expansive Soil*

Expansion Index	Potential Expansion
0-20	Very Low
21-50	Low
51-90	Medium
91-130	High
Above 130	Very High

*From Table 18A-I-B of California Building Code (1988)

When expansive soils are compacted during site grading operations, care is taken to place the materials at or slightly above optimum moisture levels and perform proper compaction operations. Any subsequent excessive wetting and/or drying of expansive soils will cause the soil materials to expand and/or contract. These actions are likely to cause distress of foundations, structures, slabs-on-grade, sidewalks and pavement over the life of the structure. ***It is therefore imperative that even after construction of improvements, the moisture contents are maintained at relatively constant levels, allowing neither excessive wetting or drying of soils.***

Evidence of excessive wetting of expansive soils may be seen in concrete slabs, both interior and exterior. Slabs may lift at construction joints producing a trip hazard or may crack from the pressure of soil expansion. Wet clays in foundation areas may result in lifting of the structure causing difficulty in the opening and closing of doors and windows, as well as cracking in exterior and interior wall surfaces. In extreme wetting of soils to depth, settlement of the structure may eventually result. Excessive wetting of soils in landscape areas adjacent to concrete or asphaltic pavement areas may also result in expansion of soils beneath pavement and resultant distress to the pavement surface.

Excessive drying of expansive soils is initially evidenced by cracking in the surface of the soils due to contraction. Settlement of structures and on-grade slabs may also eventually result along with problems in the operation of doors and windows.

Projects located in areas of expansive clay soils will be subject to more movement and "hairline" cracking of walls and slabs than similar projects situated on non-expansive sandy soils. There are, however, measures that developers and property owners may take to reduce the amount of movement over the life the development. The following guidelines are provided to assist you in both design and maintenance of projects on expansive soils:

- Drainage away from structures and pavement is essential to prevent excessive wetting of expansive soils. Grades should be designed to the latest building code and maintained to allow flow of irrigation and rain water to approved drainage devices or to the street. Any "ponding" of water adjacent to buildings, slabs and pavement after rains is evidence of poor drainage; the installation of drainage devices or regrading of the area may be required to assure proper drainage. Installation of rain gutters is also recommended to control the introduction of moisture next to buildings. Gutters should discharge into a drainage device or onto pavement which drains to roadways.

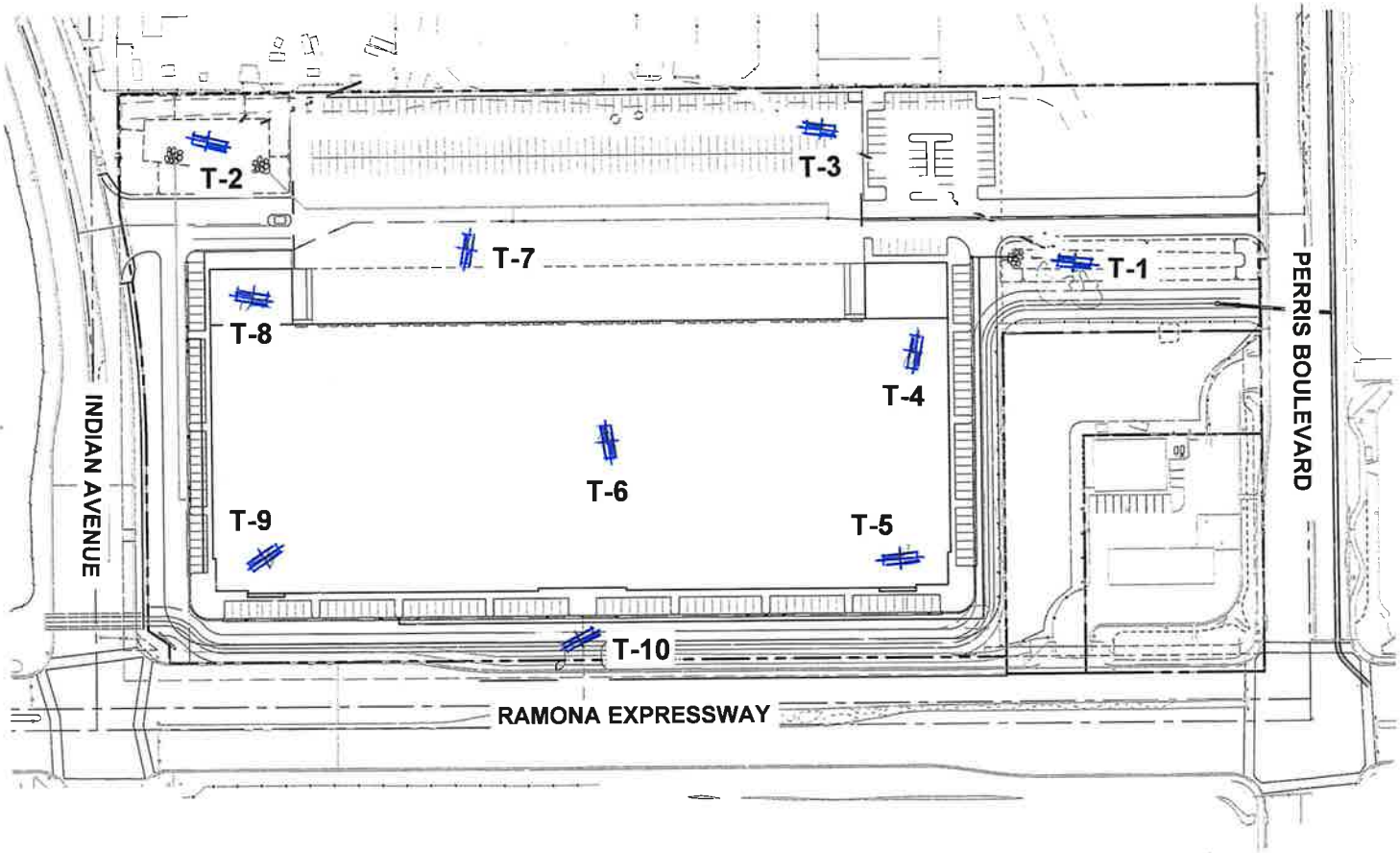
- Irrigation should be strictly controlled around building foundations, slabs and pavement and may need to be adjusted depending upon season. This control is essential to maintain a relatively uniform moisture content in the expansive soils and to prevent swelling and contracting. Over-watering adjacent to improvements may result in damage to those improvements. NorCal Engineering makes no specific recommendations regarding landscape irrigation schedules.

- Planting schemes for landscaping around structures and pavement should be analyzed carefully. Plants (including sod) requiring high amounts of water may result in excessive wetting of soils. Trees and large shrubs may actually extract moisture from the expansive soils, thus causing contraction of the fine-grained soils.

- Thickened edges on exterior slabs will assist in keeping excessive moisture from entering directly beneath the concrete. A six-inch thick or greater deepened edge on slabs may be considered. Underlying interior and exterior slabs with 6 to 12 inches or more of non-expansive soils and providing presaturation of the underlying clayey soils as recommended in the soil report will improve the overall performance of on-grade slabs.

- Increase the amount of steel reinforcing in concrete slabs, foundations and other structures to resist the forces of expansive soils. The precise amount of reinforcing should be determined by the appropriate design engineers and/or architects.

- Recommendations of the soil report should always be followed in the development of the project. Any recommendations regarding presaturation of the upper subgrade soils in slab areas should be performed in the field and verified by the Soil Engineer.



NORTH

0 40 80 160

1 INCH = 200 FEET

NorCal Engineering

SOILS AND GEOTECHNICAL CONSULTANTS

PROJECT 22243-20 | DATE DECEMBER 2020

SITE PLAN

List of Appendices
(in order of appearance)

Appendix A
Log of Excavations

MAJOR DIVISION			GRAPHIC SYMBOL	LETTER SYMBOL	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 SAND (LITTLE OR NO FINES)		SW	WELL-GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES
				SP	POORLY-GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES
	MORE THAN 50% OF COARSE FRACTION PASSING ON NO. 4 SIEVE	SANDS WITH FINE (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, FAT CLAYS
				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

UNIFIED SOIL CLASSIFICATION SYSTEM

KEY:

- ■ Indicates 2.5-inch Inside Diameter. Ring Sample.
- ⊠ Indicates 2-inch OD Split Spoon Sample (SPT).
- ⧅ Indicates Shelby Tube Sample.
- ◫ Indicates No Recovery.
- ◧ Indicates SPT with 140# Hammer 30 in. Drop.
- ⊠ Indicates Bulk Sample.
- ◩ Indicates Small Bag Sample.
- ◨ Indicates Non-Standard
- ⧓ Indicates Core Run.

COMPONENT PROPORTIONS

DESCRIPTIVE TERMS	RANGE OF PROPORTION
Trace	1 - 5%
Few	5 - 10%
Little	10 - 20%
Some	20 - 35%
And	35 - 50%

COMPONENT DEFINITIONS

COMPONENT	SIZE RANGE
Boulders	Larger than 12 in
Cobbles	3 in to 12 in
Gravel	3 in to No 4 (4.5mm)
Coarse gravel	3 in to 3/4 in
Fine gravel	3/4 in to No 4 (4.5mm)
Sand	No. 4 (4.5mm) to No. 200 (0.074mm)
Coarse sand	No. 4 (4.5 mm) to No. 10 (2.0 mm)
Medium sand	No. 10 (2.0 mm) to No. 40 (0.42 mm)
Fine sand	No. 40 (0.42 mm) to No. 200 (0.074 mm)
Silt and Clay	Smaller than No. 200 (0.074 mm)

MOISTURE CONTENT

DRY	Absence of moisture, dusty, dry to the touch.
DAMP	Some perceptible moisture; below optimum
MOIST	No visible water; near optimum moisture content
WET	Visible free water, usually soil is below water table.

RELATIVE DENSITY OR CONSISTENCY VERSUS SPT N -VALUE

COHESIONLESS SOILS		COHESIVE SOILS		
Density	N (blows/ft)	Consistency	N (blows/ft)	Approximate Undrained Shear Strength (psf)
Very Loose	0 to 4	Very Soft	0 to 2	< 250
Loose	4 to 10	Soft	2 to 4	250 - 500
Medium Dense	10 to 30	Medium Stiff	4 to 8	500 - 1000
Dense	30 to 50	Stiff	8 to 15	1000 - 2000
Very Dense	over 50	Very Stiff	15 to 30	2000 - 4000
		Hard	over 30	> 4000

Bombay Partners, L.P.
22243-20

Log of Trench T-1

Boring Location: Indian and Ramona Expressway, Perris

Date of Drilling: 12/8/2020 | **Groundwater Depth:** None Encountered

Drilling Method: Backhoe

Hammer Weight: | **Drop:**

Surface Elevation: Not Measured

Depth (feet)	Lith-ology	Material Description	Samples: Type	Samples: Blow Counts	Laboratory: Moisture	Laboratory: Dry Density	Laboratory: Fines Content %
0		FILL Clayey SILT Brown, soft, damp					
		GWT not encountered					
		NATURAL Clayey SILT Brown, stiff, moist					
5		Boring completed at depth of 5'					
10							
15							
20							
25							
30							
35							

SuperLog CivilTech Software, USA www.civiltech.com File: C:\Superlog4\PROJECT\22243-20.log Date: 12/18/2020

NorCal Engineering

Bombay Partners, L.P.
22243-20

Log of Trench T-2

Boring Location: Indian and Ramona Expressway, Perris

Date of Drilling: 12/8/2020 | Groundwater Depth: None Encountered

Drilling Method: Backhoe

Hammer Weight: | Drop:

Surface Elevation: Not Measured

Depth (feet)	Lith-ology	Material Description	Samples: Type	Samples: Blow Counts	Laboratory: Moisture	Laboratory: Dry Density	Laboratory: Fines Content %
0		FILL Clayey SILT Brown, soft, damp					
		GWT not encountered					
5		NATURAL Clayey SILT Brown, stiff, moist					
10		Boring completed at depth of 10'					
15							
20							
25							
30							
35							

SuperLog CivilTech Software, USA www.civiltech.com File: C:\Superlog4\PROJECT\22243-20.log Date: 12/18/2020

NorCal Engineering

Bombay Partners, L.P.
22243-20

Log of Trench T-3

Boring Location: Indian and Ramona Expressway, Perris

Date of Drilling: 12/8/2020 | **Groundwater Depth:** None Encountered

Drilling Method: Backhoe

Hammer Weight: | **Drop:**

Surface Elevation: Not Measured

Depth (feet)	Lith-ology	Material Description	Samples: Type	Samples: Blow Counts	Laboratory: Moisture	Laboratory: Dry Density	Laboratory: Fines Content %
0		FILL Clayey SILT Brown, soft, damp					
		GWT not encountered					
		NATURAL Clayey SILT Brown, stiff, moist					
5		Boring completed at depth of 5'					
10							
15							
20							
25							
30							
35							

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NorCal Engineering

Bombay Partners, L.P.
22243-20

Log of Trench T-4

Boring Location: Indian and Ramona Expressway, Perris

Date of Drilling: 12/8/2020 | Groundwater Depth: None Encountered

Drilling Method: Backhoe

Hammer Weight: | Drop:

Surface Elevation: Not Measured

Depth (feet)	Lith-ology	Material Description	Samples: Type	Samples: Blow Counts	Laboratory: Moisture	Laboratory: Dry Density	Laboratory: Fines Content %
0		FILL Clayey SILT Brown, soft, damp	■		12.0	108.9	
		NATURAL Clayey SILT Brown, stiff, moist					
5		GWT not encountered					
		Sandy SILT Brown, stiff, moist					
10		Boring completed at depth of 10'	■		9.7	106.6	
15							
20							
25							
30							
35							

SuperLog CivilTech Software, USA www.civiltech.com File: C:\Superlog4\PROJECT\22243-20.log Date: 12/18/2020

NorCal Engineering

Bombay Partners, L.P.
22243-20

Log of Trench T-5

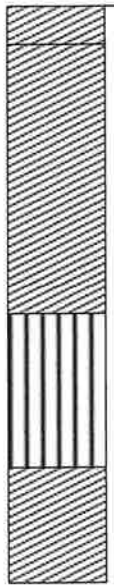
Boring Location: Indian and Ramona Expressway, Perris

Date of Drilling: 12/8/2020 | Groundwater Depth: None Encountered

Drilling Method: Backhoe

Hammer Weight: | Drop:

Surface Elevation: Not Measured



Depth (feet)	Lithology	Material Description	Samples: Type	Samples: Blow Counts	Laboratory: Moisture	Laboratory: Dry Density	Laboratory: Fines Content %
0		FILL Clayey SILT Brown, soft, damp	■		4.8	109.9	
		NATURAL Clayey SILT Brown, stiff, moist	■		12.3	105.3	
5							
		Sandy SILT Brown, stiff, moist	■		17.2	111.0	
10							
		Clayey SILT Grey-brown, stiff, moist	■		14.7	104.5	
15		Boring completed at depth of 15'					
20							
25							
30							
35							

SuperLog CivilTech Software, USA www.civiltech.com File: C:\Superlog4\PROJECT\22243-20.log Date: 12/18/2020

NorCal Engineering

Bombay Partners, L.P.
22243-20

Log of Trench T-6

Boring Location: Indian and Ramona Expressway, Perris

Date of Drilling: 12/8/2020 | **Groundwater Depth:** None Encountered

Drilling Method: Backhoe

Hammer Weight: | **Drop:**

Surface Elevation: Not Measured

Depth (feet)	Lith-ology	Material Description	Samples: Type	Samples: Blow Counts	Laboratory: Moisture	Laboratory: Dry Density	Laboratory: Fines Content %
0		FILL Clayey SILT Brown, soft, damp	■		7.8	108.1	
		NATURAL Clayey SILT Brown, stiff, moist	■		12.3	105.8	
5							
		Sandy SILT Brown, stiff, moist	■		13.9	107.3	
10							
		Clayey SILT Grey-brown, stiff, moist	■		20.2	107.3	
15							
20		Boring completed at depth of 20'	■		15.5	102.3	
25							
30							
35							

GWT not encountered

SuperLog CivilTech Software, USA www.civiltech.com File: C:\Superlog4\PROJECT\22243-20.log Date: 12/18/2020

NorCal Engineering

Bombay Partners, L.P.
22243-20

Log of Trench T-7

Boring Location: Indian and Ramona Expressway, Perris

Date of Drilling: 12/8/2020 | Groundwater Depth: None Encountered

Drilling Method: Backhoe

Hammer Weight: | Drop:

Surface Elevation: Not Measured

Depth (feet)	Lith-ology	Material Description	Samples: Type	Samples: Blow Counts	Laboratory: Moisture	Laboratory: Dry Density	Laboratory: Fines Content %
0		FILL Clayey SILT Brown, soft, damp	■		6.5	111.2	
		NATURAL Clayey SILT Brown, stiff, moist					
5		Boring completed at depth of 5'					
10							
15							
20							
25							
30							
35							

GWT not encountered

SuperLog CivilTech Software, USA www.civiltech.com File: C:\Superlog4\PROJECT\22243-20.log Date: 12/18/2020

NorCal Engineering

Bombay Partners, L.P.
22243-20

Log of Trench T-8

Boring Location: Indian and Ramona Expressway, Perris

Date of Drilling: 12/8/2020 | Groundwater Depth: None Encountered

Drilling Method: Backhoe

Hammer Weight: | Drop:

Surface Elevation: Not Measured

Depth (feet)	Lith-ology	Material Description	Samples: Type	Samples: Blow Counts	Laboratory: Moisture	Laboratory: Dry Density	Laboratory: Fines Content %
0		FILL Clayey SILT Brown, soft, damp					
		NATURAL Clayey SILT Brown, stiff, damp			7.1	113.0	
5							
					7.4	108.3	
10		Boring completed at depth of 10'					
15							
20							
25							
30							
35							

GWT not encountered

Date: 12/18/2020 File: C:\Superlog4\PROJECT\22243-20.log

SuperLog CiviliTech Software, USA www.civiltech.com

NorCal Engineering

Bombay Partners, L.P.
22243-20

Log of Trench T-9

Boring Location: Indian and Ramona Expressway, Perris

Date of Drilling: 12/8/2020 | Groundwater Depth: None Encountered

Drilling Method: Backhoe

Hammer Weight: | Drop:

Surface Elevation: Not Measured

Depth (feet)	Lith-ology	Material Description	Samples: Type	Samples: Blow Counts	Laboratory: Moisture	Laboratory: Dry Density	Laboratory: Fines Content %
0		FILL Clayey SILT Brown, soft, damp	■		6.2	103.7	
		NATURAL Clayey SILT Brown, stiff, damp					
5							
			■		5.9	110.1	
10		Boring completed at depth of 10'					
15							
20							
25							
30							
35							

GWT not encountered

SuperLog CivilTech Software, USA www.civiltech.com File: C:\Superlog4\PROJECT\22243-20.log Date: 12/18/2020

NorCal Engineering

Bombay Partners, L.P.
22243-20

Log of Trench T-10

Boring Location: Indian and Ramona Expressway, Perris

Date of Drilling: 12/8/2020 | Groundwater Depth: None Encountered

Drilling Method: Backhoe

Hammer Weight: | Drop:

Surface Elevation: Not Measured

Depth (feet)	Lith-ology	Material Description	Samples: Type	Samples: Blow Counts	Laboratory: Moisture	Laboratory: Dry Density	Laboratory: Fines Content %
0		FILL Clayey SILT Brown, soft, damp	■		7.9	108.9	
		NATURAL Clayey SILT Brown, stiff, moist					
5		Boring completed at depth of 5'					
10							
15							
20							
25							
30							
35							

GWT not encountered

SuperLog CivilTech Software, USA www.civiltech.com File: C:\Superlog4\PROJECT\22243-20.log Date: 12/18/2020

NorCal Engineering

Appendix B
Laboratory Tests

TABLE I
MAXIMUM DENSITY TESTS

Sample	Classification	Optimum Moisture (%)	Maximum Dry Density (lbs/cu.ft)
T-5 @ 2'	Clayey SILT	14.0	115.0
T-8 @ 2'	Clayey SILT	13.5	117.0

TABLE II
EXPANSION TESTS

Sample	Classification	Expansion Index
T-5 @ 2'	Clayey SILT	73
T-8 @ 2'	Clayey SILT	61

TABLE III
ATTERBERG LIMITS

Sample	Liquid Limit	Plastic Limit	Plasticity Index
T-6 @ 5'	32	21	11
T-6 @ 10'	25	20	5

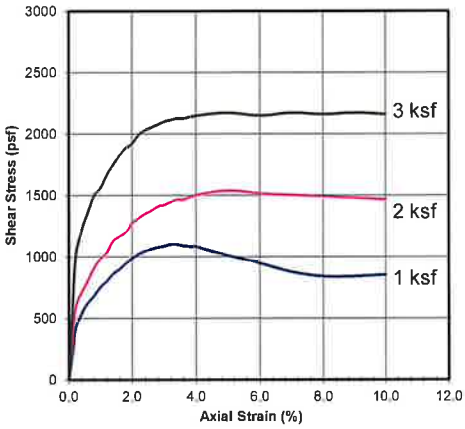
TABLE IV
CORROSION TESTS

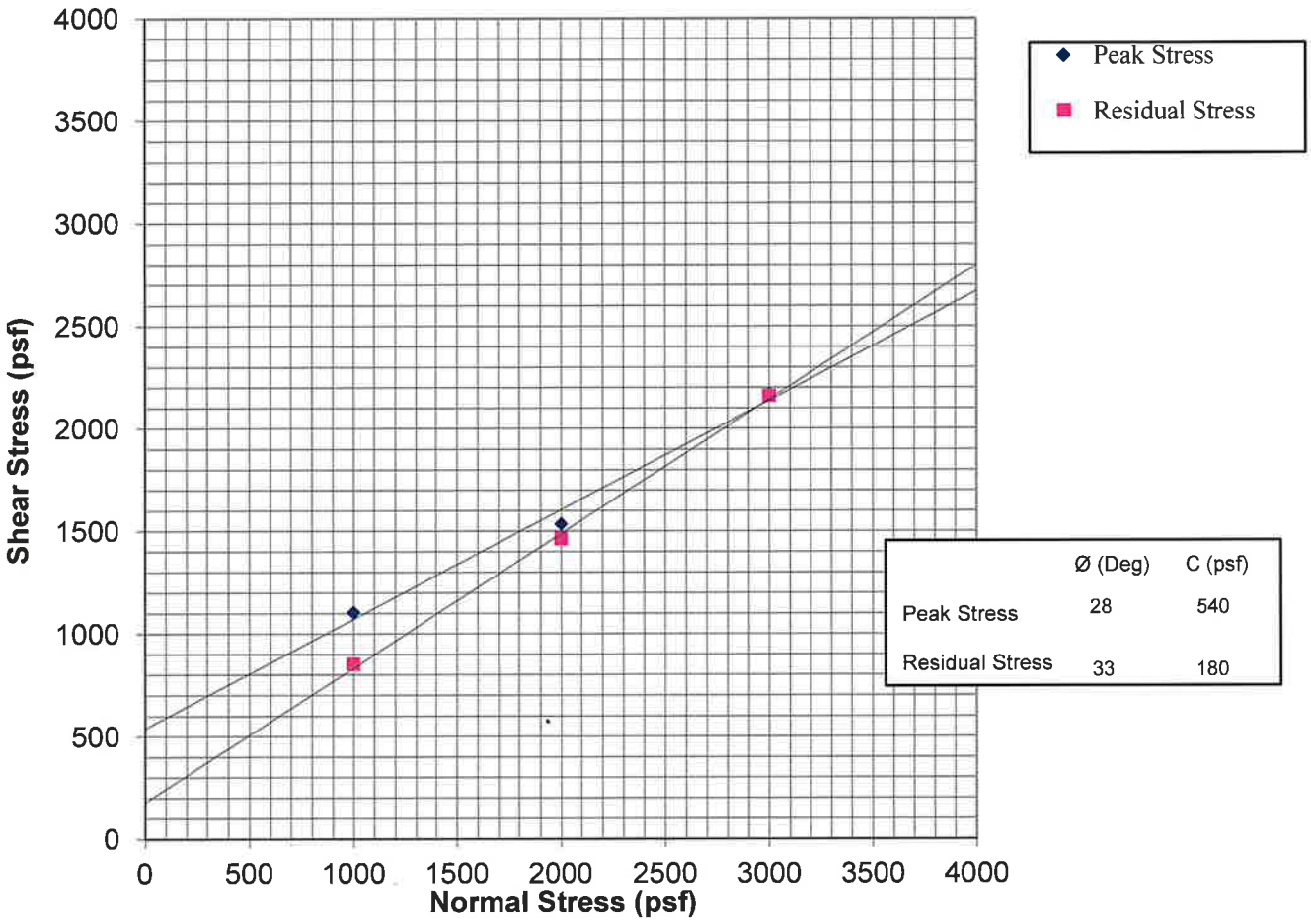
Sample	pH	Electrical Resistivity	Sulfate (%)	Chloride (ppm)
T-5 @ 2'	7.1	2,433	0.005	270

% by weight
ppm – mg/kg

Sample No.	B5@2'	
Sample Type:	Undisturbed-Saturated	
Soil Description:	Clayey Silt	

		1	2	3
Normal Stress	(psf)	1000	2000	3000
Peak Stress	(psf)	1104	1536	2172
Displacement	(in.)	0.080	0.125	0.125
Residual Stress	(psf)	852	1464	2160
Displacement	(in.)	0.250	0.250	0.250
Initial Dry Density	(pcf)	109.9	109.9	109.9
Initial Water Content	(%)	4.8	4.8	4.8
Strain Rate	(in./min.)	0.020	0.020	0.020





	Ø (Deg)	C (psf)
Peak Stress	28	540
Residual Stress	33	180

NorCal Engineering

SOILS AND GEOTECHNICAL CONSULTANTS

Bombay Partners

PROJECT NUMBER: 22243-20 DATE: 12/21/2020

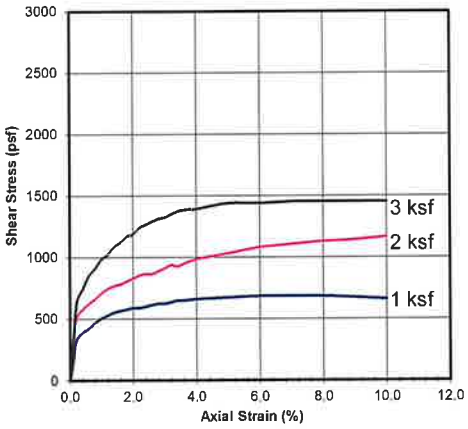
DIRECT SHEAR TEST

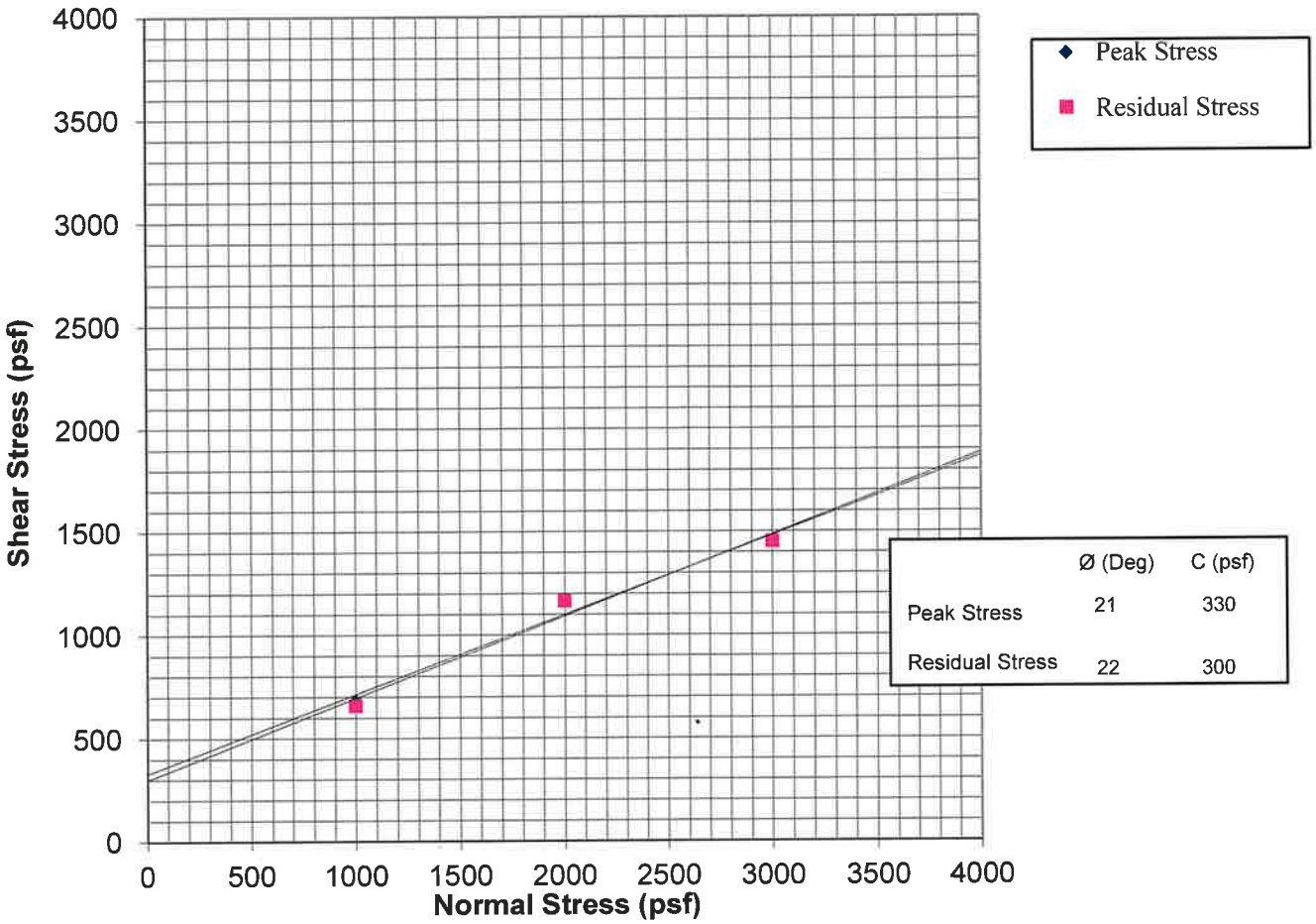
ASTM D3080

Plate A

Sample No.	B8@2'
Sample Type:	Undisturbed-Saturated
Soil Description:	Clayey Silt

		1	2	3
Normal Stress	(psf)	1000	2000	3000
Peak Stress	(psf)	684	1164	1452
Displacement	(in.)	0.150	0.250	0.175
Residual Stress	(psf)	660	1164	1452
Displacement	(in.)	0.250	0.250	0.250
Initial Dry Density	(pcf)	113.0	113.0	113.0
Initial Water Content	(%)	7.1	7.1	7.1
Strain Rate	(in./min.)	0.020	0.020	0.020





	Ø (Deg)	C (psf)
Peak Stress	21	330
Residual Stress	22	300

NorCal Engineering

SOILS AND GEOTECHNICAL CONSULTANTS

Bombay Partners

PROJECT NUMBER: 22243-20 DATE: 12/21/2020

DIRECT SHEAR TEST

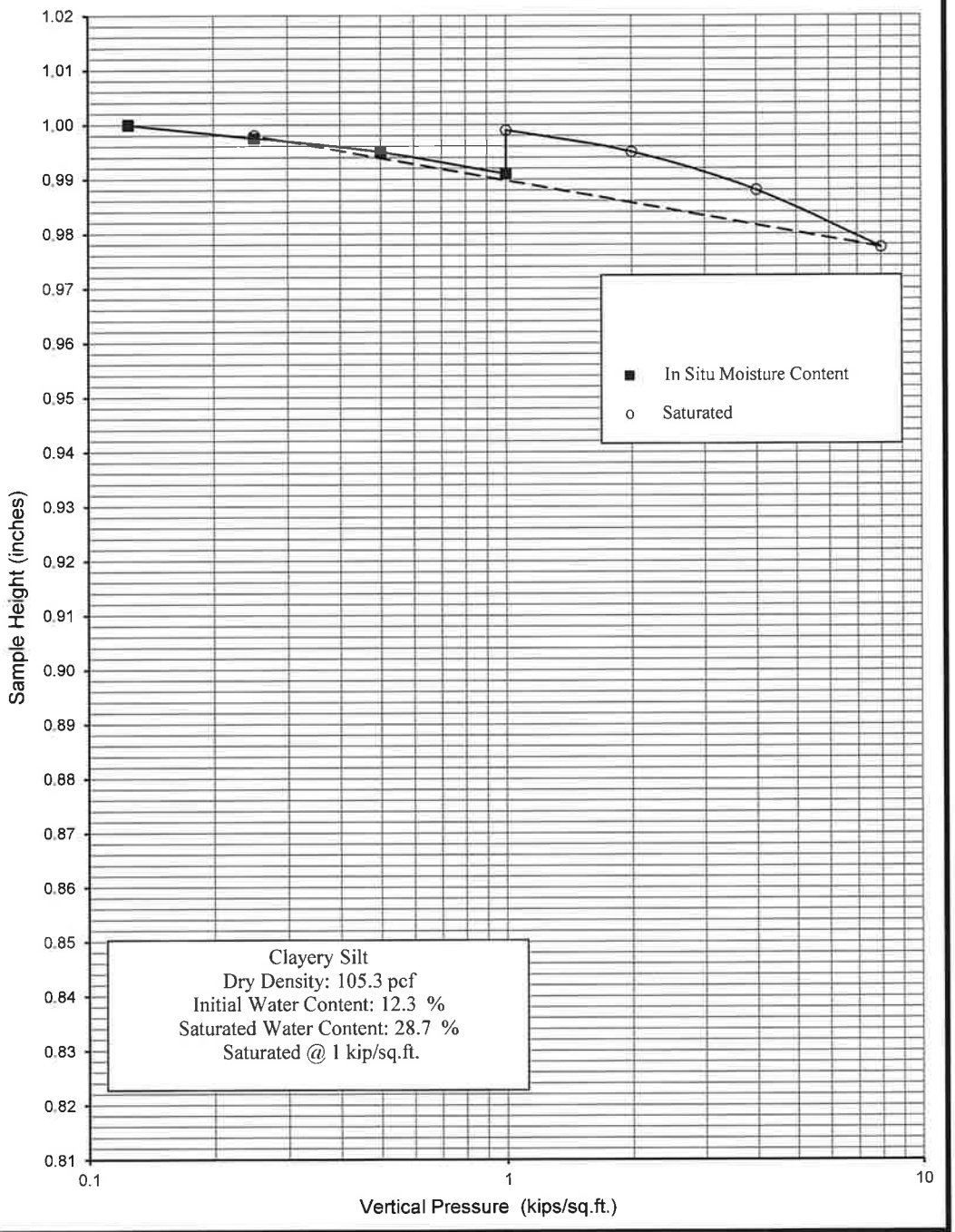
ASTM D3080

Plate B

Vertical Pressure (kips/sq.ft.)	Sample Height (inches)	Consolidation (percent)	Sample No. B1	Depth 5'	Date 12/21/2020
0.125	1.0000	0.0			
0.25	0.9975	0.2			
0.5	0.9950	0.5			
1	0.9910	0.9			
1	0.9990	0.1			
2	0.9950	0.5			
4	0.9880	1.2			
8	0.9775	2.3			
0.25	0.9980	0.2			

Saturated

Date Tested: 12/17/2020
Sample: B5
Depth: 5'



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SOILS AND GEOTECHNICAL CONSULTANTS

Bombay Partners LP

PROJECT NUMBER: 22243-20 DATE: 12/21/2020

CONSOLIDATION TEST

ASTM D2435

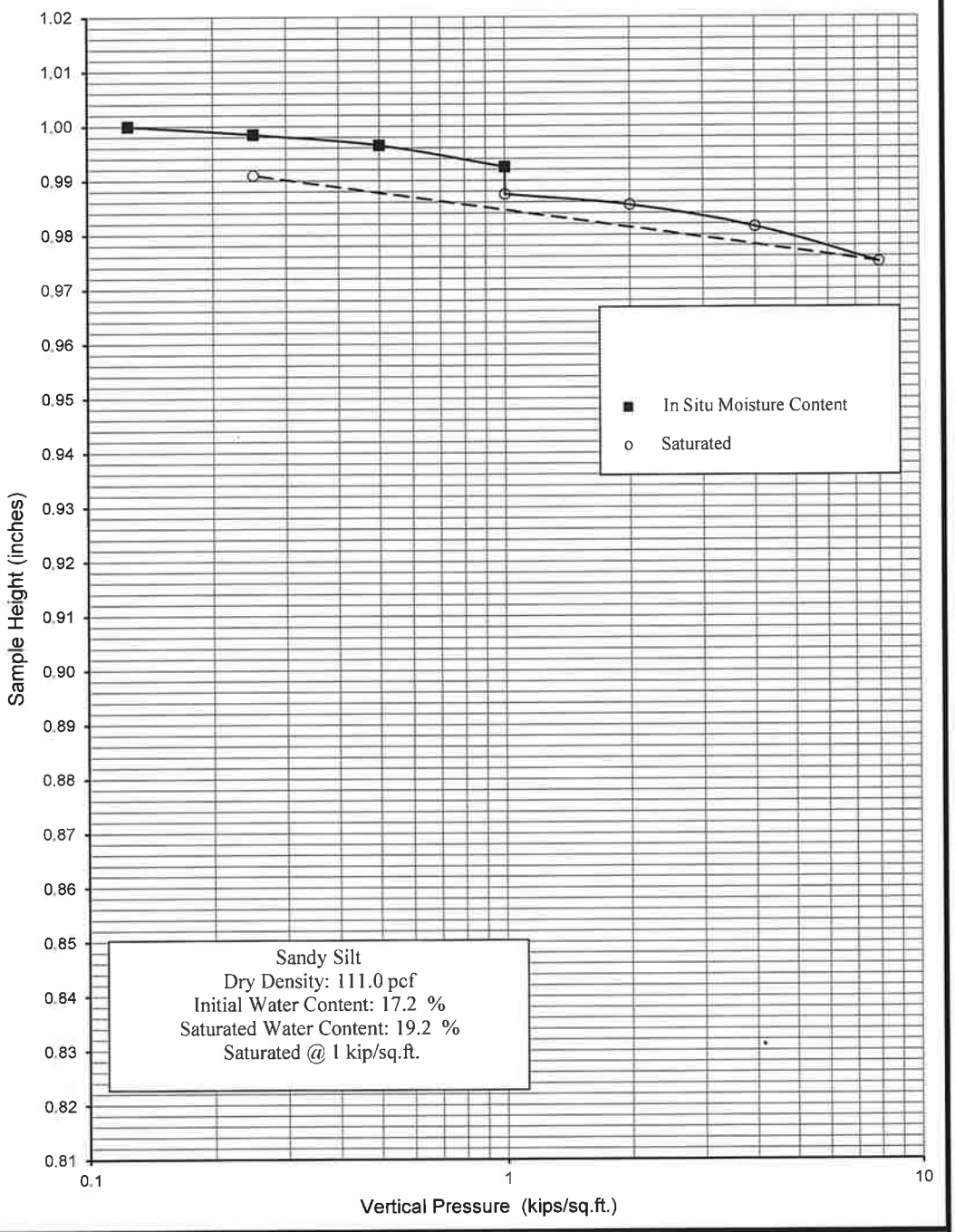
Plate C

Vertical Pressure (kips/sq.ft.)	Sample Height (inches)	Consolidation (percent)
0.125	1.0000	0.0
0.25	0.9985	0.2
0.5	0.9965	0.4
1	0.9925	0.8
1	0.9875	1.3
2	0.9855	1.5
4	0.9815	1.9
8	0.9750	2.5
0.25	0.9910	0.9

Saturated

Date Tested: 12/17/2020
Sample: B5
Depth: 10'

Sample No. B5 | Depth 10' | Date 12/21/2020



NorCal Engineering

SOILS AND GEOTECHNICAL CONSULTANTS

Bombay Partners LP

PROJECT NUMBER: 22243-20 DATE: 12/21/2020

CONSOLIDATION TEST

ASTM D2435

Plate D

Appendix C
Seismic Design Report

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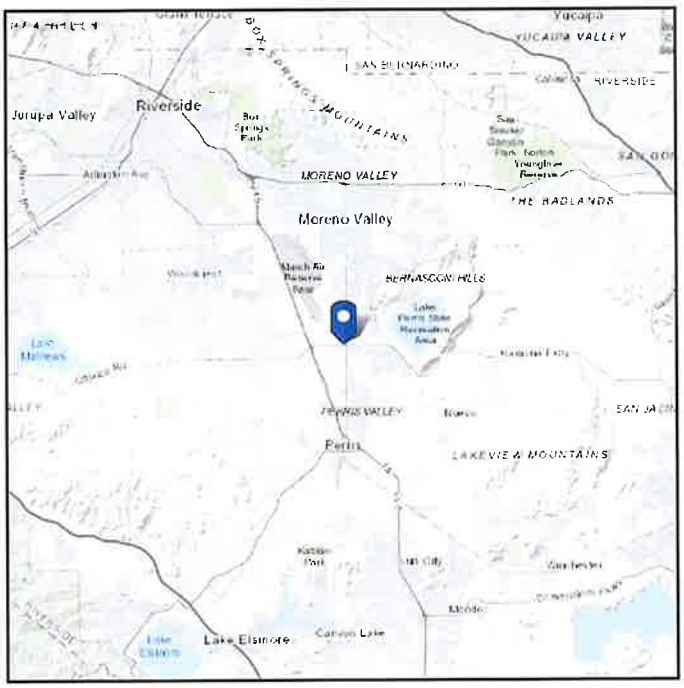
ASCE 7 Hazards Report

Address:
No Address at This Location

Standard: ASCE/SEI 7-16
Risk Category: III
Soil Class: D - Stiff Soil

Elevation: 1459.54 ft (NAVD 88)
Latitude: 33.84535
Longitude: -117.228441



ASCE
AMERICAN SOCIETY OF CIVIL ENGINEERS

Seismic

Site Soil Class: D - Stiff Soil

Results:

S_S :	1.5	S_{D1} :	N/A
S_1 :	0.58	T_L :	8
F_a :	1	PGA :	0.502
F_v :	N/A	PGA_M :	0.552
S_{MS} :	1.5	F_{PGA} :	1.1
S_{M1} :	N/A	I_e :	1.25
S_{DS} :	1	C_v :	1.4

Ground motion hazard analysis may be required. See ASCE/SEI 7-16 Section 11.4.8.

Data Accessed: Fri Dec 18 2020

Date Source: USGS Seismic Design Maps

The ASCE 7 Hazard Tool is provided for your convenience, for informational purposes only, and is provided "as is" and without warranties of any kind. The location data included herein has been obtained from information developed, produced, and maintained by third party providers; or has been extrapolated from maps incorporated in the ASCE 7 standard. While ASCE has made every effort to use data obtained from reliable sources or methodologies, ASCE does not make any representations or warranties as to the accuracy, completeness, reliability, currency, or quality of any data provided herein. Any third-party links provided by this Tool should not be construed as an endorsement, affiliation, relationship, or sponsorship of such third-party content by or from ASCE.

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In using this Tool, you expressly assume all risks associated with your use. Under no circumstances shall ASCE or its officers, directors, employees, members, affiliates, or agents be liable to you or any other person for any direct, indirect, special, incidental, or consequential damages arising from or related to your use of, or reliance on, the Tool or any information obtained therein. To the fullest extent permitted by law, you agree to release and hold harmless ASCE from any and all liability of any nature arising out of or resulting from any use of data provided by the ASCE 7 Hazard Tool.

Appendix D
Soil Infiltration Data

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SOILS AND GEOTECHNICAL CONSULTANTS

Project: Bombay Partners
Project No.: 22243-20
Date: 12/8/2020
Test No. 1
Depth: 5'
Tested By: J.S. Jr.

TIME (hr/min)	CHANGE TIME (min)	CUMULATIVE TIME (min)	INNER RING READING (cm)	INNER RING CHANGE	INNER RING FLOW (cc)	OUTER RING READING (cm)	OUTER RING CHANGE	OUTER RING FLOW (cc)	INNER RING INF RATE (cm/hr)	OUTER RING INF RATE (cm/hr)	INNER RING INF RATE (ft/hr)
7:29			99.0			39.2					
7:44	15	15	99.8	0.8		39.8	0.6				
7:44			99.8			39.8					
7:59	15	30	100.8	1.0		40.1	0.3				
7:59			100.8			40.1					
8:14	15	45	101.8	1.0		40.5	0.4				
8:14			101.8			40.5					
8:29	15	60	102.5	0.7		41.0	0.5				
8:29			102.5			41.0					
8:44	15	75	103.4	0.9		41.4	0.4				
8:44			103.4			41.4					
8:59	15	90	104.2	0.8		42.0	0.6				
8:59			104.2			42.0					
9:14	15	105	104.9	0.7		42.7	0.7		2.8	2.8	
9:14			104.9			42.7					
9:29	15	120	105.6	0.7		43.5	0.8		2.8	3.2	
9:29			105.6			43.5					
9:44	15	135	106.3	0.9		44.2	0.7		3.6	2.8	
9:44			106.3			44.2					
9:59	15	150	107.0	0.7		44.9	0.7		2.8	2.8	
9:59			107.0			44.9					
10:14	15	165	107.6	0.6		45.5	0.6		2.4	2.4	
10:14			107.6			45.5					
10:29	15	180	108.3	0.7		46.3	0.8		2.8	3.2	

Average = 2.9 / 2.9 cm/hr

NORCAL ENGINEERING

SOILS AND GEOTECHNICAL CONSULTANTS

Project: Bombay Partners
Project No.: 22243-20
Date: 12/8/2020
Test No. 2
Depth: 10'
Tested By: J.S. Jr.

TIME (hr/min)	CHANGE TIME (min)	CUMULATIVE TIME (min)	INNER RING READING (cm)	INNER RING CHANGE	INNER RING FLOW (cc)	OUTER RING READING (cm)	OUTER RING CHANGE	OUTER RING FLOW (cc)	INNER RING INF RATE (cm/hr)	OUTER RING INF RATE (cm/hr)	INNER RING INF RATE (ft/hr)
10:28			98.3			40.1					
10:43	15	15	98.7	0.4		41.0	0.9				
10:43			98.7			41.0					
10:58	15	30	99.0	0.3		41.4	0.4				
10:58			99.0			41.4					
11:13	15	45	99.8	0.8		42.2	0.8				
11:13			99.8			42.2					
11:28	15	60	100.4	0.6		42.8	0.6				
11:28			100.4			42.8					
11:43	15	75	101.0	0.6		42.3	0.5				
11:43			101.0			43.3					
11:58	15	90	101.4	0.4		43.6	0.3		1.6	1.2	
11:58			101.4			43.6					
12:13	15	105	101.9	0.6		44.1	0.5		2.4	2.0	
12:13			101.9			44.1					
12:28	15	120	102.4	0.5		44.5	0.4		2.0	1.6	
12:28			102.4			44.5					
12:43	15	135	102.8	0.4		44.8	0.3		1.6	1.2	
12:43			102.8			44.8					
12:58	15	150	103.2	0.4		45.3	0.5		1.6	2.0	
12:58			103.2			45.3					
1:13	15	165	103.8	0.6		45.6	0.3		2.4	1.2	
1:13			103.8			45.6					
1:28	15	180	104.3	0.5		45.9	0.3		2.0	1.2	

Average = 1.9 / 1.5 cm/hr

Initial Study Appendix F

Paleontological Report

The following section contains content that was obtained from a third party and may not achieve the same level of Americans with Disabilities Act (ADA) and Section 508 accessibility as other parts of this document.

PALEONTOLOGICAL TECHNICAL STUDY

RAMONA E-COMMERCE PARK PROJECT

City of Perris

Prepared for: **HELIX Environmental Planning, Inc.**
7578 El Cajon Boulevard
La Mesa, CA 91942

Prepared by: **Paleo Solutions, Inc.**
911 S. Primrose Ave., Unit N
Monrovia, CA 91016

Courtney Richards, M.S. – Principal Investigator
Betsy Kruk, M.S. – Report Author

PSI Report: CA20RiversideHEL04R

November 19, 2020

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TABLE OF CONTENTS

TABLES

FIGURES

1.0 EXECUTIVE SUMMARY

This report presents the results of the paleontological technical study conducted by Paleo Solutions, Inc. (Paleo Solutions), under contract to HELIX Environmental Planning, Inc. (HELIX), in support of the Ramona E-Commerce Park Project (Project) in the City of Perris, Riverside County, California. This work was required by the City of Perris to fulfill their responsibilities as the lead agency under the California Environmental Quality Act (CEQA).

The paleontological potential of the Project area was evaluated based on an analysis of existing paleontological data. The three components of the analysis of existing data included a geologic map review, a literature search, and a museum records search at the Western Science Center (WSC) in Hemet, California. Geologic mapping by Dibblee (2003) indicates that the Project area is entirely underlain by Holocene-age alluvial sediments (Qa) (High B sensitivity). In contrast, mapping by Morton and Miller (2006) indicates that the Project area is entirely underlain by middle to early Pleistocene-age very old alluvial-fan deposits (Qvof) (High A sensitivity). Although not mapped, recent artificial fill (Low sensitivity) may be present within the bounds of the Project area. Thus, these units are also included in the analysis of existing data for this Project.

There are no documented paleontological localities within the boundaries of the Project area; however, fossils have been recovered from similar older sedimentary deposits in the region of the Project area (Radford, 2020; Appendix A).

Based on the ground disturbance necessary to complete the Project, there is potential for adverse direct impacts to scientifically significant paleontological resources within middle to early Pleistocene-age very old alluvial-fan deposits (Qvof) (High A), either at the surface or at depth. Therefore, it is recommended that excavations are initially monitored to determine if middle to early Pleistocene-age very old alluvial-fan deposits (Qvof) (High A) will be impacted. If it is determined that only Holocene-age alluvial sediments (Qa) (High B) or artificial fill are impacted, the monitoring program should be reduced or suspended. However, if it is determined that middle to early Pleistocene-age very old alluvial-fan deposits (Qvof) (High A) are impacted, the full-time monitoring program should continue.

Prior to the start of construction, a paleontological resources Worker Environmental Awareness Program (WEAP) training should be presented to all earthmoving personnel to inform them of the possibility for buried resources and the procedures to follow in the event of fossil discoveries. Any subsurface bones or potential fossils that are unearthed during construction should be evaluated by a Qualified Paleontologist. Any fossils determined to be significant or potentially significant should be recovered, prepared, identified, analyzed, and curated at the WSC or another accredited repository.

2.0 INTRODUCTION

This report presents the results of the paleontological technical study conducted by Paleo Solutions, under contract to HELIX, in support of the Ramona E-Commerce Park Project in the City of Perris, Riverside County, California (Figure 1). All paleontological work was completed in compliance with CEQA, local regulations, and best practices in mitigation paleontology (Murphey et al., 2019).

2.1 PROJECT DESCRIPTION AND LOCATION

The Project area is situated in the City of Perris and is generally bound by Indian Avenue to the west, Perris Boulevard to the west, Ramona Express Way to the south, and residential and vacant parcels to the north. The Project consists of creating a 250,000 square-foot development and a parking lot. It encompasses approximately 15 acres and is located in San Jacinto Nuevo y Potrero Land Grant of Township 4 South and Range 3 West and is mapped on the United States Geologic Survey (USGS) Perris (2018) 7.5' topographic quadrangle (Figure 2; Table 1).

Geologic mapping by Dibblee (2003) indicates that the Project area is entirely underlain by Holocene-age alluvial sediments (Qa) (High B sensitivity). In contrast, mapping by Morton and Miller (2006) indicates that the Project area is entirely underlain by middle to early Pleistocene-age very old alluvial-fan deposits (Qvof) (High A sensitivity). Although not mapped, recent artificial fill (Low sensitivity) may be present within the bounds of the Project area. Thus, these units are also included in the analysis of existing data for this Project.

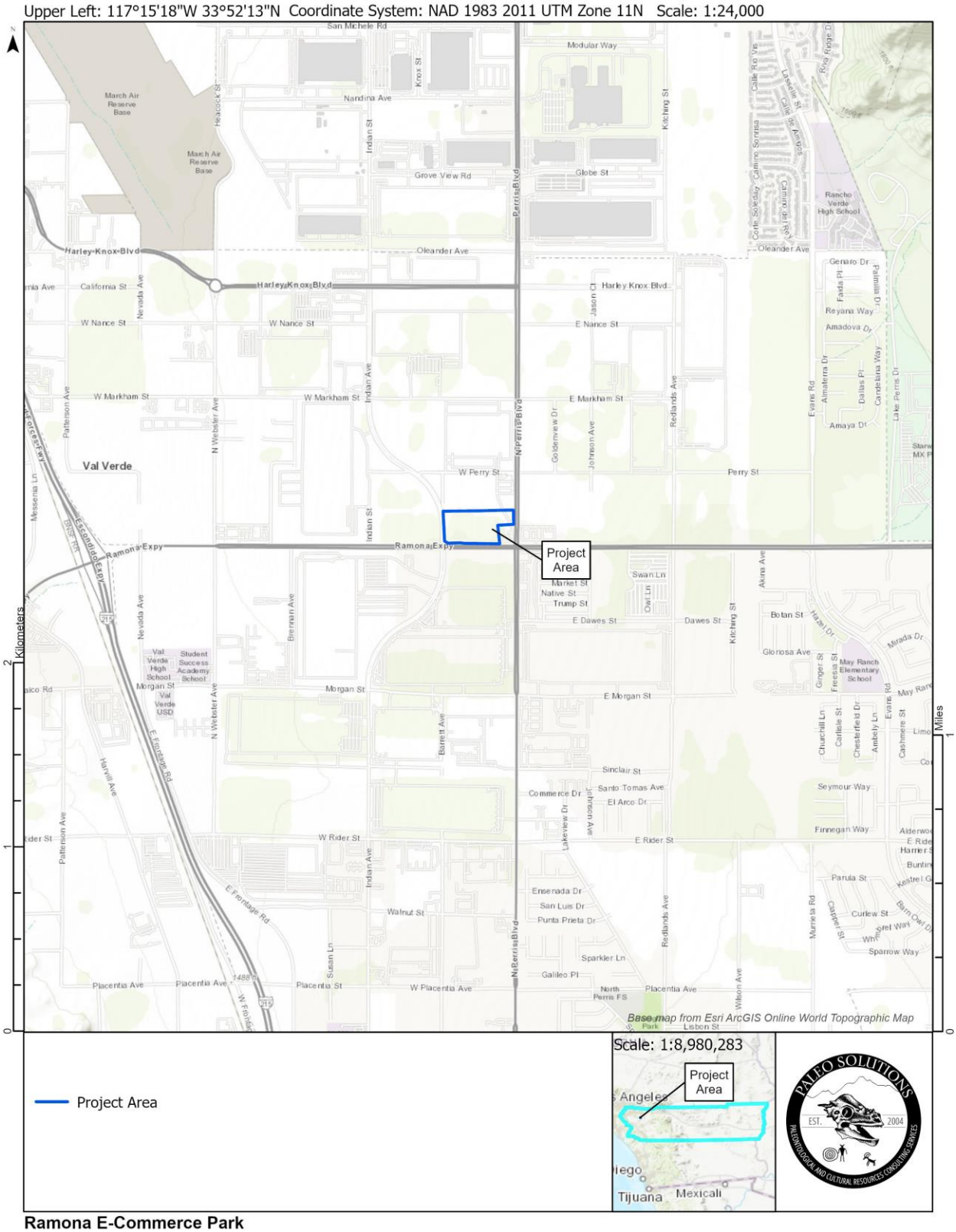

Figure 1. Project location map.

Figure 2. Project overview map.

Table 1. Ramona E-Commerce Park Project Summary

Project Name	Ramona E-Commerce Park Project			
Project Description	The Project consists of creating a 250,000 square-foot development and a parking lot.			
Project Area	The Project area is in the City of Perris and is generally bound by Indian Avenue to the west, Perris Boulevard to the west, Ramona Express Way to the south, and residential and vacant parcels to the north.			
Total Acreage	15 acres			
Location (PLSS)	**Quarter-Quarter**	**Section**	**Township**	**Range**
	San Jacinto Nuevo y Potrero Land Grant	N/A	4S	3W
Land Owner	Undetermined			
Topographic Map(s)	Perris (2018) 7.5' Topographic Quadrangle			
Geologic Map(s)	Dibblee, T.W., 2003, Geologic Map of the Perris Quadrangle, Riverside County, California: Dibblee Geological Foundation, Map DF-112, scale 1:24,000. Morton, D.M. and Miller, F.K., 2006, Geologic Map of the San Bernardino and Santa Ana 30' x 60' Quadrangles, California: United States Geological Survey; Open-File Report OF-2006-1217, scale 1:100,000.			
Mapped Geologic Unit(s) and Age(s)	**Geologic Unit**	**Map Symbol**	**Age**	**Paleontological Sensitivity**
	Artificial fill	N/A – Not Mapped	Recent	Low
	Alluvial sediments	Qa	Holocene	High B
	Very old alluvial-fan deposits	Qvof	middle to early Pleistocene	High A
Previously Documented Fossil Localities within the Project area	According to the WSC, there are no previously recorded fossil localities within the Project area nor from within one mile of the Project area. However, numerous fossil localities have been recorded from similar units throughout the region (Radford, 2020).			
Recommendation(s)	Based on the ground disturbance necessary to complete the Project, there is potential for adverse direct impacts to scientifically significant paleontological resources within middle to early Pleistocene-age very old alluvial-fan deposits (Qvof) (High A), either at the surface or at depth. Therefore, it is recommended that excavations are initially monitored to determine if middle to early Pleistocene-age very old alluvial-fan deposits (Qvof) (High A) will be impacted. If it is determined that only Holocene-age alluvial sediments (Qa) (High B) or artificial fill are impacted, the monitoring program should be reduced or suspended. However, if it is determined that middle to early Pleistocene-age very old alluvial-fan deposits (Qvof) (High A) are impacted, the full-time monitoring program should continue. Prior to the start of construction, a paleontological resources WEAP training should be presented to all earthmoving personnel to inform them of the possibility for buried resources and the procedures to follow in the event of fossil discoveries. Any subsurface bones or potential fossils that are unearthed during construction should be evaluated by a Qualified Paleontologist. Any fossils determined to be significant or potentially significant should be recovered, prepared, identified, analyzed, and curated at the WSC or another accredited repository.			

*Not mapped at the surface within the Project area but may be present in the subsurface.

3.0 DEFINITION AND SIGNIFICANCE OF PALEONTOLOGICAL RESOURCES

As defined by Murphey and Daitch (2007): "Paleontology is a multidisciplinary science that combines elements of geology, biology, chemistry, and physics in an effort to understand the history of life on earth. Paleontological resources, or fossils, are the remains, imprints, or traces of once-living organisms preserved in rocks and sediments. These include mineralized, partially mineralized, or unmineralized bones and teeth, soft tissues, shells, wood, leaf impressions, footprints, burrows, and microscopic remains. Paleontological resources include not only fossils themselves, but also the associated rocks or organic matter and the physical characteristics of the fossils' associated sedimentary matrix.

The fossil record is the only evidence that life on earth has existed for more than 3.6 billion years. Fossils are considered non-renewable resources because the organisms they represent no longer exist. Thus, once destroyed, a fossil can never be replaced. Fossils are important scientific and educational resources because they are used to:

- Study the phylogenetic relationships amongst extinct organisms, as well as their relationships to modern groups;
- Elucidate the taphonomic, behavioral, temporal, and diagenetic pathways responsible for fossil preservation, including the biases inherent in the fossil record;
- Reconstruct ancient environments, climate change, and paleoecological relationships;
- Provide a measure of relative geologic dating that forms the basis for biochronology and biostratigraphy, and which is an independent and corroborating line of evidence for isotopic dating;
- Study the geographic distribution of organisms and tectonic movements of land masses and ocean basins through time;
- Study patterns and processes of evolution, extinction, and speciation; and
- Identify past and potential future human-caused effects to global environments and climates."

Fossil resources vary widely in their relative abundance and distribution and not all are regarded as significant. According to Bureau of Land Management (BLM) Instructional Memorandum (IM) 2009-011, a "Significant Paleontological Resource" is defined as:

> "Any paleontological resource that is considered to be of scientific interest, including most vertebrate fossil remains and traces, and certain rare or unusual invertebrate and plant fossils. A significant paleontological resource is considered to be of scientific interest if it is a rare or previously unknown species, it is of high quality and well-preserved, it preserves a previously unknown anatomical or other characteristic, provides new information about the history of life on earth, or has an identified educational or recreational value. Paleontological resources that may be considered not to have scientific significance include those that lack provenience or context, lack physical integrity due to decay or natural erosion, or that are overly redundant or are otherwise not useful for research. Vertebrate fossil remains and traces include bone, scales, scutes, skin impressions, burrows, tracks, tail drag marks, vertebrate coprolites (feces), gastroliths (stomach stones), or other physical evidence of past vertebrate life or activities" (BLM, 2008).

Vertebrate fossils, whether preserved remains or track ways, are classified as significant by most state and federal agencies and professional groups (and are specifically protected under the California Public Resources Code). In some cases, fossils of plants or invertebrate animals are also considered significant and can provide important information about ancient local environments.

The full significance of fossil specimens or fossil assemblages cannot be accurately predicted before they are collected, and in many cases, before they are prepared in the laboratory and compared with previously collected fossils. Pre-construction assessment of significance associated with an area or formation must be made based on previous finds, characteristics of the sediments, and other methods that can be used to determine paleoenvironmental and taphonomic conditions.

4.0 LAWS, ORDINANCES, REGULATIONS, AND STANDARDS

This section of the report presents the regulatory requirements pertaining to paleontological resources that apply to this Project.

4.1 STATE REGULATORY SETTING

4.1.1 California Environmental Quality Act (CEQA)

The procedures, types of activities, persons, and public agencies required to comply with the CEQA are defined in the Guidelines for Implementation of CEQA (State CEQA Guidelines), as amended on March 18, 2010 (Title 14, Section 15000 et seq. of the California Code of Regulations) and further amended January 4, 2013 and December 28, 2018. One of the questions listed in the CEQA Environmental Checklist is: "Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?" (State CEQA Guidelines Appendix G, Section VII, Part F).

4.1.2 State of California Public Resources Code

The State of California Public Resources Code (Chapter 1.7), Sections 5097 and 30244, includes additional state level requirements for the assessment and management of paleontological resources. These statutes require reasonable mitigation of adverse impacts to paleontological resources resulting from development on state lands, and define the excavation, destruction, or removal of paleontological "sites" or "features" from public lands without the express permission of the jurisdictional agency as a misdemeanor. As used in Section 5097, "state lands" refers to lands owned by, or under the jurisdiction of, the state or any state agency. "Public lands" is defined as lands owned by, or under the jurisdiction of, the state, or any city, county, district, authority, or public corporation, or any agency thereof.

4.2 LOCAL REGULATORY SETTING

4.2.1 Riverside County

The Riverside County General Plan requires consideration of paleontological resources under the Multipurpose Open Space Element of the general plan (County of Riverside, 2015). The Riverside County General Plan recommendations are based on the Society of Vertebrate Paleontology (SVP) Guidelines (SVP, 2010) for the mitigation of paleontological resources. The Multipurpose Open Space Element of the general plan (County of Riverside, 2015) provides the following requirements for paleontological sensitive areas within the county:

- **OS 19.6** Whenever existing information indicates that a site proposed for development has high paleontological sensitivity as shown on Figure OS-8 [of the County of Riverside General Plan Multipurpose Open Space Element, 2015], a paleontological resource impact mitigation program (PRIMP) shall be filed with the County Geologist prior to site grading. The PRIMP shall specify the steps to be taken to mitigate impacts to paleontological resources.
- **OS 19.7** Whenever existing information indicates that a site proposed for development has low paleontological sensitivity as shown on Figure OS-8, no direct mitigation is required unless a fossil is encountered during site development. Should a fossil be encountered, the County Geologist shall be notified and a paleontologist shall be retained by the project proponent. The paleontologist shall document the extent and potential significance of the paleontological resources on the site and establish appropriate mitigation measures for further site development.
- **OS 19.8** Whenever existing information indicates that a site proposed for development has undetermined paleontological sensitivity as shown on Figure OS-8, a report shall be filed with the County Geologist documenting the extent and potential significance of the paleontological resources on site and identifying mitigation measures for the fossil and for impacts to significant paleontological resources prior to approval of that department.
- **OS 19.9** Whenever paleontological resources are found, the County Geologist shall direct them to a facility within Riverside County for their curation, including the Western Science Center in the City of Hemet.

Figure OS-8 of the County of Riverside General Plan Multipurpose Open Space Element (2015) identifies the Project area as having High B paleontological sensitivity.

4.2.2 City of Perris

The City of Perris General Plan (2005) has one goal, one policy, and three implementation measures relating to paleontological resources. Goal 4 requires the protection of historical, archaeological and paleontological sites. Policy IV.A requires that the City of Perris comply with state and federal regulations and ensure preservation of the significant historical, archaeological and paleontological resources within the City. The three implementation measures require that all new construction involving grading require appropriate surveys and necessary site investigations in conjunction with the earliest environmental documents prepared for a project, that in specifically delineated areas shown on the City's paleontological sensitivity map that levels of paleontological monitoring will be required, from full-time monitoring to part-time monitoring in some less-sensitive areas. Finally, the General Plan requires that the City of Perris identify and collect previous surveys of cultural resources, evaluate each resource and consider preparation of a comprehensive citywide inventory of cultural resources including both prehistoric sites and man-made resources.

Exhibit CN-7 of the City of Perris General Plan Conservation Element (2005) identifies the Project area as being at the boundary between high sensitivity: Pleistocene older valley deposits and low to high sensitivity: younger alluvium overlying older valley alluvium at depth.

5.0 METHODS

This paleontological analysis of existing data included a geologic map review, a literature search, and museum records search. The goal of this report is to evaluate the paleontological potential of the Project area and make recommendations for the mitigation of adverse impacts on paleontological resources that may occur as a result of the proposed Project. Betsy Kruk, M.S., performed the background research and authored this report. Robert Fritz, M.S., created the GIS figures. Courtney Richards, M.S., oversaw all aspects of the Project as the Paleontological Principal Investigator.

Paleo Solutions will retain an archival copy of all Project information including field notes, maps, and other data.

5.1 ANALYSIS OF EXISTING DATA

Paleo Solutions reviewed geologic mapping of the Project area by Dibblee (2003) and Morton and Miller (2006). The literature reviewed included published and unpublished scientific papers. Paleontological museum records search results from the WSC were analyzed and incorporated into this paleontological investigation.

6.0 ANALYSIS OF EXISTING DATA

The Project area is located within the northwestern portion of the Peninsular Ranges Geomorphic Province, a region characterized by northwest-trending fault-bounded mountain ranges, broad intervening valleys, and low-lying coastal plains (Yerkes et al., 1965). The Peninsular Ranges extend approximately 920 miles from the Los Angeles Basin to the southern tip of Baja California and vary in width from approximately 30 to 100 miles. Bedrock units within the Peninsular Ranges include pre-Cretaceous- and Cretaceous-age igneous rocks of the Southern California Batholith, Late Cretaceous-age sedimentary rocks, and post-Cretaceous-age sedimentary rocks or sediment (Yerkes et al., 1965; Norris and Webb, 1976). All post-Cretaceous-age rocks lie unconformably on either the Cretaceous-age sedimentary rocks or on basement rocks (Norris and Webb, 1976). Pliocene-age nonmarine rocks and sediments and thick and widespread throughout the northern Peninsular Ranges, and Quaternary deposits include fluvial and lacustrine sediments within the inland interior of the province (Norris and Webb, 1976).

6.1 LITERATURE SEARCH

Geologic mapping by Dibblee (2003) indicates that the Project area is entirely underlain by Holocene-age alluvial sediments (Qa) (Figure 3). In contrast, mapping by Morton and Miller (2006) indicates that the Project area is entirely underlain by middle to early Pleistocene-age very old alluvial-fan deposits (Qvof) (Figure 4). Although not mapped, recent artificial fill may be present within the bounds of the Project area. Thus, these units are also included in the analysis of existing data for this Project.

6.1.1 Artificial Fill (Unmapped)

Although Dibblee (2003) and Morton and Miller (2006) do not map fill within the Project area or its immediately vicinity, recent artificial fill may be present within the bounds of the Project area. These sediments consist of previously disturbed, reworked sediments and any fossils recovered from artificial fill have lost their stratigraphic and scientific significance. Therefore, artificial fill has a Low paleontological potential.

6.1.2 Alluvial Sediments (Qa) (Holocene)

Holocene-age alluvial sediments (Qa) were formed during the Holocene (approximately 11,700 years ago to present) and late Pleistocene (11,700 years ago to 129,000 years ago). Alluvial sediments are undissected, unconsolidated, and composed of clay and are covered by gray soil (Dibblee, 2003).

Holocene-age (less than 11,700 years old) sediments are typically too young to contain fossilized material, but they transition to, and may overlie sensitive older (e.g., Pleistocene-age) deposits at variable depth. These deposits (Qa) are assigned High (High B) paleontological sensitivity that increases with depth since there is potential for these deposits to be conformably underlain by older, paleontologically sensitive geologic units.

6.1.3 Very Old Alluvial-Fan Deposits (Qvof) (middle to early Pleistocene)

Middle to early Pleistocene-age very old alluvial-fan deposits (Qvof) are moderately to well consolidated silt, sand, gravel, and conglomerate, orangish-brown and typically well dissected (Morton and Miller, 2006).

Taxonomically diverse and locally abundant Pleistocene-age fossil animals and plants have been collected from older alluvial deposits throughout southern California and include mammoth (*Mammuthus*), mastodon (*Mammut*), camel (Camelidae), horse (Equidae), bison (*Bison*), giant ground sloth (*Megatherium*), peccary (Tayassuidae), cheetah (*Acinonyx*), lion (*Panthera*), saber tooth cat (*Smilodon*), capybara (*Hydrochoerus*), dire wolf (*Canis dirus*), and numerous taxa of smaller mammals (e.g., Rodentia) (Blake, 1991; Jahns, 1954; Jefferson, 1991). According to the Paleobiology Database (PBDB), numerous Pleistocene-age fossil localities have been recorded within Riverside County, including those from the Diamond Valley Lake east and west dams, which yielded a new species of mastodon (*Mammut pacificus*), Columbian mammoth (*Mammuthus columbi*), fox (*Urocyon* sp.), rabbit (*Sylvilagus* sp.), mole (*Scapanus* sp.), rodent (*Dipodomys* sp., *Thomomys* sp., *Neotoma* sp., *Microtus* sp.), quail (*Callipepla* sp.), and snake (Colubridae) (Dooley et al., 2019; PBDB, 2020). The University of California Museum of Paleontology (UCMP) online fossil locality database also contains numerous records of Pleistocene-age fossils in Riverside County, including horse (*Equus* sp., *Equus bautistensis*, *Hipparionini*), tapir (*Tapirus merriami*), pronghorn (*Capromeryx* sp., *Antilocapra* sp.), deer (*Odocoileus*), giant ground sloth (*Megalonyx*), mammoth (*Mammuthus* sp.), rabbit (*Lepus* sp.), rodent (*Microtus* sp., *Microtus californicus*, *Neotoma* sp.), and tortoise (*Gopherus* sp., *Gopherus agassizii*), as well as invertebrates and plants (UCMP, 2020). Therefore, Pleistocene-age older sedimentary units are assigned a High paleontological potential (High A) and may contain paleontological resources both at or near the surface and at depth.

6.2 PALEONTOLOGICAL RECORD SEARCH RESULTS

According to the WSC, there are no previously recorded fossil localities within the Project area nor from within one mile of the Project area. However, numerous fossil localities have been recorded from similar units throughout the region producing fossil mammoth (*Mammuthus pacificus*), horse (*Equus* sp.), camel (*Camelops hesternus*), and saber tooth cat (*Smilodon fatalis*) (Radford, 2020).

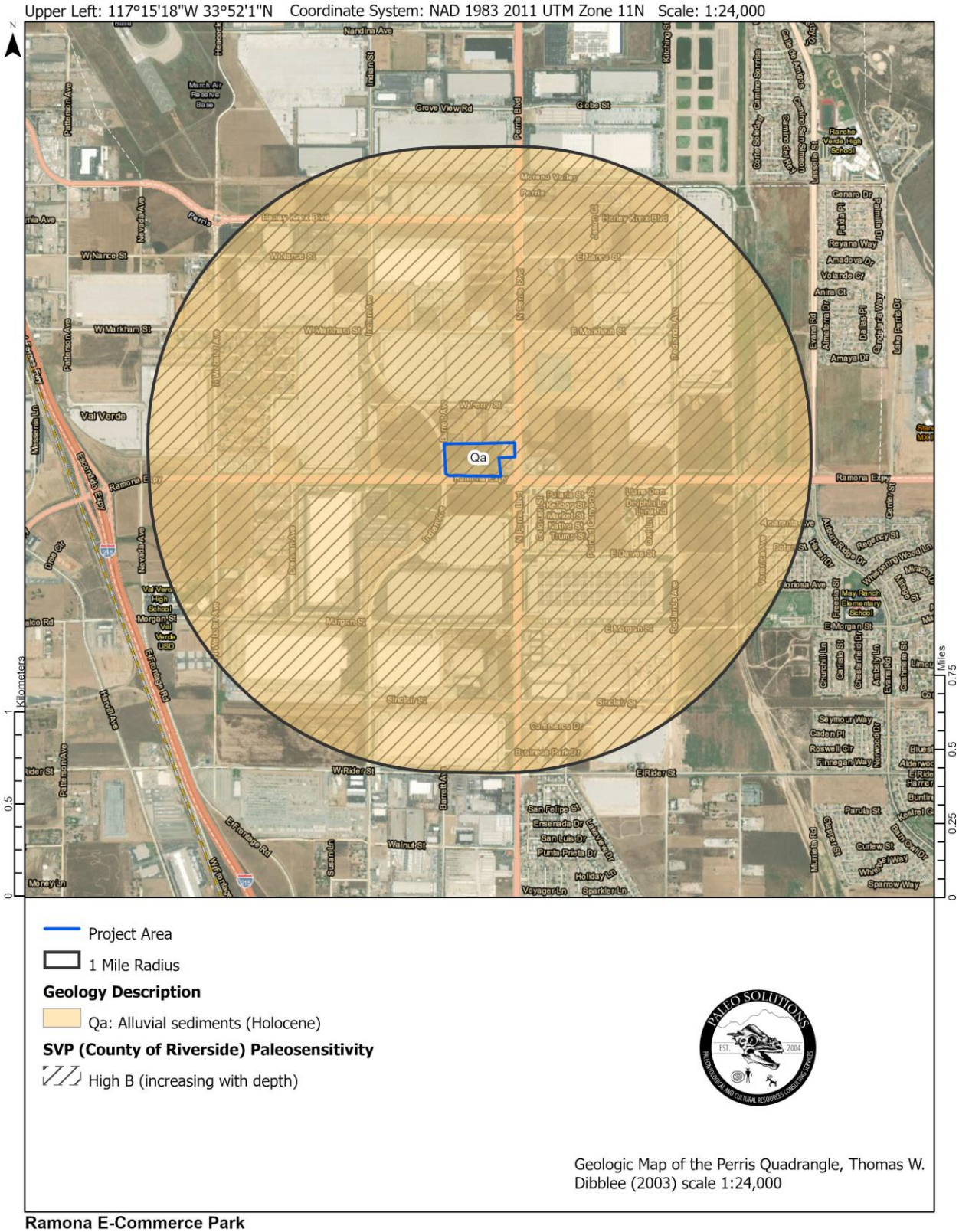

Figure 3. Project geology map (Dibblee, 2003).

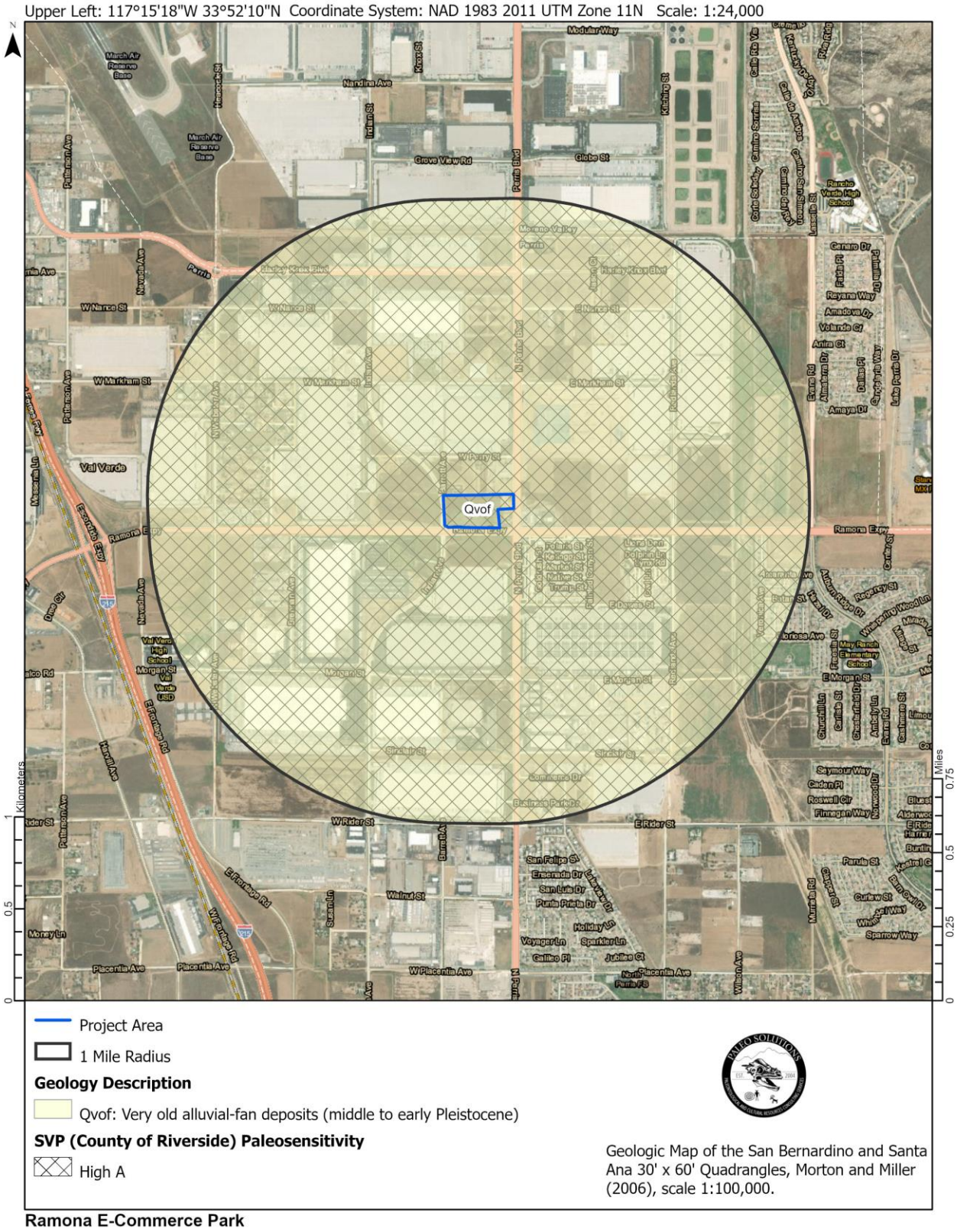

Figure 4. Project geology map (Morton and Miller, 2006).

7.0 IMPACTS TO PALEONTOLOGICAL RESOURCES

Impacts on paleontological resources can generally be classified as either direct, indirect, or cumulative. Direct adverse impacts on surface or subsurface paleontological resources are the result of destruction by breakage and crushing as the result of surface disturbing actions including construction excavations. In areas that contain paleontologically sensitive geologic units, ground disturbance has the potential to adversely impact surface and subsurface paleontological resources of scientific importance. Without mitigation, these fossils and the paleontological data they could provide if properly recovered and documented, could be adversely impacted (damaged or destroyed), rendering them permanently unavailable to science and society.

Indirect impacts typically include those effects which result from the continuing implementation of management decisions and resulting activities, including normal ongoing operations of facilities constructed within a given project area. They also occur as the result of the construction of new roads and trails in areas that were previously less accessible. This increases public access and therefore increases the likelihood of the loss of paleontological resources through vandalism and unlawful collecting. Human activities that increase erosion also cause indirect impacts to surface and subsurface fossils as the result of exposure, transport, weathering, and reburial.

Cumulative impacts can result from incrementally minor but collectively significant actions taking place over a period of time. The incremental loss of paleontological resources over time as a result of construction-related surface disturbance or vandalism and unlawful collection would represent a significant cumulative adverse impact because it would result in the destruction of non-renewable paleontological resources and the associated irretrievable loss of scientific information.

Excavations within the Project area that impact middle to early Pleistocene-age very old alluvial-fan deposits (Qvof), either at the surface or at depth beneath Holocene-age alluvial deposits (Qa), may well result in an adverse direct impact on scientifically important paleontological resources. Surface grading or shallow excavations entirely within Holocene-age alluvial deposits (Qa) or artificial fill are unlikely to uncover significant fossil remains. However, these deposits may shallowly overlie older *in situ* sedimentary deposits. Therefore, grading and other earthmoving activities may potentially result in significant adverse direct impacts to paleontological resources throughout the entirety of the Project area.

No indirect or cumulative impacts are anticipated from any of the planned Project activities.

8.0 CONCLUSIONS AND RECOMMENDATIONS

Based on the ground disturbance necessary to complete the Project, there is potential for adverse direct impacts to scientifically significant paleontological resources within middle to early Pleistocene-age very old alluvial-fan deposits (Qvof) (High A), either at the surface or at depth. Therefore, it is recommended that excavations are initially monitored to determine if middle to early Pleistocene-age very old alluvial-fan deposits (Qvof) (High A) will be impacted. If it is determined that only Holocene-age alluvial sediments (Qa) (High B) or artificial fill are impacted, the monitoring program should be reduced or suspended. However, if it is determined that middle to early Pleistocene-age very old alluvial-fan deposits (Qvof) (High A) are impacted, the full-time monitoring program should continue.

Prior to the start of construction, a paleontological resources WEAP training should be presented to all earthmoving personnel to inform them of the possibility for buried resources and the procedures to follow in the event of fossil discoveries. Any subsurface bones or potential fossils that are unearthed during construction should be evaluated by a Qualified Paleontologist. Any fossils determined to be significant or potentially significant should be recovered, prepared, identified, analyzed, and curated at the WSC or another accredited repository.

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APPENDIX A. MUSEUM RECORDS SEARCH RESULTS

WESTERN SCIENCE CENTER

Paleo Solutions
Robert W.J. Fritz
911 S. Primrose Ave., Unit N
Monrovia, CA 91016

October 27, 2020

Dear Mr. Fritz,

This letter presents the results of a record search conducted for the Romona E-Commerce Park Project in the city of Perris, Riverside County, California. The project site is located north of Romona Expressway, west of North Perris Boulevard, and east of Indian Avenue in Section 6 of Township 4 South, and Range 3 West, on the Perris USGS 7.5 minute quadrangle.

The geologic units underlying the project area are mapped entirely as very old alluvial fan deposits dating from the early Pleistocene epoch (Morton, 1996). Pleistocene alluvial units are considered to be of high paleontological sensitivity, and while the Western Science Center does not have localities within the project area or within a 1 mile radius we do have numerous fossil localities from similarly mapped units from throughout the region. Southern California Pleistocene alluvial units are well documented to contain extinct fauna including those associated with mastodon (*Mammut pacificus*), mammoth (*Mammuthus columbi*), ancient horse (*Equus sp.*), camel (*Camelops hesternus*), sabertooth cat (*Smilodon fatalis)* and many more.

Any fossil specimens recovered from the Romona E-Commerce Park Project would be scientifically significant. Excavation activity associated with the development of the project area would impact the paleontologically sensitive Pleistocene units, and it is the recommendation of the Western Science Center that a paleontological resource mitigation program be put in place to monitor, salvage, and curate any recovered fossils from the study area.

If you have any questions, or would like further information, please feel free to contact me at dradford@westerncentermuseum.org

Sincerely,

Darla Radford
Collections Manager

2345 Searl Parkway ♦ Hemet, CA 92543 ♦ phone 951.791.0033 ♦ fax 951.791.0032 ♦ WesternScienceCenter.org

Initial Study Appendix G

Phase I Environmental Assessment

The following section contains content that was obtained from a third party and may not achieve the same level of Americans with Disabilities Act (ADA) and Section 508 accessibility as other parts of this document.

Phase I
Environmental Site Assessment

APN 302-060-041
Northwest Corner of
Ramona Expressway & North Perris Boulevard

City of Perris, Riverside County, California 92571

Prepared for:

Joe Mckay, Principal
JM Reality Group
3535 Inland Empire Blvd.
Ontario, CA 91764

Prepared by:

Environmental & Regulatory Specialists, Inc.
223 62nd Street
Newport Beach, CA 92663
Contact: Dave Tanner 949-646-8958

May 18, 2020

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1.0 - EXECUTIVE SUMMARY

This Phase I Environmental Site Assessment (ESA) has been requested as part of the due diligence investigation for a potential real estate transaction or development of the Subject Property and was prepared in accord with generally accepted industry standards and ASTM Standard E-1527-13.

A Phase I ESA identifies, to the extent feasible, Recognized Environmental Conditions in connection with the Subject Property, via records review, site reconnaissance, interviews and through evaluation and report preparation. The scope of this inquiry is to perform the research and reporting tasks appropriate to support the user's ability to qualify for the innocent landowner defense under CERCLA. No subsurface site investigation was performed or is implied.

No existing Recognized Environmental Conditions were identified on the Subject Property.

Legal Description and Location

The 17.71 gross acre Subject Property, APN 302-060-041, is located near the northwest corner of Ramona Expressway and N. Perris Blvd. in Perris, California 92571.

Site Description

The property is a flat, recently disked and zoned for commercial community permitted land uses. There are no structures on the Property.

Records Search

Environmental Data Resources, Inc. (EDR) searched available environmental records to locate properties reported as possibly having Recognized Environmental Conditions that might impact the Subject Property. The California WQCB GeoTracker website was also searched. Upon examination, none of the reports found raised an environmental concern on or under the Subject Property. No nearby sites appear likely to contribute a vapor encroachment concern.

Historical Aerial Photographs

The 1938 aerial photo shows the area as plowed agricultural land. This use has gradually been replaced with large building commercial uses.

Other Sources

Historic topographic maps, phone directories and other sources are consistent with the history gleaned from aerial photos, records searches and the site visit.

Site Reconnaissance

David Tanner performed a Site Reconnaissance on May 8, 2020. No evidence of Recognized Environmental Conditions was observed during the Site Visit.

Interviews

None of the persons interviewed had knowledge of hazardous materials above de minimus quantities or Recognized Environmental Conditions having existed on the Subject Property.

Vapor Encroachment

No nearby sites appear likely to contribute a vapor encroachment concern.

Findings, Opinion, Conclusion

We have performed a Phase I ESA in conformance with the scope and limitations of ASTM E-1527-13 for the Subject Property. Based on records searches, interviews, aerial photos and Site Reconnaissance, this assessment revealed no evidence of Recognized Environmental Conditions on the Subject Property.

Data Gaps

Historic aerial photographs and other sources establish a consistent history of the evolution of the Subject Property from 1938 until the present. All data that was requested has been received. There are no "data gaps."

Additional Issues

No soil testing, subsurface testing or radon testing was performed as part of this Phase I ESA.

2.0 - INTRODUCTION

2.1 - Objective

The purpose of this ESA is to identify, to the extent feasible, recognized environmental conditions in connection with the Property, via records review, Site Reconnaissance, interviews and through evaluation and report preparation.

2.2 - Scope of Services

The scope of this inquiry was to perform those research and reporting requirements that may support the user's ability to qualify for the innocent landowner defense under CERCLA. No subsurface site investigation was performed or is implied.

2.3 - Significant Assumptions

Significant among the assumptions are that the records accessed herein are sufficiently accurate to reasonably ascertain the current condition of the Property with respect to presence of hazardous substances. This inquiry is not exhaustive; that is, it does not identify, obtain or review every possible record that might exist with respect to a property. However, all reasonably ascertainable records were reviewed by the EDR report.

2.4 - Limitations and Exceptions

The conclusions and opinions developed herein were based in part on interviews, records and reports provided by others and on our professional judgment. Thus, the assessment contained herein is only valid as of the date of this report's investigations and may require an update to reflect additional sampling, testing or other information. No guarantee of the results of this study is made or implied. Our professional services were performed in accordance with the prevailing standard of care as practiced by other environmental professionals in this area of California. We make no other warranty, either expressed or implied.

2.5 - Special Terms and Conditions

No special terms or conditions were included in this Phase I ESA.

3.0 - SITE DESCRIPTION

3.1 - Legal Description and Location

The 17.71 gross acre Subject Property, APN 302-060-041, is located near the northwestern corner of Ramona Expressway and N. Perris Blvd. in Perris, California 92571. Figure 1 shows an Assessor Map from the Riverside County Map My County website (gis.rivcoit.org). Figures 2 and 3 shows regional and vicinity maps. Figure 4 shows a USGS topographic map. Figure 5 shows satellite photos. Figure 6 shows a photo location map. Site Photos appear on Figures 7 to 14.

3.2 - Current Use of the Subject Property

The property is flat, recently disked and zoned for commercial community permitted land uses. There are no structures on the Property. No improved vehicular access exists onto the Property. Unimproved vehicular access is provided on the east from Perris Blvd. A dirt road parallels the Property's northern boundary. This dirt road is interconnected to other dirt roads to the north.

3.3 - Past Uses of the Subject Property

Since the 1938 aerial photo, the Subject Property has been disced and irrigated agricultural uses.

3.4 - Current Uses of Adjoining Properties

The Subject Property is bordered by open space lots to the south and west, open space and residential to the north, and open space and gas stations to the east.

3.5 - Past Uses of Adjoining Properties

The past use of adjoining properties was disced and irrigated agriculture.

3.6 - Current or Past Uses in the Surrounding Area

Starting with the 1938 aerial photo, the surrounding area was disced and irrigated agricultural uses. Large commercial buildings have recently been replacing these agricultural uses.

3.7 - Geologic, Hydrogeological, Hydrologic, and Topographic Conditions

The Subject Property is near perfectly flat. Off-Site to the west, north and east, the land slopes upward. Surface and groundwater flows toward the lower elevations to the southeast.

Figure 1 - Assessor Map (online)

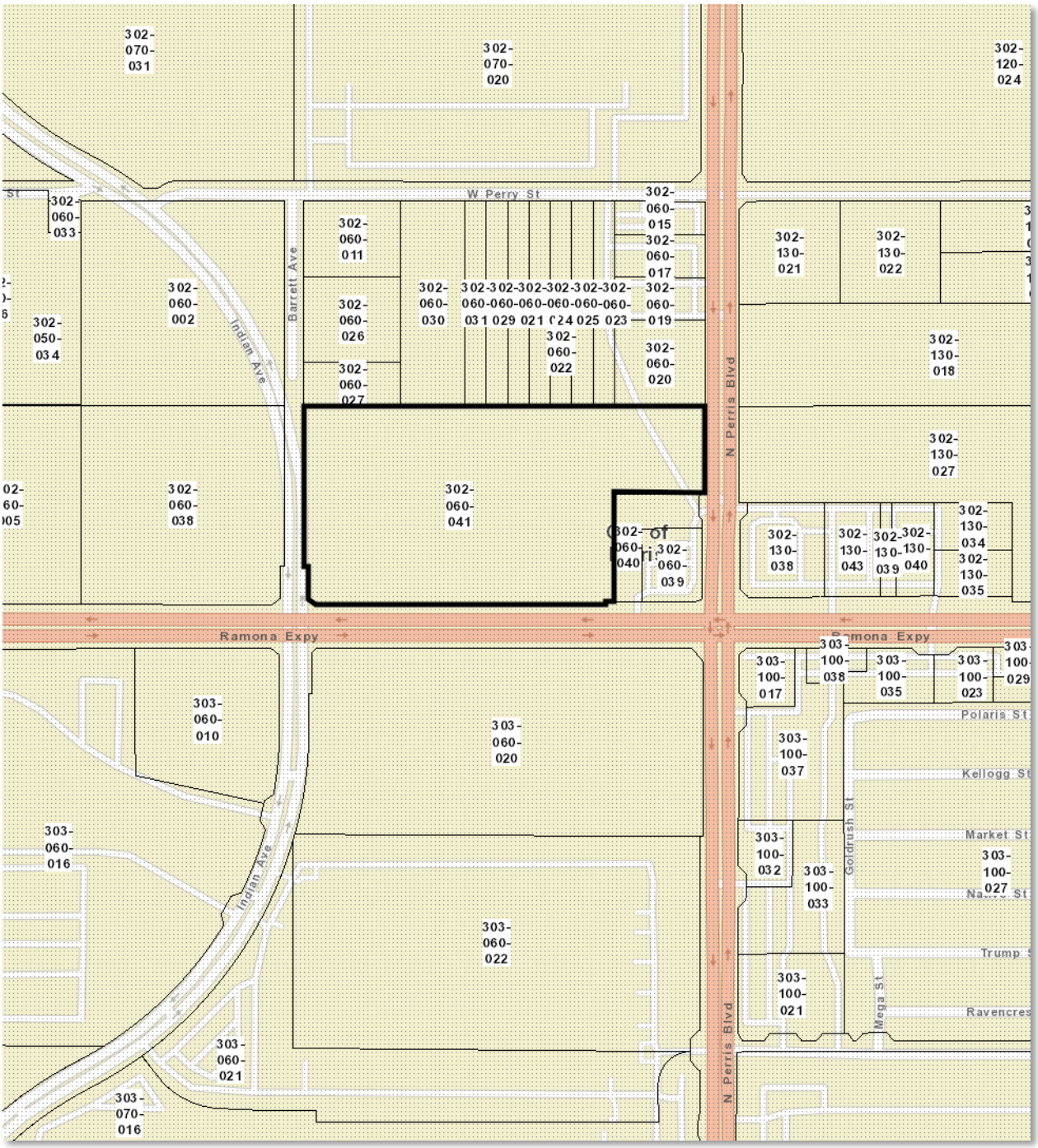
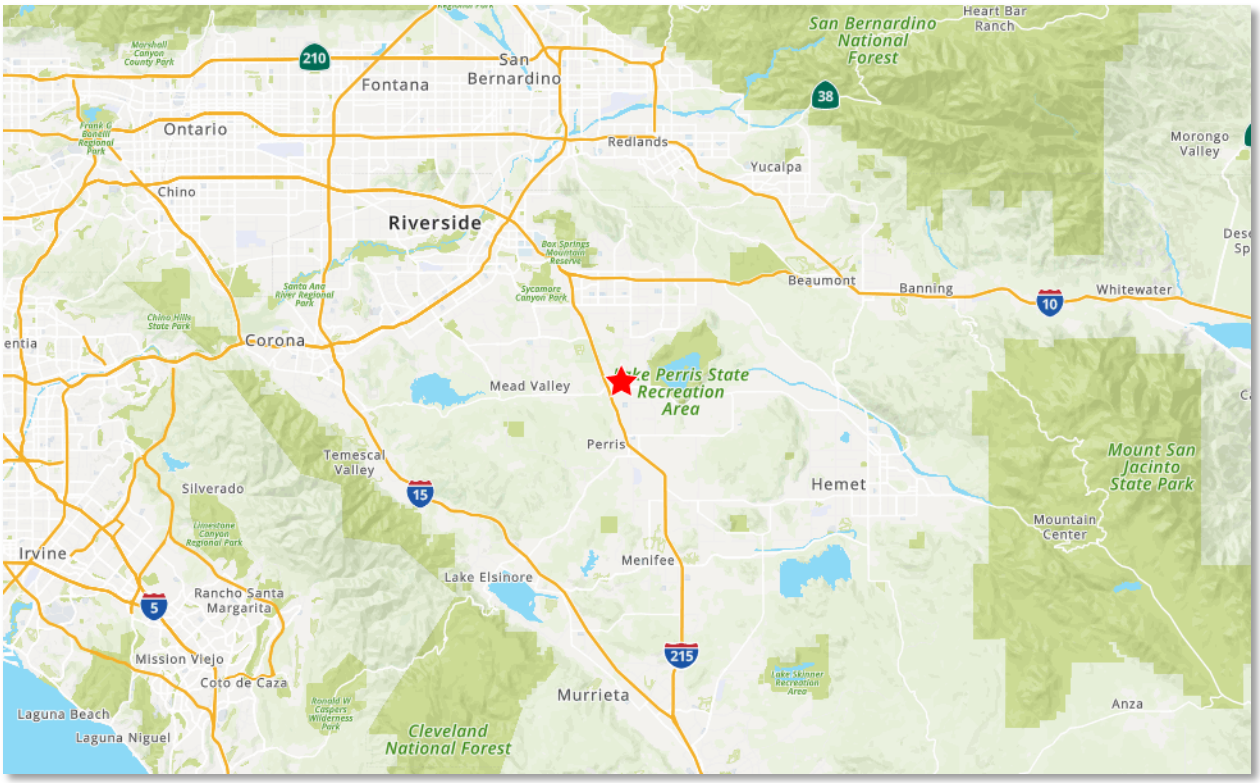


Figure 2 - Regional Maps



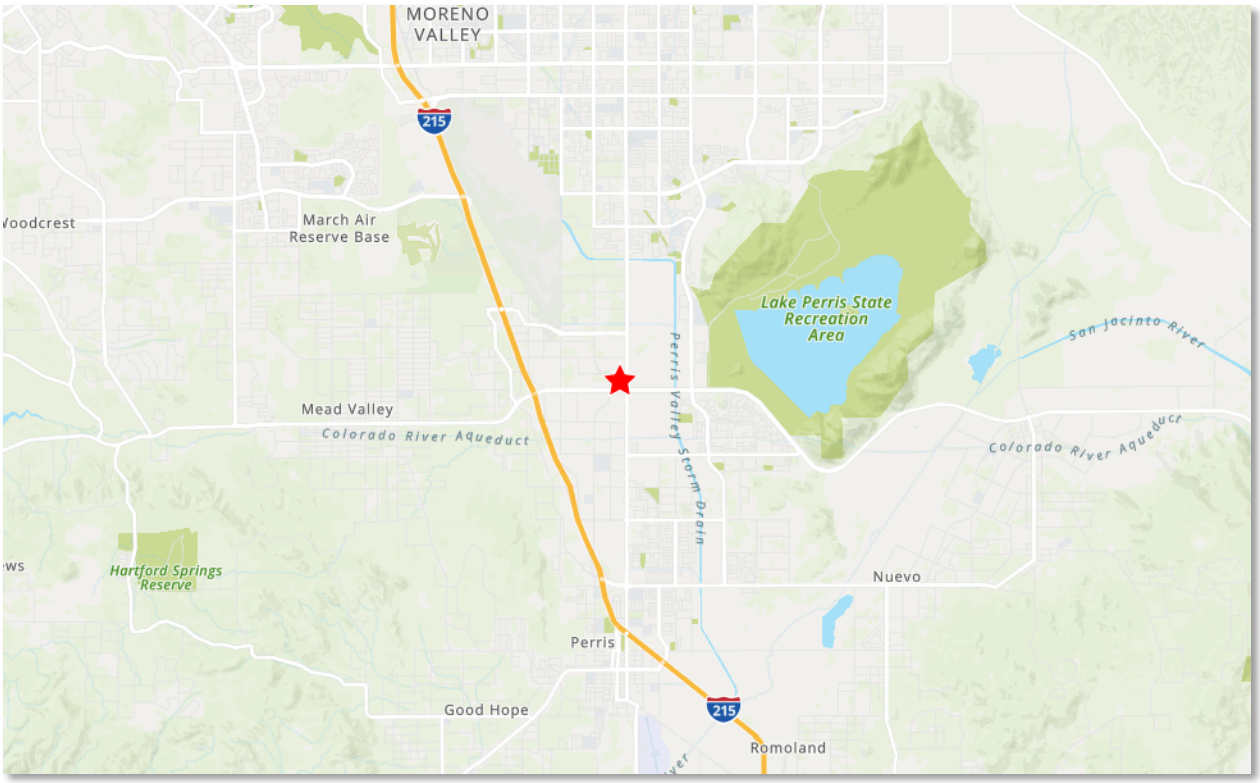
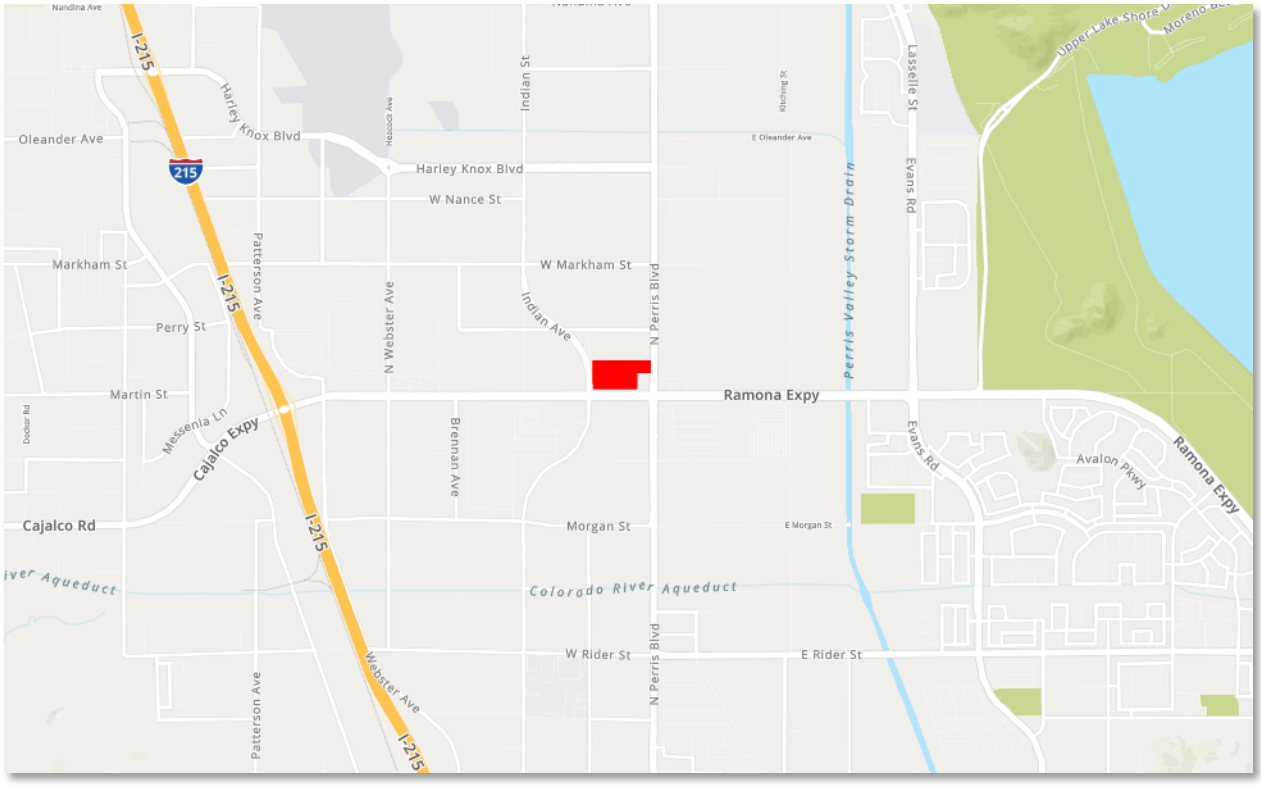


Figure 3 - Vicinity Maps



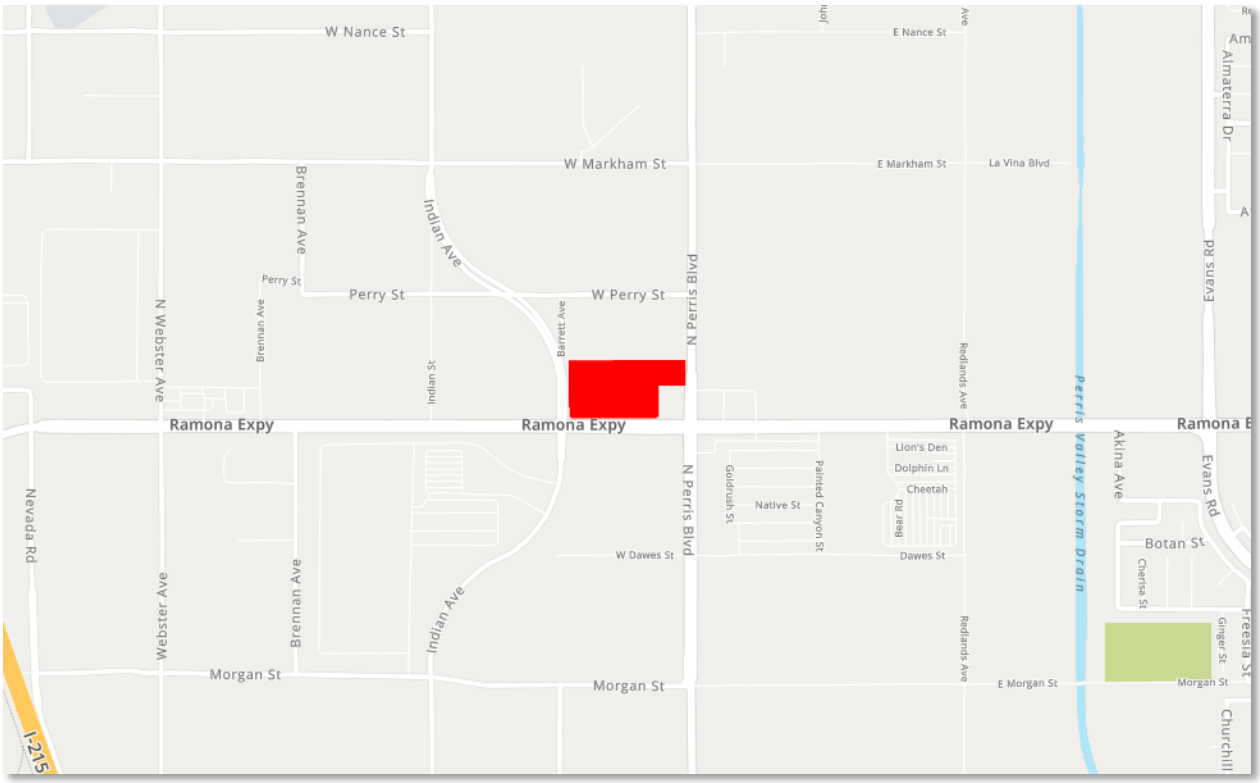


Figure 4 - USGS Topographic Map (2012)

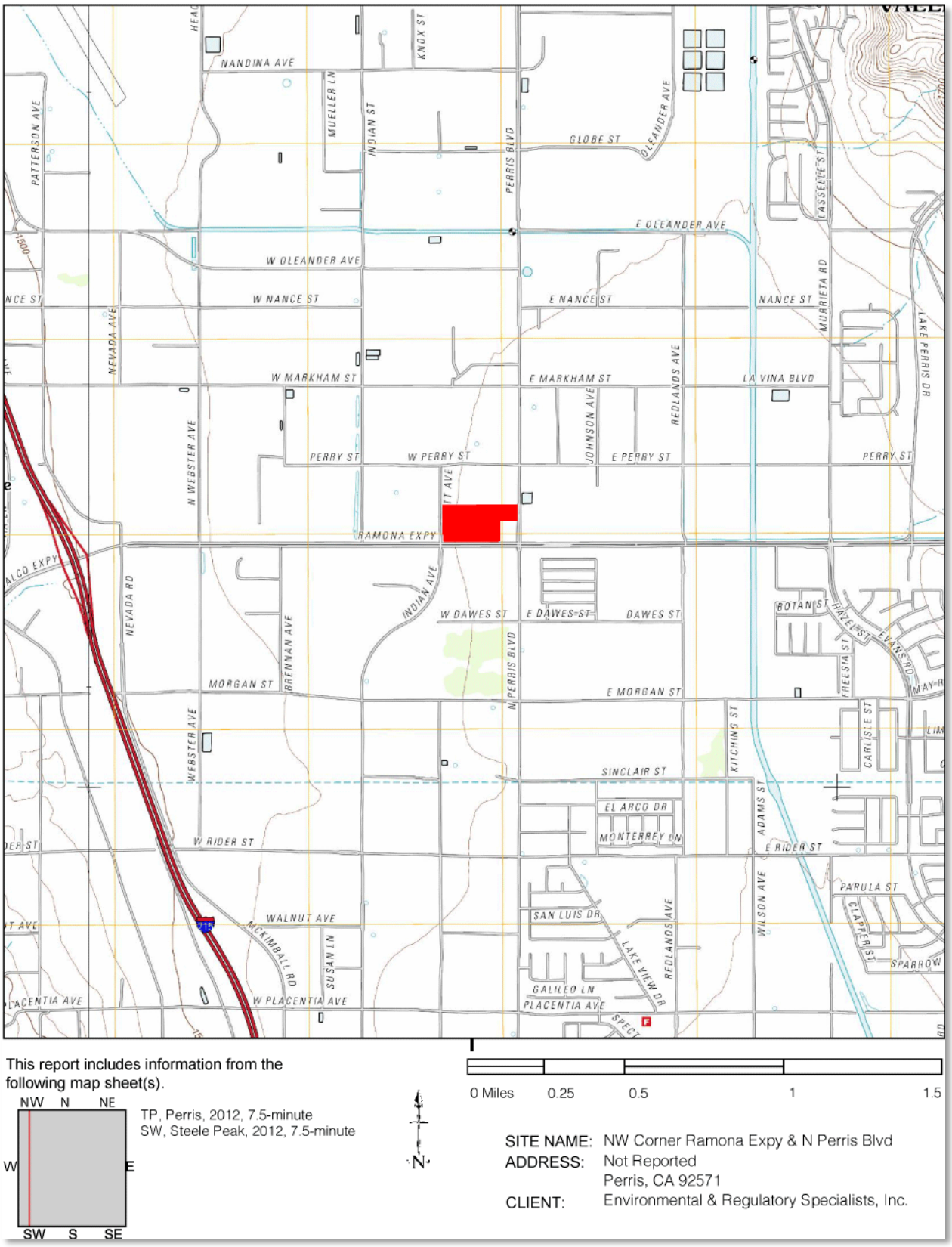


Figure 5 - Satellite Photographs

Figure 6 - Photo Location Map

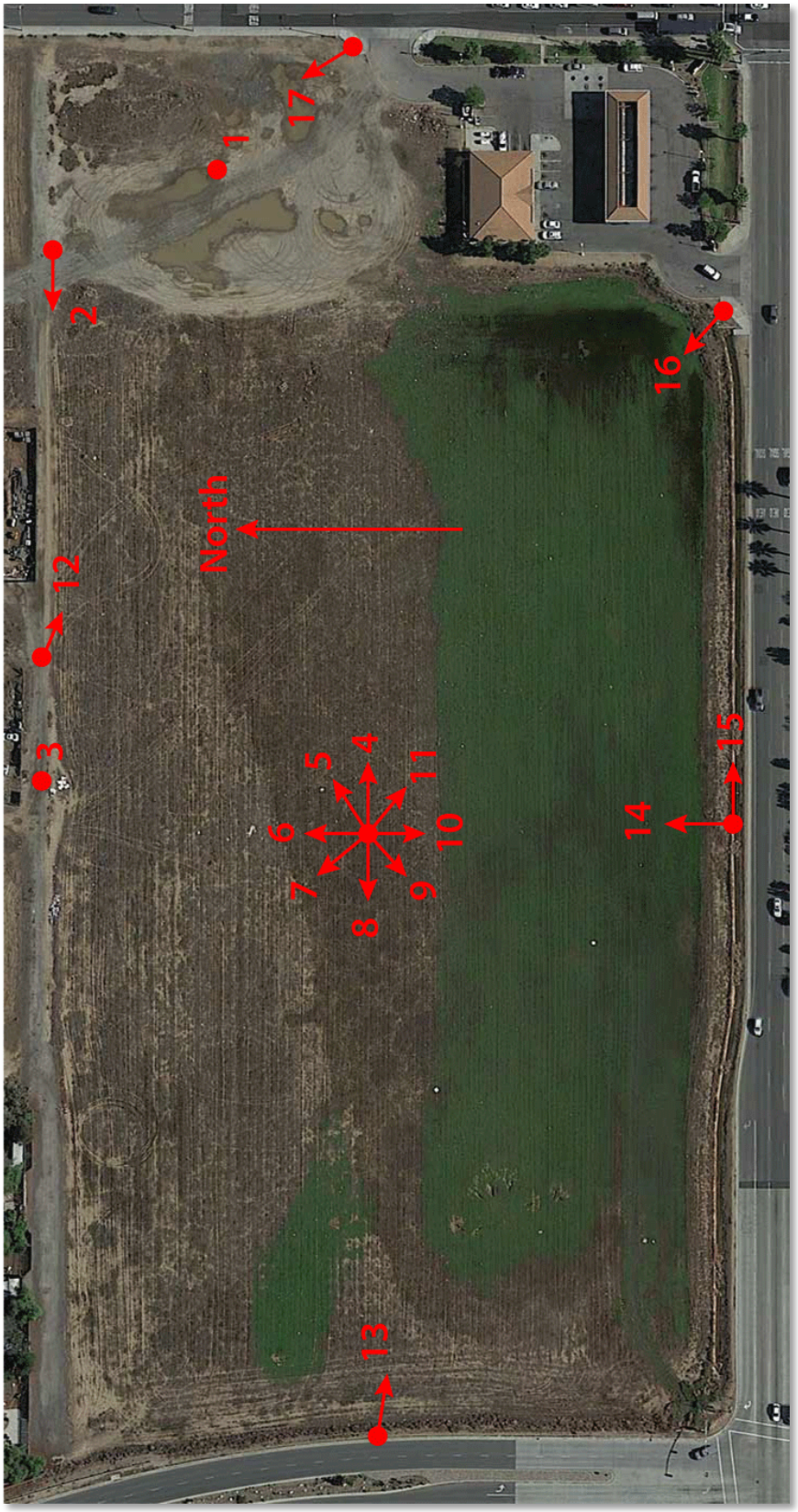


Figure 7 - Site Photos 1 & 2

Figure 8 - Site Photos 3 & 4

Figure 9 - Site Photos 5 & 6

Figure 10 - Site Photos 7 & 8

Figure 11 - Site Photos 9 & 10

Figure 12 - Site Photos 11 & 12

Figure 13 - Site Photos 13 & 14

Figure 14 - Site Photos 15 & 16

Figure 15 - Site Photo 17

4.0 - USER PROVIDED INFORMATION

4.1 - Title Records

The Riverside County Map My County website gives the owner's mailing address as 15325 Fairfield Ranch 170, Chino Hills CA 91709. From the Title Report, ownership is as follows:

Percentage	Party
1.000	The Coudures Family Management Company
8.594	Martin Family Trust UDT, Louise C. Martin, Trustee
8.078	Jeanne Louise Schulte
8.078	The Family Trust of Darrell Gene Smith and Janice Marie Smith UDT Darrell Gene Smith, Trustee, Janice Marie Smith, Trustee
16.076	The Denise C. Mcbride Revocable Living Trust UDT Michael Paul Mcbride, Trustee
4.323	The Denis L. Mcbride and Ann Mcbride Revocable Trust UDT Denis L. Mcbride, Trustee, Ann Mcbride, Trustee
4.351	The Mcbride Family Trust UDT Michael Paul Mcbride, Trustee, Marian E. Mcbride, Trustee
7.411	The Johnston Revocable Living Trust UDT Marie C. Johnston, Trustee, Charles F. Johnston, Trustee
8.670	The Charles J. Johnston and Rose M. Thommen Revocable Trust UDT Charles J. Johnston, Trustee, Rose M. Thommen, Trustee
8.670	The Mikela Bernal Irrevocable Trust UDT, Charles J. Johnston, Trustee
24.750	Mijo Investments, LP

Mr. Michael McKay, Lee & Associates, Ontario, CA, is an agent for the Sellers:

Charles J Johnston, Mikela Marie Oberg, Jeanne Louise Schulte and Janice Marie Smith.

Mr. McKay was interviewed by email on May 7, 2020.

4.2 - Liens or Activity and Use Limitations

According to Mr. McKay, there are no Liens or Activity and Use Limitations due to environmental conditions on the Subject Property.

4.3 - Specialized Knowledge

Mr. McKay stated he had no specialized knowledge of recognized environmental conditions or concerns existing on the Subject Property.

4.4 - Valuation Reduction for Environmental Issues

According to Mr. McKay, there has been no valuation reduction for the Subject Property due to environmental issues and the value of the Subject Property is approximately the same as for comparable parcels in the general area.

4.5 - Owner, Occupant Information

There are no residents on the Subject Property. Owner information is given above.

4.6 - Reasons for Performing Phase I ESA

The reason for performing this Phase I ESA Update is to provide the user (property owner, buyer, lender or other concerned groups) with an assessment of the potential for recognized environmental conditions or hazardous materials to exist at or above de minimus quantities on the Subject Property.

5.0 - RECORDS REVIEW

5.1 - Objective

The purpose of the records review is to obtain and examine records that will help identify recognized environmental conditions in connection with the Subject Property.

5.2 - Standard Environmental Record Sources

Regulatory Agency Record Search

A computer search of regulatory agency databases was performed by Environmental Data Resources (EDR) to locate properties reported as hazardous material generators, known sites with above or below ground storage tanks, sites having leaking storage tanks, sites where hazardous material spills have occurred or for other criteria in accord with ASTM Standard Practices for Environmental Site Assessments, E-1527-13.

Regulatory records contain considerable information about various environmental concerns. In some instances, there may be no Recognized Environmental Condition or impairment regarding the Subject Property arising from these listings because A) the flagged sites are sufficiently distant from the Subject Property, B) the flagged sites are down-gradient from the Subject Property so groundwater contamination below these locations would be carried away from the Subject Property given the direction of groundwater flow, C) the concern has been remediated to "case closed" status as determined by relevant governmental review agencies indicating minimal remaining contamination or D) for other reasons. In this section, all reports discovered by the EDR search are reviewed.

Information such as depth and gradient of groundwater, direction and distance from the Subject Property and current status of the listed property are considered when determining potential environmental impacts to the Subject Property. The complete EDR database search document is reproduced as Appendix I for further review and interpretation. The 1-Mile and 1/4-Mile Radius Maps from the Subject Property boundary generated during the regulatory database search are shown as Figures 16 and 17.

Some potentially environmentally impacted locations identified by the database search are counted on more than one list. Some databases searched are indexes into other databases. This inflates the number of reports flagged. In addition, some listed properties appear under different names or ownerships or the addresses were specified differently making the searching software unable to determine that an entry was for an already found location. The same location is often listed multiple times for the same concern. Thus, the actual number of distinct physical locations with potentially environmentally impacted soils or groundwater is less than initially indicated. As the first step in this analysis, the reports are scanned to develop a list of unique locations. Specifically, we are concerned whether hazardous materials, present, in use or potentially spilled at these nearby sites might migrate onto or otherwise impact the use of the Subject Property.

Figure 16 - Radius Map

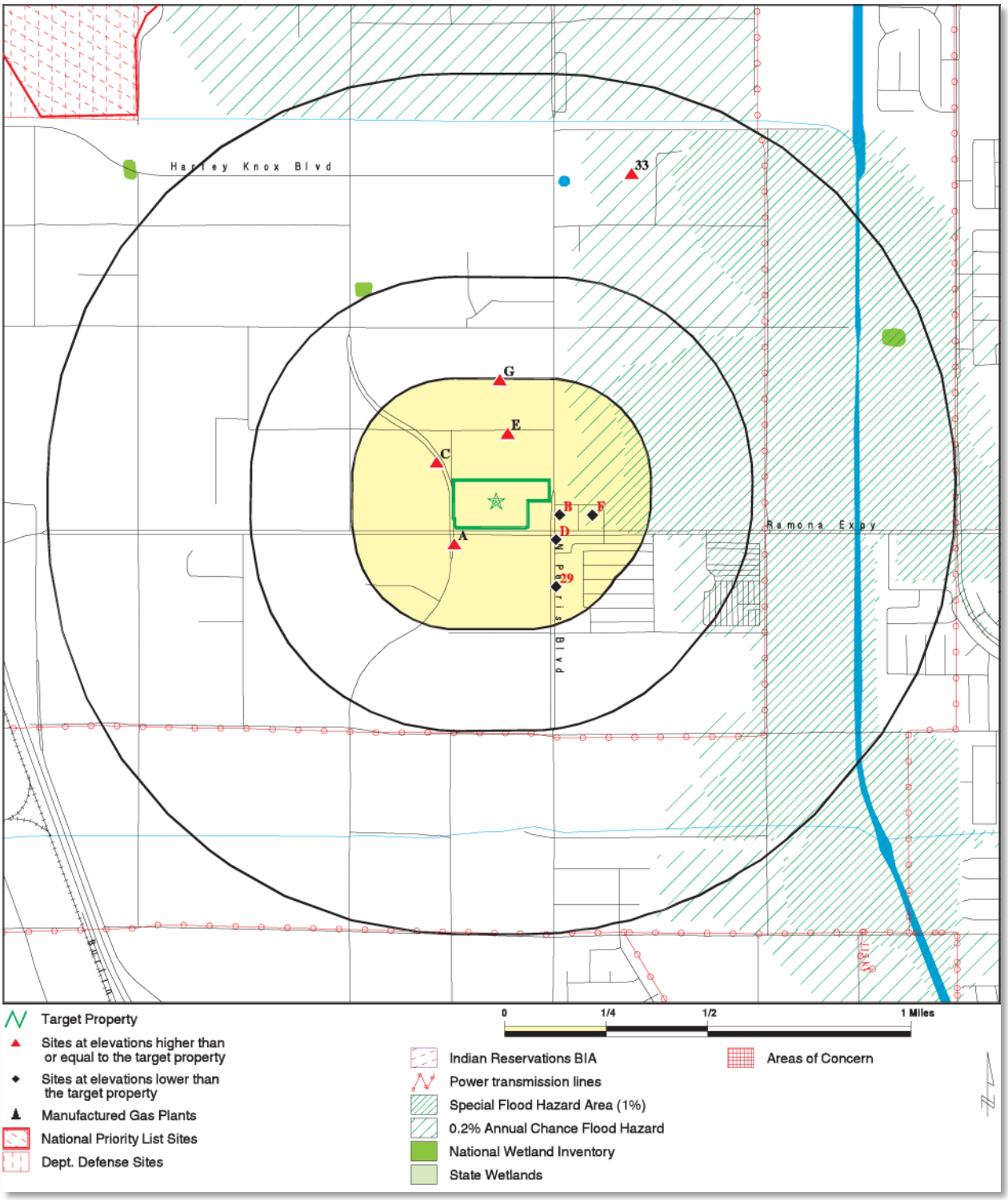
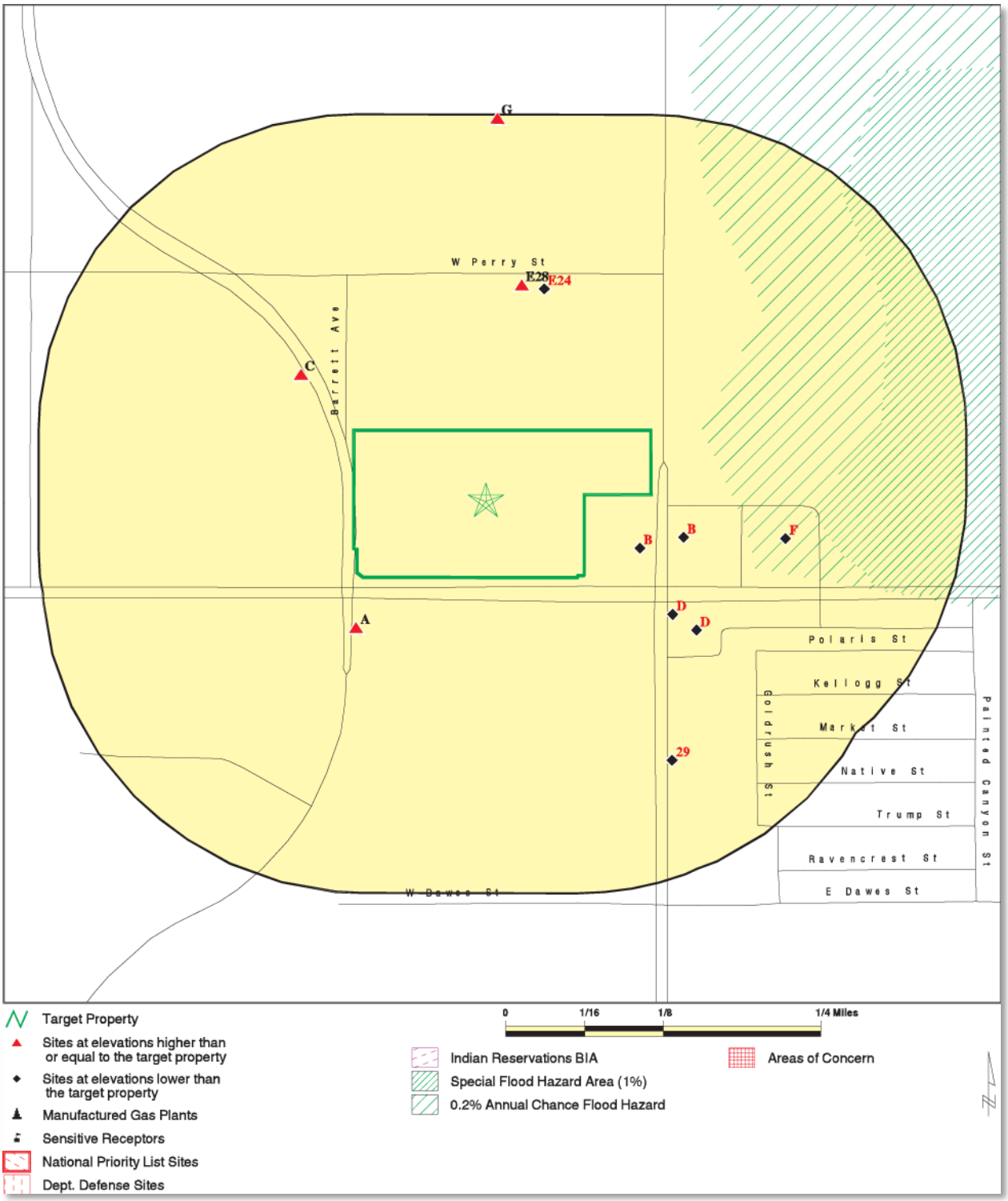


Figure 17 - Radius Map, Finer Scale



Subject Property Search Results

No reports were flagged by the EDR search for the current Subject Property

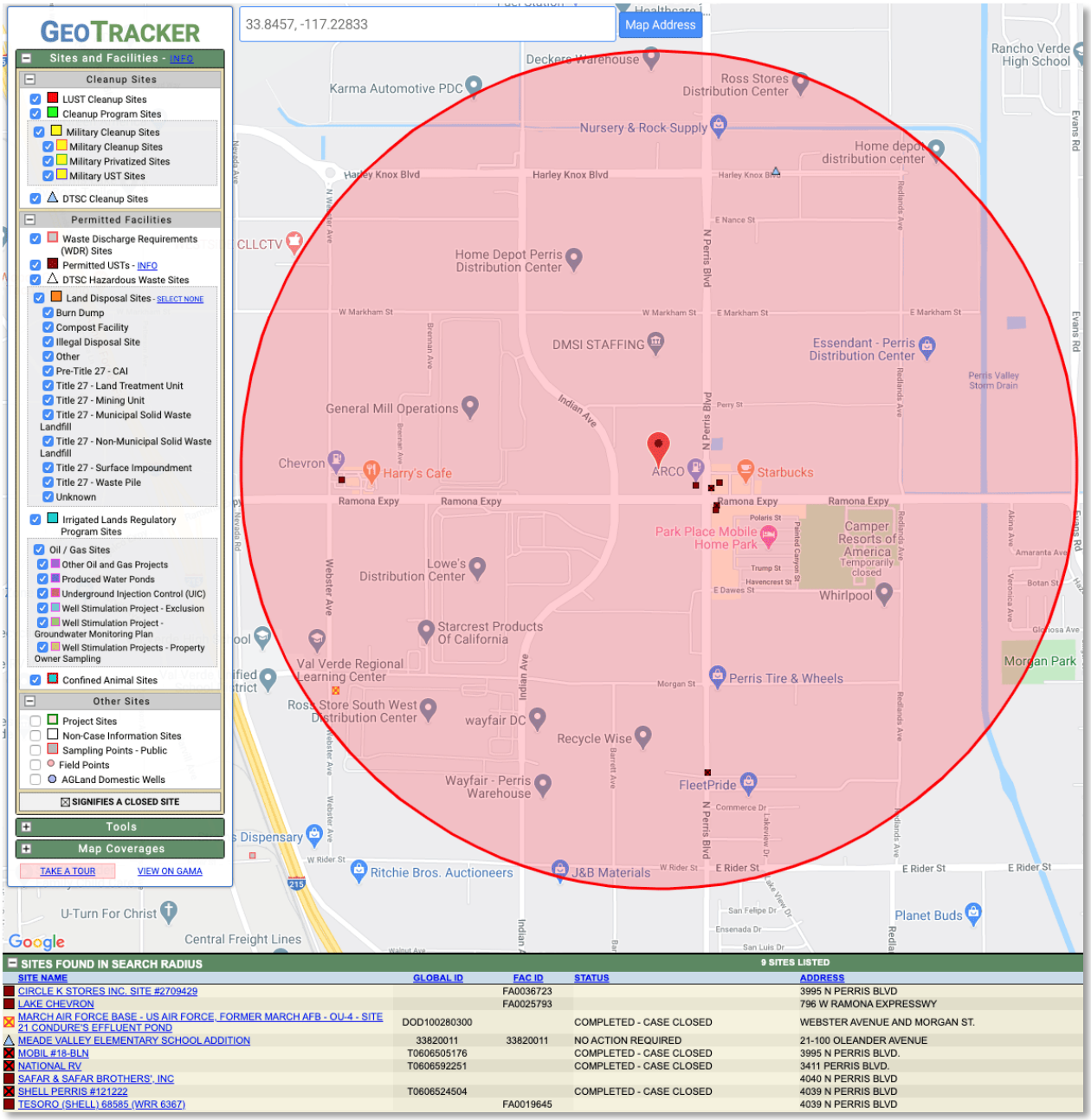
Surrounding Sites Search Results

The EDR search found reports for 33 nearby "sites" within the standard search distances. No "orphan" sites were identified. Orphan reports do not contain sufficient information to map the location and are not considered during this analysis. These reports map to 11 unique addresses as shown in the table below.

Site Address	Map ID #	Databases where the site was flagged
3984 Indian Ave	A1, A2, A3, A4	AST, RCRA-LQG, FINDS, ECHO, RCRA NonGen/NLR, CERS HAZ Waste, CERS Tanks, CERS
4040 N Perris Blvd	B5, B6, B7, B8	UST, RCRA NonGen NLR, EDR Hist Auto, CERS HAZ Waste, CERS Tanks, HAZNET, CERS, HWTS
4039 N Perris Blvd	B9, B10, B11, B12	EDR Hist Auto, UST, RCRA NonGen/NLR, LUST, CERS HAZ Waste, CERS Tanks, CERS, HWTS
1420 Indian Ave	C13, C14	CERS HAZ Waste, CERS Tanks, CERS, RCRA NonGen/NLR
3995 N Perris Blvd	D15, D16, D17, D18, D19, D20, D21, D22, D23	SWEEPS UST, CA FID UST, UST, RCRA NonGen/NLR, LUST, CERS, CERS HAZ Waste, CERS Tanks, CERS RCRA-SQG, UST, FINDS, ECHO, CHMIRS, EDR Hist Auto
77 W Perry St	E24	RCRA NonGen NLR
118 E Ramona Expy	F25, F26, F27	AST, CERS HAZ Waste, CERS Tanks, CERS, RCRA NonGen/NLR
303 Perry St	E28	RCRA-SQG, FINDS
3865 N Perris Blvd	29	CERS HAZ Waste, HAZNET, CERS, HWTS
4378 N Perris Blvd	G30, G31, G32	RCRA NonGen / NLR, CERS HAZ Waste, HAZNET, CIWQS, CERS, HWTS
21-100 Oleander Ave	33	Envirostor, SCH

The EDR report provides links to the California Water Boards GeoTracker website. Figure 18 shows the Subject Property at the center of a 5,980-foot radius circle on the GeoTracker map, far enough to extend one mile from the Subject Property and well beyond the required search distance for a Phase I ESA. Go to "GeoTracker.waterboards.ca.gov." Enter "33.8457, -117.22833," the coordinates for the approximate center of the Subject Property. You can then click on the markers to read the case reports. GeoTracker pulled up nine sites. Six of these were found by the EDR search and are already listed in the table above leaving three additional GeoTracker cleanup sites to examine. These are listed in the table below and will also be examined. Note that these three new sites are located beyond the required search distances for a Phase I ESA.

Figure 18 - GeoTracker Map



Site Address	GeoTracker ID	Case Type & Status
796 W Ramona Expy	FA0025793	Permitted Underground Storage Tank
Webster Ave & Morgan St	DOD100280300	Military Cleanup Site Completed - Case Closed
3411 Perris Blvd	T0606592251	LUST Cleanup Site Completed - Case Closed

Review of the 14 Sites Identified

The appearence of a site in many of the databases searched by EDR is routine. For example, HAZNET lists deliveries of hazardous materials to registered collection and processing facilities. While a HAZNET listing indicates hazardous materials are used or produced at the given location, it also indicates the businesses at these sites dispose of these materials in a responsible manner, thus indicating this location is likely not a concern for the Subject Property. So, for these types of databases, only those reports for which a violation or enforcement action is indicated are of concern. To reduce the amount of repetitive text, sites found in the following databases will be discussed further in this document only if a violation or other concern has been indicated.

RCRA NONGEN/NLR, RCRA-LQG, RCRA-SQG, CERS RCRA-SQG, CERS HAZ Waste - These are the Resource Conservation and Recovery Act designations for Non-Generators, Large Quantity Generators and Small Quantity Generators. Businesses registered and lawfully disposing of hazardous materials are not likely to be of concern.

HWTS, CERS HAZ Waste - These are the State of California equivalent of the Federal RCRA listings described above. Businesses properly registered and lawfully disposing of hazardous materials are not likely to be of concern. Without an indication of problems or violations, these reports are not likely to be of concern.

HAZNET - Lists deliveries of hazardous materials to registered collection and processing facilities. Absent violations, these reports are not of concern.

CHMIRS - Emergency Response Notification System - These are reports of accidental spills or releases of hazardous materials. Once reported, an emergency cleanup team is dispatched and cleanup is undertaken immediately. If cleanup cannot be quickly completed, a case would be opened in other databases that were also searched, thus these listings (by themselves without corresponding case files) are not of concern.

CIWQS - These are permits for water runnoff required for construction and/or operation. Businesses complying with the permit terms are not of concern.

FINDS, ECHO, NAICS - Indicates the business has registered with the EPA as required. Absent violations, these listings are not of concern.

AST, CA FID UST, SWEEPS UST, UST, CERS Tanks, Riverside County UST - These databases indicate the presence of above or underground storage tanks. Absent a violation or leak (a LUST report), these listings do not raise a concern. In the past, leaks were common. Today, tanks are closely monitored to avoid leaks or spills.

EDR Hist Auto - This is a database maintained by EDR indicating that at some point in the past, the site was used for an automotive related purpose. Absent another indication of a problem or violation, these sites are not likely to be of concern.

The following sites have only routine reports with no violations or problems indicated. These sites do not raise an environmental concern for the Subject Property.

Address	ID
77 W Perry St	E24
303 Perry St	E28
796 W Ramona Expy	GeoTracker FA0025793

The following 11 sites will be discussed below. The map IDs for these locations have been removed if all reports for that ID are routine with no violations or problems indicated. The CERS database contains all interactions between businesses and the Riverside County Department of Environmental Health, including scheduled and random inspections. Violations can be as small as paperwork filed late. All "violations" flagged by the EDR search will be examined. The LUST (leaking underground storage tank) reports are the greatest concern regarding groundwater.

Address	ID	Database Reports Needing Further Review
3984 Indian Ave	A4	CERS
4040 N Perris Blvd	B8	CERS
4039 N Perris Blvd	B12	LUST, CERS
1420 Indian Ave	C13	CERS
3995 N Perris Blvd	D18, D19, D21, D22	LUST, CERS
118 E Ramona Expy	F26	CERS
3865 N Perris Blvd	29	CERS
4378 N Perris Blvd	G31	CERS
21-100 Oleander Ave	33	Envirostor, SCH
Webster Ave & Morgan St	DOD100280300	Military Cleanup Site Completed - Case Closed
3411 Perris Blvd	T0606592251	LUST Cleanup Site Completed - Case Closed

The **Lowe's #966** site (3984 Indian Ave, Map ID A4) appeared in the CERS database. The building on this site is located roughly half a mile southwest of the Subject Property across Ramona Expressway. Several violations of regulations were recorded by the Riverside County Department of Environmental Health. Interspersed with violation reports were records indicating "return to compliance" and inspections where no violations were found. Continued operation of the store indicates these infractions have been remediated. Given groundwater flow toward the south in the area of the Subject Property, contamination, should it exist, would be carried away from the Subject Property. This report does not raise an environmental concern for the Subject Property.

The **Safar & Safar Brothers Arco Express AM PM gas station** (4040 N Perris Blvd, Map ID B8) appears in the CERS database. This address is the cut out in the southeast corner of the roughly rectangular Subject Property. Violations of regulations were recorded. A recurring theme was the failure to remove hazardous waste from the site within the specified timeframe. A fine of $2,000 was imposed. Interspersed with violation reports were records indicating "return to compliance" and inspections where no violations were found. Continued operation of the service center indicates these infractions have been corrected. Given groundwater flow toward the south in the area of the Subject Property, contamination, should it exist, would be carried away from the Subject Property. This report does not raise an environmental concern for the Subject Property.

The former **Texaco Service Station** (currently Tesero Shell at 4039 N Perris Blvd, Map ID B12) appears in the LUST and CERS databases. This site is immediately east of the Subject Property across North Perris Blvd. The LUST reoport has the GeoTracker ID T0606524504. The GeoTracker website indicates a soil only leak of diesel and gasoline discovered and reported 5/1/2007. The discovery was made as part of a Phase II ESA at the time of the sale of the station. Status is listed as "Completed - Case Closed as of 2/22/2010." Remediation was by Soil Vapor Extraction with 44 pounds of TPHg and 37 pounds of MTBE removed. The post remediation sampling data indicates low concentrations and minimal spread. Depth to groundwater was 80 feet with a flow direction toward the southwest. Residual contamination, should it exist, would be carried diagonally away from the Subject Property. This report does not raise an environmental concern for the Subject Property. The CRES database indicates violations of regulations were recorded. Interspersed with these reports were records of "return to compliance" and inspections in which no violations were found. Continued operation of the service center indicates these infractions are being remediated when found. These reports do not raise an environmental concern for the Subject Property.

The **United Facilities, Inc** (420 Indian Ave, Map ID C13) site appears in the CERS database. Mapped immediately northwest of the Subject Property, this location is open space. A pad with a storage tank and valve about 1/8th mile further northwest of the map marker may be the location in question. Violations of regulations were recorded, for example non-conforming signage. Interspersed with the violation reports were records indicating "return to compliance" and inspections where no violations were found. Given the minor nature of the infractions and satellite photo, this report does not raise an environmental concern for the Subject Property.

The **Mobil #18-BLN Service Station, Circle K #2709429** (3995 N Perris Blvd, Map IDs D18, D19, D21 and D22) appears in the LUST and CERS databases. This site is the southeast corner of the Ramona Expy and N Perris Blvd intersection, about 1/10th mile southeast of the Subject Property. The LUST report has the GeoTracker ID T0606505176. The GeoTracker website indicates a soil only leak of gasoline discovered 8/20/2001. Status is listed as "Completed - Case Closed as of 6/20/2003." A Soil Vapor Extraction system was installed and run for five days extracting only 2.3 pounds of TPH-g indicating low levels of residual contamination that had remained well above the water table. Given the southward flow of groundwater in the area, residual contamination, should it exist, would be carried diagonally away from the Subject

Property. This report does not raise an environmental concern for the Subject Property. The CRES database indicates violations of regulations were recorded. Interspersed with these reports were records of "return to compliance" and inspections in which no violations were found. Continued operation of the service center indicates these infractions are being remediated when found. These reports do not raise an environmental concern for the Subject Property.

The **Jiffy Lube #3294** (118 E Ramona Expy, Map ID F26) site appears in the CERS database and is located east of the Subject Property across N Perris Blvd. Violations of regulations were found. Interspersed with these were records indicating "return to compliance" and inspections where no violations were found. The southward flow of groundwater in the area would carry contamination, should it exist, away from the Subject Property. Given a history of prompt remediation of infractions, these reports do not raise an environmental concern for the Subject Property.

The **Best for Less Tires** (3865 N Perris Blvd, Map ID 29) site appears in the CERS database and is located 1/6th mile southeast of the Subject Property. Violations of regulations were recorded. Interspersed with these were records indicating "return to compliance" and inspections where no violations were found. The southward flow of groundwater in the area would carry contamination, should it exist, away from the Subject Property. Given a history of prompt remediation of infractions, these reports do not raise an environmental concern for the Subject Property.

The **Ross Store** (4378 N Perris Blvd, Map ID G31) site appears in the CERS database and is located 1/4 mile north of the Subject Property. Violations of regulations were recorded. Interspersed with these were records indicating "return to compliance" and inspections where no violations were found. Given a history of prompt remediation of infractions, these reports do not raise an environmental concern for the Subject Property.

The **Meade Valley Elementary School** (21-100 Oleander Ave, Map ID 33) site appears in the Envirostor and SCH databases. It is located 3/4 mile NNE of the Subject Property. Both records are for a site investigation completed 10/13/2000 with no further action recommended. These reports do not raise an environmental concern for the Subject Property.

The **Former March Air Force Base OU-4 Site 21 Condures's Effluent Pond** (Webster Ave & Morgan St.) was flagged by GeoTracker (ID DOD100280300) and is located about 7/8 mile southwest of the Subject Property. Before being reduced to a regional airport, March AFB covered 12 square miles with its southeastern corner sitting roughly a mile northwest of the Subject Property. Substantial cleanup was necessary prior to returning the land to civilian uses. The topography in the area funnels groundwater flow from nearly the entire March AFB basin under the Subject Property as it drains toward the south. This Phase I ESA report has found no evidence for contamination of groundwater under the Subject Property. In addition, the area has low rainfall and is very flat indicating a slow rate of groundwater flow. However, the posibility remains that contamination from March AFB has over its century long history reached or in the future may reach the Subject Property, likely in minute concentration. The summary on the Geotracker site for the Site 21 Effluent pond reads:

Installation Restoration Program (IRP) Site 21 was off-base approximately 1.5 miles south of the southern extension of the active March ARB runway. The site was never physically part of March AFB. The site was considered to be part of the former base for purpose of the IRP because treated wastewater produced on base was held in this off-base pond. John Cordures, property owner until his death, use the water of irrigation of surrounding agricultural land form 1941 to 1946 and from 1955 to 1984. Sanitary and industrial wastewater received primary and secondary treatment on the base prior to discharge into this holding pond. The boundaries of the effluent pond were physically well defined by the pond's berm during the 1993 Operable Unit 1 Remedial Investigation/Feasibility Study. At that time the site cover approximately 2.2 acres and was being used by private parties as an illegal dump. In approximately 1998, the berm was removed, and the site incorporated into the surrounding sod farm. In 2001, the land was sold and the former pond area now consists of a landscaped berm on the west side of the site and a truck parking area on the east side. Based on historic use, the contaminants of concern were metals, volatile organic compounds, and pesticides. Only iron and thallium, were present in levels above the U.S. EPA preliminary remediation goals. With the subsequent grading and mixing of material that was present in the former pond soil or sediments from the reuse of the site, it is not possible to identify the fate any impacted soil. The site was subsequently determined to be no action in the Final Operable Unit 4 Record of Decision, dated September 2005.

Given its distance to the Subject Property and the south-trending direction of groundwater flow, contamination from the Site 21 Condures's Effluent Pond would be carried away from the Subject Property. This report does not raise an environmental concern for the Subject Property.

The **National RV** (3411 Perris Blvd) site appears on GeoTracker with ID T0606592251 and is located about 3/4 mile south of the Subject Property. The GeoTracker website indicates a soil only leak of gasoline discovered 6/9/2008 when an 8,000 underground storage tank was removed. Status is listed as "Completed - Case Closed as of 3/16/2009." Test borings indicated the leak to be quite small. Given case closed status, the distance from the Subject Property to this site and the southward flow of groundwater away from the Subject Property, this report does not raise an environmental concern for the Subject Property.

Summary

None of the reports found by the EDR or GeoTracker searches raise an environmental concern for the Subject Property. None of the nearby sites identified, except under extreme conditions, would be a likely vapor encroachment source.

5.3 - Historic Use Information on the Property and Surrounding Areas

The objective of consulting historical sources is to develop a history of the previous uses of the Subject Property and surrounding area to help identify the likelihood of past uses that might have led to recognized environmental conditions in connection with the Subject Property.

Historic Aerial Photographs: Changes observed from historic aerial photos are listed below. Appendix IV contains the 15 Historic Aerial Photos used.

1938 - The area is disced, irrigated farmland with dirt roads and a few small buildings.

1949 - no significant change

1953 - no significant change

1959 - The major streets have been paved, otherwise no significant change.

1961 - no significant change

1967 - A building appears in the cut out square southeast of the Subject Property.

1978 - no significant change

1985 - More rural single family homes appear. Ramona Expressway is now four lanes.

1989 - The area is beginning to fill in. A commercial building (still present) appears north of the Subject Property. The block on southeast corner of Ramona Expressway and N Perris Blvd appears to have been developed as a trailer park.

1997 - The trailer park is fully populated. The northeast corner of Ramona Expressway and N Perris Blvd has been lightly developed.

2002 - The cut out southeast corner has been redeveloped to its current configuration. Land to the southwest of the Subject Property is being developed.

2006 - no significant change

2009 - Two huge commercial buildings south of the Subject Property appear.

2012 - A huge commercial building north of the Subject Property appears.

2016 - Another huge commercial building south of the Subject Property appears.

Date Unknown - More recent satellite images from Google Earth (used to prepare Figures 5 and 6) and from Google Maps (Figure 18) show no significant changes.

Historic USGS Topographical Maps: Historic USGS Topographic Maps are examined below. Appendix V shows the Historical USGS Topographic Maps used.

1901 - The area is open space (or possibly agricultural). The road that will become Route 395 is in place southwest of the Subject Property.

1942 - Still open space (agricultural) with a road grid and a few small buildings.

1943 - No significant change.

1953 - No significant change.

1967 - The larger March AFB runway to the northwest appears.

1979 - No significant change.

2012 - Shows the road system, which has filled in. What was Martin Street has become Ramona Expressway.

Historic City Directories: No phone listings were found for the Subject Property. The increase in phone numbers in the area is consistent with the development shown by the topo maps and aerial photos. The EDR-City Directory Abstract is reproduced as Appendix III.

Sanborn Fire Insurance Maps: See EDR report Appendix II. (An unmapped property)

Building Department Records: See EDR report Appendix I. (No records found)

5.4 - Historical Use on Subject Property

The Subject Property has been disced, irrigation agricultural since the 1938 aerial photo.

5.5 - Historical Use on Adjacent and Surrounding Properties

Beginning with the 1938 aerial photo, the area was disced, irrigation agricultural uses. This remained the case until the 2009 aerial photo shows the first two huge commercial/industrial (big box) buildings. In-fill of the area with these large buildings continues.

5.6 - Physical Setting Sources

The Subject Property is located at North Latitude 33.8456250 and West Longitude -117.2285040 and sits 1460 ft. above sea level elevation. It appears on the United States Geological Survey Perris, CA (5641330) Quadrangle. Additional information can be found in the EDR report reproduced as Appendix I. The Physical Settings Source Map from the EDR report is shown on Figure 19. Topographic Profiles are shown as Figure 20.

Water Wells and Groundwater

Fifteen water wells were mapped in the vicinity of the Subject Property (see Figure 19). The Subject Property is very flat. From the topographic profiles, surface water flows southeast to a drainage ditch along the south edge of the Property. Off-Site, there are higher elevations to the north, west and east. Thus, groundwater under the Subject Property would flow south or southeast.

Oil and Gas Well Records: No oil wells were mapped by the EDR Search.

Figure 19 - Physical Settings Source Map

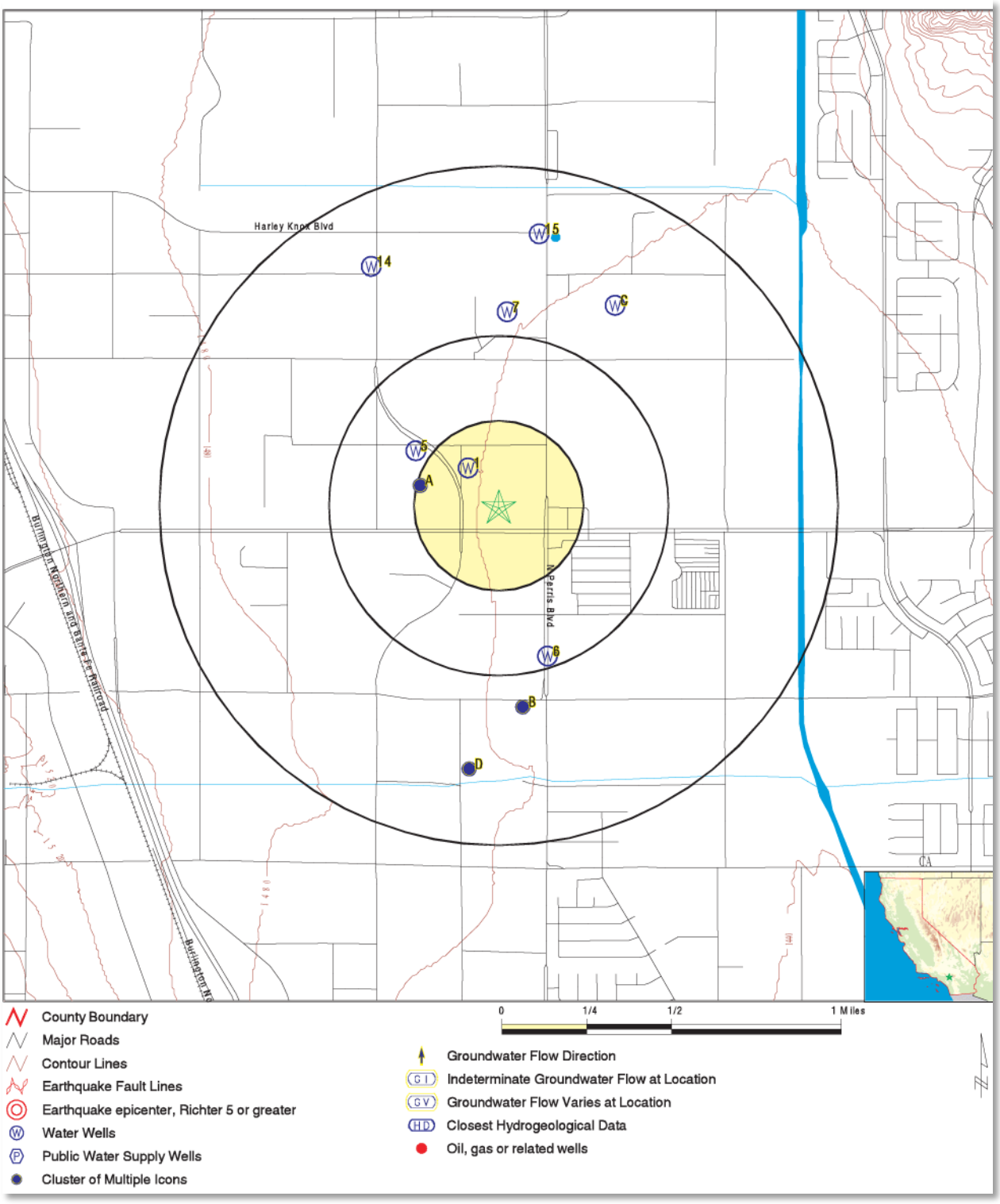
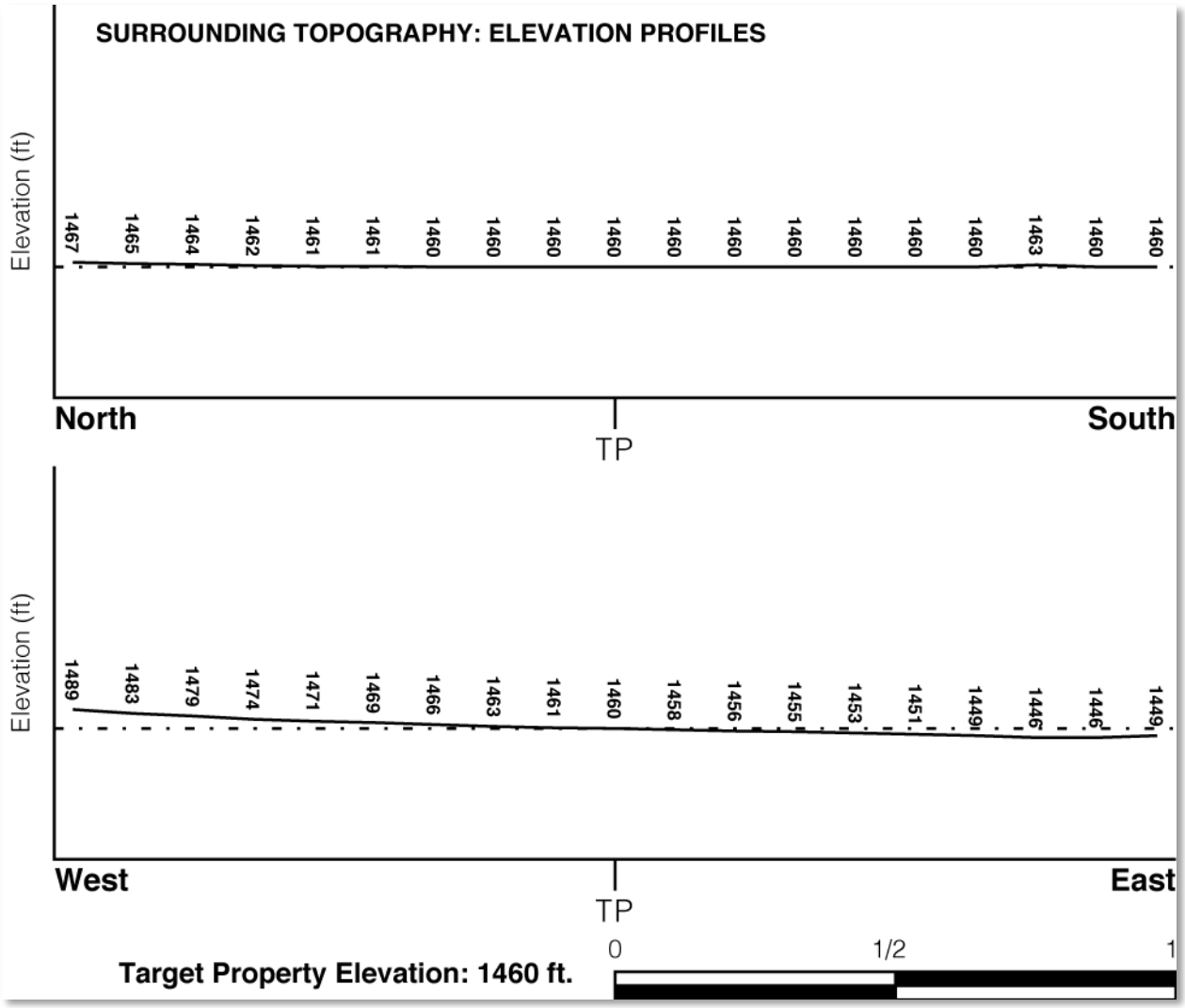


Figure 20 - Surrounding Topography: Elevation Profiles



Soils

Six soil types were mapped in the vicinity of the Subject Property. These vary regarding infiltration rates and how well drained they are. Detailed information on the area soil map and soil types appears in the EDR Radius Map report reproduced as Appendix I (see page 231).

Radon Records

The EDR search listed one Radon tests for Zip Code 92571. The Federal Area Radon Information Riverside County lists 12 sites. All readings were less than 4 pCi/L. The EPA maps Riverside County as Zone 2 with indoor average level between 2 and 4 pCi/L.

5.7 - Vapor Encroachment

ASTM Standard Practices for Phase I Environmental Site Assessments, E-1527-13 includes a requirement to review records for possible Vapor Encroachment onto the Subject Property from off-site sources. Environmental Data Resources, Inc. (EDR) can perform a computer search of regulatory agency databases to help locate properties that may emit hazardous vapors. Only sources within 1/3-mile up gradient and 100 feet down gradient are flagged for this evaluation.

After going through the sites flagged by the EDR and GeoTracker searches earlier in section 5 of this document, none of these sites appear to be a potential vapor source within the required search distances. The EDR VEC App with two upgradient sources has been run. The results are included as Appendix VI. Maps from the VEC application for identifying potential vapor encroachment sources are shown as Figures 21 and 22. The areas in gray on Figure 22 are up gradient (higher elevation) from the approximate center of the Subject Property.

Figure 21 - Vapor Source Location Map

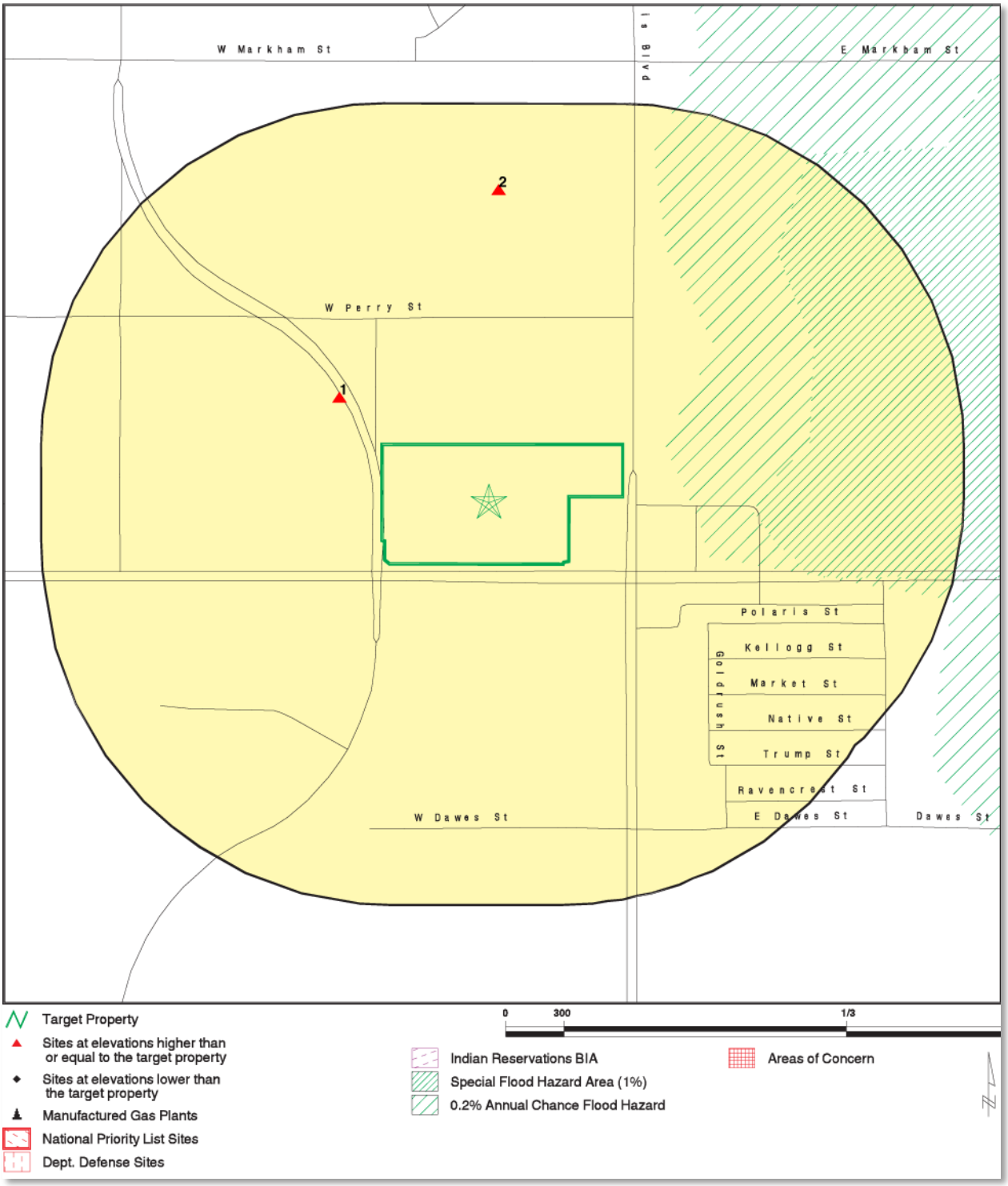
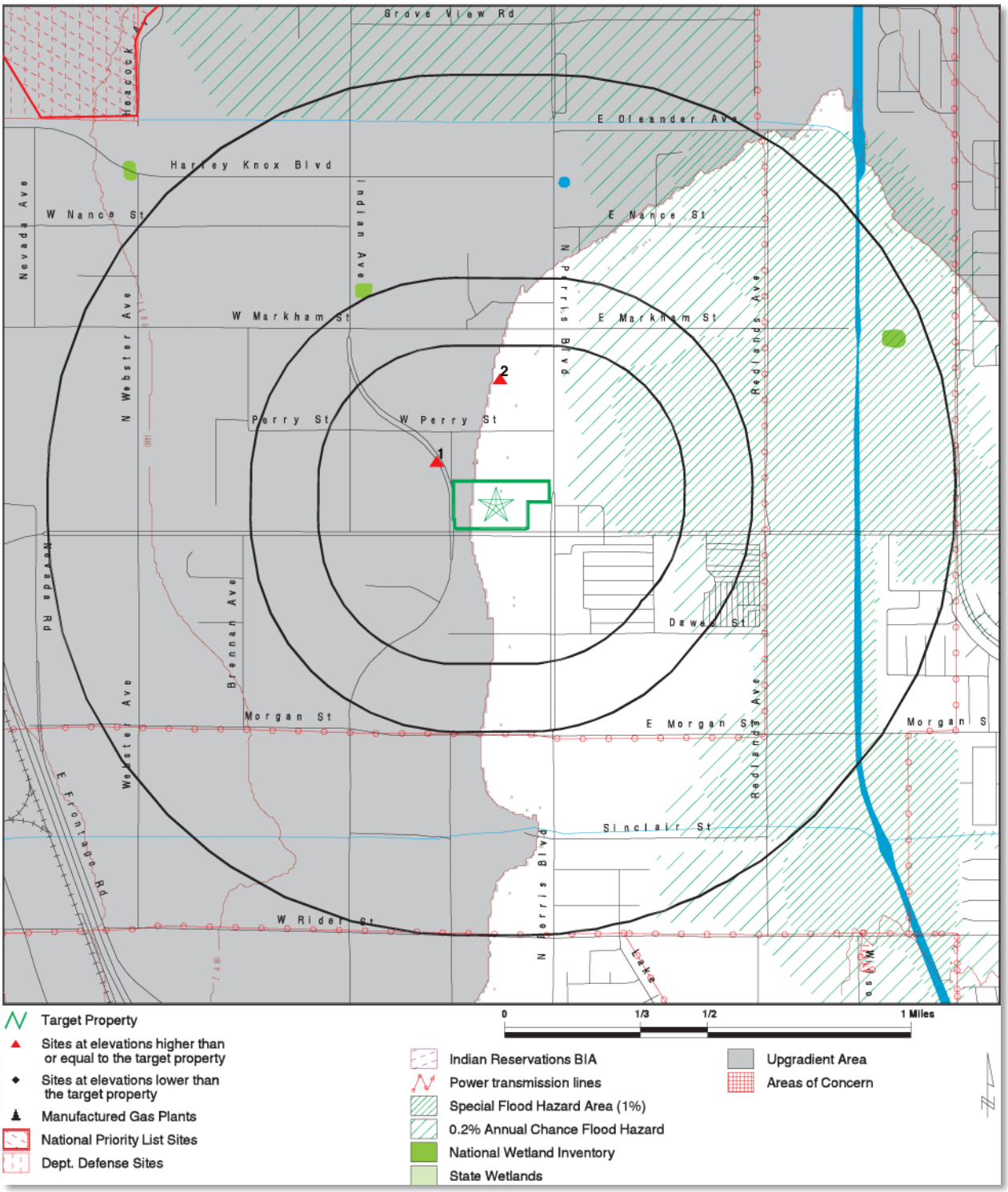


Figure 22 - Vapor App Secondary Map

Areas in gray are up gradient (higher elevation) from the (center of the) Subject Property



6.0 - SITE RECONNAISSANCE

6.1 - Objectives

The objective of a site reconnaissance is to obtain information indicating the likelihood of identifying Recognized Environmental Conditions in connection with the Subject Property.

6.2 - Observations

A Site Reconnaissance was performed by David J. Tanner on May 8, 2020 beginning at 9:15 am. Weather was clear. Temperature was about 80° F. Winds were calm. The Subject Property was traversed on foot while searching for signs of recognized environmental conditions. Photographs (some shown on Figures 7 through 15) were taken to document the observed conditions.

Description: The Property is flat and has recently been disced. There are no structures. There were no vehicles or equipment on the Property. Scattered areas of municipal trash were observed on the Property. This included car tires, an old couch, a mattress, a chair, a blanket, pieces of insulation and pieces of plaster. There were no signs of recognized environmental conditions observed on the Property at the time of the Site Inspection.

Drainage: The Site is flat. Surface runoff appeared to drain to the south and east into a concrete "V" ditch that parallels Ramona Expressway along the southern edge of the Property.

Utilities: No signs of underground utilities were observed.

Endangered Species: No federally or State listed endangered species or other significant signs of wildlife were observed on the Property.

Vegetation: The entire site had been recently disked and was devoid of wildlife and vegetation.

Groundwater: No groundwater wells were observed on the Subject Property.

Odors: No odors were detected.

Soils: No sign of stressed vegetation or soil staining was observed on the Subject Property.

Staining: No soil staining, debris, dead vegetation or other signs of recognized environmental conditions were observed on or adjacent to the Subject Property.

Other Indicators: No dead vegetation, dead animals or noxious odors were noted. No visual evidence of above or below ground tanks or other signs of commercial or industrial activity was noted. No potential hazardous substances or industrial hazardous waste impacts were seen on the Subject Property. There was no visual indication that hazardous substances or petroleum products ever existed on the Subject Property.

6.3 - Interior Observations

There are no buildings on the Subject Property.

7.0 - INTERVIEWS

7.1 - Objective

The objective of interviews is to obtain information indicating recognized environmental conditions in connection with the Subject Property.

7.2 - Owner

The representative for the Property Owner was interviewed by email. See Section 4.0.

7.3 - Site Manager

There is no site manager.

7.4 - Occupant Interviews

There are no residents.

7.5 - Local Governments

EDR and GeoTracker searched available public records regarding the Subject Property.

7.6 - Others

Buyer/Real Estate Broker's Statement:

Joe McKay, Principal, JM Reality Group, 3535 Inland Empire Blvd., Ontario, CA 91764. Mr. McKay is the buyer of the Property. Mr. McKay was interviewed by phone on May 7, 2020 with a follow up phone conversation on May 8, 2020. Mr. McKay had no knowledge of any hazardous materials or recognized environmental conditions having ever existed on the Property.

Interviews with local businesses:

Staff Arco/Mini Mart, 4040 N Perris Blvd, Perris, CA 92571: Staff was interviewed on May 8, 2020. The Arco fueling station and Mini Mart is located adjacent to the Property on the southeast. Staff had no knowledge of any hazardous materials or recognized environmental conditions having ever existed on the Property.

Staff Shell/Mini Mart, 4039 N Perris Blvd, Perris, CA 92571: Staff was interviewed on May 8, 2020. The Shell fueling station and Mini Mart is located adjacent at the northeast corner of Ramona Expressway and Perris Blvd. southeast of the Property. Staff had no knowledge of any hazardous materials or recognized environmental conditions having ever existed on the Property.

Staff Circle K/Mini Mart, 3995 N Perris Blvd, Perris, CA 92571: Staff was interviewed on May 8, 2020. The Circle K fueling station and Mini Mart is located at the southeast corner of Ramona Expressway and Perris Blvd. southeast of the Property. Staff had no knowledge of any hazardous materials or recognized environmental conditions having ever existed on the Property.

8.0 - FINDINGS

The EDR and GeoTracker database searches found environmental reports for nearby properties. Upon review of these documents, no Recognized Environmental Conditions were identified on the Subject Property or nearby properties.

Based on the Site Reconnaissance and review of government agency records, historic aerial photos and other information sources, there is no evidence that hazardous substances or petroleum products existed on (or have migrated under) the Subject Property.

9.0 - OPINION

Based on a Site Reconnaissance, review of government agency records, historic aerial photos and other information, there is no evidence that hazardous substances or petroleum products exist above de minimus levels on the surface of Subject Property or that groundwater under the Subject Property has been contaminated from on or off-site sources.

10.0 - CONCLUSIONS

We have performed a Phase I Environmental Site Assessment Update in conformance with the scope and limitations of ASTM E-1527-13 for the Subject Property described herein. Any exceptions to or deletions from, this practice are described in Section 11.0 of this report.

Based on records searches, interviews, aerial photos and Site Reconnaissance, this assessment revealed there is no evidence of Recognized Environmental Conditions on the surface or in the groundwater below the Subject Property.

11.0 - DEVIATIONS

This Environmental Site Assessment was performed in accordance with industry standards of care and practice and in general conformity with ASTM E-1527-13 standards. We do not believe that we deviated from the ASTM standards in preparing this Phase I ESA report.

12.0 - DATA GAPS

Consistent with 40 CFR 312.21(c)(2), this Environmental Site Assessment was performed in accord with ASTM E-1527-13 standards. Historic aerial photographs and other sources establish a history for the Subject Property and surrounding area from 1938 until the recent satellite photo used by Google Earth. All data that was requested has been received. There are no "data gaps."

13.0 - ADDITIONAL ISSUES

No soil or radon testing was performed as a part of this Phase I ESA. None of the tests found by the EDR search yielded a reading above 4 pCi/L. The Subject Property is in an area considered to have a low occurrence of radon. However, radon levels are site-specific and only testing can determine the actual radon level.

14.0 - SIGNATURE OF ENVIRONMENTAL PROFESSIONAL

The conclusions and opinions developed herein were based in part on test data and reports provided by others and our professional judgment. Thus, the assessment contained herein is only valid as of the data of this report and may require an update to reflect additional sampling, testing or other information. No guarantee of the results of this study is made or implied. Our professional services were performed in accordance with the prevailing standard of care as practiced by other environmental professionals in this area of California. We make no other warranty, either expressed or implied.

I declare that, to the best of my professional knowledge and belief, I meet the definition of Environmental Professional as defined in 40 CFR Part 312.10.

I have qualifications based on education, training and experience to assess a property based on the nature, history and setting of the property. I have developed and performed the appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312.

Environmental Professional

David J. Tanner, President
Environmental & Regulatory Specialists, Inc.

15.0 - QUALIFICATIONS OF ENVIRONMENTAL PROFESSIONALS

The following persons were involved in the preparation of this ESA.

- **Project Director: Mr. David Tanner, Environmental Professional**

Mr. Tanner has served as consultant to the Building Industry since 1974 providing project management, entitlement processing and environmental services. He has extensive experience in the development of large-scale multi-use land-based projects. In addition to Project Management services, Mr. Tanner has prepared over 500 Environmental documents including Phase I Environmental Site Assessments, Program, Environmental Impact Reports, Environmental Impact Statements, Specific Plans, Planned Community Zoning Regulations, as well as specialized studies typically required as a part of the entitlements process. Mr. Tanner has been involved in the entitlement phase of more than 350 projects in the southern California area alone.

> Mr. Tanner was awarded the degree of Bachelor of Arts with a major in Environmental Studies, from the University of California, Santa Barbara on December 14, 1974
>
> Mr. Tanner was awarded registration as a Registered Environmental Assessor by the State of California Environmental Protection Agency in September 1992 (REA #04440). Mr. Tanner remained a REA until the program was discontinued by the State.
>
> Mr. Tanner was awarded a Certification in Environmental Site Assessment and Remediation from the University of California, Irvine on September 14, 1994
>
> Mr. Tanner has been a long-standing member of the Association of Environmental Professionals.

- **Technical Support, Graphics and Editing: Mr. Joe Tyndall**

Mr. Tyndall holds an engineering degree from MIT and an MBA from UC Irvine. Since 1998 when he began working with EARSI, under supervision of David Tanner and other REA certified professionals, Joe has contributed to the preparation of over 200 environmental documents including more than 50 Phase I Environmental Site Assessments.

APPENDICES

I - EDR Radius Map with GeoCheck, dated May 7, 2020

II - EDR Sanborn Map Report, dated May 7, 2020

III - EDR City Directory Image Report, dated May 11, 2020

IV - EDR Aerial Photo Decade Package, dated May 8, 2020

V - EDR Historical Topographic Map Report, dated May 7, 2020

VI - EDR Vapor Encroachment Screen - dated May 17, 2020

APPENDIX I

EDR Radius Map with GeoCheck, dated May 7, 2020

NW Corner Ramona Expy & N Perris Blvd
Not Reported
Perris, CA 92571

Inquiry Number: 6058931.2s
May 07, 2020

The EDR Radius Map™ Report with GeoCheck®

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

TABLE OF CONTENTS

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

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EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR). The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E 1527-13), the ASTM Standard Practice for Environmental Site Assessments for Forestland or Rural Property (E 2247-16), the ASTM Standard Practice for Limited Environmental Due Diligence: Transaction Screen Process (E 1528-14) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

TARGET PROPERTY INFORMATION

ADDRESS

NOT REPORTED
PERRIS, CA 92571

COORDINATES

Latitude (North):	33.8456250 - 33° 50' 44.25''
Longitude (West):	117.2285040 - 117° 13' 42.61''
Universal Tranverse Mercator:	Zone 11
UTM X (Meters):	478859.6
UTM Y (Meters):	3744869.0
Elevation:	1460 ft. above sea level

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property Map:	5641330 PERRIS, CA
Version Date:	2012

AERIAL PHOTOGRAPHY IN THIS REPORT

Portions of Photo from:	20140603
Source:	USDA

MAPPED SITES SUMMARY

Target Property Address:
NOT REPORTED
PERRIS, CA 92571

Click on Map ID to see full detail.

MAP ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	RELATIVE ELEVATION	DIST (ft. & mi.) DIRECTION
A1	LOWE'S #966	3984 INDIAN AVE	AST	Higher	211, 0.040, SW
A2	LOWE'S #966	3984 INDIAN AVE	RCRA-LQG, FINDS, ECHO	Higher	211, 0.040, SW
A3	HEALTHWORKS MED GROU	3984 INDIAN AVE	RCRA NonGen / NLR	Higher	211, 0.040, SW
A4	LOWE'S #966	3984 INDIAN AVE	CERS HAZ WASTE, CERS TANKS, CERS	Higher	211, 0.040, SW
B5	SAFAR & SAFAR BROTHE	4040 N PERRIS BLVD	UST	Lower	222, 0.042, ESE
B6		4040 N PERRIS BLVD	RCRA NonGen / NLR	Lower	222, 0.042, ESE
B7	SAFARI SAFARI BROTHE	4040 N PERRIS BLVD	EDR Hist Auto	Lower	222, 0.042, ESE
B8	EXPRESS AM PM	4040 N PERRIS BLVD	CERS HAZ WASTE, CERS TANKS, HAZNET, CERS, HWTS	Lower	222, 0.042, ESE
B9	TEXACO CNVENIENCE ST	4039 N PERRIS BLVD	EDR Hist Auto	Lower	225, 0.043, East
B10	TESORO (SHELL) 68585	4039 N PERRIS BLVD	UST	Lower	225, 0.043, East
B11	TESORO SHELL 68585	4039 N PERRIS BLVD	RCRA NonGen / NLR	Lower	225, 0.043, East
B12	TEXACO SERVICE STATI	4039 N PERRIS	LUST, CERS HAZ WASTE, CERS TANKS, RCRA NonGen /...	Lower	225, 0.043, East
C13	UNITED FACILITIES IN	4120 INDIAN AVE	CERS HAZ WASTE, CERS TANKS, CERS	Higher	322, 0.061, NW
C14	UNITED FACILITIES IN	4120 INDIAN AVE	RCRA NonGen / NLR	Higher	322, 0.061, NW
D15	MOBIL #18-BLN	3995 PERRIS BLVD	SWEEPS UST, CA FID UST	Lower	405, 0.077, ESE
D16	MOBIL STATION #18-BL	3995 PERRIS BLVD	UST	Lower	405, 0.077, ESE
D17	CIRCLE K STORE #2709	3995 N PERRIS BLVD	RCRA NonGen / NLR	Lower	523, 0.099, ESE
D18	MOBIL #18-BLN	3995 N PERRIS BLVD.	LUST, CERS	Lower	523, 0.099, ESE
D19	CIRCLE K STORES INC.	3995 N PERRIS BLVD	CERS HAZ WASTE, CERS TANKS, CHMIRS, CERS	Lower	523, 0.099, ESE
D20	EXXON MOBIL OIL COPR	3995 N PERRIS BLVD	RCRA-SQG, UST, FINDS, ECHO	Lower	523, 0.099, ESE
D21	MOBIL #18-BLN	3995 NORTH PERRIS BL	LUST	Lower	523, 0.099, ESE
D22	MOBIL #18-BLN	3995 N PERRIS BLVD	LUST, CHMIRS	Lower	523, 0.099, ESE
D23	EXXON MOBIL CORPORAT	3995 N PERRIS BLVD	EDR Hist Auto	Lower	523, 0.099, ESE
E24	G HURTADO CONSTRUCTI	77 W PERRY ST	RCRA NonGen / NLR	Lower	591, 0.112, NNE
F25	JIFFY LUBE #3294	118 E RAMONA EXPRESS	AST	Lower	592, 0.112, East
F26	JIFFY LUBE #3294	118 E RAMONA EXPRESS	CERS HAZ WASTE, CERS TANKS, CERS	Lower	592, 0.112, East
F27	JIFFY LUBE #3294	118 RAMONA EXPY	RCRA NonGen / NLR	Lower	592, 0.112, East
E28	EMWD PERRY WELL #56	303 PERRY ST	RCRA-SQG, FINDS	Higher	607, 0.115, North
29	BEST FOR LESS TIRES	3865 N PERRIS BLVD U	CERS HAZ WASTE, HAZNET, CERS, HWTS	Lower	857, 0.162, SE
G30	ROSS STORES, INC.	4378 N PERRIS BLVD	RCRA NonGen / NLR	Higher	1305, 0.247, North
G31	ROSS STORES INC	4378 N PERRIS BLVD	CERS HAZ WASTE, HAZNET, CIWQS, CERS, HWTS	Higher	1305, 0.247, North
G32	ROSS STORES INC	4378 N PERRIS BLVD	RCRA NonGen / NLR	Higher	1305, 0.247, North
33	MEADE VALLEY ELEMENT	21-100 OLEANDER AVEN	ENVIROSTOR, SCH	Higher	4127, 0.782, NNE

EXECUTIVE SUMMARY

TARGET PROPERTY SEARCH RESULTS

The target property was not listed in any of the databases searched by EDR.

DATABASES WITH NO MAPPED SITES

No mapped sites were found in EDR's search of available ("reasonably ascertainable ") government records either on the target property or within the search radius around the target property for the following databases:

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL ---------- National Priority List
Proposed NPL ---------- Proposed National Priority List Sites
NPL LIENS ---------- Federal Superfund Liens

Federal Delisted NPL site list

Delisted NPL ---------- National Priority List Deletions

Federal CERCLIS list

FEDERAL FACILITY ---------- Federal Facility Site Information listing
SEMS ---------- Superfund Enterprise Management System

Federal CERCLIS NFRAP site list

SEMS-ARCHIVE ---------- Superfund Enterprise Management System Archive

Federal RCRA CORRACTS facilities list

CORRACTS ---------- Corrective Action Report

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF ---------- RCRA - Treatment, Storage and Disposal

Federal RCRA generators list

RCRA-VSQG ---------- RCRA - Very Small Quantity Generators (Formerly Conditionally Exempt Small Quantity Generators)

Federal institutional controls / engineering controls registries

LUCIS ---------- Land Use Control Information System
US ENG CONTROLS ---------- Engineering Controls Sites List
US INST CONTROLS ---------- Institutional Controls Sites List

EXECUTIVE SUMMARY

Federal ERNS list

ERNS ---------- Emergency Response Notification System

State- and tribal - equivalent NPL

RESPONSE ---------- State Response Sites

State and tribal landfill and/or solid waste disposal site lists

SWF/LF ---------- Solid Waste Information System

State and tribal leaking storage tank lists

INDIAN LUST ---------- Leaking Underground Storage Tanks on Indian Land
CPS-SLIC ---------- Statewide SLIC Cases

State and tribal registered storage tank lists

FEMA UST ---------- Underground Storage Tank Listing
INDIAN UST ---------- Underground Storage Tanks on Indian Land

State and tribal voluntary cleanup sites

INDIAN VCP ---------- Voluntary Cleanup Priority Listing
VCP ---------- Voluntary Cleanup Program Properties

State and tribal Brownfields sites

BROWNFIELDS ---------- Considered Brownfieds Sites Listing

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS ---------- A Listing of Brownfields Sites

Local Lists of Landfill / Solid Waste Disposal Sites

WMUDS/SWAT ---------- Waste Management Unit Database
SWRCY ---------- Recycler Database
HAULERS ---------- Registered Waste Tire Haulers Listing
INDIAN ODI ---------- Report on the Status of Open Dumps on Indian Lands
ODI ---------- Open Dump Inventory
DEBRIS REGION 9 ---------- Torres Martinez Reservation Illegal Dump Site Locations
IHS OPEN DUMPS ---------- Open Dumps on Indian Land

Local Lists of Hazardous waste / Contaminated Sites

US HIST CDL ---------- Delisted National Clandestine Laboratory Register
HIST Cal-Sites ---------- Historical Calsites Database
SCH ---------- School Property Evaluation Program
CDL ---------- Clandestine Drug Labs

EXECUTIVE SUMMARY

Toxic Pits ---- Toxic Pits Cleanup Act Sites
US CDL ---- National Clandestine Laboratory Register
PFAS ---- PFAS Contamination Site Location Listing

Local Lists of Registered Storage Tanks

HIST UST ---- Hazardous Substance Storage Container Database

Local Land Records

LIENS ---- Environmental Liens Listing
LIENS 2 ---- CERCLA Lien Information
DEED ---- Deed Restriction Listing

Records of Emergency Release Reports

HMIRS ---- Hazardous Materials Information Reporting System
CHMIRS ---- California Hazardous Material Incident Report System
LDS ---- Land Disposal Sites Listing
MCS ---- Military Cleanup Sites Listing
SPILLS 90 ---- SPILLS 90 data from FirstSearch

Other Ascertainable Records

FUDS ---- Formerly Used Defense Sites
DOD ---- Department of Defense Sites
SCRD DRYCLEANERS ---- State Coalition for Remediation of Drycleaners Listing
US FIN ASSUR ---- Financial Assurance Information
EPA WATCH LIST ---- EPA WATCH LIST
2020 COR ACTION ---- 2020 Corrective Action Program List
TSCA ---- Toxic Substances Control Act
TRIS ---- Toxic Chemical Release Inventory System
SSTS ---- Section 7 Tracking Systems
ROD ---- Records Of Decision
RMP ---- Risk Management Plans
RAATS ---- RCRA Administrative Action Tracking System
PRP ---- Potentially Responsible Parties
PADS ---- PCB Activity Database System
ICIS ---- Integrated Compliance Information System
FTTS ---- FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
MLTS ---- Material Licensing Tracking System
COAL ASH DOE ---- Steam-Electric Plant Operation Data
COAL ASH EPA ---- Coal Combustion Residues Surface Impoundments List
PCB TRANSFORMER ---- PCB Transformer Registration Database
RADINFO ---- Radiation Information Database
HIST FTTS ---- FIFRA/TSCA Tracking System Administrative Case Listing
DOT OPS ---- Incident and Accident Data
CONSENT ---- Superfund (CERCLA) Consent Decrees
INDIAN RESERV ---- Indian Reservations
FUSRAP ---- Formerly Utilized Sites Remedial Action Program
UMTRA ---- Uranium Mill Tailings Sites
LEAD SMELTERS ---- Lead Smelter Sites
US AIRS ---- Aerometric Information Retrieval System Facility Subsystem
US MINES ---- Mines Master Index File

EXECUTIVE SUMMARY

ABANDONED MINES - Abandoned Mines
FINDS - Facility Index System/Facility Registry System
DOCKET HWC - Hazardous Waste Compliance Docket Listing
UXO - Unexploded Ordnance Sites
ECHO - Enforcement & Compliance History Information
FUELS PROGRAM - EPA Fuels Program Registered Listing
CA BOND EXP. PLAN - Bond Expenditure Plan
Cortese - "Cortese" Hazardous Waste & Substances Sites List
CUPA Listings - CUPA Resources List
DRYCLEANERS - Cleaner Facilities
EMI - Emissions Inventory Data
ENF - Enforcement Action Listing
Financial Assurance - Financial Assurance Information Listing
HAZNET - Facility and Manifest Data
ICE - ICE
HIST CORTESE - Hazardous Waste & Substance Site List
HWP - EnviroStor Permitted Facilities Listing
HWT - Registered Hazardous Waste Transporter Database
MINES - Mines Site Location Listing
MWMP - Medical Waste Management Program Listing
NPDES - NPDES Permits Listing
PEST LIC - Pesticide Regulation Licenses Listing
PROC - Certified Processors Database
Notify 65 - Proposition 65 Records
UIC - UIC Listing
UIC GEO - UIC GEO (GEOTRACKER)
WASTEWATER PITS - Oil Wastewater Pits Listing
WDS - Waste Discharge System
WIP - Well Investigation Program Case List
MILITARY PRIV SITES - MILITARY PRIV SITES (GEOTRACKER)
PROJECT - PROJECT (GEOTRACKER)
WDR - Waste Discharge Requirements Listing
CIWQS - California Integrated Water Quality System
CERS - CERS
NON-CASE INFO - NON-CASE INFO (GEOTRACKER)
OTHER OIL GAS - OTHER OIL & GAS (GEOTRACKER)
PROD WATER PONDS - PROD WATER PONDS (GEOTRACKER)
SAMPLING POINT - SAMPLING POINT (GEOTRACKER)
WELL STIM PROJ - Well Stimulation Project (GEOTRACKER)
HWTS - Hazardous Waste Tracking System
MINES MRDS - Mineral Resources Data System

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP - EDR Proprietary Manufactured Gas Plants
EDR Hist Cleaner - EDR Exclusive Historical Cleaners

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA LF - Recovered Government Archive Solid Waste Facilities List

EXECUTIVE SUMMARY

RGA LUST---------- Recovered Government Archive Leaking Underground Storage Tank

SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified in the following databases.

Elevations have been determined from the USGS Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified. Sites with an elevation equal to or higher than the target property have been differentiated below from sites with an elevation lower than the target property.
Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in ***bold italics*** are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

STANDARD ENVIRONMENTAL RECORDS

Federal RCRA generators list

RCRA-LQG: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

A review of the RCRA-LQG list, as provided by EDR, and dated 12/16/2019 has revealed that there is 1 RCRA-LQG site within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
LOWE'S #966 EPA ID:: CAR000096867	***3984 INDIAN AVE***	***SW 0 - 1/8 (0.040 mi.)***	***A2***	***9***

RCRA-SQG: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

A review of the RCRA-SQG list, as provided by EDR, and dated 12/16/2019 has revealed that there are 2 RCRA-SQG sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
EMWD PERRY WELL #56 EPA ID:: CAR000159327	***303 PERRY ST***	***N 0 - 1/8 (0.115 mi.)***	***E28***	***118***

Lower Elevation	Address	Direction / Distance	Map ID	Page
EXXON MOBIL OIL COPR EPA ID:: CAL000055799	***3995 N PERRIS BLVD***	***ESE 0 - 1/8 (0.099 mi.)***	***D20***	***101***

State- and tribal - equivalent CERCLIS

ENVIROSTOR: The Department of Toxic Substances Control's (DTSC's) Site Mitigation and Brownfields Reuse Program's (SMBRP's) EnviroStor database identifes sites that have known contamination or sites for which there may be reasons to investigate further. The database includes the following site types: Federal Superfund sites (National Priorities List (NPL)); State Response, including Military Facilities and State Superfund; Voluntary Cleanup; and School sites. EnviroStor provides similar information to the information that was available in CalSites, and provides additional site information, including, but not limited to, identification of formerly-contaminated properties that have been released for reuse, properties where environmental deed restrictions have been recorded to prevent inappropriate land uses, and risk characterization information that is used to assess potential impacts to public health and the environment at contaminated sites.

A review of the ENVIROSTOR list, as provided by EDR, and dated 01/27/2020 has revealed that there is 1 ENVIROSTOR site within approximately 1 mile of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
MEADE VALLEY ELEMENT	***21-100 OLEANDER AVEN***	***NNE 1/2 - 1 (0.782 mi.)***	***33***	***157***
Facility Id: 33820011				
Status: No Action Required				

State and tribal leaking storage tank lists

LUST: Leaking Underground Storage Tank (LUST) Sites included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

A review of the LUST list, as provided by EDR, has revealed that there are 4 LUST sites within approximately 0.5 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
TEXACO SERVICE STATI	***4039 N PERRIS***	***E 0 - 1/8 (0.043 mi.)***	***B12***	***51***
Database: LUST, Date of Government Version: 12/09/2019				
Database: RIVERSIDE CO. LUST, Date of Government Version: 10/17/2019				
Status: Completed - Case Closed				
Facility Id: 200723493				
Global Id: T0606524504				
Facility Status: 9				
MOBIL #18-BLN	***3995 N PERRIS BLVD.***	***ESE 0 - 1/8 (0.099 mi.)***	***D18***	***89***
Database: LUST, Date of Government Version: 12/09/2019				
Status: Completed - Case Closed				
Global Id: T0606505176				
MOBIL #18-BLN	3995 NORTH PERRIS BL	ESE 0 - 1/8 (0.099 mi.)	D21	103
Database: LUST REG 8, Date of Government Version: 02/14/2005				
Facility Status: Case Closed				
Global ID: T0606505176				
MOBIL #18-BLN	***3995 N PERRIS BLVD***	***ESE 0 - 1/8 (0.099 mi.)***	***D22***	***104***
Database: RIVERSIDE CO. LUST, Date of Government Version: 10/17/2019				
Facility Id: 200117733				
Facility Status: 9				

State and tribal registered storage tank lists

UST: The Underground Storage Tank database contains registered USTs. USTs are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA). The data come from the State Water Resources Control Board's Hazardous Substance Storage Container Database.

A review of the UST list, as provided by EDR, has revealed that there are 4 UST sites within approximately 0.25 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
SAFAR & SAFAR BROTHE	4040 N PERRIS BLVD	ESE 0 - 1/8 (0.042 mi.)	B5	22
Database: UST, Date of Government Version: 12/09/2019				
Database: RIVERSIDE CO. UST, Date of Government Version: 10/17/2019				
TESORO (SHELL) 68585	4039 N PERRIS BLVD	E 0 - 1/8 (0.043 mi.)	B10	50
Database: UST, Date of Government Version: 12/09/2019				
Database: RIVERSIDE CO. UST, Date of Government Version: 10/17/2019				
Facility Id: 753				
Facility Id: FA0019645				
MOBIL STATION #18-BL	3995 PERRIS BLVD	ESE 0 - 1/8 (0.077 mi.)	D16	88
Database: UST, Date of Government Version: 12/09/2019				
Facility Id: 512				
EXXON MOBIL OIL COPR	***3995 N PERRIS BLVD***	***ESE 0 - 1/8 (0.099 mi.)***	***D20***	***101***
Database: UST, Date of Government Version: 12/09/2019				
Database: RIVERSIDE CO. UST, Date of Government Version: 10/17/2019				
Facility Id: FA0036723				

AST: A listing of aboveground storage tank petroleum storage tank locations.

A review of the AST list, as provided by EDR, has revealed that there are 2 AST sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
LOWE'S #966	3984 INDIAN AVE	SW 0 - 1/8 (0.040 mi.)	A1	9
Database: AST, Date of Government Version: 07/06/2016				

Lower Elevation	Address	Direction / Distance	Map ID	Page
JIFFY LUBE #3294	118 E RAMONA EXPRESS	E 0 - 1/8 (0.112 mi.)	F25	107
Database: AST, Date of Government Version: 07/06/2016				

ADDITIONAL ENVIRONMENTAL RECORDS

Local Lists of Hazardous waste / Contaminated Sites

CERS HAZ WASTE: List of sites in the California Environmental Protection Agency (CalEPA) Regulated Site Portal which fall under the Hazardous Chemical Management, Hazardous Waste Onsite Treatment, Household Hazardous Waste Collection, Hazardous Waste Generator, and RCRA LQ HW Generator programs.

A review of the CERS HAZ WASTE list, as provided by EDR, and dated 01/21/2020 has revealed that there

are 8 CERS HAZ WASTE sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
LOWE'S #966	*3984 INDIAN AVE*	*SW 0 - 1/8 (0.040 mi.)*	*A4*	*16*
UNITED FACILITIES IN	*4120 INDIAN AVE*	*NW 0 - 1/8 (0.061 mi.)*	*C13*	*79*
ROSS STORES INC	*4378 N PERRIS BLVD*	*N 1/8 - 1/4 (0.247 mi.)*	*G31*	*143*

Lower Elevation	Address	Direction / Distance	Map ID	Page
EXPRESS AM PM	*4040 N PERRIS BLVD*	*ESE 0 - 1/8 (0.042 mi.)*	*B8*	*24*
TEXACO SERVICE STATI	*4039 N PERRIS*	*E 0 - 1/8 (0.043 mi.)*	*B12*	*51*
CIRCLE K STORES INC.	*3995 N PERRIS BLVD*	*ESE 0 - 1/8 (0.099 mi.)*	*D19*	*91*
JIFFY LUBE #3294	*118 E RAMONA EXPRESS*	*E 0 - 1/8 (0.112 mi.)*	*F26*	*108*
BEST FOR LESS TIRES	*3865 N PERRIS BLVD U*	*SE 1/8 - 1/4 (0.162 mi.)*	*29*	*120*

Local Lists of Registered Storage Tanks

SWEEPS UST: Statewide Environmental Evaluation and Planning System. This underground storage tank listing was updated and maintained by a company contacted by the SWRCB in the early 1990's. The listing is no longer updated or maintained. The local agency is the contact for more information on a site on the SWEEPS list.

A review of the SWEEPS UST list, as provided by EDR, and dated 06/01/1994 has revealed that there is 1 SWEEPS UST site within approximately 0.25 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
MOBIL #18-BLN Status: A Tank Status: A Comp Number: 39996	*3995 PERRIS BLVD*	*ESE 0 - 1/8 (0.077 mi.)*	*D15*	*86*

CERS TANKS: List of sites in the California Environmental Protection Agency (CalEPA) Regulated Site Portal which fall under the Aboveground Petroleum Storage and Underground Storage Tank regulatory programs.

A review of the CERS TANKS list, as provided by EDR, and dated 01/21/2020 has revealed that there are 6 CERS TANKS sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
LOWE'S #966	*3984 INDIAN AVE*	*SW 0 - 1/8 (0.040 mi.)*	*A4*	*16*
UNITED FACILITIES IN	*4120 INDIAN AVE*	*NW 0 - 1/8 (0.061 mi.)*	*C13*	*79*

Lower Elevation	Address	Direction / Distance	Map ID	Page
EXPRESS AM PM	*4040 N PERRIS BLVD*	*ESE 0 - 1/8 (0.042 mi.)*	*B8*	*24*
TEXACO SERVICE STATI	*4039 N PERRIS*	*E 0 - 1/8 (0.043 mi.)*	*B12*	*51*
CIRCLE K STORES INC.	*3995 N PERRIS BLVD*	*ESE 0 - 1/8 (0.099 mi.)*	*D19*	*91*
JIFFY LUBE #3294	*118 E RAMONA EXPRESS*	*E 0 - 1/8 (0.112 mi.)*	*F26*	*108*

CA FID UST: The Facility Inventory Database contains active and inactive underground storage tank locations. The source is the State Water Resource Control Board.

A review of the CA FID UST list, as provided by EDR, and dated 10/31/1994 has revealed that there is 1 CA FID UST site within approximately 0.25 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
MOBIL #18-BLN Facility Id: 33007030 Status: A	***3995 PERRIS BLVD***	***ESE 0 - 1/8 (0.077 mi.)***	***D15***	***86***

Other Ascertainable Records

RCRA NonGen / NLR: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

A review of the RCRA NonGen / NLR list, as provided by EDR, and dated 12/16/2019 has revealed that there are 10 RCRA NonGen / NLR sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
HEALTHWORKS MED GROU EPA ID:: CAL000445422	3984 INDIAN AVE	SW 0 - 1/8 (0.040 mi.)	A3	14
UNITED FACILITIES IN EPA ID:: CAC002971221	4120 INDIAN AVE	NW 0 - 1/8 (0.061 mi.)	C14	85
ROSS STORES, INC. EPA ID:: CAC002970732	4378 N PERRIS BLVD	N 1/8 - 1/4 (0.247 mi.)	G30	142
ROSS STORES INC EPA ID:: CAL000394795	4378 N PERRIS BLVD	N 1/8 - 1/4 (0.247 mi.)	G32	155

Lower Elevation	Address	Direction / Distance	Map ID	Page
Not reported EPA ID:: CAL000341521	4040 N PERRIS BLVD	ESE 0 - 1/8 (0.042 mi.)	B6	22
TESORO SHELL 68585 EPA ID:: CAL000321813	4039 N PERRIS BLVD	E 0 - 1/8 (0.043 mi.)	B11	50
TEXACO SERVICE STATI EPA ID:: CAR000125716	***4039 N PERRIS***	***E 0 - 1/8 (0.043 mi.)***	***B12***	***51***
CIRCLE K STORE #2709 EPA ID:: CAL000369454	3995 N PERRIS BLVD	ESE 0 - 1/8 (0.099 mi.)	D17	88
G HURTADO CONSTRUCTI EPA ID:: CAL000436785	77 W PERRY ST	NNE 0 - 1/8 (0.112 mi.)	E24	106
JIFFY LUBE #3294 EPA ID:: CAL000325687	118 RAMONA EXPY	E 0 - 1/8 (0.112 mi.)	F27	117

EXECUTIVE SUMMARY

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR Hist Auto: EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

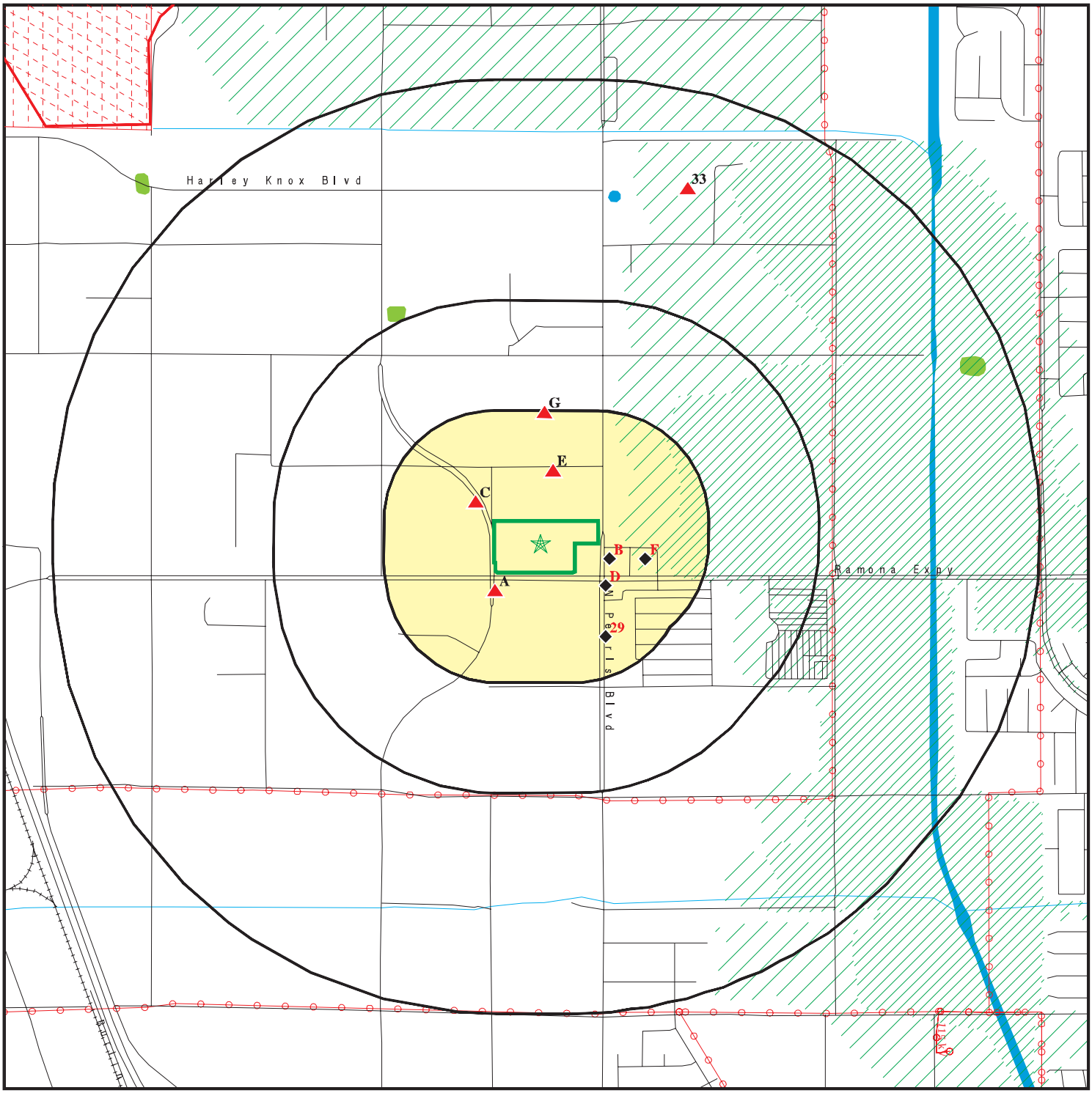
A review of the EDR Hist Auto list, as provided by EDR, has revealed that there are 3 EDR Hist Auto sites within approximately 0.125 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
SAFARI SAFARI BROTHE	4040 N PERRIS BLVD	ESE 0 - 1/8 (0.042 mi.)	B7	23
TEXACO CNVENIENCE ST	4039 N PERRIS BLVD	E 0 - 1/8 (0.043 mi.)	B9	49
EXXON MOBIL CORPORAT	3995 N PERRIS BLVD	ESE 0 - 1/8 (0.099 mi.)	D23	106

EXECUTIVE SUMMARY

There were no unmapped sites in this report.

OVERVIEW MAP - 6058931.2S



- Target Property
- Sites at elevations higher than or equal to the target property
- Sites at elevations lower than the target property
- Manufactured Gas Plants
- National Priority List Sites
- Dept. Defense Sites

0 1/4 1/2 1 Miles

- Indian Reservations BIA
- Power transmission lines
- Special Flood Hazard Area (1%)
- 0.2% Annual Chance Flood Hazard
- National Wetland Inventory
- State Wetlands
- Areas of Concern

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME:	NW Corner Ramona Expy & N Perris Blvd	CLIENT:	Environmental & Regulatory Specialists, Inc.
ADDRESS:	Not Reported Perris CA 92571	CONTACT:	Joe Tyndall
LAT/LONG:	33.845625 / 117.228504	INQUIRY #:	6058931.2s
		DATE:	May 07, 2020 5:32 pm

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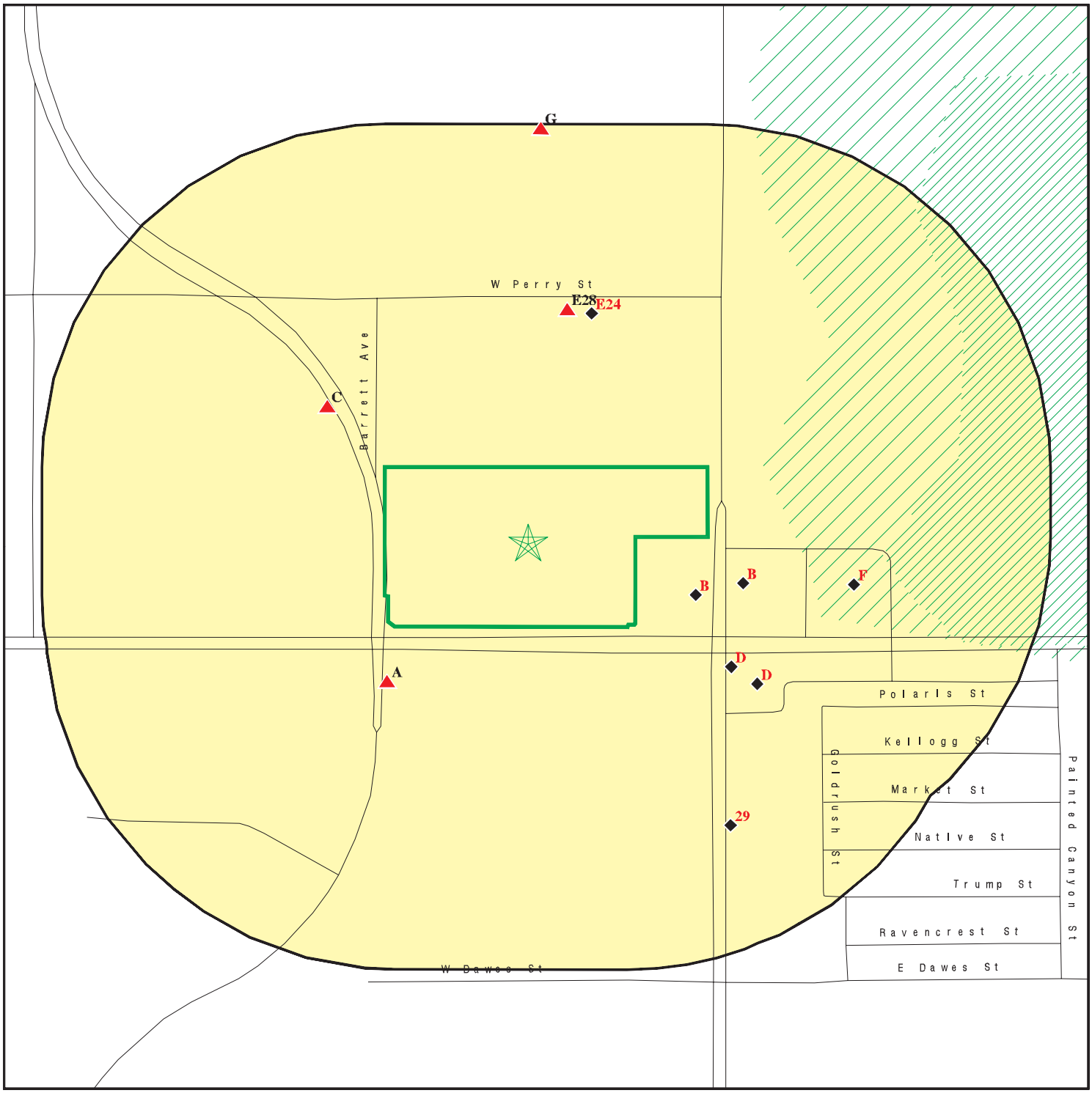
DETAIL MAP - 6058931.2S



Target Property

Sites at elevations higher than or equal to the target property

Sites at elevations lower than the target property

Manufactured Gas Plants

Sensitive Receptors

National Priority List Sites

Dept. Defense Sites

0 1/16 1/8 1/4 Miles

Indian Reservations BIA

Special Flood Hazard Area (1%)

0.2% Annual Chance Flood Hazard

Areas of Concern

N

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SITE NAME:	NW Corner Ramona Expy & N Perris Blvd	CLIENT:	Environmental & Regulatory Specialists, Inc.
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LAT/LONG:	33.845625 / 117.228504	INQUIRY #:	6058931.2s
		DATE:	May 07, 2020 5:33 pm

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MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
STANDARD ENVIRONMENTAL RECORDS								
Federal NPL site list								
NPL	1.000		0	0	0	0	NR	0
Proposed NPL	1.000		0	0	0	0	NR	0
NPL LIENS	1.000		0	0	0	0	NR	0
Federal Delisted NPL site list								
Delisted NPL	1.000		0	0	0	0	NR	0
Federal CERCLIS list								
FEDERAL FACILITY	0.500		0	0	0	NR	NR	0
SEMS	0.500		0	0	0	NR	NR	0
Federal CERCLIS NFRAP site list								
SEMS-ARCHIVE	0.500		0	0	0	NR	NR	0
Federal RCRA CORRACTS facilities list								
CORRACTS	1.000		0	0	0	0	NR	0
Federal RCRA non-CORRACTS TSD facilities list								
RCRA-TSDF	0.500		0	0	0	NR	NR	0
Federal RCRA generators list								
RCRA-LQG	0.250		1	0	NR	NR	NR	1
RCRA-SQG	0.250		2	0	NR	NR	NR	2
RCRA-VSQG	0.250		0	0	NR	NR	NR	0
Federal institutional controls / engineering controls registries								
LUCIS	0.500		0	0	0	NR	NR	0
US ENG CONTROLS	0.500		0	0	0	NR	NR	0
US INST CONTROLS	0.500		0	0	0	NR	NR	0
Federal ERNS list								
ERNS	0.001		0	NR	NR	NR	NR	0
State- and tribal - equivalent NPL								
RESPONSE	1.000		0	0	0	0	NR	0
State- and tribal - equivalent CERCLIS								
ENVIROSTOR	1.000		0	0	0	1	NR	1
State and tribal landfill and/or solid waste disposal site lists								
SWF/LF	0.500		0	0	0	NR	NR	0
State and tribal leaking storage tank lists								
LUST	0.500		4	0	0	NR	NR	4

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
INDIAN LUST	0.500		0	0	0	NR	NR	0
CPS-SLIC	0.500		0	0	0	NR	NR	0
State and tribal registered storage tank lists								
FEMA UST	0.250		0	0	NR	NR	NR	0
UST	0.250		4	0	NR	NR	NR	4
AST	0.250		2	0	NR	NR	NR	2
INDIAN UST	0.250		0	0	NR	NR	NR	0
State and tribal voluntary cleanup sites								
INDIAN VCP	0.500		0	0	0	NR	NR	0
VCP	0.500		0	0	0	NR	NR	0
State and tribal Brownfields sites								
BROWNFIELDS	0.500		0	0	0	NR	NR	0
ADDITIONAL ENVIRONMENTAL RECORDS								
Local Brownfield lists								
US BROWNFIELDS	0.500		0	0	0	NR	NR	0
Local Lists of Landfill / Solid Waste Disposal Sites								
WMUDS/SWAT	0.500		0	0	0	NR	NR	0
SWRCY	0.500		0	0	0	NR	NR	0
HAULERS	0.001		0	NR	NR	NR	NR	0
INDIAN ODI	0.500		0	0	0	NR	NR	0
ODI	0.500		0	0	0	NR	NR	0
DEBRIS REGION 9	0.500		0	0	0	NR	NR	0
IHS OPEN DUMPS	0.500		0	0	0	NR	NR	0
Local Lists of Hazardous waste / Contaminated Sites								
US HIST CDL	0.001		0	NR	NR	NR	NR	0
HIST Cal-Sites	1.000		0	0	0	0	NR	0
SCH	0.250		0	0	NR	NR	NR	0
CDL	0.001		0	NR	NR	NR	NR	0
CERS HAZ WASTE	0.250		6	2	NR	NR	NR	8
Toxic Pits	1.000		0	0	0	0	NR	0
US CDL	0.001		0	NR	NR	NR	NR	0
PFAS	0.500		0	0	0	NR	NR	0
Local Lists of Registered Storage Tanks								
SWEEPS UST	0.250		1	0	NR	NR	NR	1
HIST UST	0.250		0	0	NR	NR	NR	0
CERS TANKS	0.250		6	0	NR	NR	NR	6
CA FID UST	0.250		1	0	NR	NR	NR	1
Local Land Records								
LIENS	0.001		0	NR	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
LIENS 2	0.001		0	NR	NR	NR	NR	0
DEED	0.500		0	0	0	NR	NR	0
Records of Emergency Release Reports								
HMIRS	0.001		0	NR	NR	NR	NR	0
CHMIRS	0.001		0	NR	NR	NR	NR	0
LDS	0.001		0	NR	NR	NR	NR	0
MCS	0.001		0	NR	NR	NR	NR	0
SPILLS 90	0.001		0	NR	NR	NR	NR	0
Other Ascertainable Records								
RCRA NonGen / NLR	0.250		8	2	NR	NR	NR	10
FUDS	1.000		0	0	0	0	NR	0
DOD	1.000		0	0	0	0	NR	0
SCRD DRYCLEANERS	0.500		0	0	0	NR	NR	0
US FIN ASSUR	0.001		0	NR	NR	NR	NR	0
EPA WATCH LIST	0.001		0	NR	NR	NR	NR	0
2020 COR ACTION	0.250		0	0	NR	NR	NR	0
TSCA	0.001		0	NR	NR	NR	NR	0
TRIS	0.001		0	NR	NR	NR	NR	0
SSTS	0.001		0	NR	NR	NR	NR	0
ROD	1.000		0	0	0	0	NR	0
RMP	0.001		0	NR	NR	NR	NR	0
RAATS	0.001		0	NR	NR	NR	NR	0
PRP	0.001		0	NR	NR	NR	NR	0
PADS	0.001		0	NR	NR	NR	NR	0
ICIS	0.001		0	NR	NR	NR	NR	0
FTTS	0.001		0	NR	NR	NR	NR	0
MLTS	0.001		0	NR	NR	NR	NR	0
COAL ASH DOE	0.001		0	NR	NR	NR	NR	0
COAL ASH EPA	0.500		0	0	0	NR	NR	0
PCB TRANSFORMER	0.001		0	NR	NR	NR	NR	0
RADINFO	0.001		0	NR	NR	NR	NR	0
HIST FTTS	0.001		0	NR	NR	NR	NR	0
DOT OPS	0.001		0	NR	NR	NR	NR	0
CONSENT	1.000		0	0	0	0	NR	0
INDIAN RESERV	1.000		0	0	0	0	NR	0
FUSRAP	1.000		0	0	0	0	NR	0
UMTRA	0.500		0	0	0	NR	NR	0
LEAD SMELTERS	0.001		0	NR	NR	NR	NR	0
US AIRS	0.001		0	NR	NR	NR	NR	0
US MINES	0.250		0	0	NR	NR	NR	0
ABANDONED MINES	0.250		0	0	NR	NR	NR	0
FINDS	0.001		0	NR	NR	NR	NR	0
DOCKET HWC	0.001		0	NR	NR	NR	NR	0
UXO	1.000		0	0	0	0	NR	0
ECHO	0.001		0	NR	NR	NR	NR	0
FUELS PROGRAM	0.250		0	0	NR	NR	NR	0
CA BOND EXP. PLAN	1.000		0	0	0	0	NR	0
Cortese	0.500		0	0	0	NR	NR	0
CUPA Listings	0.250		0	0	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
DRYCLEANERS	0.250		0	0	NR	NR	NR	0
EMI	0.001		0	NR	NR	NR	NR	0
ENF	0.001		0	NR	NR	NR	NR	0
Financial Assurance	0.001		0	NR	NR	NR	NR	0
HAZNET	0.001		0	NR	NR	NR	NR	0
ICE	0.001		0	NR	NR	NR	NR	0
HIST CORTESE	0.500		0	0	0	NR	NR	0
HWP	1.000		0	0	0	0	NR	0
HWT	0.250		0	0	NR	NR	NR	0
MINES	0.250		0	0	NR	NR	NR	0
MWMP	0.250		0	0	NR	NR	NR	0
NPDES	0.001		0	NR	NR	NR	NR	0
PEST LIC	0.001		0	NR	NR	NR	NR	0
PROC	0.500		0	0	0	NR	NR	0
Notify 65	1.000		0	0	0	0	NR	0
UIC	0.001		0	NR	NR	NR	NR	0
UIC GEO	0.001		0	NR	NR	NR	NR	0
WASTEWATER PITS	0.500		0	0	0	NR	NR	0
WDS	0.001		0	NR	NR	NR	NR	0
WIP	0.250		0	0	NR	NR	NR	0
MILITARY PRIV SITES	0.001		0	NR	NR	NR	NR	0
PROJECT	0.001		0	NR	NR	NR	NR	0
WDR	0.001		0	NR	NR	NR	NR	0
CIWQS	0.001		0	NR	NR	NR	NR	0
CERS	0.001		0	NR	NR	NR	NR	0
NON-CASE INFO	0.001		0	NR	NR	NR	NR	0
OTHER OIL GAS	0.001		0	NR	NR	NR	NR	0
PROD WATER PONDS	0.001		0	NR	NR	NR	NR	0
SAMPLING POINT	0.001		0	NR	NR	NR	NR	0
WELL STIM PROJ	0.001		0	NR	NR	NR	NR	0
HWTS	TP		NR	NR	NR	NR	NR	0
MINES MRDS	0.001		0	NR	NR	NR	NR	0
EDR HIGH RISK HISTORICAL RECORDS								
EDR Exclusive Records								
EDR MGP	1.000		0	0	0	0	NR	0
EDR Hist Auto	0.125		3	NR	NR	NR	NR	3
EDR Hist Cleaner	0.125		0	NR	NR	NR	NR	0
EDR RECOVERED GOVERNMENT ARCHIVES								
Exclusive Recovered Govt. Archives								
RGA LF	0.001		0	NR	NR	NR	NR	0
RGA LUST	0.001		0	NR	NR	NR	NR	0
- Totals --		0	38	4	0	1	0	43

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted

NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

A1
SW
< 1/8
0.040 mi.
211 ft.

LOWE'S #966
3984 INDIAN AVE
PERRIS, CA 92571

Site 1 of 4 in cluster A

AST **A100422044**
N/A

Relative:
Higher

Actual:
1461 ft.

AST:

Name:	LOWE'S #966
Address:	3984 INDIAN AVE
City/Zip:	PERRIS,92571
Certified Unified Program Agencies:	Not reported
Owner:	Lowe's Home Centers, LLC
Total Gallons:	Not reported
CERSID:	10321390
Facility ID:	Not reported
Business Name:	Lowe's HIW, Inc.
Phone:	(888) 429-6281
Fax:	Not reported
Mailing Address:	1000 Lowe's Blvd., Mail Code A2ELP
Mailing Address City:	Mooresville
Mailing Address State:	NC
Mailing Address Zip Code:	28117
Operator Name:	Lowe's Home Centers, LLC
Operator Phone:	(951) 443-2500
Owner Phone:	(704) 758-6033
Owner Mail Address:	1605 Curtis Bridge Rd, Mailcode A2ELP
Owner State:	NC
Owner Zip Code:	28697
Owner Country:	United States
Property Owner Name:	Not reported
Property Owner Phone:	Not reported
Property Owner Mailing Address:	Not reported
Property Owner City:	Not reported
Property Owner Stat :	Not reported
Property Owner Zip Code:	Not reported
Property Owner Country:	Not reported
EPAID:	CAR000096867

A2
SW
< 1/8
0.040 mi.
211 ft.

LOWE'S #966
3984 INDIAN AVE
PERRIS, CA 92571

Site 2 of 4 in cluster A

RCRA-LQG **1004677410**
FINDS **CAR000096867**
ECHO

Relative:
Higher

Actual:
1461 ft.

RCRA-LQG:

Date form received by agency:	2019-03-14 00:00:00.0
Facility name:	LOWES RDC 966
Facility address:	3984 INDIAN AVE PERRIS, CA 92571
EPA ID:	CAR000096867
Mailing address:	LOWE'S BLVD., MAIL STOP A3WLP MOORESVILLE, NC 28117
Contact:	BOBBI TENBORG
Contact address:	LOWE'S BLVD., MAIL STOP A3WLP MOORESVILLE, NC 28117
Contact country:	US
Contact telephone:	704-758-2955
Contact email:	BOBBI.L.TENBORG@LOWES.COM
EPA Region:	09
Classification:	Large Quantity Generator

LOWE'S #966 (Continued) **1004677410**

Description: Handler: generates 1,000 kg or more of hazardous waste during any calendar month; or generates more than 1 kg of acutely hazardous waste during any calendar month; or generates more than 100 kg of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month; or generates 1 kg or less of acutely hazardous waste during any calendar month, and accumulates more than 1 kg of acutely hazardous waste at any time; or generates 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month, and accumulates more than 100 kg of that material at any time

Owner/Operator Summary:

Owner/operator name:	LOWE'S HOME CENTERS, LLC
Owner/operator address:	CURTIS BRIDGE RD. WILKESBORO, NC 28697
Owner/operator country:	US
Owner/operator telephone:	704-758-2955
Owner/operator email:	BOBBI.L.TENBORG@LOWES.COM
Owner/operator fax:	877-658-9885
Owner/operator extension:	Not reported
Legal status:	Private
Owner/Operator Type:	Operator
Owner/Op start date:	2001-01-15 00:00:00.
Owner/Op end date:	Not reported

Owner/operator name:	LOWE'S HOME CENTERS, LLC
Owner/operator address:	CURTIS BRIDGE RD. WILKESBORO, NC 28697
Owner/operator country:	US
Owner/operator telephone:	704-758-2955
Owner/operator email:	BOBBI.L.TENBORG@LOWES.COM
Owner/operator fax:	877-658-9885
Owner/operator extension:	Not reported
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	2001-01-15 00:00:00.
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

LOWE'S #966 (Continued) **1004677410**

Historical Generators:

Date form received by agency: 2016-10-26 00:00:00.0
Site name: LOWES RDC #966
Classification: Large Quantity Generator

Date form received by agency: 2014-03-01 00:00:00.0
Site name: LOWE'S CALFI. RDC #966
Classification: Large Quantity Generator

Date form received by agency: 2010-06-03 00:00:00.0
Site name: LOWE'S CALFI. RDC #966
Classification: Large Quantity Generator

Date form received by agency: 2006-03-01 00:00:00.0
Site name: LOWES HIW INC. NO. 966
Classification: Large Quantity Generator

Date form received by agency: 2004-02-23 00:00:00.0
Site name: LOWES HIW - PERRIS RDC 966
Classification: Small Quantity Generator

Date form received by agency: 2001-05-17 00:00:00.0
Site name: LOWES HOME IMPROVEMENT WAREHOUSE 966
Classification: Small Quantity Generator

Hazardous Waste Summary:

. Waste code: 122
. Waste name: Alkaline solution without metals (pH > 12.5)

. Waste code: 181
. Waste name: Other inorganic solid waste

. Waste code: 331
. Waste name: Off-specification, aged, or surplus organics

. Waste code: 352
. Waste name: Other organic solids

. Waste code: 791
. Waste name: Liquids with pH < 2

. Waste code: D000
. Waste name: Not Defined

. Waste code: D001
. Waste name: IGNITABLE WASTE

. Waste code: D002
. Waste name: CORROSIVE WASTE

. Waste code: D004
. Waste name: ARSENIC

. Waste code: D005
. Waste name: BARIUM

LOWE'S #966 (Continued) **1004677410**

. Waste code: D006
. Waste name: CADMIUM

. Waste code: D007
. Waste name: CHROMIUM

. Waste code: D008
. Waste name: LEAD

. Waste code: D009
. Waste name: MERCURY

. Waste code: D010
. Waste name: SELENIUM

. Waste code: D011
. Waste name: SILVER

. Waste code: D016
. Waste name: 2,4-D (2,4-DICHLOROPHENOXYACETIC ACID)

. Waste code: D018
. Waste name: BENZENE

. Waste code: D035
. Waste name: METHYL ETHYL KETONE

. Waste code: F003
. Waste name: THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NONHALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS, AND A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

. Waste code: P012
. Waste name: ARSENIC OXIDE AS2O3 (OR) ARSENIC TRIOXIDE

. Waste code: U002
. Waste name: 2-PROPANONE (I) (OR) ACETONE (I)

. Waste code: U080
. Waste name: METHANE, DICHLORO- (OR) METHYLENE CHLORIDE

. Waste code: U154
. Waste name: METHANOL (I) (OR) METHYL ALCOHOL (I)

. Waste code: U159
. Waste name: 2-BUTANONE (I,T) (OR) METHYL ETHYL KETONE (MEK) (I,T)

. Waste code: U220
. Waste name: BENZENE, METHYL- (OR) TOLUENE

LOWE'S #966 (Continued) **1004677410**

. Waste code: U239
. Waste name: BENZENE, DIMETHYL- (I,T) (OR) XYLENE (I)

Biennial Reports:

Last Biennial Reporting Year: 2017

Annual Waste Handled:

Waste code: D001
Waste name: IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.
Amount (Lbs): 20294

Waste code: D002
Waste name: A WASTE WHICH HAS A PH OF LESS THAN 2 OR GREATER THAN 12.5 IS CONSIDERED TO BE A CORROSIVE HAZARDOUS WASTE. SODIUM HYDROXIDE, A CAUSTIC SOLUTION WITH A HIGH PH, IS OFTEN USED BY INDUSTRIES TO CLEAN OR DEGREASE PARTS. HYDROCHLORIC ACID, A SOLUTION WITH A LOW PH, IS USED BY MANY INDUSTRIES TO CLEAN METAL PARTS PRIOR TO PAINTING. WHEN THESE CAUSTIC OR ACID SOLUTIONS BECOME CONTAMINATED AND MUST BE DISPOSED, THE WASTE WOULD BE A CORROSIVE HAZARDOUS WASTE.
Amount (Lbs): 15660

Waste code: D005
Waste name: BARIUM
Amount (Lbs): 20073

Waste code: D006
Waste name: CADMIUM
Amount (Lbs): 3131

Waste code: D007
Waste name: CHROMIUM
Amount (Lbs): 20073

Waste code: D008
Waste name: LEAD
Amount (Lbs): 3131

Waste code: D011
Waste name: SILVER
Amount (Lbs): 3131

Waste code: D016
Waste name: 2,4-D
Amount (Lbs): 3131

Waste code: D018
Waste name: BENZENE
Amount (Lbs): 13561

Waste code: D035
Waste name: METHYL ETHYL KETONE

LOWE'S #966 (Continued) **1004677410**

Amount (Lbs): 20073

Violation Status: No violations found

FINDS:
Registry ID: 110055707926
Facility URL: http://ofmpub.epa.gov/enviro/fii_query_detail.disp_program_facility?p_registry_id=110055707926

Environmental Interest/Information System:
STATE MASTER
Registry ID: 110012240716
Facility URL: http://ofmpub.epa.gov/enviro/fii_query_detail.disp_program_facility?p_registry_id=110012240716

Environmental Interest/Information System:
California Hazardous Waste Tracking System - Datamart (HWTS-DATAMART) provides California with information on hazardous waste shipments for generators, transporters, and treatment, storage, and disposal facilities.
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.
HAZARDOUS WASTE BIENNIAL REPORTER

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

ECHO:
Envid: 1004677410
Registry ID: 110012240716
DFR URL: http://echo.epa.gov/detailed-facility-report?fid=110012240716
Name: LOWES HOME IMPROVEMENT WAREHOUSE 966
Address: 3984 INDIAN AVE
City,State,Zip: PERRIS, CA 92571

A3 **HEALTHWORKS MED GROUP OF CA A MEDICAL CORP DBA MY** **RCRA NonGen / NLR** **1025872301**
SW **3984 INDIAN AVE** **CAL000445422**
< 1/8 **PERRIS, CA 92571**
0.040 mi.
211 ft. **Site 3 of 4 in cluster A**

Relative:
Higher

Actual:
1461 ft.

RCRA NonGen / NLR:
Date form received by agency: 2019-10-28 00:00:00.0
Facility name: HEALTHWORKS MED GROUP OF CA A MEDICAL CORP DBA MY HEALTH CENTER AT LOWES PERRIS
Facility address: 3984 INDIAN AVE
PERRIS, CA 92571
EPA ID: CAL000445422
Mailing address: 5500 MARYLAND WAY, STE 120
BRENTWOOD, TN 37027
Contact: JACKIE REYNOLDS
Contact address: 5500 MARYLAND WAY, STE 120
BRENTWOOD, TN 92571
Contact country: US
Contact telephone: 615-468-6991

HEALTHWORKS MED GROUP OF CA A MEDICAL CORP DBA MY HEALTH CEN (Continued) **1025872301**

Contact email: LICENSING@PREMISEHEALTH.COM
EPA Region: 09
Classification: Non-Generator
Description: Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:
Owner/operator name: HEALTHWORKS MED GROUP OF CA A MEDICAL
Owner/operator address: 5500 MARYLAND WAY STE 200
BRENTWOOD, TN 37027
Owner/operator country: US
Owner/operator telephone: 615-628-9368
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Other
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Owner/operator name: EVELYN HUNT
Owner/operator address: 3984 INDIAN AVE
PERRIS, CA 92571
Owner/operator country: US
Owner/operator telephone: 615-628-9368
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Other
Owner/Operator Type: Operator
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): Not reported
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Historical Generators:
Date form received by agency: 2019-04-19 00:00:00.0
Site name: MY HEALTH CENTER AT LOWES PERRIS
Classification: Not a generator, verified

Violation Status: No violations found

A4 **LOWE'S #966** **CERS HAZ WASTE** **S112938171**
SW **3984 INDIAN AVE** **CERS TANKS** **N/A**
< 1/8 **PERRIS, CA 92571** **CERS**
0.040 mi.
211 ft. **Site 4 of 4 in cluster A**

Relative:
Higher

Actual:
1461 ft.

CERS HAZ WASTE:
Name: LOWE'S #966
Address: 3984 INDIAN AVE
City,State,Zip: PERRIS, CA 92571
Site ID: 396807
CERS ID: 10321390
CERS Description: RCRA LQ HW Generator

Name: LOWE'S #966
Address: 3984 INDIAN AVE
City,State,Zip: PERRIS, CA 92571
Site ID: 396807
CERS ID: 10321390
CERS Description: Hazardous Waste Generator

CERS TANKS:
Name: LOWE'S #966
Address: 3984 INDIAN AVE
City,State,Zip: PERRIS, CA 92571
Site ID: 396807
CERS ID: 10321390
CERS Description: Aboveground Petroleum Storage

CERS:
Name: LOWE'S #966
Address: 3984 INDIAN AVE
City,State,Zip: PERRIS, CA 92571
Site ID: 396807
CERS ID: 10321390
CERS Description: Chemical Storage Facilities

Violations:
Site ID: 396807
Site Name: Lowe's #966
Violation Date: 08-21-2018
Citation: Un-Specified
Violation Description: Business Plan Program - Operations/Maintenance - General Local Ordinance
Violation Notes: Returned to compliance on 10/04/2018. OBSERVATION: Observed faded NFPA-704 signs located at the guard building and on the Diesel fire pump room. CORRECTIVE ACTION: Owner/operator shall replace all faded or otherwise unrecognizable NFPA-704 signs. Submit photos to this department. OBSERVATION: Required NFPA-704 signs were not posted. CORRECTIVE ACTION: Owner/operator shall research chemical safety data sheets and post proper NFPA-704 signs. Signs shall be posted on the storage racks for the Acetylene and the Argon/CO2, at the entrance into the battery charging room, and one the Diesel tank that is in use. Submit photos to this department.
Violation Division: Riverside County Department of Env Health
Violation Program: HMRRP
Violation Source: CERS

Site ID: 396807

LOWE'S #966 (Continued) **S112938171**

Site Name:	Lowe's #966
Violation Date:	08-21-2018
Citation:	22 CCR 15 66265.173 - California Code of Regulations, Title 22, Chapter 15, Section(s) 66265.173
Violation Description:	Failure to meet the following container management requirements: (a) A container holding hazardous waste must always be closed during storage, except when it is necessary to add or remove waste. (b) A container holding hazardous waste must not be opened, handled, or stored in a manner which may rupture the container or cause it to leak.
Violation Notes:	Returned to compliance on 10/04/2018.
Violation Division:	Riverside County Department of Env Health
Violation Program:	HW
Violation Source:	CERS
Site ID:	396807
Site Name:	Lowe's #966
Violation Date:	08-21-2018
Citation:	Un-Specified
Violation Description:	Business Plan Program - Operations/Maintenance - General Local Ordinance
Violation Notes:	Returned to compliance on 10/04/2018. OBSERVATION: Observed a cardboard type drum containing battery acid neutralizer without a product labels. CORRECTIVE ACTION: Owner/operator shall ensure all hazardous materials containers are labeled with a product name. Submit photos to this department.
Violation Division:	Riverside County Department of Env Health
Violation Program:	HMRRP
Violation Source:	CERS
Site ID:	396807
Site Name:	Lowe's #966
Violation Date:	08-21-2018
Citation:	22 CCR 12 66262.34(f) - California Code of Regulations, Title 22, Chapter 12, Section(s) 66262.34(f)
Violation Description:	Failure to properly label hazardous waste accumulation containers and portable tanks with the following requirements: "Hazardous Waste", name and address of the generator, physical and chemical characteristics of the Hazardous Waste, and starting accumulation date.
Violation Notes:	Returned to compliance on 10/04/2018.
Violation Division:	Riverside County Department of Env Health
Violation Program:	HW
Violation Source:	CERS
Site ID:	396807
Site Name:	Lowe's #966
Violation Date:	08-21-2018
Citation:	Un-Specified
Violation Description:	Business Plan Program - Operations/Maintenance - General Local Ordinance
Violation Notes:	Returned to compliance on 10/04/2018. OBSERVATION: Observed the battery storage area without a proper label. CORRECTIVE ACTION: Owner/operator shall properly identify all hazardous materials storage areas appropriately. Post a sign indicating that lead acid batteries are being stored in the area. Submit photos to this department.
Violation Division:	Riverside County Department of Env Health

LOWE'S #966 (Continued) **S112938171**

Violation Program:	HMRRP
Violation Source:	CERS
Site ID:	396807
Site Name:	Lowe's #966
Violation Date:	08-21-2018
Citation:	HSC 6.67 25270.4.5(a) - California Health and Safety Code, Chapter 6.67, Section(s) 25270.4.5(a)
Violation Description:	Failure to provide the following training to all oil-handling personnel: 1. Operation and maintenance of equipment to prevent discharges. 2. Discharge procedure protocols. 3. Applicable pollution control laws, rules, and regulations. 4. General facility operations. 5. Contents of the SPCC Plan.
Violation Notes:	Returned to compliance on 10/04/2018.
Violation Division:	Riverside County Department of Env Health
Violation Program:	APSA
Violation Source:	CERS
Site ID:	396807
Site Name:	Lowe's #966
Violation Date:	08-21-2018
Citation:	22 CCR 15 66265.31 - California Code of Regulations, Title 22, Chapter 15, Section(s) 66265.31
Violation Description:	Failure to maintain and operate the facility to minimize the possibility of a fire, explosion, or any unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents to air, soil, or surface water which could threaten human health or the environment.
Violation Notes:	Returned to compliance on 10/04/2018.
Violation Division:	Riverside County Department of Env Health
Violation Program:	HW
Violation Source:	CERS
Site ID:	396807
Site Name:	Lowe's #966
Violation Date:	08-21-2018
Citation:	HSC 6.95 25508(a)(1) - California Health and Safety Code, Chapter 6.95, Section(s) 25508(a)(1)
Violation Description:	Failure to complete and electronically submit a business plan when storing/handling a hazardous material at or above reportable quantities.
Violation Notes:	Returned to compliance on 10/04/2018. OBSERVATION: Owner/operator has previously submitted a business plan into the statewide information management system which had one or more sections rejected. Specifically, the hazardous materials inventory was rejected for not meeting minimum standards. CORRECTIVE ACTION: Owner/operator shall review the rejection comments attached to the previously submitted business plan, make required corrections, and resubmit corrected sections into the statewide information management system at http://cers.calepa.ca.gov.
Violation Division:	Riverside County Department of Env Health
Violation Program:	HMRRP
Violation Source:	CERS
Site ID:	396807
Site Name:	Lowe's #966
Violation Date:	08-21-2018

LOWE'S #966 (Continued) **S112938171**

Citation:	HSC 6.95 25508(a)(1) - California Health and Safety Code, Chapter 6.95, Section(s) 25508(a)(1)
Violation Description:	Failure to complete and electronically submit hazardous material inventory information for all reportable hazardous materials on site at or above reportable quantities.
Violation Notes:	Returned to compliance on 10/04/2018. OBSERVATION: The most recent business plan submission in the statewide information management system (CERS) failed to contain a chemical inventory description page for Acetylene and Argon/CO2. CORRECTIVE ACTION: Owner/operator shall complete a chemical inventory page for all reportable hazardous materials on site and submit to the statewide information management system at http://cers.calepa.ca.gov. OBSERVATION: The chemical inventory description page submitted for the battery neutralizer, Propane, and waste oil/fuel contained incorrect information. The battery acid neutralizer is missing storage pressure and temperature, Propane and waste oil/fuel need an update maximum daily amount. CORRECTIVE ACTION: Owner/operator shall update the chemical inventory page for the battery acid neutralizer, Propane, and the waste oil/ fuel and submit to the statewide information management system at http://cers.calepa.ca.gov. Missing information may be found by looking at [Truncated]
Violation Division:	Riverside County Department of Env Health
Violation Program:	HMRRP
Violation Source:	CERS

Evaluation:

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	03-04-2014
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Not reported
Eval Division:	Riverside County Department of Env Health
Eval Program:	HMRRP
Eval Source:	CERS

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	08-21-2018
Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	Not reported
Eval Division:	Riverside County Department of Env Health
Eval Program:	APSA
Eval Source:	CERS

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	08-21-2018
Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	Not reported
Eval Division:	Riverside County Department of Env Health
Eval Program:	HW
Eval Source:	CERS

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	03-04-2014
Violations Found:	No
Eval Type:	Routine done by local agency

LOWE'S #966 (Continued) **S112938171**

Eval Notes: Not reported
Eval Division: Riverside County Department of Env Health
Eval Program: APSA
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 08-21-2018
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Riverside County Department of Env Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 03-04-2014
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Riverside County Department of Env Health
Eval Program: HW
Eval Source: CERS

Coordinates:
Site ID: 396807
Facility Name: Lowe's #966
Env Int Type Code: APSA
Program ID: 10321390
Coord Name: Not reported
Ref Point Type Desc: Center of a facility or station.
Latitude: 33.840980
Longitude: -117.236930

Affiliation:
Affiliation Type Desc: CUPA District
Entity Name: Riverside Cnty Env Health
Entity Title: Not reported
Affiliation Address: 4065 County Circle Drive, Room 104
Affiliation City: Riverside
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 92503
Affiliation Phone: (951) 358-5055

Affiliation Type Desc: Document Preparer
Entity Name: APTIM
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: Facility Mailing Address
Entity Name: Mailing Address

LOWE'S #966 (Continued) **S112938171**

Entity Title:	Not reported
Affiliation Address:	2603 Main St., Suite 700
Affiliation City:	Irvine
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92614
Affiliation Phone:	Not reported
Affiliation Type Desc:	Identification Signer
Entity Name:	Laurie Litwin
Entity Title:	Regional Environmental Compliance Manager
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Parent Corporation
Entity Name:	LOWE'S Home Centers, LLC
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Environmental Contact
Entity Name:	Laurie Litwin
Entity Title:	Not reported
Affiliation Address:	2603 Main St., Suite 700
Affiliation City:	Irvine
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92614
Affiliation Phone:	Not reported
Affiliation Type Desc:	Legal Owner
Entity Name:	LOWE'S Home Centers, LLC
Entity Title:	Not reported
Affiliation Address:	1605 Curtis Bridge Rd
Affiliation City:	Wilkesboro
Affiliation State:	NC
Affiliation Country:	United States
Affiliation Zip:	28697
Affiliation Phone:	(704) 758-6033
Affiliation Type Desc:	Operator
Entity Name:	LOWE'S Home Centers, LLC
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	(951) 443-2500

B5 **SAFAR & SAFAR BROTHERS', INC** **UST** **U003864986**
ESE **4040 N PERRIS BLVD** **N/A**
< 1/8 **PERRIS, CA 92571**
0.042 mi.
222 ft. **Site 1 of 8 in cluster B**

Relative: **Lower**

Actual: **1458 ft.**

UST:

Name:	SAFAR & SAFAR BROTHERS', INC
Address:	4040 N PERRIS BLVD
City,State,Zip:	PERRIS, CA 92571
Facility ID:	Not reported
Permitting Agency:	Riverside County Department of Environmental Health
Latitude:	33.84507
Longitude:	-117.22657

Name:	SAFAR & SAFAR BROTHERS', INC
Address:	4040 N PERRIS BLVD
City,State,Zip:	PERRIS, CA 92571
Facility ID:	Not reported
Permitting Agency:	Riverside County Department of Environme
Latitude:	33.84507
Longitude:	-117.22657

RIVERSIDE CO. UST:

Name:	SAFAR & SAFAR BROTHERS', INC
Address:	4040 N PERRIS BLVD
City,State,Zip:	PERRIS, CA 92571
Region:	RIVERSIDE
Total Tanks:	4

B6 **RCRA NonGen / NLR** **1025867938**
ESE **4040 N PERRIS BLVD** **CAL000341521**
< 1/8 **PERRIS, CA 92571**
0.042 mi.
222 ft. **Site 2 of 8 in cluster B**

Relative: **Lower**

Actual: **1458 ft.**

RCRA NonGen / NLR:

Date form received by agency:	2009-03-20 00:00:00.0
Facility name:	Not reported
Facility address:	4040 N PERRIS BLVD PERRIS, CA 92571-0000
EPA ID:	CAL000341521
Contact:	AMANDA BUI
Contact address:	4040 N PERRIS BLVD PERRIS, CA 92571-0000
Contact country:	Not reported
Contact telephone:	925-353-7449
Contact email:	AMANDABUI@GMAIL.COM
EPA Region:	09
Classification:	Non-Generator
Description:	Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name:	AMANDA BUI
Owner/operator address:	4040 N PERRIS BLVD PERRIS, CA 92571
Owner/operator country:	Not reported
Owner/operator telephone:	925-353-7449
Owner/operator email:	Not reported

(Continued) **1025867938**

Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Other
Owner/Operator Type: Operator
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Owner/operator name: SAFAR & SAFAR BROTHER'S INC
Owner/operator address: 4040 N PERRIS BLVD
PERRIS, CA 92571
Owner/operator country: Not reported
Owner/operator telephone: 714-863-5506
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Other
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Violation Status: No violations found

B7 **SAFARI SAFARI BROTHER** **EDR Hist Auto** **1021827154**
ESE **4040 N PERRIS BLVD** **N/A**
< 1/8 **PERRIS, CA 92571**
0.042 mi.
222 ft. **Site 3 of 8 in cluster B**

Relative: EDR Hist Auto
Lower

Actual: Year: Name: Type:
1458 ft. 2010 SAFARI SAFARI BROTHER Gasoline Service Stations
2010 PERRIS ARCO Gasoline Service Stations, NEC
2011 SAFARI SAFARI BROTHER Gasoline Service Stations
2012 SAFARI SAFARI BROTHER Gasoline Service Stations
2013 SAFAR & SAFAR BROTHERS INC Gasoline Service Stations
2014 SAFAR & SAFAR BROTHERS INC Gasoline Service Stations

B8 **EXPRESS AM PM** **CERS HAZ WASTE** **S113115203**
ESE **4040 N PERRIS BLVD** **CERS TANKS** **N/A**
< 1/8 **PERRIS, CA 92571** **HAZNET**
0.042 mi. **CERS**
222 ft. **Site 4 of 8 in cluster B** **HWTS**

Relative:
Lower

Actual:
1458 ft.

CERS HAZ WASTE:
Name: SAFAR & SAFAR BROTHERS', INC
Address: 4040 N PERRIS BLVD
City,State,Zip: PERRIS, CA 92571
Site ID: 401154
CERS ID: 10321255
CERS Description: Hazardous Waste Generator

CERS TANKS:
Name: SAFAR & SAFAR BROTHERS', INC
Address: 4040 N PERRIS BLVD
City,State,Zip: PERRIS, CA 92571
Site ID: 401154
CERS ID: 10321255
CERS Description: Underground Storage Tank

HAZNET:
Name: EXPRESS AM PM
Address: 4040 N PERRIS BLVD
Address 2: Not reported
City,State,Zip: PERRIS, CA 925710000
Contact: BAHRAM TCHAMI/OWNER
Telephone: 9099436263
Mailing Name: Not reported
Mailing Address: 4040 N PERRIS BLVD

Year: 2009
Gepaid: CAL000231764
TSD EPA ID: CAD981696420
CA Waste Code: 134 - Aqueous solution with total organic residues less than 10 percent
Disposal Method: H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons: 0.168

Year: 2007
Gepaid: CAL000231764
TSD EPA ID: CAD981696420
CA Waste Code: 134 - Aqueous solution with total organic residues less than 10 percent
Disposal Method: H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons: 0.483

Additional Info:
Year: 2007
Gen EPA ID: CAL000231764

Shipment Date: 20070125
Creation Date: 2/23/2008 18:30:16
Receipt Date: 20070130
Manifest ID: 000167043GBF
Trans EPA ID: CAL000224539

EXPRESS AM PM (Continued) **S113115203**

Trans Name:	FRS ENVIRONMENTAL INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD981696420
Trans Name:	EVERGREEN ENVIRONMENTAL SERVICES
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
CA Waste Code:	134 - Aqueous solution with <10% total organic residues
RCRA Code:	Not reported
Disposal Method:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.483
Waste Quantity:	115
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Additional Info:

Year:	2009
Gen EPA ID:	CAL000231764
Shipment Date:	20090408
Creation Date:	5/23/2009 18:30:08
Receipt Date:	20090421
Manifest ID:	000758070GBF
Trans EPA ID:	CAL000224539
Trans Name:	FRS ENVIRONMENTAL INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD981696420
Trans Name:	EVERGREEN ENVIRONMENTAL SERVICES
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
CA Waste Code:	134 - Aqueous solution with <10% total organic residues
RCRA Code:	Not reported
Disposal Method:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.168
Waste Quantity:	40
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

CERS:

Name:	SAFAR & SAFAR BROTHERS', INC
Address:	4040 N PERRIS BLVD
City,State,Zip:	PERRIS, CA 92571
Site ID:	401154
CERS ID:	10321255
CERS Description:	Chemical Storage Facilities

EXPRESS AM PM (Continued) **S113115203**

Violations:

Site ID:	401154
Site Name:	Safar & Safar Brothers', Inc
Violation Date:	06-03-2019
Citation:	HSC 6.5 25123.3(h)(1) - California Health and Safety Code, Chapter 6.5, Section(s) 25123.3(h)(1)
Violation Description:	Failure to send hazardous waste offsite for treatment, storage, or disposal within 180 days (or 270 days if waste is transported over 200 miles) for a generator who generates less than 1000 kilogram per month if all of the following conditions are met: (1) The quantity of hazardous waste accumulated onsite never exceeds 6,000 kilograms. (2) The generator complies with the requirements of 40 Code of Federal Regulations section 262.34(d), (e) and (f). (3) The generator does not hold acutely hazardous waste or extremely hazardous waste in an amount greater than one kilogram for more than 90 days.
Violation Notes:	Returned to compliance on 09/18/2019. OBSERVATION: Observed two hazardous waste drums on site without an accumulation start date. CORRECTIVE ACTION: Owner/operator shall ensure all hazardous wastes are transported off site within 180 days of reaching 100kg/27gal/220lbs. Owner/operator shall have hazardous waste properly hauled off site by a registered hazardous waste transporter.
Violation Division:	Riverside County Department of Env Health
Violation Program:	HW
Violation Source:	CERS

Site ID:	401154
Site Name:	Safar & Safar Brothers', Inc
Violation Date:	04-13-2016
Citation:	23 CCR 16 2711(a)(8) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2711(a)(8)
Violation Description:	Failure to submit, obtain approval, or maintain a complete/accurate plot plan.
Violation Notes:	Returned to compliance on 06/30/2016.
Violation Division:	Riverside County Department of Env Health
Violation Program:	UST
Violation Source:	CERS

Site ID:	401154
Site Name:	Safar & Safar Brothers', Inc
Violation Date:	04-04-2018
Citation:	23 CCR 16 2665 - California Code of Regulations, Title 23, Chapter 16, Section(s) 2665
Violation Description:	Failure to comply with one or more of the following: Failure to install or maintain a liquid-tight spill bucket. Have a minimum capacity of five gallons. Have a functional drain valve or other method for the removal of liquid from the spill bucket/spill container. Be resistant to galvanic corrosion.
Violation Notes:	Returned to compliance on 05/29/2018.
Violation Division:	Riverside County Department of Env Health
Violation Program:	UST
Violation Source:	CERS

Site ID:	401154
Site Name:	Safar & Safar Brothers', Inc
Violation Date:	04-13-2016
Citation:	HSC 6.7 25299 - California Health and Safety Code, Chapter 6.7, Section(s) 25299

EXPRESS AM PM (Continued) **S113115203**

Violation Description:	Failure to comply with one or more of the operating permit conditions.
Violation Notes:	Returned to compliance on 06/30/2016.
Violation Division:	Riverside County Department of Env Health
Violation Program:	UST
Violation Source:	CERS
Site ID:	401154
Site Name:	Safar & Safar Brothers', Inc
Violation Date:	04-22-2014
Citation:	22 CCR 15 66265.174 - California Code of Regulations, Title 22, Chapter 15, Section(s) 66265.174
Violation Description:	Failure to inspect hazardous waste storage areas at least weekly.
Violation Notes:	Returned to compliance on 06/15/2016.
Violation Division:	Riverside County Department of Env Health
Violation Program:	HW
Violation Source:	CERS
Site ID:	401154
Site Name:	Safar & Safar Brothers', Inc
Violation Date:	04-13-2016
Citation:	HSC 6.75 25299.30-25299.34 - California Health and Safety Code, Chapter 6.75, Section(s) 25299.30-25299.34
Violation Description:	Failure to submit and maintain complete and current Certification of Financial Responsibility or other mechanism of financial assurance.
Violation Notes:	Returned to compliance on 06/30/2016.
Violation Division:	Riverside County Department of Env Health
Violation Program:	UST
Violation Source:	CERS
Site ID:	401154
Site Name:	Safar & Safar Brothers', Inc
Violation Date:	06-03-2019
Citation:	Un-Specified
Violation Description:	Business Plan Program - Operations/Maintenance - General Local Ordinance
Violation Notes:	Returned to compliance on 09/18/2019. OBSERVATION: Observed hazardous waste storage area not posted. CORRECTIVE ACTION: Owner/operator post a sign that identifies the hazardous waste storage area. Submit photos to this department.
Violation Division:	Riverside County Department of Env Health
Violation Program:	HMRRP
Violation Source:	CERS
Site ID:	401154
Site Name:	Safar & Safar Brothers', Inc
Violation Date:	06-10-2014
Citation:	HSC 6.75 25299.30-25299.34 - California Health and Safety Code, Chapter 6.75, Section(s) 25299.30-25299.34
Violation Description:	Failure to submit and maintain complete and current Certification of Financial Responsibility or other mechanism of financial assurance.
Violation Notes:	Returned to compliance on 06/30/2016.
Violation Division:	Riverside County Department of Env Health
Violation Program:	UST
Violation Source:	CERS
Site ID:	401154
Site Name:	Safar & Safar Brothers', Inc

EXPRESS AM PM (Continued) **S113115203**

Violation Date:	04-14-2015
Citation:	23 CCR 16 2715 - California Code of Regulations, Title 23, Chapter 16, Section(s) 2715
Violation Description:	Failure to comply with one or more of the designated operator monthly inspection requirements: failed to inspect the monthly alarm history report; attach a copy of the alarm history; failed to inspect for the presence of liquid or debris in the spill container/spill bucket and under dispenser containment; failed to inspect the under dispenser containment to ensure that monitoring equipment is placed in the proper position; failure to inspect for liquid or debris in the containment sump where an alarm occurred or for which there is no record of a service visit; or failure to check that all testing and maintenance has been completed and documented.
Violation Notes:	Returned to compliance on 06/30/2016.
Violation Division:	Riverside County Department of Env Health
Violation Program:	UST
Violation Source:	CERS
Site ID:	401154
Site Name:	Safar & Safar Brothers', Inc
Violation Date:	04-14-2015
Citation:	HSC 6.75 25299.30-25299.34 - California Health and Safety Code, Chapter 6.75, Section(s) 25299.30-25299.34
Violation Description:	Failure to submit and maintain complete and current Certification of Financial Responsibility or other mechanism of financial assurance.
Violation Notes:	Returned to compliance on 06/30/2016.
Violation Division:	Riverside County Department of Env Health
Violation Program:	UST
Violation Source:	CERS
Site ID:	401154
Site Name:	Safar & Safar Brothers', Inc
Violation Date:	04-14-2015
Citation:	23 CCR 16 2711(a)(8) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2711(a)(8)
Violation Description:	Failure to submit, obtain approval, or maintain a complete/accurate plot plan.
Violation Notes:	Returned to compliance on 06/30/2016.
Violation Division:	Riverside County Department of Env Health
Violation Program:	UST
Violation Source:	CERS
Site ID:	401154
Site Name:	Safar & Safar Brothers', Inc
Violation Date:	04-02-2019
Citation:	Un-Specified
Violation Description:	Business Plan Program - Operations/Maintenance - General Local Ordinance
Violation Notes:	Returned to compliance on 09/18/2019. OBSERVATION: Owner/operator failed to identify location of hazardous waste storage area. CORRECTIVE ACTION: Owner/operator shall properly identify all hazardous materials storage areas appropriately. Submit photos to this department.
Violation Division:	Riverside County Department of Env Health
Violation Program:	HMRRP
Violation Source:	CERS

EXPRESS AM PM (Continued) **S113115203**

Site ID:	401154
Site Name:	Safar & Safar Brothers', Inc
Violation Date:	04-02-2019
Citation:	Un-Specified
Violation Description:	Business Plan Program - Operations/Maintenance - General Local Ordinance
Violation Notes:	Returned to compliance on 04/02/2019. OBSERVATION: Spill kit located in yellow container was unlabeled. CORRECTIVE ACTION: Owner/operator shall clearly identify the locations where all emergency equipment is stored. Owner/operator labeled the container as "Spill Kit". This violation was corrected on site.
Violation Division:	Riverside County Department of Env Health
Violation Program:	HMRRP
Violation Source:	CERS

Site ID:	401154
Site Name:	Safar & Safar Brothers', Inc
Violation Date:	06-10-2014
Citation:	22 CCR 12 66262.34(f) - California Code of Regulations, Title 22, Chapter 12, Section(s) 66262.34(f)
Violation Description:	Failure to properly label hazardous waste accumulation containers with the following requirements: "Hazardous Waste", name and address of the generator, physical and chemical characteristics of the Hazardous Waste, and starting accumulation date.
Violation Notes:	Returned to compliance on 06/15/2016.
Violation Division:	Riverside County Department of Env Health
Violation Program:	HW
Violation Source:	CERS

Site ID:	401154
Site Name:	Safar & Safar Brothers', Inc
Violation Date:	04-13-2016
Citation:	19 CCR 6.95 25508(a)(1) - California Code of Regulations, Title 19, Chapter 6.95, Section(s) 25508(a)(1)
Violation Description:	Failure to complete and electronically submit the Business Activities Page and/or Business Owner Operator Identification Page.
Violation Notes:	Returned to compliance on 06/30/2016.
Violation Division:	Riverside County Department of Env Health
Violation Program:	HMRRP
Violation Source:	CERS

Site ID:	401154
Site Name:	Safar & Safar Brothers', Inc
Violation Date:	06-10-2014
Citation:	22 CCR 12 66262.34(a) - California Code of Regulations, Title 22, Chapter 12, Section(s) 66262.34(a)
Violation Description:	Failure to obtain a permit or grant of interim status to accumulate hazardous waste longer than 90 days.
Violation Notes:	Returned to compliance on 06/30/2016.
Violation Division:	Riverside County Department of Env Health
Violation Program:	HW
Violation Source:	CERS

Site ID:	401154
Site Name:	Safar & Safar Brothers', Inc
Violation Date:	04-13-2016
Citation:	23 CCR 16 2632, 2634, 2636, 2666 - California Code of Regulations,

EXPRESS AM PM (Continued) **S113115203**

	Title 23, Chapter 16, Section(s) 2632, 2634, 2636, 2666
Violation Description:	Failure of the leak detection equipment to have an audible and visual alarm as required.
Violation Notes:	Returned to compliance on 06/30/2016.
Violation Division:	Riverside County Department of Env Health
Violation Program:	UST
Violation Source:	CERS
Site ID:	401154
Site Name:	Safar & Safar Brothers', Inc
Violation Date:	04-13-2016
Citation:	HSC 6.95 25508(d) - California Health and Safety Code, Chapter 6.95, Section(s) 25508(d)
Violation Description:	Failure to complete and/or electronically submit a business plan when storing/handling a hazardous material at or above reportable quantities.
Violation Notes:	Returned to compliance on 06/30/2016.
Violation Division:	Riverside County Department of Env Health
Violation Program:	HMRRP
Violation Source:	CERS
Site ID:	401154
Site Name:	Safar & Safar Brothers', Inc
Violation Date:	06-10-2015
Citation:	23 CCR 16 2712(i) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2712(i)
Violation Description:	Failure to maintain on site an approved monitoring plan.
Violation Notes:	Returned to compliance on 06/30/2016.
Violation Division:	Riverside County Department of Env Health
Violation Program:	UST
Violation Source:	CERS
Site ID:	401154
Site Name:	Safar & Safar Brothers', Inc
Violation Date:	04-02-2019
Citation:	HSC 6.5 25123.3(h)(1) - California Health and Safety Code, Chapter 6.5, Section(s) 25123.3(h)(1)
Violation Description:	Failure to send hazardous waste offsite for treatment, storage, or disposal within 180 days (or 270 days if waste is transported over 200 miles) for a generator who generates less than 1000 kilogram per month if all of the following conditions are met: (1) The quantity of hazardous waste accumulated onsite never exceeds 6,000 kilograms. (2) The generator complies with the requirements of 40 Code of Federal Regulations section 262.34(d), (e) and (f). (3) The generator does not hold acutely hazardous waste or extremely hazardous waste in an amount greater than one kilogram for more than 90 days.
Violation Notes:	Returned to compliance on 09/18/2019. OBSERVATION: Observed two 55 gallon drums located in the hazardous waste storage area without an accumulation start date. Last hazardous waste manifest available for review was dated in the year 2009. CORRECTIVE ACTION: Owner/operator shall ensure all hazardous wastes are transported off site within 180 days of reaching 100kg/27gal/220lbs. Owner/operator shall have hazardous waste properly hauled off site by a registered hazardous waste transporter if the waste is determined to have been on site for more than 180 days.
Violation Division:	Riverside County Department of Env Health
Violation Program:	HW

EXPRESS AM PM (Continued) **S113115203**

Violation Source: CERS

Site ID: 401154
Site Name: Safar & Safar Brothers', Inc
Violation Date: 04-13-2016
Citation: 23 CCR 16 2712(b) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2712(b)
Violation Description: Failure to maintain leak detection alarm logs and/or maintain records of appropriate follow-up actions
Violation Notes: Returned to compliance on 06/30/2016.
Violation Division: Riverside County Department of Env Health
Violation Program: UST
Violation Source: CERS

Site ID: 401154
Site Name: Safar & Safar Brothers', Inc
Violation Date: 06-10-2015
Citation: HSC 6.7 25286(a) - California Health and Safety Code, Chapter 6.7, Section(s) 25286(a)
Violation Description: Failure to submit an complete and accurate application for a permit to operate an underground storage tank, or for renewal of the permit.
Violation Notes: Returned to compliance on 06/30/2016.
Violation Division: Riverside County Department of Env Health
Violation Program: UST
Violation Source: CERS

Site ID: 401154
Site Name: Safar & Safar Brothers', Inc
Violation Date: 04-22-2014
Citation: 22 CCR 12 66262.34(a) - California Code of Regulations, Title 22, Chapter 12, Section(s) 66262.34(a)
Violation Description: Failure to obtain a permit or grant of interim status to accumulate hazardous waste longer than 90 days.
Violation Notes: Returned to compliance on 06/15/2016.
Violation Division: Riverside County Department of Env Health
Violation Program: HW
Violation Source: CERS

Site ID: 401154
Site Name: Safar & Safar Brothers', Inc
Violation Date: 04-13-2016
Citation: HSC 6.95 25505(a)(4) - California Health and Safety Code, Chapter 6.95, Section(s) 25505(a)(4)
Violation Description: Failure to provide initial and annual training to all employees in safety procedures in the event of a release or threatened release of a hazardous material or failure to document and maintain training records for a minimum of three years.
Violation Notes: Returned to compliance on 06/30/2016.
Violation Division: Riverside County Department of Env Health
Violation Program: HMRRP
Violation Source: CERS

Site ID: 401154
Site Name: Safar & Safar Brothers', Inc
Violation Date: 06-10-2015
Citation: 23 CCR 16 2712(i) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2712(i)

EXPRESS AM PM (Continued) **S113115203**

Violation Description:	Failure to submit, obtain approval, or maintain a complete/accurate response plan.
Violation Notes:	Returned to compliance on 06/30/2016.
Violation Division:	Riverside County Department of Env Health
Violation Program:	UST
Violation Source:	CERS
Site ID:	401154
Site Name:	Safar & Safar Brothers', Inc
Violation Date:	04-22-2014
Citation:	19 CCR 4 2729.5 - California Code of Regulations, Title 19, Chapter 4, Section(s) 2729.5
Violation Description:	Failure to submit inventory reports (Activities, Owner/Operator, Hazardous Materials Descriptions and Map pages, if required. Documentation must be resubmitted (for facilities which exceed EPCRA thresholds) or re-certified (for facilities which do not exceed EPCRA thresholds) by March 1.
Violation Notes:	Returned to compliance on 06/30/2016.
Violation Division:	Riverside County Department of Env Health
Violation Program:	HMRRP
Violation Source:	CERS
Site ID:	401154
Site Name:	Safar & Safar Brothers', Inc
Violation Date:	04-14-2015
Citation:	23 CCR 16 2715(d) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2715(d)
Violation Description:	Failure to notify the owner or operator of any condition discovered during the monthly visual inspection that may require follow-up actions.
Violation Notes:	Returned to compliance on 06/30/2016.
Violation Division:	Riverside County Department of Env Health
Violation Program:	UST
Violation Source:	CERS
Site ID:	401154
Site Name:	Safar & Safar Brothers', Inc
Violation Date:	04-13-2016
Citation:	HSC 6.7 25299(a)(9) - California Health and Safety Code, Chapter 6.7, Section(s) 25299(a)(9)
Violation Description:	Leak detection equipment disabled or tampered with in a manner that would prevent the monitoring system from detecting and/or alerting the owner/operator of a leak.
Violation Notes:	Returned to compliance on 06/30/2016.
Violation Division:	Riverside County Department of Env Health
Violation Program:	UST
Violation Source:	CERS
Site ID:	401154
Site Name:	Safar & Safar Brothers', Inc
Violation Date:	04-14-2015
Citation:	23 CCR 16 2712(b) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2712(b)
Violation Description:	Failure to maintain leak detection alarm logs and/or maintain records of appropriate follow-up actions
Violation Notes:	Returned to compliance on 06/30/2016.
Violation Division:	Riverside County Department of Env Health

EXPRESS AM PM (Continued) **S113115203**

Violation Program: UST
Violation Source: CERS

Site ID: 401154
Site Name: Safar & Safar Brothers', Inc
Violation Date: 04-13-2016
Citation: HSC 6.95 25508(a)(1) - California Health and Safety Code, Chapter 6.95, Section(s) 25508(a)(1)
Violation Description: Failure to establish and electronically submit an adequate emergency response plan and procedures for a release or threatened release of a hazardous material.
Violation Notes: Returned to compliance on 06/30/2016.
Violation Division: Riverside County Department of Env Health
Violation Program: HMRRP
Violation Source: CERS

Site ID: 401154
Site Name: Safar & Safar Brothers', Inc
Violation Date: 04-14-2015
Citation: 23 CCR 16 2712(i) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2712(i)
Violation Description: Failure to submit, obtain approval, or maintain a complete/accurate response plan.
Violation Notes: Returned to compliance on 06/30/2016.
Violation Division: Riverside County Department of Env Health
Violation Program: UST
Violation Source: CERS

Site ID: 401154
Site Name: Safar & Safar Brothers', Inc
Violation Date: 06-10-2015
Citation: 23 CCR 16 2711(a)(8) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2711(a)(8)
Violation Description: Failure to submit, obtain approval, or maintain a complete/accurate plot plan.
Violation Notes: Returned to compliance on 06/30/2016.
Violation Division: Riverside County Department of Env Health
Violation Program: UST
Violation Source: CERS

Site ID: 401154
Site Name: Safar & Safar Brothers', Inc
Violation Date: 04-14-2015
Citation: 23 CCR 16 2632, 2634, 2636, 2666 - California Code of Regulations, Title 23, Chapter 16, Section(s) 2632, 2634, 2636, 2666
Violation Description: Failure of the leak detection equipment to have an audible and visual alarm as required.
Violation Notes: Returned to compliance on 04/14/2015.
Violation Division: Riverside County Department of Env Health
Violation Program: UST
Violation Source: CERS

Site ID: 401154
Site Name: Safar & Safar Brothers', Inc
Violation Date: 04-13-2016
Citation: HSC 6.95 25508.2 - California Health and Safety Code, Chapter 6.95, Section(s) 25508.2

EXPRESS AM PM (Continued) **S113115203**

Violation Description:	Failure to annually review and electronically certify that the business plan is complete, accurate, and up-to-date.
Violation Notes:	Returned to compliance on 06/30/2016.
Violation Division:	Riverside County Department of Env Health
Violation Program:	HMRRP
Violation Source:	CERS
Site ID:	401154
Site Name:	Safar & Safar Brothers', Inc
Violation Date:	04-14-2015
Citation:	HSC 6.7 25286(a) - California Health and Safety Code, Chapter 6.7, Section(s) 25286(a)
Violation Description:	Failure to submit an complete and accurate application for a permit to operate an underground storage tank, or for renewal of the permit.
Violation Notes:	Returned to compliance on 06/30/2016.
Violation Division:	Riverside County Department of Env Health
Violation Program:	UST
Violation Source:	CERS
Site ID:	401154
Site Name:	Safar & Safar Brothers', Inc
Violation Date:	04-14-2015
Citation:	23 CCR 16 2712(i) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2712(i)
Violation Description:	Failure to maintain on site an approved monitoring plan.
Violation Notes:	Returned to compliance on 06/30/2016.
Violation Division:	Riverside County Department of Env Health
Violation Program:	UST
Violation Source:	CERS
Site ID:	401154
Site Name:	Safar & Safar Brothers', Inc
Violation Date:	06-10-2014
Citation:	22 CCR 15 66265.174 - California Code of Regulations, Title 22, Chapter 15, Section(s) 66265.174
Violation Description:	Failure to inspect hazardous waste storage areas at least weekly.
Violation Notes:	Returned to compliance on 06/15/2016.
Violation Division:	Riverside County Department of Env Health
Violation Program:	HW
Violation Source:	CERS
Site ID:	401154
Site Name:	Safar & Safar Brothers', Inc
Violation Date:	04-13-2016
Citation:	23 CCR 16 2715 - California Code of Regulations, Title 23, Chapter 16, Section(s) 2715
Violation Description:	Failure to comply with one or more of the designated operator monthly inspection requirements: failed to inspect the monthly alarm history report; attach a copy of the alarm history; failed to inspect for the presence of liquid or debris in the spill container/spill bucket and under dispenser containment; failed to inspect the under dispenser containment to ensure that monitoring equipment is placed in the proper position; failure to inspect for liquid or debris in the containment sump where an alarm occurred or for which there is no record of a service visit; or failure to check that all testing and maintenance has been completed and documented.
Violation Notes:	Returned to compliance on 06/30/2016.

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Violation Division: Riverside County Department of Env Health
Violation Program: UST
Violation Source: CERS

Site ID: 401154
Site Name: Safar & Safar Brothers', Inc
Violation Date: 04-22-2014
Citation: 22 CCR 12 66262.34(f) - California Code of Regulations, Title 22, Chapter 12, Section(s) 66262.34(f)
Violation Description: Failure to properly label hazardous waste accumulation containers with the following requirements: "Hazardous Waste", name and address of the generator, physical and chemical characteristics of the Hazardous Waste, and starting accumulation date.
Violation Notes: Returned to compliance on 06/15/2016.
Violation Division: Riverside County Department of Env Health
Violation Program: HW
Violation Source: CERS

Site ID: 401154
Site Name: Safar & Safar Brothers', Inc
Violation Date: 06-10-2014
Citation: 19 CCR 4 2729.5 - California Code of Regulations, Title 19, Chapter 4, Section(s) 2729.5
Violation Description: Failure to submit inventory reports (Activities, Owner/Operator, Hazardous Materials Descriptions and Map pages, if required. Documentation must be resubmitted (for facilities which exceed EPCRA thresholds) or re-certified (for facilities which do not exceed EPCRA thresholds) by March 1.
Violation Notes: Returned to compliance on 06/30/2016.
Violation Division: Riverside County Department of Env Health
Violation Program: HMRRP
Violation Source: CERS

Site ID: 401154
Site Name: Safar & Safar Brothers', Inc
Violation Date: 04-22-2014
Citation: HSC 6.75 25299.30-25299.34 - California Health and Safety Code, Chapter 6.75, Section(s) 25299.30-25299.34
Violation Description: Failure to submit and maintain complete and current Certification of Financial Responsibility or other mechanism of financial assurance.
Violation Notes: Returned to compliance on 06/30/2016.
Violation Division: Riverside County Department of Env Health
Violation Program: UST
Violation Source: CERS

Site ID: 401154
Site Name: Safar & Safar Brothers', Inc
Violation Date: 06-03-2019
Citation: 22 CCR 12 66262.34(f) - California Code of Regulations, Title 22, Chapter 12, Section(s) 66262.34(f)
Violation Description: Failure to properly label hazardous waste accumulation containers and portable tanks with the following requirements: "Hazardous Waste", name and address of the generator, physical and chemical characteristics of the Hazardous Waste, and starting accumulation date.
Violation Notes: Returned to compliance on 09/18/2019. OBSERVATION: Observed several hazardous waste drums that were missing proper labels and/or

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incomplete labels. CORRECTIVE ACTION: Owner/operator shall label all hazardous waste containers with the required information. Label shall include at least: the words ""hazardous waste"", generator name and address, accumulation start date, composition and physical state of waste, and hazardous property statement. Submit photos to this department, if applicable.

Violation Division: Riverside County Department of Env Health
Violation Program: HW
Violation Source: CERS

Site ID: 401154
Site Name: Safar & Safar Brothers', Inc
Violation Date: 04-13-2016
Citation: 23 CCR 16 2636(f)(1) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2636(f)(1)
Violation Description: Failure of the double wall pressurized piping in the under dispenser containment to be continuously monitored by a method that either shuts down the flow of product to the dispenser or activates an audible/visual alarm when a leak is detected.
Violation Notes: Returned to compliance on 06/30/2016.
Violation Division: Riverside County Department of Env Health
Violation Program: UST
Violation Source: CERS

Site ID: 401154
Site Name: Safar & Safar Brothers', Inc
Violation Date: 04-13-2016
Citation: HSC 6.95 25508(a)(1) - California Health and Safety Code, Chapter 6.95, Section(s) 25508(a)(1)
Violation Description: Failure to complete and electronically submit a site map with all required content.
Violation Notes: Returned to compliance on 06/30/2016.
Violation Division: Riverside County Department of Env Health
Violation Program: HMRRP
Violation Source: CERS

Site ID: 401154
Site Name: Safar & Safar Brothers', Inc
Violation Date: 04-13-2016
Citation: 23 CCR 16 2712(i) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2712(i)
Violation Description: Failure to submit, obtain approval, or maintain a complete/accurate response plan.
Violation Notes: Returned to compliance on 06/30/2016.
Violation Division: Riverside County Department of Env Health
Violation Program: UST
Violation Source: CERS

Site ID: 401154
Site Name: Safar & Safar Brothers', Inc
Violation Date: 04-13-2016
Citation: HSC 6.95 25507 - California Health and Safety Code, Chapter 6.95, Section(s) 25507
Violation Description: Failure to adequately establish and implement a business plan when storing/handling a hazardous material at or above reportable quantities.
Violation Notes: Returned to compliance on 06/30/2016.

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Violation Division: Riverside County Department of Env Health
Violation Program: HMRRP
Violation Source: CERS

Site ID: 401154
Site Name: Safar & Safar Brothers', Inc
Violation Date: 06-10-2015
Citation: HSC 6.75 25299.30-25299.34 - California Health and Safety Code, Chapter 6.75, Section(s) 25299.30-25299.34
Violation Description: Failure to submit and maintain complete and current Certification of Financial Responsibility or other mechanism of financial assurance.
Violation Notes: Returned to compliance on 06/30/2016.
Violation Division: Riverside County Department of Env Health
Violation Program: UST
Violation Source: CERS

Site ID: 401154
Site Name: Safar & Safar Brothers', Inc
Violation Date: 04-13-2016
Citation: HSC 6.95 25508(a)(1) - California Health and Safety Code, Chapter 6.95, Section(s) 25508(a)(1)
Violation Description: Failure to complete and electronically submit hazardous material inventory information for all reportable hazardous materials on site at or above reportable quantities.
Violation Notes: Returned to compliance on 06/30/2016.
Violation Division: Riverside County Department of Env Health
Violation Program: HMRRP
Violation Source: CERS

Site ID: 401154
Site Name: Safar & Safar Brothers', Inc
Violation Date: 04-22-2014
Citation: 22 CCR 15 66265.173 - California Code of Regulations, Title 22, Chapter 15, Section(s) 66265.173
Violation Description: Failure to properly close hazardous waste containers when not in active use.
Violation Notes: Returned to compliance on 06/15/2016.
Violation Division: Riverside County Department of Env Health
Violation Program: HW
Violation Source: CERS

Site ID: 401154
Site Name: Safar & Safar Brothers', Inc
Violation Date: 04-13-2016
Citation: HSC 6.95 25508(a)(1) - California Health and Safety Code, Chapter 6.95, Section(s) 25508(a)(1)
Violation Description: Failure to establish and electronically submit an adequate training program in safety procedures in the event of a release or threatened release of a hazardous material.
Violation Notes: Returned to compliance on 06/30/2016.
Violation Division: Riverside County Department of Env Health
Violation Program: HMRRP
Violation Source: CERS

Site ID: 401154
Site Name: Safar & Safar Brothers', Inc
Violation Date: 06-30-2016

EXPRESS AM PM (Continued) **S113115203**

Citation:	HSC 6.95 25505(a)(4) - California Health and Safety Code, Chapter 6.95, Section(s) 25505(a)(4)
Violation Description:	Failure to provide initial and annual training to all employees in safety procedures in the event of a release or threatened release of a hazardous material or failure to document and maintain training records for a minimum of three years.
Violation Notes:	Returned to compliance on 08/30/2016.
Violation Division:	Riverside County Department of Env Health
Violation Program:	HMRRP
Violation Source:	CERS
Site ID:	401154
Site Name:	Safar & Safar Brothers', Inc
Violation Date:	04-02-2019
Citation:	22 CCR 12 66262.34(f) - California Code of Regulations, Title 22, Chapter 12, Section(s) 66262.34(f)
Violation Description:	Failure to properly label hazardous waste accumulation containers and portable tanks with the following requirements: "Hazardous Waste", name and address of the generator, physical and chemical characteristics of the Hazardous Waste, and starting accumulation date.
Violation Notes:	Returned to compliance on 09/18/2019. OBSERVATION: Observed 55 gallon drums located in the hazardous waste storage area that were missing proper labels. CORRECTIVE ACTION: Owner/operator shall label hazardous waste containers with all the required information. Label shall include at least: the words ""hazardous waste"", generator name and address, accumulation start date, composition and physical state of waste, and hazardous property statement. Submit photos to this department, if applicable.
Violation Division:	Riverside County Department of Env Health
Violation Program:	HW
Violation Source:	CERS
Site ID:	401154
Site Name:	Safar & Safar Brothers', Inc
Violation Date:	04-04-2018
Citation:	23 CCR 16 2665 - California Code of Regulations, Title 23, Chapter 16, Section(s) 2665
Violation Description:	Failure of the overfill prevention system to meet one of the following requirements: Alert the transfer operator when the tank is 90 percent full by restricting the flow into the tank or triggering an audible and visual alarm; or Restrict delivery of flow to the tank at least 30 minutes before the tank overfills, provided the restriction occurs when the tank is filled to no more than 95 percent of capacity; and activate an audible alarm at least five minutes before the tank overfills; or Provide positive shut-off of flow to the tank when the tank is filled to no more than 95 percent of capacity; or Provide positive shut-off of flow to the tank so that none of the fittings located on the top of the tank are exposed to product due to overfilling.
Violation Notes:	Returned to compliance on 04/04/2018.
Violation Division:	Riverside County Department of Env Health
Violation Program:	UST
Violation Source:	CERS
Site ID:	401154
Site Name:	Safar & Safar Brothers', Inc

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Violation Date: 04-13-2016
Citation: 23 CCR 16 2637 - California Code of Regulations, Title 23, Chapter 16, Section(s) 2637
Violation Description: Failure to comply with one or more of the following: conduct secondary containment testing, within six months of installation and every 36 months thereafter, conducted in accordance with proper practices, protocols, or test methods.
Violation Notes: Returned to compliance on 06/30/2016.
Violation Division: Riverside County Department of Env Health
Violation Program: UST
Violation Source: CERS

Site ID: 401154
Site Name: Safar & Safar Brothers', Inc
Violation Date: 04-13-2016
Citation: 23 CCR 16 2632, 2634, 2636, 2666 - California Code of Regulations, Title 23, Chapter 16, Section(s) 2632, 2634, 2636, 2666
Violation Description: Failure of the leak detection equipment to be properly programmed or properly operated.
Violation Notes: Returned to compliance on 06/30/2016.
Violation Division: Riverside County Department of Env Health
Violation Program: UST
Violation Source: CERS

Site ID: 401154
Site Name: Safar & Safar Brothers', Inc
Violation Date: 04-13-2016
Citation: HSC 6.95 Multiple - California Health and Safety Code, Chapter 6.95, Section(s) Multiple
Violation Description: Business Plan Program - Administration/Documentation - General
Violation Notes: Returned to compliance on 06/30/2016. An up to date HMBEP was unavailable at the time of inspection
Violation Division: Riverside County Department of Env Health
Violation Program: HMRRP
Violation Source: CERS

Site ID: 401154
Site Name: Safar & Safar Brothers', Inc
Violation Date: 04-13-2016
Citation: 23 CCR 16 2712(b) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2712(b)
Violation Description: Failure to maintain records of repairs, lining, and upgrades on site, or off site if approved by the CUPA, for the life of the underground storage tank and/or failure to maintain written monitoring and maintenance records on site, or off site if approved by the CUPA, for a period of 3 years, 6 1/2 years for cathodic protection, and 5 years for written performance claims pertaining to release detection systems and calibration and maintenance records for such systems.
Violation Notes: Returned to compliance on 06/30/2016.
Violation Division: Riverside County Department of Env Health
Violation Program: UST
Violation Source: CERS

Evaluation:
Eval General Type: Compliance Evaluation Inspection
Eval Date: 04-02-2019
Violations Found: No

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Eval Type:	Routine done by local agency
Eval Notes:	Note: Ensure all section of DO reports are filled out correctly and signed by the owner/operator within 48 hours.
Eval Division:	Riverside County Department of Env Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	04-02-2019
Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	Note: EPA ID number is inactive. An active number will be required to haul hazardous waste.
Eval Division:	Riverside County Department of Env Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	04-06-2017
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Not reported
Eval Division:	Riverside County Department of Env Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	04-19-2016
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Not reported
Eval Division:	Riverside County Department of Env Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	06-10-2014
Violations Found:	Yes
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Not reported
Eval Division:	Riverside County Department of Env Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	06-30-2016
Violations Found:	Yes
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Not reported
Eval Division:	Riverside County Department of Env Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	09-17-2019
Violations Found:	No
Eval Type:	Other, not routine, done by local agency

EXPRESS AM PM (Continued) **S113115203**

Eval Notes: Not reported
Eval Division: Riverside County Department of Env Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 04-13-2016
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Riverside County Department of Env Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 04-14-2016
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Not reported
Eval Division: Riverside County Department of Env Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 04-22-2014
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Riverside County Department of Env Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 06-03-2019
Violations Found: Yes
Eval Type: Other, not routine, done by local agency
Eval Notes: Not reported
Eval Division: Riverside County Department of Env Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 06-10-2014
Violations Found: Yes
Eval Type: Other, not routine, done by local agency
Eval Notes: Not reported
Eval Division: Riverside County Department of Env Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 04-02-2019
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Riverside County Department of Env Health
Eval Program: HMRRP

EXPRESS AM PM (Continued) **S113115203**

Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 04-04-2018
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Riverside County Department of Env Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 04-13-2016
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Riverside County Department of Env Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 04-19-2016
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Not reported
Eval Division: Riverside County Department of Env Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 04-22-2014
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Riverside County Department of Env Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 06-03-2019
Violations Found: Yes
Eval Type: Other, not routine, done by local agency
Eval Notes: Not reported
Eval Division: Riverside County Department of Env Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 06-10-2014
Violations Found: Yes
Eval Type: Other, not routine, done by local agency
Eval Notes: Not reported
Eval Division: Riverside County Department of Env Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Other/Unknown

EXPRESS AM PM (Continued) **S113115203**

Eval Date: 06-30-2016
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Not reported
Eval Division: Riverside County Department of Env Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 09-17-2019
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Not reported
Eval Division: Riverside County Department of Env Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 12-04-2018
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Not reported
Eval Division: Riverside County Department of Env Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 04-14-2015
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Riverside County Department of Env Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 04-22-2014
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Riverside County Department of Env Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 06-10-2015
Violations Found: Yes
Eval Type: Other, not routine, done by local agency
Eval Notes: Not reported
Eval Division: Riverside County Department of Env Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 07-03-2013
Violations Found: No
Eval Type: Other, not routine, done by local agency

EXPRESS AM PM (Continued) **S113115203**

Eval Notes: Follow-up of AEO
Eval Division: Riverside County Department of Env Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 08-30-2016
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Not reported
Eval Division: Riverside County Department of Env Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 04-13-2016
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Riverside County Department of Env Health
Eval Program: HW
Eval Source: CERS

Enforcement Action:
Site ID: 401154
Site Name: Safar & Safar Brothers', Inc
Site Address: 4040 N PERRIS BLVD
Site City: PERRIS
Site Zip: 92571
Enf Action Date: 04-14-2015
Enf Action Type: Notice of Violation (Unified Program)
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: Not reported
Enf Action Division: Riverside County Department of Env Health
Enf Action Program: UST
Enf Action Source: CERS

Site ID: 401154
Site Name: Safar & Safar Brothers', Inc
Site Address: 4040 N PERRIS BLVD
Site City: PERRIS
Site Zip: 92571
Enf Action Date: 04-22-2014
Enf Action Type: Notice of Violation (Unified Program)
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: Not reported
Enf Action Division: Riverside County Department of Env Health
Enf Action Program: HMRRP
Enf Action Source: CERS

Site ID: 401154
Site Name: Safar & Safar Brothers', Inc
Site Address: 4040 N PERRIS BLVD
Site City: PERRIS
Site Zip: 92571
Enf Action Date: 04-22-2014
Enf Action Type: Notice of Violation (Unified Program)

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Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: Not reported
Enf Action Division: Riverside County Department of Env Health
Enf Action Program: HW
Enf Action Source: CERS

Site ID: 401154
Site Name: Safar & Safar Brothers', Inc
Site Address: 4040 N PERRIS BLVD
Site City: PERRIS
Site Zip: 92571
Enf Action Date: 04-22-2014
Enf Action Type: Notice of Violation (Unified Program)
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: Not reported
Enf Action Division: Riverside County Department of Env Health
Enf Action Program: UST
Enf Action Source: CERS

Site ID: 401154
Site Name: Safar & Safar Brothers', Inc
Site Address: 4040 N PERRIS BLVD
Site City: PERRIS
Site Zip: 92571
Enf Action Date: 05-26-2016
Enf Action Type: AEO - Unified Program
Enf Action Description: Administrative Enforcement Order Based on the Unified Program Statute
Enf Action Notes: Fines/Penalties Assessed: $2,000.00.
Enf Action Division: Riverside County Department of Env Health
Enf Action Program: UST
Enf Action Source: CERS

Site ID: 401154
Site Name: Safar & Safar Brothers', Inc
Site Address: 4040 N PERRIS BLVD
Site City: PERRIS
Site Zip: 92571
Enf Action Date: 06-10-2014
Enf Action Type: Notice of Violation (Unified Program)
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: Not reported
Enf Action Division: Riverside County Department of Env Health
Enf Action Program: HMRRP
Enf Action Source: CERS

Site ID: 401154
Site Name: Safar & Safar Brothers', Inc
Site Address: 4040 N PERRIS BLVD
Site City: PERRIS
Site Zip: 92571
Enf Action Date: 06-10-2014
Enf Action Type: Notice of Violation (Unified Program)
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: Not reported
Enf Action Division: Riverside County Department of Env Health
Enf Action Program: HW
Enf Action Source: CERS

EXPRESS AM PM (Continued) **S113115203**

Site ID:	401154
Site Name:	Safar & Safar Brothers', Inc
Site Address:	4040 N PERRIS BLVD
Site City:	PERRIS
Site Zip:	92571
Enf Action Date:	06-10-2014
Enf Action Type:	Notice of Violation (Unified Program)
Enf Action Description:	Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes:	Not reported
Enf Action Division:	Riverside County Department of Env Health
Enf Action Program:	UST
Enf Action Source:	CERS

Site ID:	401154
Site Name:	Safar & Safar Brothers', Inc
Site Address:	4040 N PERRIS BLVD
Site City:	PERRIS
Site Zip:	92571
Enf Action Date:	06-10-2015
Enf Action Type:	Notice of Violation (Unified Program)
Enf Action Description:	Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes:	Not reported
Enf Action Division:	Riverside County Department of Env Health
Enf Action Program:	UST
Enf Action Source:	CERS

Coordinates:

Site ID:	401154
Facility Name:	Safar & Safar Brothers', Inc
Env Int Type Code:	HMBP
Program ID:	10321255
Coord Name:	Not reported
Ref Point Type Desc:	Center of a facility or station.
Latitude:	33.845070
Longitude:	-117.226570

Affiliation:

Affiliation Type Desc:	CUPA District
Entity Name:	Riverside Cnty Env Health
Entity Title:	Not reported
Affiliation Address:	4065 County Circle Drive, Room 104
Affiliation City:	Riverside
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92503
Affiliation Phone:	(951) 358-5055

Affiliation Type Desc:	Document Preparer
Entity Name:	AMANDA BUI
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

EXPRESS AM PM (Continued) **S113115203**

Affiliation Type Desc:	Operator
Entity Name:	SAFAR & SAFAR BROTHERS', INC.
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	(925) 353-7449

Affiliation Type Desc:	UST Permit Applicant
Entity Name:	AMANDA N BUI
Entity Title:	WNER / SECRETARY
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	(925) 353-7449

Affiliation Type Desc:	UST Tank Owner
Entity Name:	SAFAR & SAFAR BROTHERS', INC.
Entity Title:	Not reported
Affiliation Address:	4040 NORTH PERRIS BOULEVARD
Affiliation City:	PERRIS
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	92571
Affiliation Phone:	(925) 353-7449

Affiliation Type Desc:	Legal Owner
Entity Name:	SAFAR & SAFAR BROTHERS', INC.
Entity Title:	Not reported
Affiliation Address:	4040 NORTH PERRIS BOULEVARD
Affiliation City:	PERRIS
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	92571
Affiliation Phone:	(909) 657-4895

Affiliation Type Desc:	UST Tank Operator
Entity Name:	SAFAR & SAFAR BROTHERS', INC.
Entity Title:	Not reported
Affiliation Address:	4040 NORTH PERRIS BOULEVARD
Affiliation City:	PERRIS
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	92571
Affiliation Phone:	(925) 353-7449

Affiliation Type Desc:	Identification Signer
Entity Name:	AMANDA BUI
Entity Title:	OWNER
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported

EXPRESS AM PM (Continued) **S113115203**

Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: Parent Corporation
Entity Name: Safar & Safar Brothers', Inc
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: Environmental Contact
Entity Name: State UST Fund Advisory & Services, Inc.
Entity Title: Not reported
Affiliation Address: 22930 CALABASH STREET
Affiliation City: WOODLAND HILLS
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 91364
Affiliation Phone: Not reported

Affiliation Type Desc: Facility Mailing Address
Entity Name: Mailing Address
Entity Title: Not reported
Affiliation Address: 4040 NORTH PERRIS BOULEVARD
Affiliation City: PERRIS
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 92571
Affiliation Phone: Not reported

Affiliation Type Desc: UST Property Owner Name
Entity Name: SAFAR & SAFAR BROTHERS', INC.
Entity Title: Not reported
Affiliation Address: 4040 NORTH PERRIS BOULEVARD
Affiliation City: PERRIS
Affiliation State: CA
Affiliation Country: United States
Affiliation Zip: 92571
Affiliation Phone: (925) 353-7449

HWTS:
Name: EXPRESS AM PM
Address: 4040 N PERRIS BLVD
Address 2: Not reported
City,State,Zip: PERRIS, CA 925710000
EPA ID: CAL000231764
Inactive Date: 06/30/2006
Create Date: 12/04/2001
Last Act Date: 10/18/2013
Mailing Name: BAHRAM TCHAMI/OWNER
Mailing Address: 4040 N PERRIS BLVD
Mailing Address 2: Not reported
Mailing City,State,Zip: PERRIS, CA 925710000

EXPRESS AM PM (Continued) **S113115203**

Owner Name:	BAHRAM TCHAMI
Owner Address:	4040 N PERRIS BLVD
Owner Address 2:	Not reported
Owner City,State,Zip:	PERRIS, CA 925710000
Contact Name:	BAHRAM TCHAMI/OWNER
Contact Address:	4040 N PERRIS BLVD
Contact Address 2:	Not reported
City,State,Zip:	PERRIS, CA 925710000

NAICS:

EPA ID:	CAL000231764
Create Date:	2002-03-14 16:36:29
NAICS Code:	44719
NAICS Description:	Other Gasoline Stations
Issued EPA ID Date:	2001-12-04 00:00:00
Inactive Date:	2006-06-30 00:00:00
Facility Name:	EXPRESS AM PM
Facility Address:	4040 N PERRIS BLVD
Facility Address 2:	Not reported
Facility City:	PERRIS
Facility County:	33
Facility State:	CA
Facility Zip:	925710000

B9 **TEXACO CNVENIENCE STR CAR WASH** **EDR Hist Auto** **1020850127**
East **4039 N PERRIS BLVD** **N/A**
< 1/8 **PERRIS, CA 92571**
0.043 mi.
225 ft. **Site 5 of 8 in cluster B**

Relative: EDR Hist Auto
Lower

Actual:
1457 ft.

Year:	Name:	Type:
1998	TEXACO CNVENIENCE STR CAR WASH	Gasoline Service Stations
1999	TEXACO CNVENIENCE STR CAR WASH	Gasoline Service Stations
2000	TEXACO CNVENIENCE STR CAR WASH	Gasoline Service Stations
2001	TEXACO CNVENIENCE STR CAR WASH	Gasoline Service Stations
2002	TEXACO CNVENIENCE STR CAR WASH	Gasoline Service Stations
2003	TEXACO CNVENIENCE STR CAR WASH	Gasoline Service Stations
2004	TEXACO CNVENIENCE STR CAR WASH	Gasoline Service Stations
2005	TEXACO CNVENIENCE STR CAR WASH	Gasoline Service Stations, NEC
2005	FCTI	Gasoline Service Stations
2006	FCTI	Gasoline Service Stations
2007	FCTI	Gasoline Service Stations
2008	FCTI	Gasoline Service Stations
2008	C A R ENTERPRISES INCORPORATED	Gasoline Service Stations
2009	C A R ENTERPRISES INCORPORATED	Gasoline Service Stations
2010	C A R ENTERPRISES INCORPORATED	Gasoline Service Stations
2011	C A R ENTERPRISES INCORPORATED	Gasoline Service Stations
2012	CAR ENTERPRISES INC	Gasoline Service Stations
2013	CAR ENTERPRISES INC	Gasoline Service Stations
2014	CAR ENTERPRISES INC	Gasoline Service Stations

B10 **TESORO (SHELL) 68585** **UST** **U003886141**
East **4039 N PERRIS BLVD** **N/A**
< 1/8 **PERRIS, CA 92571**
0.043 mi.
225 ft. **Site 6 of 8 in cluster B**

Relative: UST:
Lower
Actual: Name: TEXACO STAR MART
1457 ft. Address: 4039 N PERRIS BLVD
City,State,Zip: PERRIS, CA 92571
Facility ID: 753
Permitting Agency: RIVERSIDE COUNTY
Latitude: 33.8465083
Longitude: -117.2241719

Name: TESORO (SHELL) 68585 (WRR 6367)
Address: 4039 N PERRIS BLVD
City,State,Zip: PERRIS, CA 92571
Facility ID: FA0019645
Permitting Agency: Riverside County Department of Environmental Health
Latitude: 33.84519
Longitude: -117.22544

RIVERSIDE CO. UST:
Name: TESORO (SHELL) 68585
Address: 4039 N PERRIS BLVD
City,State,Zip: PERRIS, CA 92571
Region: RIVERSIDE
Total Tanks: 3

B11 **TESORO SHELL 68585** **RCRA NonGen / NLR** **1024817514**
East **4039 N PERRIS BLVD** **CAL000321813**
< 1/8 **PERRIS, CA 92571**
0.043 mi.
225 ft. **Site 7 of 8 in cluster B**

Relative: RCRA NonGen / NLR:
Lower
Actual: Date form received by agency: 2007-07-05 00:00:00.0
1457 ft. Facility name: TESORO SHELL 68585
Facility address: 4039 N PERRIS BLVD
PERRIS, CA 92571-9245
EPA ID: CAL000321813
Mailing address: 19100 RIDGEWOOD PKWY
SAN ANTONIO, TX 78259-0000
Contact: BRENDA RAMIREZ
Contact address: 19100 RIDGEWOOD PKWY
SAN ANTONIO, TX 78259
Contact country: Not reported
Contact telephone: 210-626-5153
Contact email: BRENDA.RAMIREZ@TSOCORP.COM
EPA Region: 09
Classification: Non-Generator
Description: Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:
Owner/operator name: TESORO REFINING & MARKETING COMPANY
Owner/operator address: 19100 RIDGEWOOD PKWY
SAN ANTONIO, TX 78259
Owner/operator country: Not reported

TESORO SHELL 68585 (Continued) **1024817514**

Owner/operator telephone: 210-626-6153
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Other
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Owner/operator name: BRENDA RAMIREZ
Owner/operator address: 19100 RIDGEWOOD PKWY
SAN ANTONIO, TX 78259
Owner/operator country: Not reported
Owner/operator telephone: 210-626-5153
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Other
Owner/Operator Type: Operator
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: Yes
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Violation Status: No violations found

B12 **TEXACO SERVICE STATION** **LUST** **1006805307**
East **4039 N PERRIS** **CERS HAZ WASTE** **CAR000125716**
< 1/8 **PERRIS, CA 92571** **CERS TANKS**
0.043 mi. **RCRA NonGen / NLR**
225 ft. **Site 8 of 8 in cluster B** **FINDS**
ECHO
Relative: **HAZNET**
Lower **CERS**
Actual: **HWTS**
1457 ft.

LUST:
Name: SHELL PERRIS #121222
Address: 4039 N PERRIS BLVD
City,State,Zip: PERRIS, CA 92571
Lead Agency: RIVERSIDE COUNTY LOP
Case Type: LUST Cleanup Site
Geo Track: http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0606524504

TEXACO SERVICE STATION (Continued) **1006805307**

Global Id:	T0606524504
Latitude:	33.844968564
Longitude:	-117.22585011
Status:	Completed - Case Closed
Status Date:	03/22/2010
Case Worker:	Not reported
RB Case Number:	Not reported
Local Agency:	Not reported
File Location:	Local Agency
Local Case Number:	200723493
Potential Media Affect:	Soil
Potential Contaminants of Concern:	Gasoline, Diesel
Site History:	On April 12 and 13, 2007, a Phase II assessment was completed for the sale of the property. 8 borings were drilled; 3 near the tank pit to 51.5 and 5 near the dispensers to 31.5. Up to 2.2 ppm TPHg, 16 ppm TPHd, 4.5 ppm MTBE, and 1.3 ppm TBA were detected in the soil. The site was placed into the LOP program. Three groundwater monitoring wells were installed to 100 on July 16-19, 2007. The soil from well 1 had ND TPHg, BTEX and a high of 0.027 ppm MTBE. Soil from Well 2 had 0.9 ppm TPHg, ND BTEX, up to 2.8 ppm MTBE, 0.41 ppm TBA, 0.017 ppm TAME. Well 3 had up to 11 ppm TPHg, ND BTEX, up to 17 ppm MTBE, 0.89 ppm TBA, 0.062 ppm TAME. Highest concentrations were between 30-45 ft in the borings. GW encountered at approximately 80 ft bgs 3 SVE wells were installed November 12 and 13, 2007. Wells were drilled to 40and screened from 25-40. Up to 0.83 ppm TPHg, 7.8 ppm TPHd, 2 ppmv MTBE, 0.18 ppm TBA and 0.0084 ppm TAME was detected in the soil. Soil Vapor Extraction was conducted from June 26, 2008 to December 9, 2008 when the system was shut down for a successful rebound test. 44 lbs of TPHg and 37 lbs of MTBE were removed. Influent TPHg went from 41 ppmv to 2.1 ppmv. MTBE started at 47 ppmv and ended at 1.9 ppmv. Four confirmation borings were proposed; however CB-4 (to be drilled north of MW-3) could not be drilled due to pea gravel in the air-knifed hole and could not be relocated due to an electric transformer and power pole, tree, vent lines, and a water line in the area around the proposed boring location. On March 30 and 31, 2009, three borings were drilled to 85 and soil samples were taken every 5 beginning at 10. TPHg was detected in one sample (CB-2 at 40) at 0.7 ppm. MTBE was detected in 6 samples from all three borings between 40-55 with a maximum of 0.64 ppm. TBA was detected in one sample (CB-1 at 40) at 0.2 ppm. No BTEX, DIPE, ETBE, TAME or ethanol was detected. The groundwater was sampled quarterly from the third quarter 2007 until the first quarter 2009. No TPHg or BTEX was detected. All three wells had MTBE (2.2, 29 and 1.3 ppb) during the first sampling event but have been ND<1 ppb since. MW-1 had 24 ppb TBA during the second quarter of 2008. The consultant is requesting no further action be conducted at the site due to the minimal hydrocarbons remaining in the soil. Even though CB-4 could not be drilled, the ROI for the site is 31, which encompasses the soil in the vicinity of MW-3. Additionally, groundwater analytical data of MW-3 indicates MTBE degraded from 1.3 ppb to ND<1 ppb and has not been detected since the third quarter 2007. Access of the alley to the north of the site was investigated in order to relocate CB-4. The alley is shared with 8 parcels of land and would require a city issued encroachment permit and notification of all the property owners. The alley is trafficked by large trucks and due to a power pole located near the alley, overhead obstructions would require the entire alley be blocked for further soil investigations. Subsurface Soil types: fine to coarse

TEXACO SERVICE STATION (Continued) **1006805307**

grained sands, silty sand, sandy silt and silt Depth to GW: 80.52 ft bgs to 83.09 ft bgs Current Depth To GW: 80.52 GW Flow: southwest Remediation: soil vapor extraction Sensitive Receptors: one active public well located 2212 northeast of site Other information: UST system currently installed and operating at the site.

LUST:
Global Id: T0606524504
Contact Type: Regional Board Caseworker
Contact Name: CARL BERNHARDT
Organization Name: SANTA ANA RWQCB (REGION 8)
Address: 3737 MAIN STREET, SUITE 500
City: RIVERSIDE
Email: carl.bernhardt@waterboards.ca.gov
Phone Number: 9517824495

LUST:
Global Id: T0606524504
Action Type: ENFORCEMENT
Date: 07/16/2008
Action: File review

Global Id: T0606524504
Action Type: Other
Date: 05/01/2007
Action: Leak Reported

Global Id: T0606524504
Action Type: RESPONSE
Date: 08/18/2007
Action: Preliminary Site Assessment Report

Global Id: T0606524504
Action Type: ENFORCEMENT
Date: 02/24/2009
Action: Staff Letter - #RCDEH 022409

Global Id: T0606524504
Action Type: ENFORCEMENT
Date: 12/08/2008
Action: Staff Letter - #RCDEH120808

Global Id: T0606524504
Action Type: ENFORCEMENT
Date: 10/22/2008
Action: File review

Global Id: T0606524504
Action Type: ENFORCEMENT
Date: 01/12/2009
Action: File review

Global Id: T0606524504
Action Type: ENFORCEMENT
Date: 05/08/2007
Action: File review

TEXACO SERVICE STATION (Continued) **1006805307**

Global Id: T0606524504
Action Type: RESPONSE
Date: 06/15/2007
Action: Preliminary Site Assessment Workplan

Global Id: T0606524504
Action Type: ENFORCEMENT
Date: 04/08/2009
Action: File review

Global Id: T0606524504
Action Type: ENFORCEMENT
Date: 06/03/2009
Action: Staff Letter - #RCDEH060309

Global Id: T0606524504
Action Type: ENFORCEMENT
Date: 08/31/2009
Action: Staff Letter - #Riv Co 083109

Global Id: T0606524504
Action Type: ENFORCEMENT
Date: 09/23/2009
Action: Staff Letter - #RCDEH 092309

Global Id: T0606524504
Action Type: RESPONSE
Date: 08/15/2008
Action: Remedial Progress Report

Global Id: T0606524504
Action Type: ENFORCEMENT
Date: 03/22/2010
Action: Closure/No Further Action Letter - #RCDEH Closure

Global Id: T0606524504
Action Type: RESPONSE
Date: 04/24/2009
Action: Other Report / Document

Global Id: T0606524504
Action Type: RESPONSE
Date: 10/15/2009
Action: Monitoring Report - Quarterly

Global Id: T0606524504
Action Type: RESPONSE
Date: 12/28/2009
Action: Well Destruction Report

Global Id: T0606524504
Action Type: ENFORCEMENT
Date: 05/15/2007
Action: Staff Letter - #051507

Global Id: T0606524504
Action Type: ENFORCEMENT

TEXACO SERVICE STATION (Continued) **1006805307**

Date: 01/09/2008
Action: Staff Letter - #010908

Global Id: T0606524504
Action Type: ENFORCEMENT
Date: 06/18/2007
Action: Staff Letter - #061807

Global Id: T0606524504
Action Type: ENFORCEMENT
Date: 01/08/2008
Action: File review

Global Id: T0606524504
Action Type: Other
Date: 05/01/2007
Action: Leak Discovery

Global Id: T0606524504
Action Type: REMEDIATION
Date: 06/26/2008
Action: Soil Vapor Extraction (SVE)

Global Id: T0606524504
Action Type: ENFORCEMENT
Date: 02/22/2008
Action: Staff Letter - #022208

Global Id: T0606524504
Action Type: ENFORCEMENT
Date: 10/09/2007
Action: File review

Global Id: T0606524504
Action Type: ENFORCEMENT
Date: 04/04/2008
Action: File review

Global Id: T0606524504
Action Type: ENFORCEMENT
Date: 03/21/2010
Action: Other Report - #UST Sample Analytical Report

Global Id: T0606524504
Action Type: ENFORCEMENT
Date: 03/21/2010
Action: Other Report - #UST Sample Analytical Report

Global Id: T0606524504
Action Type: Other
Date: 07/02/2007
Action: Leak Stopped

Global Id: T0606524504
Action Type: RESPONSE
Date: 02/29/2008
Action: CAP/RAP - Final Remediation / Design Plan

TEXACO SERVICE STATION (Continued) **1006805307**

LUST:
Global Id: T0606524504
Status: Open - Case Begin Date
Status Date: 05/01/2007

Global Id: T0606524504
Status: Open - Site Assessment
Status Date: 05/15/2007

Global Id: T0606524504
Status: Open - Site Assessment
Status Date: 06/15/2007

Global Id: T0606524504
Status: Open - Site Assessment
Status Date: 08/21/2007

Global Id: T0606524504
Status: Open - Remediation
Status Date: 02/22/2008

Global Id: T0606524504
Status: Completed - Case Closed
Status Date: 03/22/2010

RIVERSIDE CO. LUST:
Name: SHELL PERRIS #121222
Address: 4039 N PERRIS BLVD
City,State,Zip: PERRIS, CA
Region: RIVERSIDE
Facility ID: 200723493
Employee: Shurlow-LOP
Site Closed: Yes
Case Type: Soil only
Facility Status: closed/action completed
Casetype Decode: Soil only is impacted
Fstatus Decode: Closed/Action completed

CERS HAZ WASTE:
Name: TESORO (SHELL) 68585 (WRR 6367)
Address: 4039 N PERRIS BLVD
City,State,Zip: PERRIS, CA 92571
Site ID: 74498
CERS ID: 10320079
CERS Description: Hazardous Waste Generator

CERS TANKS:
Name: TESORO (SHELL) 68585 (WRR 6367)
Address: 4039 N PERRIS BLVD
City,State,Zip: PERRIS, CA 92571
Site ID: 74498
CERS ID: 10320079
CERS Description: Underground Storage Tank

TEXACO SERVICE STATION (Continued) **1006805307**

RCRA NonGen / NLR:
Date form received by agency: 2017-04-03 00:00:00.0
Facility name: TEXACO SERVICE STATION
Facility address: 4039 N PERRIS
SAP #121222
PERRIS, CA 92571
EPA ID: CAR000125716
Mailing address: SHELL OIL PRODUCTS US
12700 NORTHBOROUGH DR MFT240G
HOUSTON, TX 77067-2508
Contact: FRANCISCO O BERNAL
Contact address: Not reported
Not reported
Contact country: Not reported
Contact telephone: 818-759-7910
Contact email: FOBERNAL@SHELLOPUS.COM
EPA Region: 09
Classification: Non-Generator
Description: Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:
Owner/operator name: SHELL OIL PRODUCTS US
Owner/operator address: Not reported
Not reported
Owner/operator country: Not reported
Owner/operator telephone: Not reported
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: 1998-08-01 00:00:00.
Owner/Op end date: Not reported

Owner/operator name: EQUILON ENTERPRISES LLC DBA SHELL OIL PR
Owner/operator address: PO BOX 2648
HOUSTON, TX 77252
Owner/operator country: US
Owner/operator telephone: Not reported
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: 1998-08-01 00:00:00.
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No

TEXACO SERVICE STATION (Continued) **1006805307**

Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Historical Generators:
Date form received by agency: 2004-02-26 00:00:00.0
Site name: TEXACO SERVICE STATION
Classification: Small Quantity Generator

Date form received by agency: 2004-02-26 00:00:00.0
Site name: TEXACO SERVICE STATION
Classification: Large Quantity Generator

Date form received by agency: 2002-08-14 00:00:00.0
Site name: TEXACO SERVICE STATION
Classification: Small Quantity Generator

Hazardous Waste Summary:

. Waste code: D001
. Waste name: IGNITABLE WASTE

. Waste code: D018
. Waste name: BENZENE

Violation Status: No violations found

FINDS:
Registry ID: 110013308740
Facility URL: http://ofmpub.epa.gov/enviro/fii_query_detail.disp_program_facility?p_registry_id=110013308740

Environmental Interest/Information System:
California Hazardous Waste Tracking System - Datamart (HWTS-DATAMART) provides California with information on hazardous waste shipments for generators, transporters, and treatment, storage, and disposal facilities.
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.
HAZARDOUS WASTE BIENNIAL REPORTER
Registry ID: 110058266237
Facility URL: http://ofmpub.epa.gov/enviro/fii_query_detail.disp_program_facility?p_registry_id=110058266237

Environmental Interest/Information System:
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and

TEXACO SERVICE STATION (Continued) **1006805307**

corrective action activities required under RCRA.
STATE MASTER

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

ECHO:

Envid:	1006805307
Registry ID:	110013308740
DFR URL:	http://echo.epa.gov/detailed-facility-report?fid=110013308740
Name:	TEXACO SERVICE STATION
Address:	4039 N PERRIS
City,State,Zip:	PERRIS, CA 92571

HAZNET:

Name:	TEXACO SERVICE STATION
Address:	4039 N PERRIS
Address 2:	Not reported
City,State,Zip:	PERRIS, CA 92571
Contact:	Adam Estes
Telephone:	3172917007
Mailing Name:	Not reported
Mailing Address:	PO BOX 3127
Year:	2007
Gepaid:	CAR000125716
TSD EPA ID:	CAD008302903
CA Waste Code:	-
Disposal Method:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons:	Not reported
Year:	2007
Gepaid:	CAR000125716
TSD EPA ID:	CAT080013352
CA Waste Code:	134 - Aqueous solution with total organic residues less than 10 percent
Disposal Method:	H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Tons:	0.126
Year:	2007
Gepaid:	CAR000125716
TSD EPA ID:	CAD008302903
CA Waste Code:	343 - Unspecified organic liquid mixture
Disposal Method:	-
Tons:	0.0068
Year:	2007
Gepaid:	CAR000125716
TSD EPA ID:	CAD028409019
CA Waste Code:	352 - Other organic solids
Disposal Method:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons:	0.0825
Year:	2006
Gepaid:	CAR000125716

TEXACO SERVICE STATION (Continued) **1006805307**

TSD EPA ID: CAD008302903
CA Waste Code: 352 - Other organic solids
Disposal Method: H01 - Transfer Station
Tons: 0.015

Year: 2006
Gepaid: CAR000125716
TSD EPA ID: CAT080013352
CA Waste Code: 134 - Aqueous solution with total organic residues less than 10 percent
Disposal Method: R01 - Recycler
Tons: 0.0504

Year: 2005
Gepaid: CAR000125716
TSD EPA ID: CAD028409019
CA Waste Code: 352 - Other organic solids
Disposal Method: H01 - Transfer Station
Tons: 0.139

Year: 2005
Gepaid: CAR000125716
TSD EPA ID: CAT080033681
CA Waste Code: 352 - Other organic solids
Disposal Method: D80 - Disposal, Land Fill
Tons: 0.15

Year: 2004
Gepaid: CAR000125716
TSD EPA ID: CAD008364432
CA Waste Code: 352 - Other organic solids
Disposal Method: R01 - Recycler
Tons: 0.005

Year: 2003
Gepaid: CAR000125716
TSD EPA ID: CAD028409019
CA Waste Code: 134 - Aqueous solution with total organic residues less than 10 percent
Disposal Method: T01 - Treatment, Tank
Tons: 0.84

Click this hyperlink while viewing on your computer to access
2 additional CA HAZNET: record(s) in the EDR Site Report.

Additional Info:
Year: 2007
Gen EPA ID: CAR000125716

Shipment Date: 20070725
Creation Date: 12/28/2007 18:31:37
Receipt Date: 20070801
Manifest ID: 000752868FLE
Trans EPA ID: CAR000165175
Trans Name: BELSHIRE ENVIRONMENTAL SERVICES INC
Trans 2 EPA ID: Not reported
Trans 2 Name: Not reported
TSDF EPA ID: CAT080013352

TEXACO SERVICE STATION (Continued) **1006805307**

Trans Name:	DEMENNO KERDOON
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
CA Waste Code:	134 - Aqueous solution with <10% total organic residues
RCRA Code:	D018
Disposal Method:	H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Quantity Tons:	0.126
Waste Quantity:	30
Quantity Unit:	G
Additional Code 1:	D001
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20070502
Creation Date:	9/24/2007 18:30:15
Receipt Date:	20070507
Manifest ID:	000752714FLE
Trans EPA ID:	CAR000165175
Trans Name:	BELSHIRE ENVIRONMENTAL SERVICES INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD008302903
Trans Name:	VEOLIA ES TECHNICAL SOLUTIONS LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
CA Waste Code:	- Not reported
RCRA Code:	Not reported
Disposal Method:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	Not reported
Waste Quantity:	Not reported
Quantity Unit:	Not reported
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20070502
Creation Date:	9/24/2007 18:30:15
Receipt Date:	20070507
Manifest ID:	000752714FLE
Trans EPA ID:	CAR000165175
Trans Name:	BELSHIRE ENVIRONMENTAL SERVICES INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD008302903
Trans Name:	VEOLIA ES TECHNICAL SOLUTIONS LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
CA Waste Code:	343 - Unspecified organic liquid mixture
RCRA Code:	D001
Disposal Method:	- Not reported
Quantity Tons:	0.0068

TEXACO SERVICE STATION (Continued) **1006805307**

Waste Quantity:	2
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20070424
Creation Date:	8/28/2007 18:30:20
Receipt Date:	20070502
Manifest ID:	002084731JJK
Trans EPA ID:	CAR000152785
Trans Name:	CALIFORNIA HAZARDOUS SERVICES
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD028409019
Trans Name:	CROSBY & OVERTON INC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
CA Waste Code:	352 - Other organic solids
RCRA Code:	D018
Disposal Method:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.0825
Waste Quantity:	165
Quantity Unit:	P
Additional Code 1:	D001
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Additional Info:

Year:	2002
Gen EPA ID:	CAR000125716
Shipment Date:	20021009
Creation Date:	2/6/2003 18:31:16
Receipt Date:	20021013
Manifest ID:	22089485
Trans EPA ID:	CAR000118992
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD028409019
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
CA Waste Code:	241 - Tank bottom waste 251 Still bottoms with halogenated organics
RCRA Code:	D001
Disposal Method:	T01 - Treatment, Tank
Quantity Tons:	0.4587
Waste Quantity:	110
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported

TEXACO SERVICE STATION (Continued) **1006805307**

Additional Code 3: Not reported
Additional Code 4: Not reported
Additional Code 5: Not reported

Additional Info:
Year: 2003
Gen EPA ID: CAR000125716

Shipment Date: 20030909
Creation Date: 7/29/2004 7:46:19
Receipt Date: 20030910
Manifest ID: 22730455
Trans EPA ID: CAR000031211
Trans Name: Not reported
Trans 2 EPA ID: Not reported
Trans 2 Name: Not reported
TSDF EPA ID: CAD028409019
Trans Name: Not reported
TSDF Alt EPA ID: CAD028409019
TSDF Alt Name: Not reported
CA Waste Code: 134 - Aqueous solution with <10% total organic residues
RCRA Code: D001
Disposal Method: T01 - Treatment, Tank
Quantity Tons: 0.84
Waste Quantity: 200
Quantity Unit: G
Additional Code 1: Not reported
Additional Code 2: Not reported
Additional Code 3: Not reported
Additional Code 4: Not reported
Additional Code 5: Not reported

Shipment Date: 20030508
Creation Date: 6/23/2004 10:00:42
Receipt Date: 20030514
Manifest ID: 22252194
Trans EPA ID: CAR000031211
Trans Name: Not reported
Trans 2 EPA ID: Not reported
Trans 2 Name: Not reported
TSDF EPA ID: CAD028409019
Trans Name: Not reported
TSDF Alt EPA ID: CAD028409019
TSDF Alt Name: Not reported
CA Waste Code: 352 - Other organic solids
RCRA Code: D001
Disposal Method: H01 - Transfer Station
Quantity Tons: 0.2875
Waste Quantity: 575
Quantity Unit: P
Additional Code 1: Not reported
Additional Code 2: Not reported
Additional Code 3: Not reported
Additional Code 4: Not reported
Additional Code 5: Not reported

TEXACO SERVICE STATION (Continued) **1006805307**

Additional Info:

Year:	2006
Gen EPA ID:	CAR000125716
Shipment Date:	20060322
Creation Date:	12/21/2006 18:30:38
Receipt Date:	20060324
Manifest ID:	24532186
Trans EPA ID:	CAR000165175
Trans Name:	BESI
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080013352
Trans Name:	DEMENNO KERDOON
TSDF Alt EPA ID:	CAT080013352
TSDF Alt Name:	Not reported
CA Waste Code:	134 - Aqueous solution with <10% total organic residues
RCRA Code:	D001
Disposal Method:	R01 - Recycler
Quantity Tons:	0.0504
Waste Quantity:	12
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20060322
Creation Date:	7/27/2006 18:30:34
Receipt Date:	20060327
Manifest ID:	24532185
Trans EPA ID:	CAR000165175
Trans Name:	B E S I
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD008302903
Trans Name:	ONYX ENVIRONMENTAL SERVICES
TSDF Alt EPA ID:	CAD008302903
TSDF Alt Name:	Not reported
CA Waste Code:	352 - Other organic solids
RCRA Code:	D001
Disposal Method:	H01 - Transfer Station
Quantity Tons:	0.015
Waste Quantity:	30
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Additional Info:

Year:	2004
Gen EPA ID:	CAR000125716

TEXACO SERVICE STATION (Continued) **1006805307**

Shipment Date:	20040526
Creation Date:	10/29/2004 7:40:51
Receipt Date:	20040526
Manifest ID:	22803652
Trans EPA ID:	CAD008364432
Trans Name:	RHO-CHEM
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD008364432
Trans Name:	RHO-CHEM CORPORATION
TSDF Alt EPA ID:	CAD008364432
TSDF Alt Name:	Not reported
CA Waste Code:	352 - Other organic solids
RCRA Code:	Not reported
Disposal Method:	R01 - Recycler
Quantity Tons:	0.005
Waste Quantity:	10
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Additional Info:

Year:	2005
Gen EPA ID:	CAR000125716

Shipment Date:	20050505
Creation Date:	8/17/2005 18:32:04
Receipt Date:	20050512
Manifest ID:	22496762
Trans EPA ID:	CAD009661844
Trans Name:	HAZARDOUS TECHNOLOGIES INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080033681
Trans Name:	D/K ENVIRONMENTAL
TSDF Alt EPA ID:	CAT080033681
TSDF Alt Name:	Not reported
CA Waste Code:	352 - Other organic solids
RCRA Code:	NONE
Disposal Method:	D80 - Disposal, Land Fill
Quantity Tons:	0.1
Waste Quantity:	200
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20050505
Creation Date:	8/17/2005 18:32:04
Receipt Date:	20050512
Manifest ID:	22496762
Trans EPA ID:	CAD009661844

TEXACO SERVICE STATION (Continued) **1006805307**

Trans Name:	HAZARDOUS TECHNOLOGIES INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080033681
Trans Name:	D/K ENVIRONMENTAL
TSDF Alt EPA ID:	CAT080033681
TSDF Alt Name:	Not reported
CA Waste Code:	352 - Other organic solids
RCRA Code:	D018
Disposal Method:	D80 - Disposal, Land Fill
Quantity Tons:	0.05
Waste Quantity:	100
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20050503
Creation Date:	7/27/2005 10:48:47
Receipt Date:	20050511
Manifest ID:	24330602
Trans EPA ID:	CAR000152785
Trans Name:	CALIFORNIA HAZARDOUS SERVICES
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD028409019
Trans Name:	CROSBY & OVERTON INC
TSDF Alt EPA ID:	CAD028409019
TSDF Alt Name:	Not reported
CA Waste Code:	352 - Other organic solids
RCRA Code:	D001
Disposal Method:	H01 - Transfer Station
Quantity Tons:	0.139
Waste Quantity:	278
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

CERS:

Name:	TESORO (SHELL) 68585 (WRR 6367)
Address:	4039 N PERRIS BLVD
City,State,Zip:	PERRIS, CA 92571
Site ID:	74498
CERS ID:	10320079
CERS Description:	Chemical Storage Facilities

Violations:

Site ID:	74498
Site Name:	TESORO (SHELL) 68585 (WRR 6367)
Violation Date:	10-18-2017
Citation:	40 CFR 1 265.32 - U.S. Code of Federal Regulations, Title 40, Chapter 1, Section(s) 265.32

TEXACO SERVICE STATION (Continued) **1006805307**

Violation Description:	Failure of the facility to maintain the following emergency equipment or equivalents: 1) An internal communications or alarm system; 2) A device, such as a telephone (immediately available at the scene of Operations/ Maintenance) or a hand-held two-way radio, capable of summoning emergency assistance from local police departments, fire departments, or State or local emergency response teams; 3) Portable fire extinguishers, fire control equipment, spill control equipment, and decontamination equipment; and 4) Water at adequate volume and pressure to supply water hose streams, or foam producing equipment, or automatic sprinklers, or water spray systems.
Violation Notes:	Returned to compliance on 11/21/2017.
Violation Division:	Riverside County Department of Env Health
Violation Program:	HW
Violation Source:	CERS
Site ID:	74498
Site Name:	TESORO (SHELL) 68585 (WRR 6367)
Violation Date:	10-08-2019
Citation:	23 CCR 16 2636(f)(2) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2636(f)(2)
Violation Description:	Failure of the functional line leak detector (LLD) monitoring pressurized piping to meet one or more of the following requirements: Monitored at least hourly with the capability of detecting a release of 3.0 gallons per hour leak at 10 pounds per square inch and restrict or shut off the flow of product through the piping when a leak is detected.
Violation Notes:	Returned to compliance on 10/08/2019. OBSERVATION: Observed 87 and 91 LLDs fail to detect a 3.0 gallon per hour leak and restrict or shut off flow of product when tested. CORRECTIVE ACTION: Owner/operator shall repair/replace failed leak detector and certify that leak detector is capable of detecting a 3.0 gallon per hour leak and slowing/stopping the flow of product. 48 hour notification required to be submitted to this Department prior to re-testing failed leak detector. Both leak detectors were repaired and retested at the time of inspection.
Violation Division:	Riverside County Department of Env Health
Violation Program:	UST
Violation Source:	CERS
Site ID:	74498
Site Name:	TESORO (SHELL) 68585 (WRR 6367)
Violation Date:	11-12-2015
Citation:	23 CCR 16 2636(f)(2) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2636(f)(2)
Violation Description:	Failure of the pressurized piping to meet one or more of the following requirements: monitored at least hourly with the capability of detecting a release of 3.0 gallons per hour, and will restrict the flow of product through the piping or trigger an alarm when a release occurs.
Violation Notes:	Returned to compliance on 12/07/2015. 87 octane tank leak detector failed testing during inspection.
Violation Division:	Riverside County Department of Env Health
Violation Program:	UST
Violation Source:	CERS
Site ID:	74498
Site Name:	TESORO (SHELL) 68585 (WRR 6367)

TEXACO SERVICE STATION (Continued) **1006805307**

Violation Date:	12-23-2013
Citation:	23 CCR 16 2637(e) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2637(e)
Violation Description:	Failure to submit a copy of the secondary containment test results to the CUPA within 30 days after the test.
Violation Notes:	Returned to compliance on 12/23/2014.
Violation Division:	Riverside County Department of Env Health
Violation Program:	UST
Violation Source:	CERS
Site ID:	74498
Site Name:	TESORO (SHELL) 68585 (WRR 6367)
Violation Date:	10-08-2019
Citation:	23 CCR 16 2712(b)(1)(G) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2712(b)(1)(G)
Violation Description:	Failure to comply with one or more of the following overfill prevention equipment requirements: Alert the transfer operator when the tank is 90 percent full by restricting the flow into the tank or triggering an audible and visual alarm; or Restrict delivery of flow to the tank at least 30 minutes before the tank overfills, provided the restriction occurs when the tank is filled to no more than 95 percent of capacity; and activate an audible alarm at least five minutes before the tank overfills; or Provide positive shut-off of flow to the tank when the tank is filled to no more than 95 percent of capacity; or Provide positive shut-off of flow to the tank so that none of the fittings located on the top of the tank are exposed to product due to overfilling. Install/retrofit overfill prevention equipment that does not use flow restrictors on vent piping to meet overfill prevention equipment requirements when the overfill prevention equipment is installed, repaired, or replaced on and after October 1,- 2018. For USTs installed before October 1, 2018, perform an inspection by October 13, 2018 and every 36 months thereafter. For USTs installed on and after October- 1,- 2018, perform an inspection at installation and every 36 months thereafter. Inspected within 30 days after a repair to the overfill prevention equipment. Inspected using an applicable manufacturer guidelines, industry codes, engineering standards, or a method approved by a professional engineer. Inspected by a certified UST service technician. Maintain records of overfill prevention equipment inspection for 36 months.
Violation Notes:	Returned to compliance on 11/26/2019. OBSERVATION: Observed Overfill testing completed in October 2018. Overfill was set at 96.4% in the 87 tank which is above the allowable limit. A permit to repair/replace the drop tube was approved by this department. Retesting of the 87 drop tube has not been received by this department, nor was any retest paperwork found on site. CORRECTIVE ACTION: Owner/operator shall ensure that overfill requirements are being met by adjusting/replacing overfill equipment. Any adjustment or replacement of overfill equipment may require a plan check.
Violation Division:	Riverside County Department of Env Health
Violation Program:	UST
Violation Source:	CERS
Site ID:	74498
Site Name:	TESORO (SHELL) 68585 (WRR 6367)
Violation Date:	10-27-2016
Citation:	HSC 6.7 25290.1(c)(3), 25290.2(c)(3) - California Health and Safety Code, Chapter 6.7, Section(s) 25290.1(c)(3), 25290.2(c)(3)

TEXACO SERVICE STATION (Continued) **1006805307**

Violation Description:	Failure to keep water out of the secondary containment of UST systems installed on or after July 1, 2003 and before July 1, 2004, or on or after July 1, 2004.
Violation Notes:	Returned to compliance on 10/27/2016.
Violation Division:	Riverside County Department of Env Health
Violation Program:	UST
Violation Source:	CERS
Site ID:	74498
Site Name:	TESORO (SHELL) 68585 (WRR 6367)
Violation Date:	12-23-2013
Citation:	HSC 6.7 Multiple Sections - California Health and Safety Code, Chapter 6.7, Section(s) Multiple Sections
Violation Description:	UST Program - Operations/Maintenance - General
Violation Notes:	Returned to compliance on 12/23/2013.
Violation Division:	Riverside County Department of Env Health
Violation Program:	UST
Violation Source:	CERS
Site ID:	74498
Site Name:	TESORO (SHELL) 68585 (WRR 6367)
Violation Date:	12-04-2014
Citation:	HSC 6.7 25291 - California Health and Safety Code, Chapter 6.7, Section(s) 25291
Violation Description:	Failure to maintain under-dispenser containment, sumps, and/or other secondary containment in good condition and/or free of debris/liquid.
Violation Notes:	Returned to compliance on 12/04/2014.
Violation Division:	Riverside County Department of Env Health
Violation Program:	UST
Violation Source:	CERS
Site ID:	74498
Site Name:	TESORO (SHELL) 68585 (WRR 6367)
Violation Date:	10-18-2017
Citation:	Un-Specified
Violation Description:	Business Plan Program - Operations/Maintenance - General Local Ordinance
Violation Notes:	Returned to compliance on 11/21/2017. OBSERVATION: [insert specific observations here] CORRECTIVE ACTION: Owner/operator shall clearly identify the locations where all emergency equipment is stored by [insert correction details].
Violation Division:	Riverside County Department of Env Health
Violation Program:	HMRRP
Violation Source:	CERS
Site ID:	74498
Site Name:	TESORO (SHELL) 68585 (WRR 6367)
Violation Date:	10-18-2017
Citation:	23 CCR 16 2712(i) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2712(i)
Violation Description:	Failure to have a UST Monitoring Plan available on site.
Violation Notes:	Returned to compliance on 11/21/2017.
Violation Division:	Riverside County Department of Env Health
Violation Program:	UST
Violation Source:	CERS
Site ID:	74498

TEXACO SERVICE STATION (Continued) **1006805307**

Site Name: TESORO (SHELL) 68585 (WRR 6367)
Violation Date: 10-08-2019
Citation: HSC 6.7 25284.2 - California Health and Safety Code, Chapter 6.7, Section(s) 25284.2
Violation Description: "Failure to meet one or more of the following requirements: Install or maintain a liquid-tight spill container. Have a minimum capacity of five gallons. Have a functional drain valve or other method for the removal of liquid from the spill container. Be resistant to galvanic corrosion. Perform a tightness test at installation, every 12 months thereafter, or within 30 days after a repair to the spill container. Tested using applicable manufacturer guidelines, industry codes, engineering standards, or a method approved by a professional engineer. Tested by a certified UST service technician. Maintain records of spill containment testing for 36 months. "
Violation Notes: Returned to compliance on 10/08/2019. OBSERVATION: Observed 87 spill bucket drain valve to be leaking and would not hold liquid. CORRECTIVE ACTION: Owner/operator shall repair/replace the leaking 87 spill bucket drain valve so that bucket is able to hold liquid and contain release until detected.**Corrected on site**
Violation Division: Riverside County Department of Env Health
Violation Program: UST
Violation Source: CERS

Site ID: 74498
Site Name: TESORO (SHELL) 68585 (WRR 6367)
Violation Date: 10-27-2016
Citation: 23 CCR 16 2636(f)(2) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2636(f)(2)
Violation Description: Failure of the line leak detector (LLD) monitoring pressurized piping to meet one or more of the following requirements:Monitor at least hourly.Be capable of detecting a release of 3.0 gallons per hour at 10 p.s.i.g. Restrict or shut off the flow of product through the piping when a leak is detected.
Violation Notes: Returned to compliance on 10/27/2016.
Violation Division: Riverside County Department of Env Health
Violation Program: UST
Violation Source: CERS

Site ID: 74498
Site Name: TESORO (SHELL) 68585 (WRR 6367)
Violation Date: 12-23-2013
Citation: 23 CCR 16 2715(c)(2) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2715(c)(2)
Violation Description: Failure to comply with one or more of the following: maintain the spill bucket in good condition, containment free of debris/liquid, and/or to remove the contents of the spill bucket when a release/leak/spill was observed.
Violation Notes: Returned to compliance on 12/23/2013.
Violation Division: Riverside County Department of Env Health
Violation Program: UST
Violation Source: CERS

Site ID: 74498
Site Name: TESORO (SHELL) 68585 (WRR 6367)
Violation Date: 10-02-2018
Citation: 23 CCR 16 2636(f)(2) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2636(f)(2)

TEXACO SERVICE STATION (Continued) **1006805307**

Violation Description: Failure of the functional line leak detector (LLD) monitoring pressurized piping to meet one or more of the following requirements: Monitored at least hourly with the capability of detecting a release of 3.0 gallons per hour leak at 10 pounds per square inch and restrict or shut off the flow of product through the piping when a leak is detected.
Violation Notes: Returned to compliance on 10/02/2018.
Violation Division: Riverside County Department of Env Health
Violation Program: UST
Violation Source: CERS

Site ID: 74498
Site Name: TESORO (SHELL) 68585 (WRR 6367)
Violation Date: 11-12-2015
Citation: 23 CCR 16 2636(f)(2) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2636(f)(2)
Violation Description: Failure of the pressurized piping to meet one or more of the following requirements: monitored at least hourly with the capability of detecting a release of 3.0 gallons per hour, and will restrict the flow of product through the piping or trigger an alarm when a release occurs.
Violation Notes: Returned to compliance on 12/07/2015. 91 octane tank leak detector failed testing during inspection.
Violation Division: Riverside County Department of Env Health
Violation Program: UST
Violation Source: CERS

Site ID: 74498
Site Name: TESORO (SHELL) 68585 (WRR 6367)
Violation Date: 10-18-2017
Citation: 23 CCR 16 2641(h) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2641(h)
Violation Description: Failure to have an approved UST Monitoring Plan.
Violation Notes: Returned to compliance on 11/21/2017.
Violation Division: Riverside County Department of Env Health
Violation Program: UST
Violation Source: CERS

Evaluation:
Eval General Type: Compliance Evaluation Inspection
Eval Date: 12-04-2014
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Riverside County Department of Env Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 10-18-2017
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Riverside County Department of Env Health
Eval Program: HW
Eval Source: CERS

TEXACO SERVICE STATION (Continued) **1006805307**

Eval General Type: Compliance Evaluation Inspection
Eval Date: 11-12-2015
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Riverside County Department of Env Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 11-12-2015
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Riverside County Department of Env Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 11-21-2017
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Not reported
Eval Division: Riverside County Department of Env Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 12-07-2015
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Not reported
Eval Division: Riverside County Department of Env Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 10-02-2018
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Riverside County Department of Env Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 10-08-2019
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Riverside County Department of Env Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 10-18-2017
Violations Found: Yes

TEXACO SERVICE STATION (Continued) **1006805307**

Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Riverside County Department of Env Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 12-23-2013
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Riverside County Department of Env Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 02-20-2014
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Not reported
Eval Division: Riverside County Department of Env Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 10-18-2017
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Riverside County Department of Env Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 10-27-2016
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Riverside County Department of Env Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 11-12-2015
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Riverside County Department of Env Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 11-21-2017
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Not reported
Eval Division: Riverside County Department of Env Health

TEXACO SERVICE STATION (Continued) **1006805307**

Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 12-23-2013
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Riverside County Department of Env Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 12-23-2013
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Riverside County Department of Env Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 11-21-2017
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Not reported
Eval Division: Riverside County Department of Env Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 12-04-2018
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Not reported
Eval Division: Riverside County Department of Env Health
Eval Program: UST
Eval Source: CERS

Enforcement Action:
Site ID: 74498
Site Name: TESORO (SHELL) 68585 (WRR 6367)
Site Address: 4039 N PERRIS BLVD
Site City: PERRIS
Site Zip: 92571
Enf Action Date: 11-12-2015
Enf Action Type: Notice of Violation (Unified Program)
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: Not reported
Enf Action Division: Riverside County Department of Env Health
Enf Action Program: UST
Enf Action Source: CERS

Site ID: 74498
Site Name: TESORO (SHELL) 68585 (WRR 6367)
Site Address: 4039 N PERRIS BLVD
Site City: PERRIS

TEXACO SERVICE STATION (Continued) **1006805307**

Site Zip: 92571
Enf Action Date: 12-04-2014
Enf Action Type: Notice of Violation (Unified Program)
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: Not reported
Enf Action Division: Riverside County Department of Env Health
Enf Action Program: UST
Enf Action Source: CERS

Site ID: 74498
Site Name: TESORO (SHELL) 68585 (WRR 6367)
Site Address: 4039 N PERRIS BLVD
Site City: PERRIS
Site Zip: 92571
Enf Action Date: 12-23-2013
Enf Action Type: Notice of Violation (Unified Program)
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: Not reported
Enf Action Division: Riverside County Department of Env Health
Enf Action Program: UST
Enf Action Source: CERS

Coordinates:
Site ID: 74498
Facility Name: TESORO (SHELL) 68585 (WRR 6367)
Env Int Type Code: HWG
Program ID: 10320079
Coord Name: Not reported
Ref Point Type Desc: Center of a facility or station.
Latitude: 33.845190
Longitude: -117.225440

Affiliation:
Affiliation Type Desc: Document Preparer
Entity Name: BELSHIRE ENVIRONMENTAL SERVICE, INC
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: Operator
Entity Name: WESTERN REFINING AND MARKETING, LLC
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: (505) 893-2973

Affiliation Type Desc: UST Permit Applicant
Entity Name: TERESA A. MILES
Entity Title: ENVIRONMENTAL COMPLIANCE SUPERVISOR

TEXACO SERVICE STATION (Continued) **1006805307**

Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	(562) 495-6850
Affiliation Type Desc:	CUPA District
Entity Name:	Riverside Cnty Env Health
Entity Title:	Not reported
Affiliation Address:	4065 County Circle Drive, Room 104
Affiliation City:	Riverside
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92503
Affiliation Phone:	(951) 358-5055
Affiliation Type Desc:	UST Property Owner Name
Entity Name:	TESORO SOUTH COAST COMPANY LLC
Entity Title:	Not reported
Affiliation Address:	19100 RIDGEWOOD PKWY, MS: TX1-022
Affiliation City:	SAN ANTONIO
Affiliation State:	TX
Affiliation Country:	United States
Affiliation Zip:	78259
Affiliation Phone:	(210) 626-4673
Affiliation Type Desc:	UST Tank Operator
Entity Name:	WESTERN REFINING RETAIL, LLC
Entity Title:	Not reported
Affiliation Address:	1250 WEST WASHINGTON STREET, SUITE #101
Affiliation City:	TEMPE
Affiliation State:	AZ
Affiliation Country:	United States
Affiliation Zip:	85281
Affiliation Phone:	(505) 893-2973
Affiliation Type Desc:	Facility Mailing Address
Entity Name:	Mailing Address
Entity Title:	Not reported
Affiliation Address:	19100 RIDGEWOOD PKWY, MS: TX1-022
Affiliation City:	SAN ANTONIO
Affiliation State:	TX
Affiliation Country:	Not reported
Affiliation Zip:	78259
Affiliation Phone:	Not reported
Affiliation Type Desc:	Legal Owner
Entity Name:	TESORO SOUTH COAST COMPANY LLC
Entity Title:	Not reported
Affiliation Address:	19100 RIDGEWOOD PKWY, MS: TX1-022
Affiliation City:	SAN ANTONIO
Affiliation State:	TX
Affiliation Country:	United States
Affiliation Zip:	78259
Affiliation Phone:	(210) 626-4673

TEXACO SERVICE STATION (Continued) **1006805307**

Affiliation Type Desc:	Property Owner
Entity Name:	TESORO SOUTH COAST COMPANY LLC
Entity Title:	Not reported
Affiliation Address:	19100 RIDGEWOOD PKWY, MS: TX1-022
Affiliation City:	SAN ANTONIO
Affiliation State:	TX
Affiliation Country:	United States
Affiliation Zip:	78259
Affiliation Phone:	(210) 626-4673

Affiliation Type Desc:	UST Tank Owner
Entity Name:	TESORO SOUTH COAST COMPANY LLC
Entity Title:	Not reported
Affiliation Address:	19100 RIDGEWOOD PKY, MS:TX1-022
Affiliation City:	SAN ANTONIO
Affiliation State:	TX
Affiliation Country:	United States
Affiliation Zip:	78259
Affiliation Phone:	(210) 626-4673

Affiliation Type Desc:	Environmental Contact
Entity Name:	SEAN AUGUSTINE
Entity Title:	Not reported
Affiliation Address:	301 E OCEAN BLVD., SUITE 1600
Affiliation City:	LONG BEACH
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	90802
Affiliation Phone:	Not reported

Affiliation Type Desc:	Identification Signer
Entity Name:	TERESA A. MILES
Entity Title:	ENVIRONMENTAL COMPLIANCE SUPERVISOR
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

Affiliation Type Desc:	Parent Corporation
Entity Name:	Tesoro Refining and Marketing Company LLC
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

Name:	SHELL PERRIS #121222
Address:	4039 N PERRIS BLVD
City,State,Zip:	PERRIS, CA 92571
Site ID:	205179
CERS ID:	T0606524504
CERS Description:	Leaking Underground Storage Tank Cleanup Site

TEXACO SERVICE STATION (Continued) **1006805307**

Affiliation:

Affiliation Type Desc:	Regional Board Caseworker
Entity Name:	CARL BERNHARDT - SANTA ANA RWQCB (REGION 8)
Entity Title:	Not reported
Affiliation Address:	3737 MAIN STREET, SUITE 500
Affiliation City:	RIVERSIDE
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	9517824495

HWTS:

Name:	TEXACO SERVICE STATION
Address:	4039 N PERRIS
Address 2:	S A P No 121222
City,State,Zip:	PERRIS, CA 92571
EPA ID:	CAR000125716
Inactive Date:	03/17/2017
Create Date:	03/04/2003
Last Act Date:	09/14/2017
Mailing Name:	Not reported
Mailing Address:	7750 NORTH MACARTHUR, SUITE 120
Mailing Address 2:	PMB 319
Mailing City,State,Zip:	IRVING, TX 750630000
Owner Name:	EQUILON ENTERPRISE LLC DBA SHELL
Owner Address:	1 SHELL PLAZA
Owner Address 2:	910 LOUISIANA ST
Owner City,State,Zip:	HOUSTON, TX 77002
Contact Name:	ADAM ESTES
Contact Address:	6520 CORPORATE DRIVE
Contact Address 2:	Not reported
City,State,Zip:	INDIANAPOLIS, IN 462780000

NAICS:

EPA ID:	CAR000125716
Create Date:	2003-10-23 13:13:52
NAICS Code:	44711
NAICS Description:	Gasoline Stations with Convenience Stores
Issued EPA ID Date:	2003-03-04 14:25:35
Inactive Date:	2017-03-17 00:00:00
Facility Name:	TEXACO SERVICE STATION
Facility Address:	4039 N PERRIS
Facility Address 2:	S A P No 121222
Facility City:	PERRIS
Facility County:	33
Facility State:	CA
Facility Zip:	92571

C13 **UNITED FACILITIES INC.** **CERS HAZ WASTE** **S123517618**
NW **4120 INDIAN AVE** **CERS TANKS** **N/A**
< 1/8 **PERRIS, CA 92571** **CERS**
0.061 mi.
322 ft. **Site 1 of 2 in cluster C**

Relative: Higher

Actual: 1462 ft.

CERS HAZ WASTE:

Name:	UNITED FACILITIES INC.
Address:	4120 INDIAN AVE
City,State,Zip:	PERRIS, CA 92571
Site ID:	412573
CERS ID:	10714651
CERS Description:	Hazardous Waste Generator

CERS TANKS:

Name:	UNITED FACILITIES INC.
Address:	4120 INDIAN AVE
City,State,Zip:	PERRIS, CA 92571
Site ID:	412573
CERS ID:	10714651
CERS Description:	Aboveground Petroleum Storage

CERS:

Name:	UNITED FACILITIES INC.
Address:	4120 INDIAN AVE
City,State,Zip:	PERRIS, CA 92571
Site ID:	412573
CERS ID:	10714651
CERS Description:	Chemical Storage Facilities

Violations:

Site ID:	412573
Site Name:	United Facilities Inc.
Violation Date:	08-24-2018
Citation:	HSC 6.67 25270.4.5(a) - California Health and Safety Code, Chapter 6.67, Section(s) 25270.4.5(a)
Violation Description:	Failure to maintain a complete copy of the SPCC Plan at the facility if the facility is normally attended at least four hours per day, or at the nearest field office if the facility is not so attended.
Violation Notes:	Returned to compliance on 09/21/2018.
Violation Division:	Riverside County Department of Env Health
Violation Program:	APSA
Violation Source:	CERS

Site ID:	412573
Site Name:	United Facilities Inc.
Violation Date:	11-15-2016
Citation:	Un-Specified
Violation Description:	Business Plan Program - Operations/Maintenance - General Local Ordinance
Violation Notes:	Returned to compliance on 08/14/2017. Diesel fuel tank was observed without proper labeling.
Violation Division:	Riverside County Department of Env Health
Violation Program:	HMRRP
Violation Source:	CERS

Site ID:	412573
Site Name:	United Facilities Inc.
Violation Date:	11-15-2016

UNITED FACILITIES INC. (Continued) **S123517618**

Citation: Un-Specified
Violation Description: Business Plan Program - Operations/Maintenance - General Local Ordinance
Violation Notes: Returned to compliance on 08/14/2017. The entrances to the facility was observed without NFPA704 signs.
Violation Division: Riverside County Department of Env Health
Violation Program: HMRRP
Violation Source: CERS

Site ID: 412573
Site Name: United Facilities Inc.
Violation Date: 08-24-2018
Citation: HSC 6.67 25270.4.5(a) - California Health and Safety Code, Chapter 6.67, Section(s) 25270.4.5(a)
Violation Description: Failure to prepare a Spill Prevention, Control, and Countermeasures (SPCC) Plan.
Violation Notes: Returned to compliance on 09/21/2018.
Violation Division: Riverside County Department of Env Health
Violation Program: APSA
Violation Source: CERS

Site ID: 412573
Site Name: United Facilities Inc.
Violation Date: 11-15-2016
Citation: 19 CCR 6.95 25508(a)(1) - California Code of Regulations, Title 19, Chapter 6.95, Section(s) 25508(a)(1)
Violation Description: Failure to complete and electronically submit the Business Activities Page and/or Business Owner Operator Identification Page.
Violation Notes: Returned to compliance on 08/14/2017.
Violation Division: Riverside County Department of Env Health
Violation Program: HMRRP
Violation Source: CERS

Site ID: 412573
Site Name: United Facilities Inc.
Violation Date: 11-15-2016
Citation: HSC 6.95 25505(a)(4) - California Health and Safety Code, Chapter 6.95, Section(s) 25505(a)(4)
Violation Description: Failure to provide initial and annual training to all employees in safety procedures in the event of a release or threatened release of a hazardous material or failure to document and maintain training records for a minimum of three years.
Violation Notes: Returned to compliance on 08/14/2017.
Violation Division: Riverside County Department of Env Health
Violation Program: HMRRP
Violation Source: CERS

Site ID: 412573
Site Name: United Facilities Inc.
Violation Date: 08-24-2018
Citation: HSC 6.67 25270.4.5 (a) - California Health and Safety Code, Chapter 6.67 , Section(s) 25270.4.5 (a)
Violation Description: Failure to have management or a professional engineer certify the SPCC Plan and comply with certification requirements at a qualified facility.
Violation Notes: Returned to compliance on 09/21/2018.
Violation Division: Riverside County Department of Env Health

UNITED FACILITIES INC. (Continued) **S123517618**

Violation Program: APSA
Violation Source: CERS

Site ID: 412573
Site Name: United Facilities Inc.
Violation Date: 11-13-2019
Citation: Un-Specified
Violation Description: Business Plan Program - Operations/Maintenance - General Local Ordinance
Violation Notes: Returned to compliance on 12/16/2019. OBSERVATION: Observed faded/peeling NFPA-704 signs located on the Diesel tank and both Diesel generators. CORRECTIVE ACTION: Owner/operator shall replace all faded or otherwise unrecognizable NFPA-704 signs. Submit photos to this department.
Violation Division: Riverside County Department of Env Health
Violation Program: HMRRP
Violation Source: CERS

Site ID: 412573
Site Name: United Facilities Inc.
Violation Date: 11-15-2016
Citation: HSC 6.95 25508(a)(1) - California Health and Safety Code, Chapter 6.95, Section(s) 25508(a)(1)
Violation Description: Failure to establish and electronically submit an adequate training program in safety procedures in the event of a release or threatened release of a hazardous material.
Violation Notes: Returned to compliance on 08/14/2017.
Violation Division: Riverside County Department of Env Health
Violation Program: HMRRP
Violation Source: CERS

Site ID: 412573
Site Name: United Facilities Inc.
Violation Date: 11-15-2016
Citation: HSC 6.95 25508(a)(1) - California Health and Safety Code, Chapter 6.95, Section(s) 25508(a)(1)
Violation Description: Failure to complete and electronically submit a business plan when storing/handling a hazardous material at or above reportable quantities.
Violation Notes: Returned to compliance on 08/14/2017.
Violation Division: Riverside County Department of Env Health
Violation Program: HMRRP
Violation Source: CERS

Site ID: 412573
Site Name: United Facilities Inc.
Violation Date: 11-15-2016
Citation: HSC 6.95 25508(a)(1) - California Health and Safety Code, Chapter 6.95, Section(s) 25508(a)(1)
Violation Description: Failure to establish and electronically submit an adequate emergency response plan and procedures for a release or threatened release of a hazardous material.
Violation Notes: Returned to compliance on 08/14/2017.
Violation Division: Riverside County Department of Env Health
Violation Program: HMRRP
Violation Source: CERS

UNITED FACILITIES INC. (Continued) **S123517618**

Site ID: 412573
Site Name: United Facilities Inc.
Violation Date: 11-15-2016
Citation: HSC 6.95 25508(a)(1) - California Health and Safety Code, Chapter 6.95, Section(s) 25508(a)(1)
Violation Description: Failure to complete and electronically submit hazardous material inventory information for all reportable hazardous materials on site at or above reportable quantities.
Violation Notes: Returned to compliance on 08/14/2017.
Violation Division: Riverside County Department of Env Health
Violation Program: HMRRP
Violation Source: CERS

Site ID: 412573
Site Name: United Facilities Inc.
Violation Date: 11-15-2016
Citation: HSC 6.95 25507 - California Health and Safety Code, Chapter 6.95, Section(s) 25507
Violation Description: Failure to adequately establish and implement a business plan when storing/handling a hazardous material at or above reportable quantities.
Violation Notes: Returned to compliance on 08/14/2017.
Violation Division: Riverside County Department of Env Health
Violation Program: HMRRP
Violation Source: CERS

Site ID: 412573
Site Name: United Facilities Inc.
Violation Date: 11-15-2016
Citation: HSC 6.95 25508(a)(1) - California Health and Safety Code, Chapter 6.95, Section(s) 25508(a)(1)
Violation Description: Failure to complete and electronically submit a site map with all required content.
Violation Notes: Returned to compliance on 08/14/2017.
Violation Division: Riverside County Department of Env Health
Violation Program: HMRRP
Violation Source: CERS

Evaluation:
Eval General Type: Other/Unknown
Eval Date: 08-14-2017
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Not reported
Eval Division: Riverside County Department of Env Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 08-24-2018
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Riverside County Department of Env Health
Eval Program: APSA
Eval Source: CERS

UNITED FACILITIES INC. (Continued) **S123517618**

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	11-15-2016
Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	Not reported
Eval Division:	Riverside County Department of Env Health
Eval Program:	HMRRP
Eval Source:	CERS

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	11-13-2019
Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	Not reported
Eval Division:	Riverside County Department of Env Health
Eval Program:	HMRRP
Eval Source:	CERS

Coordinates:

Site ID:	412573
Facility Name:	United Facilities Inc.
Env Int Type Code:	APSA
Program ID:	10714651
Coord Name:	Not reported
Ref Point Type Desc:	Center of a facility or station.
Latitude:	33.845460
Longitude:	-117.230540

Affiliation:

Affiliation Type Desc:	Environmental Contact
Entity Name:	Raymond Gonzales
Entity Title:	Not reported
Affiliation Address:	4120 Indian Ave
Affiliation City:	Perris
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92571
Affiliation Phone:	Not reported

Affiliation Type Desc:	Identification Signer
Entity Name:	Raymond Gonzales
Entity Title:	Facility Manager
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

Affiliation Type Desc:	Legal Owner
Entity Name:	Unire Real Estate
Entity Title:	Not reported
Affiliation Address:	1800 East Imperial Hwy
Affiliation City:	Brea
Affiliation State:	CA
Affiliation Country:	United States

UNITED FACILITIES INC. (Continued) **S123517618**

Affiliation Zip:	92821
Affiliation Phone:	(714) 990-2100
Affiliation Type Desc:	Operator
Entity Name:	United Facilities Inc.
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	(909) 224-4970
Affiliation Type Desc:	CUPA District
Entity Name:	Riverside Cnty Env Health
Entity Title:	Not reported
Affiliation Address:	4065 County Circle Drive, Room 104
Affiliation City:	Riverside
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92503
Affiliation Phone:	(951) 358-5055
Affiliation Type Desc:	Document Preparer
Entity Name:	Raymond Gonzales
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Parent Corporation
Entity Name:	United Facilities Inc
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Facility Mailing Address
Entity Name:	Mailing Address
Entity Title:	Not reported
Affiliation Address:	4120 Indian Ave
Affiliation City:	Perris
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92571
Affiliation Phone:	Not reported

C14 **UNITED FACILITIES INC** **RCRA NonGen / NLR** **1024751429**
NW **4120 INDIAN AVE** **CAC002971221**
< 1/8 **PERRIS, CA 92571**
0.061 mi.
322 ft. **Site 2 of 2 in cluster C**

Relative:
Higher

Actual:
1462 ft.

RCRA NonGen / NLR:

Date form received by agency:	2018-07-17 00:00:00.0
Facility name:	UNITED FACILITIES INC
Facility address:	4120 INDIAN AVE PERRIS, CA 92571
EPA ID:	CAC002971221
Contact:	MICHAEL SCOTT
Contact address:	4120 INDIAN AVE PERRIS, CA 92571
Contact country:	Not reported
Contact telephone:	909-222-2613
Contact email:	JASON.BARNES@SAFETY-KLEEN.COM
EPA Region:	09
Classification:	Non-Generator
Description:	Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name:	MICHAEL SCOTT
Owner/operator address:	4120 INDIAN AVE PERRIS, CA 92571
Owner/operator country:	Not reported
Owner/operator telephone:	909-222-2613
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Other
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Owner/operator name:	MICHAEL SCOTT
Owner/operator address:	4120 INDIAN AVE PERRIS, CA 92571
Owner/operator country:	Not reported
Owner/operator telephone:	909-222-2613
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Other
Owner/Operator Type:	Operator
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No

UNITED FACILITIES INC (Continued) **1024751429**

Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Violation Status: No violations found

D15 **MOBIL #18-BLN** **SWEEPS UST S101590321**
ESE **3995 PERRIS BLVD** **CA FID UST N/A**
< 1/8 **PERRIS, CA 92370**
0.077 mi.
405 ft. **Site 1 of 9 in cluster D**

Relative:
Lower

Actual:
1457 ft.

SWEEPS UST:

Name:	MOBIL #18-BLN
Address:	3995 PERRIS BLVD
City:	PERRIS
Status:	Active
Comp Number:	39996
Number:	1
Board Of Equalization:	Not reported
Referral Date:	05-08-91
Action Date:	05-08-91
Created Date:	05-08-91
Owner Tank Id:	1
SWRCB Tank Id:	33-000-039996-000001
Tank Status:	A
Capacity:	10000
Active Date:	05-08-91
Tank Use:	M.V. FUEL
STG:	P
Content:	REG UNLEADED
Number Of Tanks:	4

Name:	MOBIL #18-BLN
Address:	3995 PERRIS BLVD
City:	PERRIS
Status:	Active
Comp Number:	39996
Number:	1
Board Of Equalization:	Not reported
Referral Date:	05-08-91
Action Date:	05-08-91
Created Date:	05-08-91
Owner Tank Id:	2
SWRCB Tank Id:	33-000-039996-000002
Tank Status:	A
Capacity:	10000
Active Date:	05-08-91
Tank Use:	M.V. FUEL
STG:	P
Content:	REG UNLEADED
Number Of Tanks:	Not reported

Name:	MOBIL #18-BLN
Address:	3995 PERRIS BLVD

MOBIL #18-BLN (Continued) **S101590321**

City: PERRIS
Status: Active
Comp Number: 39996
Number: 1
Board Of Equalization: Not reported
Referral Date: 05-08-91
Action Date: 05-08-91
Created Date: 05-08-91
Owner Tank Id: 3
SWRCB Tank Id: 33-000-039996-000003
Tank Status: A
Capacity: 10000
Active Date: 05-08-91
Tank Use: M.V. FUEL
STG: P
Content: REG UNLEADED
Number Of Tanks: Not reported

Name: MOBIL #18-BLN
Address: 3995 PERRIS BLVD
City: PERRIS
Status: Active
Comp Number: 39996
Number: 1
Board Of Equalization: Not reported
Referral Date: 05-08-91
Action Date: 05-08-91
Created Date: 05-08-91
Owner Tank Id: 4
SWRCB Tank Id: 33-000-039996-000004
Tank Status: A
Capacity: 10000
Active Date: 05-08-91
Tank Use: M.V. FUEL
STG: P
Content: LEADED
Number Of Tanks: Not reported

CA FID UST:
Facility ID: 33007030
Regulated By: UTNKA
Regulated ID: Not reported
Cortese Code: Not reported
SIC Code: Not reported
Facility Phone: 7149435292
Mail To: Not reported
Mailing Address: 3225 GALLOWS RD
Mailing Address 2: Not reported
Mailing City,St,Zip: PERRIS 92370
Contact: Not reported
Contact Phone: Not reported
DUNs Number: Not reported
NPDES Number: Not reported
EPA ID: Not reported
Comments: Not reported
Status: Active

D16 **MOBIL STATION #18-BLN** **UST** **U003936671**
ESE **3995 PERRIS BLVD** **N/A**
< 1/8 **PERRIS, CA 92571**
0.077 mi.
405 ft. **Site 2 of 9 in cluster D**

Relative: UST:
Lower
Actual: Name: MOBIL STATION #18-BLN
1457 ft. Address: 3995 PERRIS BLVD
City,State,Zip: PERRIS, CA 92571
Facility ID: 512
Permitting Agency: RIVERSIDE COUNTY
Latitude: 33.8454709
Longitude: -117.2243543

D17 **CIRCLE K STORE #2709429** **RCRA NonGen / NLR** **1024831877**
ESE **3995 N PERRIS BLVD** **CAL000369454**
< 1/8 **PERRIS, CA 92571**
0.099 mi.
523 ft. **Site 3 of 9 in cluster D**

Relative: RCRA NonGen / NLR:
Lower
Actual: Date form received by agency: 2011-12-01 00:00:00.0
1457 ft. Facility name: CIRCLE K STORE #2709429
Facility address: 3995 N PERRIS BLVD
PERRIS, CA 92571-3152
EPA ID: CAL000369454
Mailing address: 255 E RINCON ST STE 100
CORONA, CA 92879-0000
Contact: KRISTI HODGE
Contact address: 255 E. RINCON ST. SUITE 100
CORONA, CA 92879
Contact country: Not reported
Contact telephone: 951-270-5153
Contact email: KHODGE@CIRCLEK.COM
EPA Region: 09
Classification: Non-Generator
Description: Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:
Owner/operator name: KRISTI HODGE
Owner/operator address: 255 E. RINCON ST. SUITE 100
CORONA, CA 92879
Owner/operator country: Not reported
Owner/operator telephone: 951-270-5153
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Other
Owner/Operator Type: Operator
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Owner/operator name: CIRCLE K STORES INC
Owner/operator address: 255 E RINCON ST STE 100
CORONA, CA 92879
Owner/operator country: Not reported
Owner/operator telephone: 951-270-5153
Owner/operator email: Not reported

CIRCLE K STORE #2709429 (Continued) **1024831877**

Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Other
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: Yes
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Violation Status: No violations found

D18 **MOBIL #18-BLN** **LUST S113804499**
ESE **3995 N PERRIS BLVD.** **CERS N/A**
< 1/8 **PERRIS, CA 92571**
0.099 mi.
523 ft. **Site 4 of 9 in cluster D**

Relative: LUST:
Lower
Actual: Name: MOBIL #18-BLN
1457 ft. Address: 3995 N PERRIS BLVD.
City,State,Zip: PERRIS, CA 92571
Lead Agency: RIVERSIDE COUNTY LOP
Case Type: LUST Cleanup Site
Geo Track: http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0606505176
Global Id: T0606505176
Latitude: 33.844283
Longitude: -117.225606
Status: Completed - Case Closed
Status Date: 06/20/2003
Case Worker: SCB
RB Case Number: Not reported
Local Agency: RIVERSIDE COUNTY LOP
File Location: Not reported
Local Case Number: 200117733
Potential Media Affect: Soil
Potential Contaminants of Concern: Gasoline
Site History: Not reported

LUST:
Global Id: T0606505176
Contact Type: Regional Board Caseworker
Contact Name: ROSE SCOTT
Organization Name: SANTA ANA RWQCB (REGION 8)
Address: 3737 MAIN STREET, SUITE 500

MOBIL #18-BLN (Continued) **S113804499**

City: RIVERSIDE
Email: rose.scott@waterboards.ca.gov
Phone Number: 9513206375

Global Id: T0606505176
Contact Type: Local Agency Caseworker
Contact Name: SHARON BOLTINGHOUSE
Organization Name: RIVERSIDE COUNTY LOP
Address: 3880 LEMON ST SUITE 200
City: RIVERSIDE
Email: sbolting@rivco.org
Phone Number: 9519558980

LUST:
Global Id: T0606505176
Action Type: Other
Date: 08/20/2001
Action: Leak Reported

Global Id: T0606505176
Action Type: ENFORCEMENT
Date: 05/08/2019
Action: File review

Global Id: T0606505176
Action Type: ENFORCEMENT
Date: 06/17/2003
Action: Closure Summary

Global Id: T0606505176
Action Type: ENFORCEMENT
Date: 06/17/2003
Action: Closure/No Further Action Letter

Global Id: T0606505176
Action Type: Other
Date: 08/20/2001
Action: Leak Discovery

Global Id: T0606505176
Action Type: REMEDIATION
Date: 08/20/2001
Action: Other (Use Description Field)

Global Id: T0606505176
Action Type: Other
Date: 08/20/2001
Action: Leak Stopped

LUST:
Global Id: T0606505176
Status: Open - Case Begin Date
Status Date: 08/20/2001

Global Id: T0606505176
Status: Open - Site Assessment

MOBIL #18-BLN (Continued) **S113804499**

Status Date: 08/20/2001

Global Id: T0606505176
Status: Completed - Case Closed
Status Date: 06/20/2003

CERS:
Name: MOBIL #18-BLN
Address: 3995 N PERRIS BLVD.
City,State,Zip: PERRIS, CA 92571
Site ID: 225895
CERS ID: T0606505176
CERS Description: Leaking Underground Storage Tank Cleanup Site

Affiliation:
Affiliation Type Desc: Local Agency Caseworker
Entity Name: SHARON BOLTINGHOUSE - RIVERSIDE COUNTY LOP
Entity Title: Not reported
Affiliation Address: 3880 LEMON ST SUITE 200
Affiliation City: RIVERSIDE
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: 9519558980

Affiliation Type Desc: Regional Board Caseworker
Entity Name: ROSE SCOTT - SANTA ANA RWQCB (REGION 8)
Entity Title: Not reported
Affiliation Address: 3737 MAIN STREET, SUITE 500
Affiliation City: RIVERSIDE
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: 9513206375

D19 **CIRCLE K STORES INC. SITE #2709429** **CERS HAZ WASTE** **S109038998**
ESE **3995 N PERRIS BLVD** **CERS TANKS** **N/A**
< 1/8 **PERRIS, CA 92571** **CHMIRS**
0.099 mi. **CERS**
523 ft. **Site 5 of 9 in cluster D**

Relative: **Lower**
Actual: **1457 ft.**

CERS HAZ WASTE:
Name: CIRCLE K STORES INC. SITE #2709429
Address: 3995 N PERRIS BLVD
City,State,Zip: PERRIS, CA 92571
Site ID: 105666
CERS ID: 10175751
CERS Description: Hazardous Waste Generator

CERS TANKS:
Name: CIRCLE K STORES INC. SITE #2709429
Address: 3995 N PERRIS BLVD
City,State,Zip: PERRIS, CA 92571
Site ID: 105666
CERS ID: 10175751

CIRCLE K STORES INC. SITE #2709429 (Continued) **S109038998**

CERS Description: Underground Storage Tank

CHMIRS:

Name:	Not reported
Address:	3995 N PERRIS BLVD
City,State,Zip:	PERRIS, CA
OES Incident Number:	6-4095
OES notification:	07/11/2006
OES Date:	Not reported
OES Time:	Not reported
Date Completed:	**Not reported**
Property Use:	Not reported
Agency Id Number:	Not reported
Agency Incident Number:	Not reported
Time Notified:	Not reported
Time Completed:	Not reported
Surrounding Area:	Not reported
Estimated Temperature:	Not reported
Property Management:	Not reported
More Than Two Substances Involved?:	Not reported
Resp Agncy Personel # Of Decontaminated:	Not reported
Responding Agency Personel # Of Injuries:	Not reported
Responding Agency Personel # Of Fatalities:	Not reported
Others Number Of Decontaminated:	Not reported
Others Number Of Injuries:	Not reported
Others Number Of Fatalities:	Not reported
Vehicle Make/year:	Not reported
Vehicle License Number:	Not reported
Vehicle State:	Not reported
Vehicle Id Number:	Not reported
CA DOT PUC/ICC Number:	Not reported
Company Name:	Not reported
Reporting Officer Name/ID:	Not reported
Report Date:	Not reported
Facility Telephone:	Not reported
Waterway Involved:	Not reported
Waterway:	Not reported
Spill Site:	Not reported
Cleanup By:	Unknown
Containment:	Not reported
What Happened:	Not reported
Type:	Not reported
Measure:	Not reported
Other:	Not reported
Date/Time:	Not reported
Year:	2006
Agency:	Veeder Root
Incident Date:	7/11/2006 12:00:00 AM
Admin Agency:	Riverside County Environmental Health
Amount:	Not reported
Contained:	Unknown
Site Type:	Service Station
E Date:	Not reported
Substance:	Gasoline
Gallons:	2
Unknown:	0
Substance #2:	Not reported

CIRCLE K STORES INC. SITE #2709429 (Continued) **S109038998**

Substance #3:	Not reported
Evacuations:	0
Number of Injuries:	0
Number of Fatalities:	0
#1 Pipeline:	Not reported
#2 Pipeline:	Not reported
#3 Pipeline:	Not reported
#1 Vessel >= 300 Tons:	Not reported
#2 Vessel >= 300 Tons:	Not reported
#3 Vessel >= 300 Tons:	Not reported
Evacs:	Not reported
Injuries:	Not reported
Fatals:	Not reported
Comments:	Not reported
Description:	Per caller, a leaky dispenser caused the release.

CERS:

Name:	CIRCLE K STORES INC. SITE #2709429
Address:	3995 N PERRIS BLVD
City,State,Zip:	PERRIS, CA 92571
Site ID:	105666
CERS ID:	10175751
CERS Description:	Chemical Storage Facilities

Violations:

Site ID:	105666
Site Name:	Circle K Stores Inc. Site #2709429
Violation Date:	09-26-2016
Citation:	23 CCR 16 2632(c)(2)(B), 2634(d)(1)(a), 2636(f)(1) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2632(c)(2)(B), 2634(d)(1)(a), 2636(f)(1)
Violation Description:	Failure of the leak detection equipment to have an audible and visual alarm as required.
Violation Notes:	Returned to compliance on 09/26/2016.
Violation Division:	Riverside County Department of Env Health
Violation Program:	UST
Violation Source:	CERS

Site ID:	105666
Site Name:	Circle K Stores Inc. Site #2709429
Violation Date:	09-26-2016
Citation:	23 CCR 16 2631(g), 2632(c)(2)(A) & (B) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2631(g), 2632(c)(2)(A) & (B)
Violation Description:	Failure of the double-walled interstitial space of the tank to be continuously monitored with an audible and visual alarm.
Violation Notes:	Returned to compliance on 09/26/2016.
Violation Division:	Riverside County Department of Env Health
Violation Program:	UST
Violation Source:	CERS

Site ID:	105666
Site Name:	Circle K Stores Inc. Site #2709429
Violation Date:	10-16-2014
Citation:	23 CCR 16 2665 - California Code of Regulations, Title 23, Chapter 16, Section(s) 2665
Violation Description:	Failure to comply with one or more of the following: failure to

CIRCLE K STORES INC. SITE #2709429 (Continued) **S109038998**

	install a spill bucket, have a functional drain valve or other method for the removal of liquid from the spill bucket/spill container, and/or be resistant to galvanic corrosion.
Violation Notes:	Returned to compliance on 10/16/2014.
Violation Division:	Riverside County Department of Env Health
Violation Program:	UST
Violation Source:	CERS
Site ID:	105666
Site Name:	Circle K Stores Inc. Site #2709429
Violation Date:	09-26-2016
Citation:	23 CCR 16 2665 - California Code of Regulations, Title 23, Chapter 16, Section(s) 2665
Violation Description:	Failure of the overfill prevention system to meet one of the following requirements: Alert the transfer operator when the tank is 90 percent full by restricting the flow into the tank or triggering an audible and visual alarm; or Restrict delivery of flow to the tank at least 30 minutes before the tank overfills, provided the restriction occurs when the tank is filled to no more than 95 percent of capacity; and activate an audible alarm at least five minutes before the tank overfills; or Provide positive shut-off of flow to the tank when the tank is filled to no more than 95 percent of capacity; or Provide positive shut-off of flow to the tank so that none of the fittings located on the top of the tank are exposed to product due to overfilling.
Violation Notes:	Returned to compliance on 10/25/2016.
Violation Division:	Riverside County Department of Env Health
Violation Program:	UST
Violation Source:	CERS
Site ID:	105666
Site Name:	Circle K Stores Inc. Site #2709429
Violation Date:	09-25-2017
Citation:	23 CCR 16 2632(c)(2)(B), 2634(d)(1)(a), 2636(f)(1) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2632(c)(2)(B), 2634(d)(1)(a), 2636(f)(1)
Violation Description:	Failure of the leak detection equipment to have an audible and visual alarm as required.
Violation Notes:	Returned to compliance on 09/25/2017.
Violation Division:	Riverside County Department of Env Health
Violation Program:	UST
Violation Source:	CERS
Site ID:	105666
Site Name:	Circle K Stores Inc. Site #2709429
Violation Date:	10-16-2014
Citation:	23 CCR 16 2636(f) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2636(f)
Violation Description:	Failure to continuously monitor the interstitial space of the tank, piping and/or sumps sump such that the leak detection activates an audible/visual alarm when a leak is detected.
Violation Notes:	Returned to compliance on 10/16/2014.
Violation Division:	Riverside County Department of Env Health
Violation Program:	UST
Violation Source:	CERS
Site ID:	105666

CIRCLE K STORES INC. SITE #2709429 (Continued) **S109038998**

Site Name:	Circle K Stores Inc. Site #2709429
Violation Date:	09-17-2018
Citation:	HSC 6.7 25284, 25286 - California Health and Safety Code, Chapter 6.7, Section(s) 25284, 25286
Violation Description:	Failure to submit a complete and accurate application for a permit to operate a UST, or for renewal of the permit.
Violation Notes:	Returned to compliance on 10/11/2018.
Violation Division:	Riverside County Department of Env Health
Violation Program:	UST
Violation Source:	CERS
Site ID:	105666
Site Name:	Circle K Stores Inc. Site #2709429
Violation Date:	09-12-2019
Citation:	23 CCR 16 2712(b)(1)(G) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2712(b)(1)(G)
Violation Description:	Failure to comply with one or more of the following overfill prevention equipment requirements: Alert the transfer operator when the tank is 90 percent full by restricting the flow into the tank or triggering an audible and visual alarm; or Restrict delivery of flow to the tank at least 30 minutes before the tank overfills, provided the restriction occurs when the tank is filled to no more than 95 percent of capacity; and activate an audible alarm at least five minutes before the tank overfills; or Provide positive shut-off of flow to the tank when the tank is filled to no more than 95 percent of capacity; or Provide positive shut-off of flow to the tank so that none of the fittings located on the top of the tank are exposed to product due to overfilling. Install/retrofit overfill prevention equipment that does not use flow restrictors on vent piping to meet overfill prevention equipment requirements when the overfill prevention equipment is installed, repaired, or replaced on and after October 1,- 2018. For USTs installed before October 1, 2018, perform an inspection by October 13, 2018 and every 36 months thereafter. For USTs installed on and after October- 1,- 2018, perform an inspection at installation and every 36 months thereafter. Inspected within 30 days after a repair to the overfill prevention equipment. Inspected using an applicable manufacturer guidelines, industry codes, engineering standards, or a method approved by a professional engineer. Inspected by a certified UST service technician. Maintain records of overfill prevention equipment inspection for 36 months.
Violation Notes:	OBSERVATION: Observed installed overfill equipment that doesn't meet current requirements. Overfill was set above 95 for the ball float which is above allowable limit. CORRECTIVE ACTION: Owner/operator shall ensure that overfill requirements are being met by adjusting/replacing overfill equipment. Any adjustment or replacement of overfill equipment may require a plan check.
Violation Division:	Riverside County Department of Env Health
Violation Program:	UST
Violation Source:	CERS
Site ID:	105666
Site Name:	Circle K Stores Inc. Site #2709429
Violation Date:	09-25-2017
Citation:	23 CCR 16 2636(f)(1) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2636(f)(1)
Violation Description:	Failure of the double-walled pressurized piping to be continuously monitored with a system that activates an audible and visual alarm or

CIRCLE K STORES INC. SITE #2709429 (Continued) **S109038998**

stops flow at the dispenser when a leak is detected.
Violation Notes: Returned to compliance on 09/25/2017.
Violation Division: Riverside County Department of Env Health
Violation Program: UST
Violation Source: CERS

Site ID: 105666
Site Name: Circle K Stores Inc. Site #2709429
Violation Date: 09-25-2017
Citation: 23 CCR 16 2641(j) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2641(j)
Violation Description: Failure of the leak detection equipment to be installed, calibrated, operated, and/or maintained properly.
Violation Notes: Returned to compliance on 09/25/2017.
Violation Division: Riverside County Department of Env Health
Violation Program: UST
Violation Source: CERS

Evaluation:
Eval General Type: Compliance Evaluation Inspection
Eval Date: 10-07-2015
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Riverside County Department of Env Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 07-24-2019
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Not reported
Eval Division: Riverside County Department of Env Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 10-07-2015
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Riverside County Department of Env Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 10-24-2013
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Riverside County Department of Env Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 10-24-2016

CIRCLE K STORES INC. SITE #2709429 (Continued) **S109038998**

Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Not reported
Eval Division: Riverside County Department of Env Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 10-24-2013
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Riverside County Department of Env Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 09-17-2018
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Riverside County Department of Env Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 09-25-2017
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Riverside County Department of Env Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 10-07-2015
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Riverside County Department of Env Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 10-16-2014
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Riverside County Department of Env Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 10-25-2016
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Not reported

CIRCLE K STORES INC. SITE #2709429 (Continued) **S109038998**

Eval Division: Riverside County Department of Env Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 07-01-2019
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Not reported
Eval Division: Riverside County Department of Env Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 09-12-2019
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Riverside County Department of Env Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 09-25-2017
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Riverside County Department of Env Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 09-26-2016
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Riverside County Department of Env Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 10-24-2013
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Riverside County Department of Env Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 09-25-2017
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Riverside County Department of Env Health
Eval Program: HMRRP
Eval Source: CERS

CIRCLE K STORES INC. SITE #2709429 (Continued) **S109038998**

Enforcement Action:

Site ID:	105666
Site Name:	Circle K Stores Inc. Site #2709429
Site Address:	3995 N PERRIS BLVD
Site City:	PERRIS
Site Zip:	92571
Enf Action Date:	10-16-2014
Enf Action Type:	Notice of Violation (Unified Program)
Enf Action Description:	Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes:	Not reported
Enf Action Division:	Riverside County Department of Env Health
Enf Action Program:	UST
Enf Action Source:	CERS

Coordinates:

Site ID:	105666
Facility Name:	Circle K Stores Inc. Site #2709429
Env Int Type Code:	HWG
Program ID:	10175751
Coord Name:	Not reported
Ref Point Type Desc:	Center of a facility or station.
Latitude:	33.844120
Longitude:	-117.225610

Affiliation:

Affiliation Type Desc:	Document Preparer
Entity Name:	Robert Velasco
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

Affiliation Type Desc:	Identification Signer
Entity Name:	Robert Velasco
Entity Title:	Agent For Circle K
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

Affiliation Type Desc:	UST Permit Applicant
Entity Name:	Robert Velasco
Entity Title:	Agent For Circle K
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	(661) 250-9300

Affiliation Type Desc:	UST Tank Owner

CIRCLE K STORES INC. SITE #2709429 (Continued) **S109038998**

Entity Name:	Circle K Stores Inc.
Entity Title:	Not reported
Affiliation Address:	P.O. Box 52085, Attn: Environmental
Affiliation City:	Phoenix
Affiliation State:	AZ
Affiliation Country:	United States
Affiliation Zip:	85072
Affiliation Phone:	(980) 875-1745
Affiliation Type Desc:	Legal Owner
Entity Name:	Circle K Stores Inc.
Entity Title:	Not reported
Affiliation Address:	P.O. Box 52085, Attn: Environmental
Affiliation City:	Phoenix
Affiliation State:	AZ
Affiliation Country:	United States
Affiliation Zip:	85072
Affiliation Phone:	(980) 875-1745
Affiliation Type Desc:	UST Property Owner Name
Entity Name:	Circle K Stores Inc.
Entity Title:	Not reported
Affiliation Address:	P.O. Box 52085, Attn: Environmental
Affiliation City:	Phoenix
Affiliation State:	AZ
Affiliation Country:	United States
Affiliation Zip:	85072
Affiliation Phone:	(980) 875-1745
Affiliation Type Desc:	UST Tank Operator
Entity Name:	Circle K Stores Inc.
Entity Title:	Not reported
Affiliation Address:	P.O. Box 52085, Attn: Environmental
Affiliation City:	Phoenix
Affiliation State:	AZ
Affiliation Country:	United States
Affiliation Zip:	85072
Affiliation Phone:	(980) 875-1745
Affiliation Type Desc:	CUPA District
Entity Name:	Riverside Cnty Env Health
Entity Title:	Not reported
Affiliation Address:	4065 County Circle Drive, Room 104
Affiliation City:	Riverside
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92503
Affiliation Phone:	(951) 358-5055
Affiliation Type Desc:	Facility Mailing Address
Entity Name:	Mailing Address
Entity Title:	Not reported
Affiliation Address:	P.O. Box 52085, Attn: Environmental
Affiliation City:	Phoenix
Affiliation State:	AZ
Affiliation Country:	Not reported
Affiliation Zip:	85072

CIRCLE K STORES INC. SITE #2709429 (Continued) **S109038998**

Affiliation Phone:	Not reported
Affiliation Type Desc:	Property Owner
Entity Name:	Circle K Stores Inc.
Entity Title:	Not reported
Affiliation Address:	P.O. Box 52085, Attn: Environmental
Affiliation City:	Phoenix
Affiliation State:	AZ
Affiliation Country:	United States
Affiliation Zip:	85072
Affiliation Phone:	(980) 875-1745
Affiliation Type Desc:	Environmental Contact
Entity Name:	Yolanda Jones
Entity Title:	Not reported
Affiliation Address:	P.O. Box 52085, Attn: Environmental
Affiliation City:	Phoenix
Affiliation State:	AZ
Affiliation Country:	Not reported
Affiliation Zip:	85072
Affiliation Phone:	Not reported
Affiliation Type Desc:	Operator
Entity Name:	Circle K Stores Inc.
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	(980) 875-1745
Affiliation Type Desc:	Parent Corporation
Entity Name:	Circle K Stores Inc.
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

D20 **EXXON MOBIL OIL COPR** **RCRA-SQG** **1007200125**
ESE **3995 N PERRIS BLVD** **UST** **CAL000055799**
< 1/8 **PERRIS, CA 92571** **FINDS**
0.099 mi. **ECHO**
523 ft. **Site 6 of 9 in cluster D**

Relative:
Lower

Actual:
1457 ft.

RCRA-SQG:

Date form received by agency:	2002-02-28 00:00:00.0
Facility name:	EXXON MOBIL OIL COPR
Facility address:	3995 N PERRIS BLVD PERRIS, CA 92571
EPA ID:	CAL000055799
Mailing address:	12265 W BAYAUD AVE LAKEWOOD, CA 80228
Contact:	WENDY MCCARVILLE

EXXON MOBIL OIL COPR (Continued) **1007200125**

Contact address: Not reported
Not reported
Contact country: US
Contact telephone: 303-986-8011
Contact email: Not reported
EPA Region: 09
Classification: Small Small Quantity Generator
Description: Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Historical Generators:
Date form received by agency: 2002-02-28 00:00:00.0
Site name: EXXON MOBIL OIL COPR
Classification: Small Quantity Generator

Violation Status: No violations found

UST:
Name: CIRCLE K STORES INC. SITE #2709429
Address: 3995 N PERRIS BLVD
City,State,Zip: PERRIS, CA 92571
Facility ID: FA0036723
Permitting Agency: Riverside County Department of Environmental Health
Latitude: 33.84412
Longitude: -117.22561

RIVERSIDE CO. UST:
Name: CIRCLE K STORES, INC#2709429
Address: 3995 N PERRIS BLVD
City,State,Zip: PERRIS, CA 92571
Region: RIVERSIDE
Total Tanks: 4

FINDS:
Registry ID: 110055915737
Facility URL: http://ofmpub.epa.gov/enviro/fii_query_detail.disp_program_facility?p_

EXXON MOBIL OIL COPR (Continued) **1007200125**

registry_id=110055915737

Environmental Interest/Information System:
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.
STATE MASTER

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

ECHO:

Envid:	1007200125
Registry ID:	110055915737
DFR URL:	http://echo.epa.gov/detailed-facility-report?fid=110055915737
Name:	CIRCLE K STORE #2709429
Address:	3995 N PERRIS BLVD
City,State,Zip:	PERRIS, CA 92571

D21 **MOBIL #18-BLN** **LUST** **S105960688**
ESE **3995 NORTH PERRIS BLVD.** **N/A**
< 1/8 **PERRIS, CA 92571**
0.099 mi.
523 ft. **Site 7 of 9 in cluster D**

Relative: LUST REG 8:
Lower

Actual:
1457 ft.

Name:	MOBIL #18-BLN
Address:	3995 NORTH PERRIS BLVD.
City:	PERRIS
Region:	8
County:	Riverside
Regional Board:	Santa Ana Region
Facility Status:	Case Closed
Case Number:	Not reported
Local Case Num:	200117733
Case Type:	Soil only
Substance:	Gasoline
Qty Leaked:	Not reported
Abate Method:	Not reported
Cross Street:	RAMONA EXPRESSWAY
Enf Type:	Not reported
Funding:	Not reported
How Discovered:	OM
How Stopped:	Other Means
Leak Cause:	UNK
Leak Source:	UNK
Global ID:	T0606505176
How Stopped Date:	8/20/2001
Enter Date:	Not reported
Date Confirmation of Leak Began:	8/20/2001
Date Preliminary Assessment Began:	Not reported
Discover Date:	8/20/2001
Enforcement Date:	Not reported
Close Date:	6/20/2003
Date Prelim Assessment Workplan Submitted:	Not reported
Date Pollution Characterization Began:	Not reported

MOBIL #18-BLN (Continued) **S105960688**

Date Remediation Plan Submitted:	Not reported
Date Remedial Action Underway:	Not reported
Date Post Remedial Action Monitoring:	Not reported
Enter Date:	Not reported
GW Qualifies:	Not reported
Soil Qualifies:	Not reported
Operator:	Not reported
Facility Contact:	Not reported
Interim:	Not reported
Oversite Program:	LUST
Latitude:	0
Longitude:	0
MTBE Date:	Not reported
Max MTBE GW:	Not reported
MTBE Concentration:	0
Max MTBE Soil:	Not reported
MTBE Fuel:	1
MTBE Tested:	Site NOT Tested for MTBE.Includes Unknown and Not Analyzed.
MTBE Class:	*
Staff:	RS
Staff Initials:	SCB
Lead Agency:	Local Agency
Local Agency:	33000L
Hydr Basin #:	Not reported
Beneficial:	Not reported
Priority:	Not reported
Cleanup Fund Id:	Not reported
Work Suspended:	Not reported

Summary: Not reported

D22 **MOBIL #18-BLN** **LUST S106410451**
ESE **3995 N PERRIS BLVD** **CHMIRS N/A**
< 1/8 **PERRIS, CA**
0.099 mi.
523 ft. **Site 8 of 9 in cluster D**

Relative:
Lower

Actual:
1457 ft.

RIVERSIDE CO. LUST:

Name:	MOBIL #18-BLN
Address:	3995 N PERRIS BLVD
City,State,Zip:	PERRIS, CA
Region:	RIVERSIDE
Facility ID:	200117733
Employee:	Boltinghous-LOP
Site Closed:	Yes
Case Type:	Soil only
Facility Status:	closed/action completed
Casetype Decode:	Soil only is impacted
Fstatus Decode:	Closed/Action completed

CHMIRS:

Name:	Not reported
Address:	3995 N. PERRIS
City,State,Zip:	PERRIS, CA
OES Incident Number:	10-5738
OES notification:	09/24/2010
OES Date:	Not reported
OES Time:	Not reported

MOBIL #18-BLN (Continued) **S106410451**

Date Completed:	**Not reported**
Property Use:	Not reported
Agency Id Number:	Not reported
Agency Incident Number:	Not reported
Time Notified:	Not reported
Time Completed:	Not reported
Surrounding Area:	Not reported
Estimated Temperature:	Not reported
Property Management:	Not reported
More Than Two Substances Involved?:	Not reported
Resp Agncy Personel # Of Decontaminated:	Not reported
Responding Agency Personel # Of Injuries:	Not reported
Responding Agency Personel # Of Fatalities:	Not reported
Others Number Of Decontaminated:	Not reported
Others Number Of Injuries:	Not reported
Others Number Of Fatalities:	Not reported
Vehicle Make/year:	Not reported
Vehicle License Number:	Not reported
Vehicle State:	Not reported
Vehicle Id Number:	Not reported
CA DOT PUC/ICC Number:	Not reported
Company Name:	Not reported
Reporting Officer Name/ID:	Not reported
Report Date:	Not reported
Facility Telephone:	Not reported
Waterway Involved:	No
Waterway:	Not reported
Spill Site:	Service Station
Cleanup By:	Unknown
Containment:	Not reported
What Happened:	Not reported
Type:	Not reported
Measure:	Cup(s)
Other:	Not reported
Date/Time:	1030
Year:	2010
Agency:	Veeder Root
Incident Date:	9/24/2010
Admin Agency:	Riverside County Environmental Health
Amount:	Not reported
Contained:	Yes
Site Type:	Not reported
E Date:	Not reported
Substance:	Gasoline
Quantity Released:	1
Unknown:	Not reported
Substance #2:	Not reported
Substance #3:	Not reported
Evacuations:	Not reported
Number of Injuries:	Not reported
Number of Fatalities:	Not reported
#1 Pipeline:	Not reported
#2 Pipeline:	Not reported
#3 Pipeline:	Not reported
#1 Vessel >= 300 Tons:	Not reported
#2 Vessel >= 300 Tons:	Not reported
#3 Vessel >= 300 Tons:	Not reported

MOBIL #18-BLN (Continued) **S106410451**

Evacs: Not reported
Injuries: Not reported
Fatals: Not reported
Comments: Not reported
Description: The caller is reporting a gasoline spill due to a leaking nozzle.

D23 **EXXON MOBIL CORPORATION** **EDR Hist Auto** **1022060947**
ESE **3995 N PERRIS BLVD** **N/A**
< 1/8 **PERRIS, CA 92571**
0.099 mi.
523 ft. **Site 9 of 9 in cluster D**

Relative: EDR Hist Auto
Lower

Actual:
1457 ft.

Year:	Name:	Type:
2003	MOBIL OIL CORP SOI	Petroleum Products, NEC
2004	MOBILE OIL CORP	Petroleum Products, NEC
2005	MOBILE OIL CORP	Gasoline Service Stations, NEC
2006	EXXON MOBIL CORPORATION	Gasoline Service Stations, NEC
2007	EXXON MOBIL CORPORATION	Gasoline Service Stations, NEC
2008	EXXON MOBIL CORPORATION	Gasoline Service Stations, NEC
2009	EXXON MOBIL CORPORATION	Gasoline Service Stations, NEC
2010	EXXON MOBIL CORPORATION	Gasoline Service Stations, NEC
2010	MOBIL OIL CORPORATION SOI	Gasoline Service Stations, NEC
2011	EXXON MOBIL CORPORATION	Gasoline Service Stations, NEC
2012	EXXON MOBIL CORPORATION	Gasoline Service Stations, NEC
2013	EXXON MOBIL CORPORATION	Gasoline Service Stations, NEC
2014	EXXON MOBIL CORPORATION	Gasoline Service Stations, NEC

E24 **G HURTADO CONSTRUCTION INC** **RCRA NonGen / NLR** **1024868183**
NNE **77 W PERRY ST** **CAL000436785**
< 1/8 **PERRIS, CA 92571**
0.112 mi.
591 ft. **Site 1 of 2 in cluster E**

Relative: RCRA NonGen / NLR:
Lower
Date form received by agency: 2018-06-06 00:00:00.0

Actual:
1459 ft.

Facility name:	G HURTADO CONSTRUCTION INC
Facility address:	77 W PERRY ST PERRIS, CA 92571
EPA ID:	CAL000436785
Mailing address:	16130 REINER CIRCLE RIVERSIDE, CA 92504
Contact:	GABRIELA ARAMBUL
Contact address:	16130 REINER CIRCLE RIVERSIDE, CA 92504
Contact country:	Not reported
Contact telephone:	951-776-9903
Contact email:	GABRIELA@GHURTADO.COM
EPA Region:	09
Classification:	Non-Generator
Description:	Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:
Owner/operator name: GABRIELA ARAMBUL

G HURTADO CONSTRUCTION INC (Continued) **1024868183**

Owner/operator address:	16130 REINER CIRCLE RIVERSIDE, CA 92504
Owner/operator country:	Not reported
Owner/operator telephone:	951-776-9903
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Other
Owner/Operator Type:	Operator
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Owner/operator name:	GABRIEL AND MARIA HURTADO
Owner/operator address:	16130 REINER CIRCLE RIVERSIDE, CA 92504
Owner/operator country:	Not reported
Owner/operator telephone:	951-780-5285
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Other
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	Yes
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Violation Status: No violations found

F25 **JIFFY LUBE #3294** **AST** **A100421201**
East **118 E RAMONA EXPRESSWAY** **N/A**
< 1/8 **PERRIS, CA 92571**
0.112 mi.
592 ft. **Site 1 of 3 in cluster F**

Relative: AST:
Lower

Name:	JIFFY LUBE #3294
Address:	118 E RAMONA EXPRESSWAY
City/Zip:	PERRIS,92571
Certified Unified Program Agencies:	Not reported
Owner:	Najar Lube Centers, Inc
Total Gallons:	Not reported
CERSID:	10325710

Actual:
1456 ft.

JIFFY LUBE #3294 (Continued) **A100421201**

Facility ID:	Not reported
Business Name:	Jiffy Lube
Phone:	(951) 943-2200
Fax:	Not reported
Mailing Address:	490 W. Arrow Hwy
Mailing Address City:	San Dimas
Mailing Address State:	CA
Mailing Address Zip Code:	91773
Operator Name:	Elias Najar
Operator Phone:	951-694-5460
Owner Phone:	909-592-8484
Owner Mail Address:	490 W. Arrow Hwy
Owner State:	CA
Owner Zip Code:	91773
Owner Country:	United States
Property Owner Name:	Not reported
Property Owner Phone:	Not reported
Property Owner Mailing Address:	Not reported
Property Owner City:	Not reported
Property Owner Stat :	Not reported
Property Owner Zip Code:	Not reported
Property Owner Country:	Not reported
EPAID:	CAL000325687

F26 **JIFFY LUBE #3294** **CERS HAZ WASTE** **S123500273**
East **118 E RAMONA EXPRESSWAY** **CERS TANKS** **N/A**
< 1/8 **PERRIS, CA 92571** **CERS**
0.112 mi.
592 ft. **Site 2 of 3 in cluster F**

Relative: **Lower**

Actual: **1456 ft.**

CERS HAZ WASTE:

Name:	JIFFY LUBE #3294
Address:	118 E RAMONA EXPRESSWAY
City,State,Zip:	PERRIS, CA 92571
Site ID:	126098
CERS ID:	10325710
CERS Description:	Hazardous Waste Generator

CERS TANKS:

Name:	JIFFY LUBE #3294
Address:	118 E RAMONA EXPRESSWAY
City,State,Zip:	PERRIS, CA 92571
Site ID:	126098
CERS ID:	10325710
CERS Description:	Aboveground Petroleum Storage

CERS:

Name:	JIFFY LUBE #3294
Address:	118 E RAMONA EXPRESSWAY
City,State,Zip:	PERRIS, CA 92571
Site ID:	126098
CERS ID:	10325710
CERS Description:	Chemical Storage Facilities

Violations:

Site ID:	126098
Site Name:	Jiffy Lube #3294

JIFFY LUBE #3294 (Continued) **S123500273**

Violation Date:	03-17-2016
Citation:	HSC 6.67 25270.4.5(a) - California Health and Safety Code, Chapter 6.67, Section(s) 25270.4.5(a)
Violation Description:	Failure to comply with all of the following requirements: 1. Failure to conduct inspections and tests in accordance with written procedures that you or a certifying engineer have developed for the facility. 2. Failure to sign written procedures and/or a record of inspections and/or customary business records by the appropriate supervisor or inspector. 3. Failure to keep written procedures and/or a record of inspections and/or customary business records with the plan. AND 4. Failure to maintain written procedures and/or a record of inspections and/or customary business records for three years.
Violation Notes:	Returned to compliance on 05/03/2016.
Violation Division:	Riverside County Department of Env Health
Violation Program:	APSA
Violation Source:	CERS
Site ID:	126098
Site Name:	Jiffy Lube #3294
Violation Date:	08-16-2019
Citation:	22 CCR 12 66262.40(a) - California Code of Regulations, Title 22, Chapter 12, Section(s) 66262.40(a)
Violation Description:	Failure to keep a copy of each properly signed manifest for at least three years from the date the waste was accepted by the initial transporter. The manifest signed at the time the waste was accepted for transport shall be kept until receiving a signed copy from the designated facility which received the waste.
Violation Notes:	Not reported
Violation Division:	Riverside County Department of Env Health
Violation Program:	HW
Violation Source:	CERS
Site ID:	126098
Site Name:	Jiffy Lube #3294
Violation Date:	08-16-2019
Citation:	22 CCR 15 66265.192(a) - California Code of Regulations, Title 22, Chapter 15, Section(s) 66265.192(a)
Violation Description:	Failure to obtain and maintain a written assessment reviewed and certified by an independent, qualified, professional engineer prior to placing the tank system in service. The written assessment shall state that, the new hazardous waste tank system has sufficient structural integrity, is acceptable for the transferring, storing and treating of hazardous waste, and that the tanks and containment system including the foundation, structural support, seams, connections, and pressure controls (if applicable) are suitably designed to meet the regulation.
Violation Notes:	Not reported
Violation Division:	Riverside County Department of Env Health
Violation Program:	HW
Violation Source:	CERS
Site ID:	126098
Site Name:	Jiffy Lube #3294
Violation Date:	11-14-2019
Citation:	HSC 6.67 25270.4.5 (a) - California Health and Safety Code, Chapter 6.67, Section(s) 25270.4.5 (a)
Violation Description:	Failure to complete a review and evaluation of the SPCC Plan at least once every five years, document the completion of the review, and sign

JIFFY LUBE #3294 (Continued) **S123500273**

a statement as to whether the SPCC Plan will be amended.
Violation Notes: Not reported
Violation Division: Riverside County Department of Env Health
Violation Program: APSA
Violation Source: CERS

Site ID: 126098
Site Name: Jiffy Lube #3294
Violation Date: 08-16-2019
Citation: Un-Specified
Violation Description: Business Plan Program - Operations/Maintenance - General Local Ordinance
Violation Notes: Returned to compliance on 11/14/2019. OBSERVATION: Observed plastic drum container Degreaser without a bung cap. CORRECTIVE ACTION: Owner/operator shall store all hazardous materials in a manner which will prevent unauthorized fire, explosion, or release. All hazardous materials shall be stored closed.
Violation Division: Riverside County Department of Env Health
Violation Program: HMRRP
Violation Source: CERS

Site ID: 126098
Site Name: Jiffy Lube #3294
Violation Date: 03-17-2016
Citation: HSC 6.67 25270.4.5(a) - California Health and Safety Code, Chapter 6.67, Section(s) 25270.4.5(a)
Violation Description: Failure to provide training regarding: 1. The operation and maintenance of equipment to prevent discharges. 2. Discharge procedure protocols. 3. Applicable pollution control laws, rules, and regulations. 4. General facility operations. AND 5. The contents of the SPCC Plan.
Violation Notes: Returned to compliance on 05/03/2016.
Violation Division: Riverside County Department of Env Health
Violation Program: APSA
Violation Source: CERS

Site ID: 126098
Site Name: Jiffy Lube #3294
Violation Date: 08-16-2019
Citation: HSC 6.5 25201 - California Health and Safety Code, Chapter 6.5, Section(s) 25201
Violation Description: Failure to obtain a permit or grant of interim status after generator has accumulated hazardous waste on-site for longer than 90 days.
Violation Notes: Not reported
Violation Division: Riverside County Department of Env Health
Violation Program: HW
Violation Source: CERS

Site ID: 126098
Site Name: Jiffy Lube #3294
Violation Date: 08-16-2019
Citation: Un-Specified
Violation Description: Business Plan Program - Operations/Maintenance - General Local Ordinance
Violation Notes: OBSERVATION: Required NFPA-704 signs were not posted. CORRECTIVE ACTION: Owner/operator shall research chemical safety data sheets and post proper NFPA-704 signs. Signs shall be posted near the entrance to

JIFFY LUBE #3294 (Continued) **S123500273**

	the facility. Submit photos to this department.
Violation Division:	Riverside County Department of Env Health
Violation Program:	HMRRP
Violation Source:	CERS
Site ID:	126098
Site Name:	Jiffy Lube #3294
Violation Date:	08-16-2019
Citation:	22 CCR 15 66265.31 - California Code of Regulations, Title 22, Chapter 15, Section(s) 66265.31
Violation Description:	Failure to maintain and operate the facility to minimize the possibility of a fire, explosion, or any unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents to air, soil, or surface water which could threaten human health or the environment.
Violation Notes:	Returned to compliance on 11/14/2019.
Violation Division:	Riverside County Department of Env Health
Violation Program:	HW
Violation Source:	CERS
Site ID:	126098
Site Name:	Jiffy Lube #3294
Violation Date:	11-14-2019
Citation:	22 CCR 15 66265.192(a) - California Code of Regulations, Title 22, Chapter 15, Section(s) 66265.192(a)
Violation Description:	Failure to obtain and maintain a written assessment reviewed and certified by an independent, qualified, professional engineer prior to placing the tank system in service. The written assessment shall state that, the new hazardous waste tank system has sufficient structural integrity, is acceptable for the transferring, storing and treating of hazardous waste, and that the tanks and containment system including the foundation, structural support, seams, connections, and pressure controls (if applicable) are suitably designed to meet the regulation.
Violation Notes:	Not reported
Violation Division:	Riverside County Department of Env Health
Violation Program:	HW
Violation Source:	CERS
Site ID:	126098
Site Name:	Jiffy Lube #3294
Violation Date:	11-14-2019
Citation:	Un-Specified
Violation Description:	Business Plan Program - Operations/Maintenance - General Local Ordinance
Violation Notes:	OBSERVATION: Required NFPA-704 signs were not posted. CORRECTIVE ACTION: Owner/operator shall research chemical safety data sheets and post proper NFPA-704 signs. Signs shall be posted at entrance to the facility. Submit photos to this department.
Violation Division:	Riverside County Department of Env Health
Violation Program:	HMRRP
Violation Source:	CERS
Site ID:	126098
Site Name:	Jiffy Lube #3294
Violation Date:	11-14-2019
Citation:	HSC 6.67 25270.4.5 (a) - California Health and Safety Code, Chapter 6.67, Section(s) 25270.4.5 (a)

JIFFY LUBE #3294 (Continued) **S123500273**

Violation Description:	Failure to amend the SPCC Plan within 6 months: 1. When the facility has had a change in design, construction, operation, or maintenance which affects the facilityG s discharge potential. AND/OR 2. To include more effective proven technology at the time of the 5-year SPCC Plan review and evaluation.
Violation Notes:	Not reported
Violation Division:	Riverside County Department of Env Health
Violation Program:	APSA
Violation Source:	CERS
Site ID:	126098
Site Name:	Jiffy Lube #3294
Violation Date:	11-14-2019
Citation:	22 CCR 12 66262.40(a) - California Code of Regulations, Title 22, Chapter 12, Section(s) 66262.40(a)
Violation Description:	Failure to keep a copy of each properly signed manifest for at least three years from the date the waste was accepted by the initial transporter. The manifest signed at the time the waste was accepted for transport shall be kept until receiving a signed copy from the designated facility which received the waste.
Violation Notes:	Not reported
Violation Division:	Riverside County Department of Env Health
Violation Program:	HW
Violation Source:	CERS
Site ID:	126098
Site Name:	Jiffy Lube #3294
Violation Date:	03-17-2016
Citation:	22 CCR 16 66266.81(a)(4)(B) - California Code of Regulations, Title 22, Chapter 16, Section(s) 66266.81(a)(4)(B)
Violation Description:	Failure to retain disposal records of spent lead batteries for three years.
Violation Notes:	Returned to compliance on 05/03/2016.
Violation Division:	Riverside County Department of Env Health
Violation Program:	HW
Violation Source:	CERS
Site ID:	126098
Site Name:	Jiffy Lube #3294
Violation Date:	11-14-2019
Citation:	HSC 6.5 25201 - California Health and Safety Code, Chapter 6.5, Section(s) 25201
Violation Description:	Failure to obtain a permit or grant of interim status after generator has accumulated hazardous waste on-site for longer than 90 days.
Violation Notes:	Not reported
Violation Division:	Riverside County Department of Env Health
Violation Program:	HW
Violation Source:	CERS
Site ID:	126098
Site Name:	Jiffy Lube #3294
Violation Date:	08-16-2019
Citation:	22 CCR 15 66265.196 - California Code of Regulations, Title 22, Chapter 15, Section(s) 66265.196
Violation Description:	Failure to immediately remove from service a tank system or secondary containment system from which there has been a leak, spill, is unfit for use and comply with applicable requirements.

JIFFY LUBE #3294 (Continued) **S123500273**

Violation Notes: Returned to compliance on 11/14/2019.
Violation Division: Riverside County Department of Env Health
Violation Program: HW
Violation Source: CERS

Site ID: 126098
Site Name: Jiffy Lube #3294
Violation Date: 11-14-2019
Citation: HSC 6.67 25270.4.5 (a) - California Health and Safety Code, Chapter 6.67 , Section(s) 25270.4.5 (a)
Violation Description: Failure to have management or a professional engineer certify the SPCC Plan and comply with certification requirements at a qualified facility.
Violation Notes: Not reported
Violation Division: Riverside County Department of Env Health
Violation Program: APSA
Violation Source: CERS

Site ID: 126098
Site Name: Jiffy Lube #3294
Violation Date: 03-17-2016
Citation: 40 CFR 1 265.201(c)(3) - U.S. Code of Federal Regulations, Title 40, Chapter 1, Section(s) 265.201(c)(3)
Violation Description: Failure to conduct daily tank inspection of the discharge systems, monitoring equipment, and tank levels.
Violation Notes: Returned to compliance on 05/03/2016.
Violation Division: Riverside County Department of Env Health
Violation Program: HW
Violation Source: CERS

Evaluation:
Eval General Type: Other/Unknown
Eval Date: 05-03-2016
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Not reported
Eval Division: Riverside County Department of Env Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 08-16-2019
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Riverside County Department of Env Health
Eval Program: APSA
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 03-17-2016
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Riverside County Department of Env Health
Eval Program: HMRRP
Eval Source: CERS

JIFFY LUBE #3294 (Continued) **S123500273**

Eval General Type: Compliance Evaluation Inspection
Eval Date: 03-17-2016
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Riverside County Department of Env Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 05-03-2016
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Not reported
Eval Division: Riverside County Department of Env Health
Eval Program: APSA
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 03-17-2016
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Riverside County Department of Env Health
Eval Program: APSA
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 08-16-2019
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Riverside County Department of Env Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 11-14-2019
Violations Found: Yes
Eval Type: Other, not routine, done by local agency
Eval Notes: Not reported
Eval Division: Riverside County Department of Env Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 08-16-2019
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Riverside County Department of Env Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 11-14-2019
Violations Found: Yes

JIFFY LUBE #3294 (Continued) **S123500273**

Eval Type:	Other, not routine, done by local agency
Eval Notes:	Not reported
Eval Division:	Riverside County Department of Env Health
Eval Program:	APSA
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	11-14-2019
Violations Found:	Yes
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Not reported
Eval Division:	Riverside County Department of Env Health
Eval Program:	HW
Eval Source:	CERS

Enforcement Action:

Site ID:	126098
Site Name:	Jiffy Lube #3294
Site Address:	118 E RAMONA EXPRESSWAY
Site City:	PERRIS
Site Zip:	92571
Enf Action Date:	03-17-2016
Enf Action Type:	Notice of Violation (Unified Program)
Enf Action Description:	Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes:	Not reported
Enf Action Division:	Riverside County Department of Env Health
Enf Action Program:	APSA
Enf Action Source:	CERS
Site ID:	126098
Site Name:	Jiffy Lube #3294
Site Address:	118 E RAMONA EXPRESSWAY
Site City:	PERRIS
Site Zip:	92571
Enf Action Date:	03-17-2016
Enf Action Type:	Notice of Violation (Unified Program)
Enf Action Description:	Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes:	Not reported
Enf Action Division:	Riverside County Department of Env Health
Enf Action Program:	HW
Enf Action Source:	CERS

Affiliation:

Affiliation Type Desc:	Document Preparer
Entity Name:	Kathy Datuin, KPA LLC
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Identification Signer
Entity Name:	CRUZ MARTINEZ
Entity Title:	DIRECTOR OF OPERATIONS

JIFFY LUBE #3294 (Continued) **S123500273**

Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Legal Owner
Entity Name:	NAJJAR LUBE CENTERS INC
Entity Title:	Not reported
Affiliation Address:	490 W ARROW HWY SUITE D
Affiliation City:	SAN DIMAS
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	91773
Affiliation Phone:	(909) 592-8484
Affiliation Type Desc:	CUPA District
Entity Name:	Riverside Cnty Env Health
Entity Title:	Not reported
Affiliation Address:	4065 County Circle Drive, Room 104
Affiliation City:	Riverside
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92503
Affiliation Phone:	(951) 358-5055
Affiliation Type Desc:	Environmental Contact
Entity Name:	CRUZ MARTINEZ
Entity Title:	Not reported
Affiliation Address:	490 W ARROW HWY SUITE D
Affiliation City:	SAN DIMAS
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	91773
Affiliation Phone:	Not reported
Affiliation Type Desc:	Facility Mailing Address
Entity Name:	Mailing Address
Entity Title:	Not reported
Affiliation Address:	490 W ARROW HWY STE D
Affiliation City:	SAN DIMAS
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	91773
Affiliation Phone:	Not reported
Affiliation Type Desc:	Operator
Entity Name:	ELIAS NAJJAR
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	(909) 641-8889

JIFFY LUBE #3294 (Continued) **S123500273**

Affiliation Type Desc:	Property Owner
Entity Name:	MARLIN, LLC; ATTN LINDA VALENZUELA
Entity Title:	Not reported
Affiliation Address:	2123 N BEACHWOOD DRIVE
Affiliation City:	LOS ANGELES
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	90068
Affiliation Phone:	(323) 356-2307

Affiliation Type Desc:	Parent Corporation
Entity Name:	Najjar Lube Centers
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

F27 **JIFFY LUBE #3294** **RCRA NonGen / NLR** **1024818454**
East **118 RAMONA EXPY** **CAL000325687**
< 1/8 **PERRIS, CA 92571**
0.112 mi.
592 ft. **Site 3 of 3 in cluster F**

Relative:
Lower

Actual:
1456 ft.

RCRA NonGen / NLR:

Date form received by agency:	2007-10-12 00:00:00.0
Facility name:	JIFFY LUBE #3294
Facility address:	118 RAMONA EXPY PERRIS, CA 92571-7458
EPA ID:	CAL000325687
Mailing address:	490 W ARROW HWY STE D SAN DIMAS, CA 91773-2920
Contact:	CRUZ MARTINEZ
Contact address:	490 W ARROW HWY STE D SAN DIMAS, CA 91773
Contact country:	Not reported
Contact telephone:	909-263-7778
Contact email:	JAMES.HAN@NLCJL.COM
EPA Region:	09
Classification:	Non-Generator
Description:	Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name:	CRUZ MARTINEZ
Owner/operator address:	490 W ARROW HWY STE D SAN DIMAS, CA 91773
Owner/operator country:	Not reported
Owner/operator telephone:	909-263-7778
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Other
Owner/Operator Type:	Operator
Owner/Op start date:	Not reported

JIFFY LUBE #3294 (Continued) **1024818454**

Owner/Op end date: Not reported

Owner/operator name: NAJJAR LUBE CENTERS INC
Owner/operator address: 490 W ARROW HWY STE D
SAN DIMAS, CA 91773
Owner/operator country: Not reported
Owner/operator telephone: 909-592-8484
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Other
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: Yes
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Violation Status: No violations found

E28 **EMWD PERRY WELL #56** **RCRA-SQG** **1007989025**
North **303 PERRY ST** **FINDS** **CAR000159327**
< 1/8 **PERRIS, CA 92571**
0.115 mi.
607 ft. **Site 2 of 2 in cluster E**

Relative:
Higher

Actual:
1460 ft.

RCRA-SQG:
Date form received by agency: 2006-02-17 00:00:00.0
Facility name: WELL 56
Facility address: 303 PERRY STREET
PERRIS, CA 92571
EPA ID: CAR000159327
Mailing address: P.O. BOX 8300
PERRIS, CA 92572
Contact: JUDY J ADAMS
Contact address: Not reported
Not reported
Contact country: US
Contact telephone: 951-928-3777
Telephone ext.: 6252
Contact email: ADAMSJ@EMWD.ORG
EPA Region: 09
Classification: Small Small Quantity Generator
Description: Handler: generates more than 100 and less than 1000 kg of hazardous

EMWD PERRY WELL #56 (Continued) **1007989025**

waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:

Owner/operator name:	EASTERN MUNICIPAL WATER DISTRICT
Owner/operator address:	Not reported
	Not reported
Owner/operator country:	US
Owner/operator telephone:	Not reported
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Municipal
Owner/Operator Type:	Operator
Owner/Op start date:	1950-10-16 00:00:00.
Owner/Op end date:	Not reported

Owner/operator name:	EASTERN MUNICIPAL WATER DISTRICT
Owner/operator address:	PO BOX 8300
	PERRIS, CA 92572
Owner/operator country:	US
Owner/operator telephone:	Not reported
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Municipal
Owner/Operator Type:	Owner
Owner/Op start date:	1950-10-16 00:00:00.
Owner/Op end date:	Not reported

Owner/operator name:	EASTERN MUNICIPAL WATER DISTRICT
Owner/operator address:	P.O. BOX 8300
	PERRIS, CA 92572
Owner/operator country:	US
Owner/operator telephone:	Not reported
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Municipal
Owner/Operator Type:	Owner
Owner/Op start date:	1950-10-16 00:00:00.
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No

EMWD PERRY WELL #56 (Continued) **1007989025**

User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Historical Generators:
Date form received by agency: 2006-02-17 00:00:00.0
Site name: WELL 56
Classification: Large Quantity Generator

Date form received by agency: 2005-01-03 00:00:00.0
Site name: WELL 56
Classification: Large Quantity Generator

Hazardous Waste Summary:

. Waste code: 122
. Waste name: Alkaline solution without metals (pH > 12.5)

. Waste code: 791
. Waste name: Liquids with pH < 2

. Waste code: D002
. Waste name: CORROSIVE WASTE

Violation Status: No violations found

FINDS:
Registry ID: 110055725210
Facility URL: http://ofmpub.epa.gov/enviro/fii_query_detail.disp_program_facility?p_registry_id=110055725210

Environmental Interest/Information System:
STATE MASTER

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

29
SE
1/8-1/4
0.162 mi.
857 ft.

BEST FOR LESS TIRES
3865 N PERRIS BLVD UNIT A7
PERRIS, CA 92570

CERS HAZ WASTE
HAZNET
CERS
HWTS

S113050962
N/A

Relative:
Lower

Actual:
1457 ft.

CERS HAZ WASTE:
Name: RENTERIA CUSTOM WHEELS & TIRES
Address: 3865 N PERRIS BLVD
City,State,Zip: PERRIS, CA 92571
Site ID: 147475
CERS ID: 10329820
CERS Description: Hazardous Waste Generator

HAZNET:
Name: BEST FOR LESS TIRES
Address: 3865 N PERRIS BLVD UNIT A7
Address 2: Not reported
City,State,Zip: PERRIS, CA 925700000

BEST FOR LESS TIRES (Continued) **S113050962**

Contact:	SUSAN RICHARDSON
Telephone:	9099404333
Mailing Name:	Not reported
Mailing Address:	3865 N PERRIS BLVD UNIT A7
Year:	1995
Gepaid:	CAL000076584
TSD EPA ID:	CAD093459485
CA Waste Code:	214 - Unspecified solvent mixture
Disposal Method:	H01 - Transfer Station
Tons:	0.072

Additional Info:

Year:	1995
Gen EPA ID:	CAL000076584
Shipment Date:	19950921
Creation Date:	7/26/1996 0:00:00
Receipt Date:	19951003
Manifest ID:	95641365
Trans EPA ID:	ILD984908202
Trans Name:	Not reported
Trans 2 EPA ID:	ILD984908202
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD093459485
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
CA Waste Code:	214 - Unspecified solvent mixture
RCRA Code:	D039
Disposal Method:	H01 - Transfer Station
Quantity Tons:	0.018
Waste Quantity:	5
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	19950731
Creation Date:	4/2/1996 0:00:00
Receipt Date:	19950810
Manifest ID:	95420484
Trans EPA ID:	ILD984908202
Trans Name:	Not reported
Trans 2 EPA ID:	ILD984908202
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD093459485
Trans Name:	Not reported
TSDF Alt EPA ID:	CAD093459485
TSDF Alt Name:	Not reported
CA Waste Code:	214 - Unspecified solvent mixture
RCRA Code:	D039
Disposal Method:	H01 - Transfer Station
Quantity Tons:	0.018

BEST FOR LESS TIRES (Continued) **S113050962**

Waste Quantity:	5
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	19950607
Creation Date:	10/24/1995 0:00:00
Receipt Date:	19950614
Manifest ID:	95516323
Trans EPA ID:	ILD984908202
Trans Name:	Not reported
Trans 2 EPA ID:	ILD984908202
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD093459485
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
CA Waste Code:	214 - Unspecified solvent mixture
RCRA Code:	D039
Disposal Method:	H01 - Transfer Station
Quantity Tons:	0.036
Waste Quantity:	10
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

CERS:

Name:	RENTERIA CUSTOM WHEELS & TIRES
Address:	3865 N PERRIS BLVD
City,State,Zip:	PERRIS, CA 92571
Site ID:	147475
CERS ID:	10329820
CERS Description:	Chemical Storage Facilities

Violations:

Site ID:	147475
Site Name:	Renteria Custom Wheels & Tires
Violation Date:	05-14-2015
Citation:	HSC 6.95 25508(a)(1) - California Health and Safety Code, Chapter 6.95, Section(s) 25508(a)(1)
Violation Description:	Failure to establish and electronically submit an adequate emergency response plan and procedures for a release or threatened release of a hazardous material.
Violation Notes:	Returned to compliance on 08/11/2015.
Violation Division:	Riverside County Department of Env Health
Violation Program:	HMRRP
Violation Source:	CERS
Site ID:	147475
Site Name:	Renteria Custom Wheels & Tires
Violation Date:	10-10-2018

BEST FOR LESS TIRES (Continued) **S113050962**

Citation:	HSC 6.95 25505(c) - California Health and Safety Code, Chapter 6.95, Section(s) 25505(c)
Violation Description:	Failure to have a business plan readily available to personnel of the business or the unified program facility with responsibilities for emergency response or training.
Violation Notes:	Returned to compliance on 04/18/2019. OBSERVATION: Facility personnel were unable to access/locate a current copy of the business plan during the inspection. CORRECTIVE ACTION: Owner/operator shall ensure a current copy of the hazardous materials business plan is readily available on site at all times when the facility is staffed.
Violation Division:	Riverside County Department of Env Health
Violation Program:	HMRRP
Violation Source:	CERS
Site ID:	147475
Site Name:	Renteria Custom Wheels & Tires
Violation Date:	03-07-2019
Citation:	40 CFR 1 265.173 - U.S. Code of Federal Regulations, Title 40, Chapter 1, Section(s) 265.173
Violation Description:	Failure to meet the following container management requirements: (a) A container holding hazardous waste must always be closed during storage, except when it is necessary to add or remove waste. (b) A container holding hazardous waste must not be opened, handled, or stored in a manner which may rupture the container or cause it to leak.
Violation Notes:	Returned to compliance on 03/07/2019.
Violation Division:	Riverside County Department of Env Health
Violation Program:	HW
Violation Source:	CERS
Site ID:	147475
Site Name:	Renteria Custom Wheels & Tires
Violation Date:	10-10-2018
Citation:	40 CFR 1 262.34(d)(5)(iii) - U.S. Code of Federal Regulations, Title 40, Chapter 1, Section(s) 262.34(d)(5)(iii)
Violation Description:	Failure to ensure that all employees are thoroughly familiar with proper waste handling and emergency procedures, relevant to their responsibilities during normal facility operations and emergencies.
Violation Notes:	Returned to compliance on 03/21/2019. OBSERVATION: No training records observed/provided during inspection. CORRECTIVE ACTION: Owner/operator shall provide employees with initial or refresher hazardous waste training as required. Submit a copy of the roster and the syllabus to the CUPA.
Violation Division:	Riverside County Department of Env Health
Violation Program:	HW
Violation Source:	CERS
Site ID:	147475
Site Name:	Renteria Custom Wheels & Tires
Violation Date:	10-10-2018
Citation:	Un-Specified
Violation Description:	Business Plan Program - Operations/Maintenance - General Local Ordinance
Violation Notes:	Returned to compliance on 03/21/2019. OBSERVATION: Observed faded NFPA-704 signs located at the entrance to the facility. CORRECTIVE ACTION: Owner/operator shall replace all faded or otherwise unrecognizable NFPA-704 signs. Submit photos to this department.

BEST FOR LESS TIRES (Continued) **S113050962**

Violation Division:	Riverside County Department of Env Health
Violation Program:	HMRRP
Violation Source:	CERS
Site ID:	147475
Site Name:	Renteria Custom Wheels & Tires
Violation Date:	10-10-2018
Citation:	40 CFR 1 265.173 - U.S. Code of Federal Regulations, Title 40, Chapter 1, Section(s) 265.173
Violation Description:	Failure to meet the following container management requirements: (a) A container holding hazardous waste must always be closed during storage, except when it is necessary to add or remove waste. (b) A container holding hazardous waste must not be opened, handled, or stored in a manner which may rupture the container or cause it to leak.
Violation Notes:	Returned to compliance on 03/21/2019. OBSERVATION: Observed two 55 gallon drums containing used oil filters without cover/lid in place. CORRECTIVE ACTION: Owner/operator shall maintain all hazardous waste containers closed when not adding/removing hazardous waste. OBSERVATION: Observed used oil tank without bung cap in place. CORRECTIVE ACTION: Owner/operator shall maintain all hazardous waste containers closed when not adding/removing hazardous waste.
Violation Division:	Riverside County Department of Env Health
Violation Program:	HW
Violation Source:	CERS
Site ID:	147475
Site Name:	Renteria Custom Wheels & Tires
Violation Date:	10-10-2018
Citation:	HSC 6.5 25160.2 - California Health and Safety Code, Chapter 6.5, Section(s) 25160.2
Violation Description:	Failure of a generator of hazardous waste that meets the conditions to be transported on a consolidated manifest to comply with one or more of the required consolidated manifesting procedures and retain copies of receipts for three years.
Violation Notes:	Returned to compliance on 03/21/2019. OBSERVATION: Observed facility shipping non-RCRA hazardous waste off site. Only one consolidated manifest was available during inspection. CORRECTIVE ACTION: Owner/operator shall obtain previous records of waste disposal. Owner/operator shall maintain records of hazardous waste transport and disposal on site for at least 3 years.
Violation Division:	Riverside County Department of Env Health
Violation Program:	HW
Violation Source:	CERS
Site ID:	147475
Site Name:	Renteria Custom Wheels & Tires
Violation Date:	05-14-2015
Citation:	HSC 6.95 25508(a)(1) - California Health and Safety Code, Chapter 6.95, Section(s) 25508(a)(1)
Violation Description:	Failure to establish and electronically submit an adequate training program in safety procedures in the event of a release or threatened release of a hazardous material.
Violation Notes:	Returned to compliance on 08/11/2015.
Violation Division:	Riverside County Department of Env Health
Violation Program:	HMRRP
Violation Source:	CERS

BEST FOR LESS TIRES (Continued) **S113050962**

Site ID: 147475
Site Name: Renteria Custom Wheels & Tires
Violation Date: 02-04-2019
Citation: Un-Specified
Violation Description: Business Plan Program - Operations/Maintenance - General Local Ordinance
Violation Notes: Returned to compliance on 03/21/2019. See initial inspection.
Violation Division: Riverside County Department of Env Health
Violation Program: HMRRP
Violation Source: CERS

Site ID: 147475
Site Name: Renteria Custom Wheels & Tires
Violation Date: 05-14-2015
Citation: 19 CCR 6.95 25508(a)(1) - California Code of Regulations, Title 19, Chapter 6.95, Section(s) 25508(a)(1)
Violation Description: Failure to complete and electronically submit the Business Activities Page and/or Business Owner Operator Identification Page.
Violation Notes: Returned to compliance on 08/11/2015.
Violation Division: Riverside County Department of Env Health
Violation Program: HMRRP
Violation Source: CERS

Site ID: 147475
Site Name: Renteria Custom Wheels & Tires
Violation Date: 10-10-2018
Citation: Un-Specified
Violation Description: Business Plan Program - Administration/Documentation - General Local Ordinance
Violation Notes: Returned to compliance on 03/21/2019. OBSERVATION: No emergency contact posting was observed. CORRECTIVE ACTION: Owner/operator shall post emergency contact information in a conspicuous location.
Violation Division: Riverside County Department of Env Health
Violation Program: HMRRP
Violation Source: CERS

Site ID: 147475
Site Name: Renteria Custom Wheels & Tires
Violation Date: 03-07-2019
Citation: HSC 6.95 25505(c) - California Health and Safety Code, Chapter 6.95, Section(s) 25505(c)
Violation Description: Failure to have a business plan readily available to personnel of the business or the unified program facility with responsibilities for emergency response or training.
Violation Notes: Returned to compliance on 04/18/2019. OBSERVATION: Facility personnel were unable to access/locate a current copy of the business plan during the inspection. CORRECTIVE ACTION: Owner/operator shall ensure a current copy of the hazardous materials business plan is readily available on site at all times when the facility is staffed.
Violation Division: Riverside County Department of Env Health
Violation Program: HMRRP
Violation Source: CERS

Site ID: 147475
Site Name: Renteria Custom Wheels & Tires
Violation Date: 05-14-2015
Citation: HSC 6.95 25508(d) - California Health and Safety Code, Chapter 6.95,

BEST FOR LESS TIRES (Continued) **S113050962**

	Section(s) 25508(d)
Violation Description:	Failure to complete and/or electronically submit a business plan when storing/handling a hazardous material at or above reportable quantities.
Violation Notes:	Returned to compliance on 08/11/2015.
Violation Division:	Riverside County Department of Env Health
Violation Program:	HMRRP
Violation Source:	CERS
Site ID:	147475
Site Name:	Renteria Custom Wheels & Tires
Violation Date:	02-04-2019
Citation:	HSC 6.95 25505(a)(4) - California Health and Safety Code, Chapter 6.95, Section(s) 25505(a)(4)
Violation Description:	Failure to provide initial and annual training to all employees in safety procedures in the event of a release or threatened release of a hazardous material or failure to document and maintain training records for a minimum of three years.
Violation Notes:	Returned to compliance on 03/07/2019.
Violation Division:	Riverside County Department of Env Health
Violation Program:	HMRRP
Violation Source:	CERS
Site ID:	147475
Site Name:	Renteria Custom Wheels & Tires
Violation Date:	10-10-2018
Citation:	HSC 6.95 25508.2 - California Health and Safety Code, Chapter 6.95, Section(s) 25508.2
Violation Description:	Failure to annually review and electronically certify that the business plan is complete and accurate on or before the annual due date.
Violation Notes:	Returned to compliance on 03/21/2019.
Violation Division:	Riverside County Department of Env Health
Violation Program:	HMRRP
Violation Source:	CERS
Site ID:	147475
Site Name:	Renteria Custom Wheels & Tires
Violation Date:	10-10-2018
Citation:	40 CFR 1 265.174 - U.S. Code of Federal Regulations, Title 40, Chapter 1, Section(s) 265.174
Violation Description:	Failure to inspect hazardous waste storage areas at least weekly and look for leaking and deteriorating containers.
Violation Notes:	Returned to compliance on 03/21/2019. OBSERVATION: Observed the presence of multiple hazardous waste violations at this facility. The presence of multiple violations indicates that inspections of the hazardous waste areas are not being conducted. CORRECTIVE ACTION: Owner/operator shall conduct weekly inspections of all hazardous waste storage areas.
Violation Division:	Riverside County Department of Env Health
Violation Program:	HW
Violation Source:	CERS
Site ID:	147475
Site Name:	Renteria Custom Wheels & Tires
Violation Date:	02-04-2019
Citation:	40 CFR 1 265.173 - U.S. Code of Federal Regulations, Title 40, Chapter

BEST FOR LESS TIRES (Continued) **S113050962**

	1, Section(s) 265.173
Violation Description:	Failure to meet the following container management requirements: (a) A container holding hazardous waste must always be closed during storage, except when it is necessary to add or remove waste. (b) A container holding hazardous waste must not be opened, handled, or stored in a manner which may rupture the container or cause it to leak.
Violation Notes:	Returned to compliance on 03/21/2019. OBSERVATION: Observed one 55 gallon drum for used filters without cover/lid in place. CORRECTIVE ACTION: Owner/operator shall maintain all hazardous waste containers closed when not adding/removing hazardous waste.
Violation Division:	Riverside County Department of Env Health
Violation Program:	HW
Violation Source:	CERS
Site ID:	147475
Site Name:	Renteria Custom Wheels & Tires
Violation Date:	03-07-2019
Citation:	Un-Specified
Violation Description:	Business Plan Program - Administration/Documentation - General Local Ordinance
Violation Notes:	Returned to compliance on 03/21/2019. OBSERVATION: No emergency contact posting was observed. CORRECTIVE ACTION: Owner/operator shall post emergency contact information in a conspicuous location.
Violation Division:	Riverside County Department of Env Health
Violation Program:	HMRRP
Violation Source:	CERS
Site ID:	147475
Site Name:	Renteria Custom Wheels & Tires
Violation Date:	03-07-2019
Citation:	HSC 6.95 25508.2 - California Health and Safety Code, Chapter 6.95, Section(s) 25508.2
Violation Description:	Failure to annually review and electronically certify that the business plan is complete and accurate on or before the annual due date.
Violation Notes:	Returned to compliance on 03/21/2019. OBSERVATION: A complete annual business plan certification was not observed in the statewide information management system. A notice was previously mailed from RivCo DEH requiring submission of a business plan. CORRECTIVE ACTION: Owner/Operator shall submit an updated business plan in the statewide information management system at http://cers.calepa.ca.gov in accordance with the letter(s) previously sent to this facility. The compliance deadline for this violation will be pursuant to the date specified in the letter mailed to you by this Department, rather than 30 days from the date of this report. Business plans shall be reviewed and certified on at least an annual basis. The facility is still missing the Hazardous Materials Inventory section.
Violation Division:	Riverside County Department of Env Health
Violation Program:	HMRRP
Violation Source:	CERS
Site ID:	147475
Site Name:	Renteria Custom Wheels & Tires
Violation Date:	02-04-2019
Citation:	HSC 6.95 25508.2 - California Health and Safety Code, Chapter 6.95, Section(s) 25508.2

BEST FOR LESS TIRES (Continued) **S113050962**

Violation Description:	Failure to annually review and electronically certify that the business plan is complete and accurate on or before the annual due date.
Violation Notes:	Returned to compliance on 03/21/2019. OBSERVATION: No annual business plan certification was observed in the statewide information management system. A notice was previously mailed from RivCo DEH requiring submission of a business plan. CORRECTIVE ACTION: Owner/Operator shall submit an updated business plan in the statewide information management system at http://cers.calepa.ca.gov in accordance with the letter(s) previously sent to this facility. The compliance deadline for this violation will be pursuant to the date specified in the letter mailed to you by this Department, rather than 30 days from the date of this report. Business plans shall be reviewed and certified on at least an annual basis.
Violation Division:	Riverside County Department of Env Health
Violation Program:	HMRRP
Violation Source:	CERS
Site ID:	147475
Site Name:	Renteria Custom Wheels & Tires
Violation Date:	02-04-2019
Citation:	40 CFR 1 262.34(d)(5)(iii) - U.S. Code of Federal Regulations, Title 40, Chapter 1, Section(s) 262.34(d)(5)(iii)
Violation Description:	Failure to ensure that all employees are thoroughly familiar with proper waste handling and emergency procedures, relevant to their responsibilities during normal facility operations and emergencies.
Violation Notes:	Returned to compliance on 03/21/2019. OBSERVATION: No training records observed/provided during inspection. CORRECTIVE ACTION: Owner/operator shall provide employees with initial or refresher hazardous waste training as required. Submit a copy of the roster and the syllabus to the CUPA.
Violation Division:	Riverside County Department of Env Health
Violation Program:	HW
Violation Source:	CERS
Site ID:	147475
Site Name:	Renteria Custom Wheels & Tires
Violation Date:	05-14-2015
Citation:	HSC 6.95 25505(a)(4) - California Health and Safety Code, Chapter 6.95, Section(s) 25505(a)(4)
Violation Description:	Failure to provide initial and annual training to all employees in safety procedures in the event of a release or threatened release of a hazardous material or failure to document and maintain training records for a minimum of three years.
Violation Notes:	Returned to compliance on 08/11/2015.
Violation Division:	Riverside County Department of Env Health
Violation Program:	HMRRP
Violation Source:	CERS
Site ID:	147475
Site Name:	Renteria Custom Wheels & Tires
Violation Date:	02-04-2019
Citation:	HSC 6.95 25505(c) - California Health and Safety Code, Chapter 6.95, Section(s) 25505(c)
Violation Description:	Failure to have a business plan readily available to personnel of the business or the unified program facility with responsibilities for emergency response or training.

BEST FOR LESS TIRES (Continued) **S113050962**

Violation Notes:	Returned to compliance on 03/21/2019. OBSERVATION: Facility personnel were unable to access/locate a current copy of the business plan during the inspection. CORRECTIVE ACTION: Owner/operator shall ensure a current copy of the hazardous materials business plan is readily available on site at all times when the facility is staffed.
Violation Division:	Riverside County Department of Env Health
Violation Program:	HMRRP
Violation Source:	CERS
Site ID:	147475
Site Name:	Renteria Custom Wheels & Tires
Violation Date:	10-10-2018
Citation:	HSC 6.95 25505(a)(4) - California Health and Safety Code, Chapter 6.95, Section(s) 25505(a)(4)
Violation Description:	Failure to provide initial and annual training to all employees in safety procedures in the event of a release or threatened release of a hazardous material or failure to document and maintain training records for a minimum of three years.
Violation Notes:	Returned to compliance on 03/07/2019. OBSERVATION: No training records observed/provided during inspection. CORRECTIVE ACTION: Owner/operator shall provide training to all employees. Documentation shall be retained and be made available for inspection for a minimum period of 3 years from the date of the training. Please email the syllabus used for training as well as dated signatures of all the employees who received the training.
Violation Division:	Riverside County Department of Env Health
Violation Program:	HMRRP
Violation Source:	CERS
Site ID:	147475
Site Name:	Renteria Custom Wheels & Tires
Violation Date:	10-11-2017
Citation:	HSC 6.95 25508.2 - California Health and Safety Code, Chapter 6.95, Section(s) 25508.2
Violation Description:	Failure to annually review and electronically certify that the business plan is complete and accurate on or before the annual due date.
Violation Notes:	Returned to compliance on 03/21/2019.
Violation Division:	Riverside County Department of Env Health
Violation Program:	HMRRP
Violation Source:	CERS
Site ID:	147475
Site Name:	Renteria Custom Wheels & Tires
Violation Date:	10-10-2018
Citation:	22 CCR 12 66262.40(a) - California Code of Regulations, Title 22, Chapter 12, Section(s) 66262.40(a)
Violation Description:	Failure to keep a copy of each properly signed manifest for at least three years from the date the waste was accepted by the initial transporter. The manifest signed at the time the waste was accepted for transport shall be kept until receiving a signed copy from the designated facility which received the waste.
Violation Notes:	Returned to compliance on 03/21/2019. OBSERVATION: Only the most recent manifest (July 2018) for used oil was available during the inspection. No manifests for used filters was observed during the inspection. CORRECTIVE ACTION: Owner/operator shall obtain all manifests for hazardous waste shipments which occurred in the past 3

BEST FOR LESS TIRES (Continued) **S113050962**

	years. Manifests shall be made available for inspection.
Violation Division:	Riverside County Department of Env Health
Violation Program:	HW
Violation Source:	CERS
Site ID:	147475
Site Name:	Renteria Custom Wheels & Tires
Violation Date:	05-14-2015
Citation:	HSC 6.95 25508(a)(1) - California Health and Safety Code, Chapter 6.95, Section(s) 25508(a)(1)
Violation Description:	Failure to complete and electronically submit a site map with all required content.
Violation Notes:	Returned to compliance on 08/11/2015.
Violation Division:	Riverside County Department of Env Health
Violation Program:	HMRRP
Violation Source:	CERS
Site ID:	147475
Site Name:	Renteria Custom Wheels & Tires
Violation Date:	10-10-2018
Citation:	HSC 6.95 25508.2 - California Health and Safety Code, Chapter 6.95, Section(s) 25508.2
Violation Description:	Failure to annually review and electronically certify that the business plan is complete and accurate on or before the annual due date.
Violation Notes:	Returned to compliance on 03/21/2019. OBSERVATION: No annual business plan certification was observed in the statewide information management system. A notice was previously mailed from RivCo DEH requiring submission of a business plan. CORRECTIVE ACTION: Owner/Operator shall submit an updated business plan in the statewide information management system at http://cers.calepa.ca.gov in accordance with the letter(s) previously sent to this facility. The compliance deadline for this violation will be pursuant to the date specified in the letter mailed to you by this Department, rather than 30 days from the date of this report. Business plans shall be reviewed and certified on at least an annual basis.
Violation Division:	Riverside County Department of Env Health
Violation Program:	HMRRP
Violation Source:	CERS
Site ID:	147475
Site Name:	Renteria Custom Wheels & Tires
Violation Date:	08-09-2017
Citation:	HSC 6.95 25508.2 - California Health and Safety Code, Chapter 6.95, Section(s) 25508.2
Violation Description:	Failure to annually review and electronically certify that the business plan is complete and accurate on or before the annual due date.
Violation Notes:	Returned to compliance on 03/21/2019.
Violation Division:	Riverside County Department of Env Health
Violation Program:	HMRRP
Violation Source:	CERS
Site ID:	147475
Site Name:	Renteria Custom Wheels & Tires
Violation Date:	05-14-2015
Citation:	HSC 6.95 25508(a)(1) - California Health and Safety Code, Chapter

BEST FOR LESS TIRES (Continued) **S113050962**

6.95, Section(s) 25508(a)(1)
Violation Description: Failure to complete and electronically submit hazardous material inventory information for all reportable hazardous materials on site at or above reportable quantities.
Violation Notes: Returned to compliance on 08/11/2015.
Violation Division: Riverside County Department of Env Health
Violation Program: HMRRP
Violation Source: CERS

Site ID: 147475
Site Name: Renteria Custom Wheels & Tires
Violation Date: 10-10-2018
Citation: 40 CFR 1 265.31 - U.S. Code of Federal Regulations, Title 40, Chapter 1, Section(s) 265.31
Violation Description: Failure to maintain and operate the facility to minimize the possibility of a fire, explosion, or any unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents to air, soil, or surface water which could threaten human health or the environment.
Violation Notes: Returned to compliance on 03/21/2019. OBSERVATION: Observed two 55 gallon drums containing used filters without lids, used absorbent on the ground, liquid on top of the waste oil tank, and a missing cap on the waste tank. CORRECTIVE ACTION: Owner/operator shall promptly clean up all spills and place used absorbent in the appropriate drum, all hazardous materials shall be stored dry and closed, and manage according to Title 22 hazardous waste regulations. Submit a statement and supporting documentation (photos) explaining how this waste was managed to this department.
Violation Division: Riverside County Department of Env Health
Violation Program: HW
Violation Source: CERS

Site ID: 147475
Site Name: Renteria Custom Wheels & Tires
Violation Date: 10-10-2018
Citation: HSC 6.5 25123.3(h)(1) - California Health and Safety Code, Chapter 6.5, Section(s) 25123.3(h)(1)
Violation Description: Failure to send hazardous waste offsite for treatment, storage, or disposal within 180 days (or 270 days if waste is transported over 200 miles) for a generator who generates less than 1000 kilogram per month if all of the following conditions are met: (1) The quantity of hazardous waste accumulated onsite never exceeds 6,000 kilograms. (2) The generator complies with the requirements of 40 Code of Federal Regulations section 262.34(d), (e) and (f). (3) The generator does not hold acutely hazardous waste or extremely hazardous waste in an amount greater than one kilogram for more than 90 days.
Violation Notes: Returned to compliance on 03/21/2019. OBSERVATION: Observed one 55 gallon drum containing used filters on site with accumulation start date of 7/6/16 and another drum of used filters without a hazardous waste label. CORRECTIVE ACTION: Owner/operator shall ensure all hazardous wastes are transported off site within 180 days of the accumulation start date. Owner/operator shall have two 55 gallon drums of used filters properly hauled off site by a registered hazardous waste transporter.
Violation Division: Riverside County Department of Env Health
Violation Program: HW
Violation Source: CERS

BEST FOR LESS TIRES (Continued) **S113050962**

Site ID:	147475
Site Name:	Renteria Custom Wheels & Tires
Violation Date:	02-04-2019
Citation:	40 CFR 1 262.34(d)(5)(ii) - U.S. Code of Federal Regulations, Title 40, Chapter 1, Section(s) 262.34(d)(5)(ii)
Violation Description:	Failure to post the following information next to the telephone: (A) The name and telephone number of the emergency coordinator; (B) Location of fire extinguishers and spill control material, and, if present, fire alarm; and (C) The telephone number of the fire department, unless the facility has a direct alarm.
Violation Notes:	Returned to compliance on 03/21/2019. OBSERVATION: Observed no/incomplete emergency response information postings. CORRECTIVE ACTION: Owner/operator shall post required information next to the phone. Owner/ Operator shall post an evacuation map and emergency contacts in an easily accessible area for business personnel.
Violation Division:	Riverside County Department of Env Health
Violation Program:	HW
Violation Source:	CERS

Site ID:	147475
Site Name:	Renteria Custom Wheels & Tires
Violation Date:	07-19-2018
Citation:	HSC 6.95 25508.2 - California Health and Safety Code, Chapter 6.95, Section(s) 25508.2
Violation Description:	Failure to annually review and electronically certify that the business plan is complete and accurate on or before the annual due date.
Violation Notes:	Returned to compliance on 03/21/2019.
Violation Division:	Riverside County Department of Env Health
Violation Program:	HMRRP
Violation Source:	CERS

Site ID:	147475
Site Name:	Renteria Custom Wheels & Tires
Violation Date:	02-04-2019
Citation:	Un-Specified
Violation Description:	Business Plan Program - Administration/Documentation - General Local Ordinance
Violation Notes:	Returned to compliance on 03/21/2019. OBSERVATION: No emergency contact posting was observed. CORRECTIVE ACTION: Owner/operator shall post emergency contact information in a conspicuous location.
Violation Division:	Riverside County Department of Env Health
Violation Program:	HMRRP
Violation Source:	CERS

Site ID:	147475
Site Name:	Renteria Custom Wheels & Tires
Violation Date:	08-29-2018
Citation:	HSC 6.95 25508.2 - California Health and Safety Code, Chapter 6.95, Section(s) 25508.2
Violation Description:	Failure to annually review and electronically certify that the business plan is complete and accurate on or before the annual due date.
Violation Notes:	Returned to compliance on 03/21/2019.
Violation Division:	Riverside County Department of Env Health
Violation Program:	HMRRP
Violation Source:	CERS

BEST FOR LESS TIRES (Continued) **S113050962**

Site ID:	147475
Site Name:	Renteria Custom Wheels & Tires
Violation Date:	10-10-2018
Citation:	22 CCR 12 66262.34(f) - California Code of Regulations, Title 22, Chapter 12, Section(s) 66262.34(f)
Violation Description:	Failure to properly label hazardous waste accumulation containers and portable tanks with the following requirements: "Hazardous Waste", name and address of the generator, physical and chemical characteristics of the Hazardous Waste, and starting accumulation date.
Violation Notes:	Returned to compliance on 03/21/2019. OBSERVATION: Observed one 55 gallon drum containing used filters that was missing a proper label. CORRECTIVE ACTION: Owner/operator shall label hazardous waste containers with all the required information. Label shall include at least: the words ""hazardous waste"", generator name and address, accumulation start date, composition and physical state of waste, and hazardous property statement. Submit photos to this department, if applicable.
Violation Division:	Riverside County Department of Env Health
Violation Program:	HW
Violation Source:	CERS

Site ID:	147475
Site Name:	Renteria Custom Wheels & Tires
Violation Date:	10-10-2018
Citation:	HSC 6.5 25144.6 (b) - California Health and Safety Code, Chapter 6.5, Section(s) 25144.6 (b)
Violation Description:	Failure to properly manage reusable soiled textile materials prior to being sent for laundering.
Violation Notes:	Returned to compliance on 03/21/2019. OBSERVATION: Observed improper textile/contaminated rag management. Used contaminated rags were observed on top of drums and laying around the shop. CORRECTIVE ACTION: Owner/operator shall properly manage used/soiled textiles. Contaminated rags shall be properly stored in a closed container and rags shall be professionally cleaned or disposed of as a hazardous waste.
Violation Division:	Riverside County Department of Env Health
Violation Program:	HW
Violation Source:	CERS

Site ID:	147475
Site Name:	Renteria Custom Wheels & Tires
Violation Date:	05-14-2015
Citation:	40 CFR 1 262.34(d)(5)(iii) - U.S. Code of Federal Regulations, Title 40, Chapter 1, Section(s) 262.34(d)(5)(iii)
Violation Description:	Failure to ensure employees are familiar with the handling and compliance of hazardous waste regulations and emergency response.
Violation Notes:	Returned to compliance on 08/11/2015.
Violation Division:	Riverside County Department of Env Health
Violation Program:	HW
Violation Source:	CERS

Site ID:	147475
Site Name:	Renteria Custom Wheels & Tires
Violation Date:	10-10-2018
Citation:	HSC 6.5 25250.1; 25250.18; 25250.19(b)(2) - California Health and Safety Code, Chapter 6.5, Section(s) 25250.1; 25250.18; 25250.19(b)(2)

BEST FOR LESS TIRES (Continued) **S113050962**

Violation Description:	"Failure to record in an operating log and retain for three years the following information for each shipment of recycled or exempted oil: 1) The name and address of the used oil recycling facility or generator claiming the oil meets the requirements of HSC 6.5 25250.1. 2) The name and address of the facility receiving the shipment. 3) The quantity of oil delivered. 4) The date of shipment or delivery. 5) A cross-reference to the records and documentation required under HSC 6.5 25250.1."
Violation Notes:	Returned to compliance on 03/21/2019. OBSERVATION: Facility is recycling used oil. No proper documentation observed during inspection. CORRECTIVE ACTION: Owner/operator shall complete proper certification for all used oil which is being recycled. Retain copies on site for a minimum of 3 years from date of disposal.
Violation Division:	Riverside County Department of Env Health
Violation Program:	HW
Violation Source:	CERS
Site ID:	147475
Site Name:	Renteria Custom Wheels & Tires
Violation Date:	10-10-2018
Citation:	40 CFR 1 262.34(d)(5)(ii) - U.S. Code of Federal Regulations, Title 40, Chapter 1, Section(s) 262.34(d)(5)(ii)
Violation Description:	Failure to post the following information next to the telephone: (A) The name and telephone number of the emergency coordinator; (B) Location of fire extinguishers and spill control material, and, if present, fire alarm; and (C) The telephone number of the fire department, unless the facility has a direct alarm.
Violation Notes:	Returned to compliance on 03/21/2019. OBSERVATION: Observed no emergency response procedures posted. CORRECTIVE ACTION: Owner/operator shall post required emergency response procedures near the phone. Owner/Operator shall post emergency contacts and an emergency evacuation map.
Violation Division:	Riverside County Department of Env Health
Violation Program:	HW
Violation Source:	CERS
Site ID:	147475
Site Name:	Renteria Custom Wheels & Tires
Violation Date:	10-10-2018
Citation:	Un-Specified
Violation Description:	Business Plan Program - Operations/Maintenance - General Local Ordinance
Violation Notes:	Returned to compliance on 03/21/2019. OBSERVATION: Observed missing caps on the motor oil tanks. CORRECTIVE ACTION: Owner/operator shall store all hazardous materials in a manner which will prevent unauthorized fire, explosion, or release. All hazardous materials shall be stored closed.
Violation Division:	Riverside County Department of Env Health
Violation Program:	HMRRP
Violation Source:	CERS
Site ID:	147475
Site Name:	Renteria Custom Wheels & Tires
Violation Date:	10-10-2018
Citation:	40 CFR 1 265.33 - U.S. Code of Federal Regulations, Title 40, Chapter 1, Section(s) 265.33
Violation Description:	Failure to test and maintain as necessary all facility communications

BEST FOR LESS TIRES (Continued) **S113050962**

	or alarm systems, fire protection equipment, spill control equipment, and decontamination equipment to assure its proper operation in time of emergency.
Violation Notes:	Returned to compliance on 03/21/2019. OBSERVATION: Observed fire extinguishers not properly maintained. Fire extinguishers are past the service date CORRECTIVE ACTION: Owner/operator shall properly test and maintain all emergency equipment. Fire extinguishers shall be serviced annually.
Violation Division:	Riverside County Department of Env Health
Violation Program:	HW
Violation Source:	CERS
Site ID:	147475
Site Name:	Renteria Custom Wheels & Tires
Violation Date:	07-05-2017
Citation:	HSC 6.95 25508.2 - California Health and Safety Code, Chapter 6.95, Section(s) 25508.2
Violation Description:	Failure to annually review and electronically certify that the business plan is complete and accurate on or before the annual due date.
Violation Notes:	Returned to compliance on 03/21/2019.
Violation Division:	Riverside County Department of Env Health
Violation Program:	HMRRP
Violation Source:	CERS

Evaluation:

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	05-14-2015
Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	Not reported
Eval Division:	Riverside County Department of Env Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	08-29-2018
Violations Found:	Yes
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Not reported
Eval Division:	Riverside County Department of Env Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	10-10-2018
Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	Not reported
Eval Division:	Riverside County Department of Env Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	12-10-2018
Violations Found:	No
Eval Type:	Other, not routine, done by local agency

BEST FOR LESS TIRES (Continued) **S113050962**

Eval Notes:	Not reported
Eval Division:	Riverside County Department of Env Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	02-04-2019
Violations Found:	Yes
Eval Type:	Other, not routine, done by local agency
Eval Notes:	A copy of the initial inspection was left with the manager on duty, Jesus Omar Nunez.
Eval Division:	Riverside County Department of Env Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	02-04-2019
Violations Found:	Yes
Eval Type:	Other, not routine, done by local agency
Eval Notes:	A copy of the initial inspection was left with the manager on duty, Jesus Omar Nunez.
Eval Division:	Riverside County Department of Env Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	05-14-2015
Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	Not reported
Eval Division:	Riverside County Department of Env Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	07-05-2017
Violations Found:	Yes
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Not reported
Eval Division:	Riverside County Department of Env Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	08-09-2017
Violations Found:	Yes
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Not reported
Eval Division:	Riverside County Department of Env Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	08-11-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Not reported

BEST FOR LESS TIRES (Continued) **S113050962**

Eval Division: Riverside County Department of Env Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 10-10-2018
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Riverside County Department of Env Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 03-07-2019
Violations Found: Yes
Eval Type: Other, not routine, done by local agency
Eval Notes: Not reported
Eval Division: Riverside County Department of Env Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 08-11-2015
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Not reported
Eval Division: Riverside County Department of Env Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 12-10-2018
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Not reported
Eval Division: Riverside County Department of Env Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 03-07-2019
Violations Found: Yes
Eval Type: Other, not routine, done by local agency
Eval Notes: Not reported
Eval Division: Riverside County Department of Env Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 04-18-2019
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Not reported
Eval Division: Riverside County Department of Env Health
Eval Program: HMRRP
Eval Source: CERS

BEST FOR LESS TIRES (Continued) **S113050962**

Eval General Type:	Other/Unknown
Eval Date:	07-19-2018
Violations Found:	Yes
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Not reported
Eval Division:	Riverside County Department of Env Health
Eval Program:	HMRRP
Eval Source:	CERS

Eval General Type:	Other/Unknown
Eval Date:	10-10-2018
Violations Found:	Yes
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Not reported
Eval Division:	Riverside County Department of Env Health
Eval Program:	HMRRP
Eval Source:	CERS

Eval General Type:	Other/Unknown
Eval Date:	10-11-2017
Violations Found:	Yes
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Not reported
Eval Division:	Riverside County Department of Env Health
Eval Program:	HMRRP
Eval Source:	CERS

Enforcement Action:

Site ID:	147475
Site Name:	Renteria Custom Wheels & Tires
Site Address:	3865 N PERRIS BLVD
Site City:	PERRIS
Site Zip:	92571
Enf Action Date:	05-14-2015
Enf Action Type:	Notice of Violation (Unified Program)
Enf Action Description:	Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes:	Not reported
Enf Action Division:	Riverside County Department of Env Health
Enf Action Program:	HMRRP
Enf Action Source:	CERS

Site ID:	147475
Site Name:	Renteria Custom Wheels & Tires
Site Address:	3865 N PERRIS BLVD
Site City:	PERRIS
Site Zip:	92571
Enf Action Date:	05-14-2015
Enf Action Type:	Notice of Violation (Unified Program)
Enf Action Description:	Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes:	Not reported
Enf Action Division:	Riverside County Department of Env Health
Enf Action Program:	HW
Enf Action Source:	CERS

Site ID:	147475
Site Name:	Renteria Custom Wheels & Tires
Site Address:	3865 N PERRIS BLVD

BEST FOR LESS TIRES (Continued) **S113050962**

Site City:	PERRIS
Site Zip:	92571
Enf Action Date:	10-10-2018
Enf Action Type:	AEO - Unified Program
Enf Action Description:	Administrative Enforcement Order Based on the Unified Program Statute
Enf Action Notes:	Fines/Penalties Assessed: $3,500.00.
Enf Action Division:	Riverside County Department of Env Health
Enf Action Program:	HMRRP
Enf Action Source:	CERS

Site ID:	147475
Site Name:	Renteria Custom Wheels & Tires
Site Address:	3865 N PERRIS BLVD
Site City:	PERRIS
Site Zip:	92571
Enf Action Date:	10-11-2017
Enf Action Type:	AEO - Unified Program
Enf Action Description:	Administrative Enforcement Order Based on the Unified Program Statute
Enf Action Notes:	Not reported
Enf Action Division:	Riverside County Department of Env Health
Enf Action Program:	HMRRP
Enf Action Source:	CERS

Coordinates:

Site ID:	147475
Facility Name:	Renteria Custom Wheels & Tires
Env Int Type Code:	HWG
Program ID:	10329820
Coord Name:	Not reported
Ref Point Type Desc:	Center of a facility or station.
Latitude:	33.841670
Longitude:	-117.225970

Affiliation:

Affiliation Type Desc:	Parent Corporation
Entity Name:	Renteria Custom Wheels & Tires
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

Affiliation Type Desc:	Environmental Contact
Entity Name:	Noe M Renteria
Entity Title:	Not reported
Affiliation Address:	6010 Canal St
Affiliation City:	Riverside
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92509
Affiliation Phone:	Not reported

Affiliation Type Desc:	Facility Mailing Address
Entity Name:	Mailing Address

BEST FOR LESS TIRES (Continued) **S113050962**

Entity Title:	Not reported
Affiliation Address:	3865 N Perris Blvd
Affiliation City:	Perris
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92571
Affiliation Phone:	Not reported
Affiliation Type Desc:	Document Preparer
Entity Name:	jesus nunez
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Legal Owner
Entity Name:	Noe Renteria
Entity Title:	Not reported
Affiliation Address:	610 canal st
Affiliation City:	riverside
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	92509
Affiliation Phone:	(951) 833-6735
Affiliation Type Desc:	Operator
Entity Name:	Noe Renteria
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	(951) 943-4840
Affiliation Type Desc:	CUPA District
Entity Name:	Riverside Cnty Env Health
Entity Title:	Not reported
Affiliation Address:	4065 County Circle Drive, Room 104
Affiliation City:	Riverside
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92503
Affiliation Phone:	(951) 358-5055
Affiliation Type Desc:	Identification Signer
Entity Name:	jesus nunez
Entity Title:	manager
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

BEST FOR LESS TIRES (Continued) **S113050962**

HWTS:

Name:	BEST FOR LESS TIRES
Address:	3865 N PERRIS BLVD UNIT A7
Address 2:	Not reported
City,State,Zip:	PERRIS, CA 925713146
EPA ID:	CAL000105492
Inactive Date:	06/30/2006
Create Date:	04/12/1999
Last Act Date:	11/18/2010
Mailing Name:	DAVID KISH/OWNER
Mailing Address:	3462 TANYA AVE
Mailing Address 2:	Not reported
Mailing City,State,Zip:	HEMET, CA 925459798
Owner Name:	DAVID KISH
Owner Address:	31225 ORANGE AVE
Owner Address 2:	Not reported
Owner City,State,Zip:	NUEVO, CA 92567
Contact Name:	DAVID KISH/OWNER
Contact Address:	3865 N PERRIS BLVD UNIT A7
Contact Address 2:	Not reported
City,State,Zip:	PERRIS, CA 925713146

NAICS:

EPA ID:	CAL000105492
Create Date:	2002-03-14 16:36:28
NAICS Code:	4431
NAICS Description:	Electronics and Appliance Stores
Issued EPA ID Date:	1999-04-12 00:00:00
Inactive Date:	2006-06-30 00:00:00
Facility Name:	BEST FOR LESS TIRES
Facility Address:	3865 N PERRIS BLVD UNIT A7
Facility Address 2:	Not reported
Facility City:	PERRIS
Facility County:	33
Facility State:	CA
Facility Zip:	925713146

Name:	BEST FOR LESS TIRES
Address:	3865 N PERRIS BLVD UNIT A7
Address 2:	Not reported
City,State,Zip:	PERRIS, CA 925700000
EPA ID:	CAL000076584
Inactive Date:	04/12/1999
Create Date:	03/24/1992
Last Act Date:	01/05/2000
Mailing Name:	Not reported
Mailing Address:	3865 N PERRIS BLVD UNIT A7
Mailing Address 2:	Not reported
Mailing City,State,Zip:	PERRIS, CA 925713158
Owner Name:	RICHARDSON RICHARD
Owner Address:	30407 WHITE COVE
Owner Address 2:	Not reported
Owner City,State,Zip:	CANYON LAKE, CA 925870000
Contact Name:	SUSAN RICHARDSON
Contact Address:	31225 ORANGE AVE/SOLD
Contact Address 2:	Not reported

BEST FOR LESS TIRES (Continued) **S113050962**

City,State,Zip: NUEVO, CA 925670000

NAICS:

EPA ID:	CAL000076584
Create Date:	2002-03-14 16:36:27
NAICS Code:	4431
NAICS Description:	Electronics and Appliance Stores
Issued EPA ID Date:	1992-03-24 00:00:00
Inactive Date:	1999-04-12 00:00:00
Facility Name:	BEST FOR LESS TIRES
Facility Address:	3865 N PERRIS BLVD UNIT A7
Facility Address 2:	Not reported
Facility City:	PERRIS
Facility County:	33
Facility State:	CA
Facility Zip:	925700000

G30 **ROSS STORES, INC.** **RCRA NonGen / NLR** **1024750942**
North **4378 N PERRIS BLVD** **CAC002970732**
1/8-1/4 **PERRIS, CA 92571**
0.247 mi.
1305 ft. **Site 1 of 3 in cluster G**

Relative:
Higher

Actual:
1460 ft.

RCRA NonGen / NLR:

Date form received by agency:	2018-07-13 00:00:00.0
Facility name:	ROSS STORES, INC.
Facility address:	4378 N PERRIS BLVD PERRIS, CA 92571
EPA ID:	CAC002970732
Mailing address:	17800 PERRIS BLVD MORENO VALLEY, CA 92551
Contact:	JOSHUA SHEIBE
Contact address:	17800 PERRIS BLVD MORENO VALLEY, CA 92551
Contact country:	Not reported
Contact telephone:	951-489-5724
Contact email:	CLOPEZ@ENVIRONMENTALLOGISTICS.ORG
EPA Region:	09
Classification:	Non-Generator
Description:	Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name:	JOSHUA SHEIBE
Owner/operator address:	17800 PERRIS BLVD MORENO VALLEY, CA 92551
Owner/operator country:	Not reported
Owner/operator telephone:	951-489-5724
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Other
Owner/Operator Type:	Operator
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Owner/operator name:	ROSS STORES, INC.
Owner/operator address:	5130 HACIENDA DR

ROSS STORES, INC. (Continued) **1024750942**

DUBLIN, CA 94588
Owner/operator country: Not reported
Owner/operator telephone: 925-965-4400
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Other
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Violation Status: No violations found

G31 **ROSS STORES INC** **CERS HAZ WASTE** **S111215871**
North **4378 N PERRIS BLVD** **HAZNET** **N/A**
1/8-1/4 **PERRIS, CA 92571** **CIWQS**
0.247 mi. **CERS**
1305 ft. **Site 2 of 3 in cluster G** **HWTS**

Relative: Higher
Actual: 1460 ft.

CERS HAZ WASTE:
Name: SWH3 ROSS
Address: 4378 N PERRIS BLVD
City,State,Zip: PERRIS, CA 92571
Site ID: 72886
CERS ID: 10482409
CERS Description: Hazardous Waste Generator

HAZNET:
Name: ROSS STORES INC
Address: 4378 N PERRIS BLVD
Address 2: Not reported
City,State,Zip: PERRIS, CA 925717900
Contact: JOSHUA SHEIBE
Telephone: 9514895724
Mailing Name: Not reported
Mailing Address: 17800 PERRIS BLVD

Year: 2017
Gepaid: CAL000394795
TSD EPA ID: CAD982444481
CA Waste Code: 221 - Waste oil and mixed oil

ROSS STORES INC (Continued) **S111215871**

Disposal Method: H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons: 0.209

Year: 2017
Gepaid: CAL000394795
TSD EPA ID: CAD982444481
CA Waste Code: 352 - Other organic solids
Disposal Method: H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons: 0.05

Year: 2016
Gepaid: CAL000394795
TSD EPA ID: CAD982444481
CA Waste Code: 352 - Other organic solids
Disposal Method: H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons: 0.02

Year: 2016
Gepaid: CAL000394795
TSD EPA ID: CAD982444481
CA Waste Code: 221 - Waste oil and mixed oil
Disposal Method: H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons: 0.114

Year: 2015
Gepaid: CAL000394795
TSD EPA ID: CAD982444481
CA Waste Code: 352 - Other organic solids
Disposal Method: H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons: 0.125

Year: 2015
Gepaid: CAL000394795
TSD EPA ID: CAD982444481
CA Waste Code: 221 - Waste oil and mixed oil
Disposal Method: H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons: 0.513

Additional Info:
Year: 2015
Gen EPA ID: CAL000394795

Shipment Date: 20151216
Creation Date: 2/9/2016 22:15:57
Receipt Date: 20151217
Manifest ID: 015033198JJK
Trans EPA ID: CAR000172460
Trans Name: ENVIRONMENTAL LOGISTICS INC
Trans 2 EPA ID: Not reported
Trans 2 Name: Not reported

ROSS STORES INC (Continued) **S111215871**

TSDF EPA ID:	CAD982444481
Trans Name:	FILTER RECYCLING SERVICES INC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
CA Waste Code:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Disposal Method:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.304
Waste Quantity:	80
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20151216
Creation Date:	2/9/2016 22:15:57
Receipt Date:	20151217
Manifest ID:	015033198JJK
Trans EPA ID:	CAR000172460
Trans Name:	ENVIRONMENTAL LOGISTICS INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD982444481
Trans Name:	FILTER RECYCLING SERVICES INC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
CA Waste Code:	352 - Other organic solids
RCRA Code:	Not reported
Disposal Method:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.05
Waste Quantity:	100
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20150424
Creation Date:	6/25/2015 22:15:58
Receipt Date:	20150428
Manifest ID:	013863947JJK
Trans EPA ID:	CAR000172460
Trans Name:	ENVIRONMENTAL LOGISTICS INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD982444481
Trans Name:	FILTER RECYCLING SERVICES INC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
CA Waste Code:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Disposal Method:	H141 - Storage, Bulking, And/Or Transfer Off Site--No

ROSS STORES INC (Continued) **S111215871**

	Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.209
Waste Quantity:	55
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20150226
Creation Date:	5/18/2015 22:15:34
Receipt Date:	20150227
Manifest ID:	013863528JJK
Trans EPA ID:	CAR000172460
Trans Name:	ENVIRONMENTAL LOGISTICS INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD982444481
Trans Name:	FILTER RECYCLING SERVICES INC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
CA Waste Code:	352 - Other organic solids
RCRA Code:	Not reported
Disposal Method:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.075
Waste Quantity:	150
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Additional Info:

Year:	2017
Gen EPA ID:	CAL000394795
Shipment Date:	20170111
Creation Date:	3/21/2017 18:30:31
Receipt Date:	20170113
Manifest ID:	016467843JJK
Trans EPA ID:	CAR000172460
Trans Name:	ENVIRONMENTAL LOGISTICS, INC.
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD982444481
Trans Name:	FILTER RECYCLING SERVICES, INC.
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
CA Waste Code:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Disposal Method:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.209
Waste Quantity:	55

ROSS STORES INC (Continued) **S111215871**

Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20170111
Creation Date:	3/21/2017 18:30:31
Receipt Date:	20170113
Manifest ID:	016467843JJK
Trans EPA ID:	CAR000172460
Trans Name:	ENVIRONMENTAL LOGISTICS, INC.
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD982444481
Trans Name:	FILTER RECYCLING SERVICES, INC.
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
CA Waste Code:	352 - Other organic solids
RCRA Code:	Not reported
Disposal Method:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.05
Waste Quantity:	100
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Additional Info:

Year:	2016
Gen EPA ID:	CAL000394795
Shipment Date:	20151216
Creation Date:	2/9/2016 22:15:57
Receipt Date:	20151217
Manifest ID:	015033198JJK
Trans EPA ID:	CAR000172460
Trans Name:	ENVIRONMENTAL LOGISTICS INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD982444481
Trans Name:	FILTER RECYCLING SERVICES INC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
CA Waste Code:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Disposal Method:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.304
Waste Quantity:	80
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported

ROSS STORES INC (Continued) **S111215871**

Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20151216
Creation Date:	2/9/2016 22:15:57
Receipt Date:	20151217
Manifest ID:	015033198JJK
Trans EPA ID:	CAR000172460
Trans Name:	ENVIRONMENTAL LOGISTICS INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD982444481
Trans Name:	FILTER RECYCLING SERVICES INC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
CA Waste Code:	352 - Other organic solids
RCRA Code:	Not reported
Disposal Method:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.05
Waste Quantity:	100
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20150424
Creation Date:	6/25/2015 22:15:58
Receipt Date:	20150428
Manifest ID:	013863947JJK
Trans EPA ID:	CAR000172460
Trans Name:	ENVIRONMENTAL LOGISTICS INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD982444481
Trans Name:	FILTER RECYCLING SERVICES INC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
CA Waste Code:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Disposal Method:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.209
Waste Quantity:	55
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20150226
Creation Date:	5/18/2015 22:15:34
Receipt Date:	20150227

ROSS STORES INC (Continued) **S111215871**

Manifest ID:	013863528JJK
Trans EPA ID:	CAR000172460
Trans Name:	ENVIRONMENTAL LOGISTICS INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD982444481
Trans Name:	FILTER RECYCLING SERVICES INC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
CA Waste Code:	352 - Other organic solids
RCRA Code:	Not reported
Disposal Method:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.075
Waste Quantity:	150
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

CIWQS:

Name:	PERRIS LOGISTICS CENTER
Address:	4378 NORTH PERRIS BOULEVARD
City,State,Zip:	PERRIS, CA 92571
Agency:	Oakmont Perris Markham LLC
Agency Address:	155 North Riverview Drive, Anaheim, CA 92808
Place/Project Type:	Construction - Industrial
SIC/NAICS:	Not reported
Region:	8
Program:	CONSTW
Regulatory Measure Status:	Terminated
Regulatory Measure Type:	Storm water construction
Order Number:	2009-0009-DWQ
WDID:	8 33C361232
NPDES Number:	CAS000002
Adoption Date:	Not reported
Effective Date:	06/16/2011
Termination Date:	11/19/2012
Expiration/Review Date:	Not reported
Design Flow:	Not reported
Major/Minor:	Not reported
Complexity:	Not reported
TTWQ:	Not reported
Enforcement Actions within 5 years:	0
Violations within 5 years:	0
Latitude:	33.851338
Longitude:	-117.226078

CERS:

Name:	SWH3 ROSS
Address:	4378 N PERRIS BLVD
City,State,Zip:	PERRIS, CA 92571
Site ID:	72886
CERS ID:	10482409

ROSS STORES INC (Continued) **S111215871**

CERS Description: Chemical Storage Facilities

Violations:

Site ID: 72886
Site Name: SWH3 Ross
Violation Date: 04-15-2014
Citation: HSC 6.95 Multiple - California Health and Safety Code, Chapter 6.95, Section(s) Multiple
Violation Description: Business Plan Program - Administration/Documentation - General
Violation Notes: Returned to compliance on 06/12/2014.
Violation Division: Riverside County Department of Env Health
Violation Program: HMRRP
Violation Source: CERS

Site ID: 72886
Site Name: SWH3 Ross
Violation Date: 04-15-2014
Citation: HSC 6.11 25404.1 - California Health and Safety Code, Chapter 6.11, Section(s) 25404.1
Violation Description: Failure to obtain and/or maintain an active hazardous waste generator permit.
Violation Notes: Returned to compliance on 06/12/2014.
Violation Division: Riverside County Department of Env Health
Violation Program: HW
Violation Source: CERS

Site ID: 72886
Site Name: SWH3 Ross
Violation Date: 04-15-2014
Citation: HSC 6.95 Multiple - California Health and Safety Code, Chapter 6.95, Section(s) Multiple
Violation Description: Business Plan Program - Operations/Maintenance - General
Violation Notes: Returned to compliance on 06/12/2014. [LOCAL ORDINANCE VIOLATION 104C] Hazardous materials storage area(s) have been posted appropriately.
Violation Division: Riverside County Department of Env Health
Violation Program: HMRRP
Violation Source: CERS

Site ID: 72886
Site Name: SWH3 Ross
Violation Date: 06-19-2018
Citation: HSC 6.95 25505(a)(4) - California Health and Safety Code, Chapter 6.95, Section(s) 25505(a)(4)
Violation Description: Failure to provide initial and annual training to all employees in safety procedures in the event of a release or threatened release of a hazardous material or failure to document and maintain training records for a minimum of three years.
Violation Notes: Returned to compliance on 06/27/2018.
Violation Division: Riverside County Department of Env Health
Violation Program: HMRRP
Violation Source: CERS

Site ID: 72886
Site Name: SWH3 Ross
Violation Date: 06-19-2018
Citation: HSC 6.5 25250.1; 25250.18; 25250.19(b)(2) - California Health and Safety Code, Chapter 6.5, Section(s) 25250.1; 25250.18; 25250.19(b)(2)
Violation Description: "Failure to record in an operating log and retain for three years the

ROSS STORES INC (Continued) **S111215871**

following information for each shipment of recycled or exempted oil: 1) The name and address of the used oil recycling facility or generator claiming the oil meets the requirements of HSC 6.5 25250.1. 2) The name and address of the facility receiving the shipment. 3) The quantity of oil delivered. 4) The date of shipment or delivery. 5) A cross-reference to the records and documentation required under HSC 6.5 25250.1."

Violation Notes: Returned to compliance on 06/27/2018.
Violation Division: Riverside County Department of Env Health
Violation Program: HW
Violation Source: CERS

Site ID: 72886
Site Name: SWH3 Ross
Violation Date: 06-19-2018
Citation: 22 CCR 12 66262.40(a) - California Code of Regulations, Title 22, Chapter 12, Section(s) 66262.40(a)
Violation Description: Failure to keep a copy of each properly signed manifest for at least three years from the date the waste was accepted by the initial transporter. The manifest signed at the time the waste was accepted for transport shall be kept until receiving a signed copy from the designated facility which received the waste.
Violation Notes: Returned to compliance on 06/27/2018.
Violation Division: Riverside County Department of Env Health
Violation Program: HW
Violation Source: CERS

Site ID: 72886
Site Name: SWH3 Ross
Violation Date: 04-15-2014
Citation: HSC 6.95 Multiple - California Health and Safety Code, Chapter 6.95, Section(s) Multiple
Violation Description: Business Plan Program - Administration/Documentation - General
Violation Notes: Returned to compliance on 06/12/2014. [LOCAL ORDINANCE VIOLATION 104A] NFPA 704 sign(s) have been posted appropriately.
Violation Division: Riverside County Department of Env Health
Violation Program: HMRRP
Violation Source: CERS

Site ID: 72886
Site Name: SWH3 Ross
Violation Date: 06-19-2018
Citation: Un-Specified
Violation Description: Business Plan Program - Operations/Maintenance - General Local Ordinance
Violation Notes: Returned to compliance on 07/25/2018.
Violation Division: Riverside County Department of Env Health
Violation Program: HMRRP
Violation Source: CERS

Evaluation:
Eval General Type: Compliance Evaluation Inspection
Eval Date: 06-19-2018
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Riverside County Department of Env Health

ROSS STORES INC (Continued) **S111215871**

Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 04-15-2014
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Riverside County Department of Env Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 06-12-2014
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Not reported
Eval Division: Riverside County Department of Env Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 06-12-2014
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Not reported
Eval Division: Riverside County Department of Env Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 06-19-2018
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Riverside County Department of Env Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 04-15-2014
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Riverside County Department of Env Health
Eval Program: HW
Eval Source: CERS

Enforcement Action:
Site ID: 72886
Site Name: SWH3 Ross
Site Address: 4378 N PERRIS BLVD
Site City: PERRIS
Site Zip: 92571
Enf Action Date: 04-15-2014
Enf Action Type: Notice of Violation (Unified Program)
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection

ROSS STORES INC (Continued) **S111215871**

Enf Action Notes:	Not reported
Enf Action Division:	Riverside County Department of Env Health
Enf Action Program:	HMRRP
Enf Action Source:	CERS
Site ID:	72886
Site Name:	SWH3 Ross
Site Address:	4378 N PERRIS BLVD
Site City:	PERRIS
Site Zip:	92571
Enf Action Date:	04-15-2014
Enf Action Type:	Notice of Violation (Unified Program)
Enf Action Description:	Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes:	Not reported
Enf Action Division:	Riverside County Department of Env Health
Enf Action Program:	HW
Enf Action Source:	CERS

Coordinates:

Site ID:	72886
Facility Name:	SWH3 Ross
Env Int Type Code:	HWG
Program ID:	10482409
Coord Name:	Not reported
Ref Point Type Desc:	Center of a facility or station.
Latitude:	33.851380
Longitude:	-117.226110

Affiliation:

Affiliation Type Desc:	Identification Signer
Entity Name:	Joshua Sheibe
Entity Title:	Loss Prevention & Safety Manager
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Legal Owner
Entity Name:	Ross Stores Inc
Entity Title:	Not reported
Affiliation Address:	5130 Hacienda Drive
Affiliation City:	Dublin
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	94568
Affiliation Phone:	(925) 965-4400
Affiliation Type Desc:	CUPA District
Entity Name:	Riverside Cnty Env Health
Entity Title:	Not reported
Affiliation Address:	4065 County Circle Drive, Room 104
Affiliation City:	Riverside
Affiliation State:	CA
Affiliation Country:	Not reported

ROSS STORES INC (Continued) **S111215871**

Affiliation Zip:	92503
Affiliation Phone:	(951) 358-5055
Affiliation Type Desc:	Environmental Contact
Entity Name:	Paul Mosqueda
Entity Title:	Not reported
Affiliation Address:	4378 Perris Blvd
Affiliation City:	Perris
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92571
Affiliation Phone:	Not reported
Affiliation Type Desc:	Property Owner
Entity Name:	Ross Stores Inc
Entity Title:	Not reported
Affiliation Address:	4378 Perris Blvd
Affiliation City:	Moreno Valley
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	92571
Affiliation Phone:	(925) 965-4400
Affiliation Type Desc:	Operator
Entity Name:	Ross Stores Inc
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	(951) 489-5795
Affiliation Type Desc:	Document Preparer
Entity Name:	Green Environmental Management
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Facility Mailing Address
Entity Name:	Mailing Address
Entity Title:	Not reported
Affiliation Address:	4378 Perris Blvd
Affiliation City:	Perris
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92571
Affiliation Phone:	Not reported
Affiliation Type Desc:	Parent Corporation
Entity Name:	SWH3 Ross
Entity Title:	Not reported
Affiliation Address:	Not reported

ROSS STORES INC (Continued) **S111215871**

Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

HWTS:
Name: ROSS STORES INC
Address: 4378 N PERRIS BLVD
Address 2: Not reported
City,State,Zip: PERRIS, CA 925717900
EPA ID: CAL000394795
Inactive Date: Not reported
Create Date: 03/07/2014
Last Act Date: 12/15/2018
Mailing Name: Not reported
Mailing Address: 17800 PERRIS BLVD
Mailing Address 2: Not reported
Mailing City,State,Zip: MORENO VALLEY, CA 925519520
Owner Name: ROSS STORES INC
Owner Address: 5130 HACIENDA DR
Owner Address 2: Not reported
Owner City,State,Zip: DUBLIN, CA 945880000
Contact Name: JOSHUA SHEIBE
Contact Address: 17800 PERRIS BLVD
Contact Address 2: Not reported
City,State,Zip: MORENO VALLEY, CA 92551

NAICS:
EPA ID: CAL000394795
Create Date: 2014-03-07 14:37:20
NAICS Code: 53113
NAICS Description: Lessors of Miniwarehouses and Self-Storage Units
Issued EPA ID Date: 2014-03-07 14:37:20
Inactive Date: Not reported
Facility Name: ROSS STORES INC
Facility Address: 4378 N PERRIS BLVD
Facility Address 2: Not reported
Facility City: PERRIS
Facility County: 33
Facility State: CA
Facility Zip: 925717900

G32 **ROSS STORES INC** **RCRA NonGen / NLR** **1024843423**
North **4378 N PERRIS BLVD** **CAL000394795**
1/8-1/4 **PERRIS, CA 92571**
0.247 mi.
1305 ft. **Site 3 of 3 in cluster G**

Relative:
Higher

Actual:
1460 ft.

RCRA NonGen / NLR:
Date form received by agency: 2014-03-07 00:00:00.0
Facility name: ROSS STORES INC
Facility address: 4378 N PERRIS BLVD
PERRIS, CA 92571-7900
EPA ID: CAL000394795
Mailing address: 17800 PERRIS BLVD

ROSS STORES INC (Continued) **1024843423**

MORENO VALLEY, CA 92551-9520
Contact: JOSHUA SHEIBE
Contact address: 17800 PERRIS BLVD
MORENO VALLEY, CA 92551
Contact country: Not reported
Contact telephone: 951-489-5724
Contact email: JOSHUA.SHEIBE@ROS.COM
EPA Region: 09
Classification: Non-Generator
Description: Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:
Owner/operator name: JOSHUA SHEIBE
Owner/operator address: 17800 PERRIS BLVD
MORENO VALLEY, CA 92551
Owner/operator country: Not reported
Owner/operator telephone: 951-489-5724
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Other
Owner/Operator Type: Operator
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Owner/operator name: ROSS STORES INC
Owner/operator address: 5130 HACIENDA DR
DUBLIN, CA 94588
Owner/operator country: Not reported
Owner/operator telephone: 925-965-4400
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Other
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: Yes
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Violation Status: No violations found

33
NNE
1/2-1
0.782 mi.
4127 ft.

MEADE VALLEY ELEMENTARY SCHOOL ADDITION
21-100 OLEANDER AVENUE
PERRIS, CA 92570

ENVIROSTOR
SCH

S118756752
N/A

Relative:
Higher

Actual:
1462 ft.

ENVIROSTOR:

Name:	MEADE VALLEY ELEMENTARY SCHOOL ADDITION
Address:	21-100 OLEANDER AVENUE
City,State,Zip:	PERRIS, CA 92570
Facility ID:	33820011
Status:	No Action Required
Status Date:	10/13/2000
Site Code:	404133
Site Type:	School Investigation
Site Type Detailed:	School
Acres:	Not reported
NPL:	NO
Regulatory Agencies:	DTSC
Lead Agency:	DTSC
Program Manager:	Not reported
Supervisor:	Javier Hinojosa
Division Branch:	Southern California Schools & Brownfields Outreach
Assembly:	61
Senate:	31
Special Program:	Not reported
Restricted Use:	NO
Site Mgmt Req:	NONE SPECIFIED
Funding:	School District
Latitude:	33.85737
Longitude:	-117.2227
APN:	NONE SPECIFIED
Past Use:	* EDUCATIONAL SERVICES
Potential COC:	NONE SPECIFIED No Contaminants found
Confirmed COC:	NONE SPECIFIED
Potential Description:	NMA
Alias Name:	MEADE VALLEY ELEMENTARY SCHOOL ADDITION
Alias Type:	Alternate Name
Alias Name:	VAL VERDE UNIFIED SCHOOL DISTRICT
Alias Type:	Alternate Name
Alias Name:	VAL VERDE USD-MEADE VALLEY ELEM
Alias Type:	Alternate Name
Alias Name:	404133
Alias Type:	Project Code (Site Code)
Alias Name:	33820011
Alias Type:	Envirostor ID Number

Completed Info:

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Phase 1
Completed Date:	10/13/2000
Comments:	Not reported

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Cost Recovery Closeout Memo
Completed Date:	11/22/2000
Comments:	Not reported

MEADE VALLEY ELEMENTARY SCHOOL ADDITION (Continued) **S118756752**

Future Area Name:	Not reported
Future Sub Area Name:	Not reported
Future Document Type:	Not reported
Future Due Date:	Not reported
Schedule Area Name:	Not reported
Schedule Sub Area Name:	Not reported
Schedule Document Type:	Not reported
Schedule Due Date:	Not reported
Schedule Revised Date:	Not reported

SCH:

Name:	MEADE VALLEY ELEMENTARY SCHOOL ADDITION
Address:	21-100 OLEANDER AVENUE
City,State,Zip:	PERRIS, CA 92570
Facility ID:	33820011
Site Type:	School Investigation
Site Type Detail:	School
Site Mgmt. Req.:	NONE SPECIFIED
Acres:	Not reported
National Priorities List:	NO
Cleanup Oversight Agencies:	DTSC
Lead Agency:	DTSC
Lead Agency Description:	* DTSC
Project Manager:	Not reported
Supervisor:	Javier Hinojosa
Division Branch:	Southern California Schools & Brownfields Outreach
Site Code:	404133
Assembly:	61
Senate:	31
Special Program Status:	Not reported
Status:	No Action Required
Status Date:	10/13/2000
Restricted Use:	NO
Funding:	School District
Latitude:	33.85737
Longitude:	-117.2227
APN:	NONE SPECIFIED
Past Use:	* EDUCATIONAL SERVICES
Potential COC:	NONE SPECIFIED, No Contaminants found
Confirmed COC:	NONE SPECIFIED
Potential Description:	NMA
Alias Name:	MEADE VALLEY ELEMENTARY SCHOOL ADDITION
Alias Type:	Alternate Name
Alias Name:	VAL VERDE UNIFIED SCHOOL DISTRICT
Alias Type:	Alternate Name
Alias Name:	VAL VERDE USD-MEADE VALLEY ELEM
Alias Type:	Alternate Name
Alias Name:	404133
Alias Type:	Project Code (Site Code)
Alias Name:	33820011
Alias Type:	Envirostor ID Number

Completed Info:

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Phase 1

MEADE VALLEY ELEMENTARY SCHOOL ADDITION (Continued) **S118756752**

Completed Date:	10/13/2000
Comments:	Not reported
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Cost Recovery Closeout Memo
Completed Date:	11/22/2000
Comments:	Not reported
Future Area Name:	Not reported
Future Sub Area Name:	Not reported
Future Document Type:	Not reported
Future Due Date:	Not reported
Schedule Area Name:	Not reported
Schedule Sub Area Name:	Not reported
Schedule Document Type:	Not reported
Schedule Due Date:	Not reported
Schedule Revised Date:	Not reported

Count: 0 records.

ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
		NO SITES FOUND			

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

Number of Days to Update: Provides confirmation that EDR is reporting records that have been updated within 90 days from the date the government agency made the information available to the public.

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL: National Priority List

National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC) and regional EPA offices.

Date of Government Version: 01/30/2020
Date Data Arrived at EDR: 02/05/2020
Date Made Active in Reports: 02/14/2020
Number of Days to Update: 9

Source: EPA
Telephone: N/A
Last EDR Contact: 05/06/2020
Next Scheduled EDR Contact: 07/13/2020
Data Release Frequency: Quarterly

NPL Site Boundaries

Sources:

EPA's Environmental Photographic Interpretation Center (EPIC)
Telephone: 202-564-7333

EPA Region 1
Telephone 617-918-1143

EPA Region 3
Telephone 215-814-5418

EPA Region 4
Telephone 404-562-8033

EPA Region 5
Telephone 312-886-6686

EPA Region 6
Telephone: 214-655-6659

EPA Region 7
Telephone: 913-551-7247

EPA Region 8
Telephone: 303-312-6774

EPA Region 9
Telephone: 415-947-4246

EPA Region 10
Telephone 206-553-8665

Proposed NPL: Proposed National Priority List Sites

A site that has been proposed for listing on the National Priorities List through the issuance of a proposed rule in the Federal Register. EPA then accepts public comments on the site, responds to the comments, and places on the NPL those sites that continue to meet the requirements for listing.

Date of Government Version: 01/30/2020
Date Data Arrived at EDR: 02/05/2020
Date Made Active in Reports: 02/14/2020
Number of Days to Update: 9

Source: EPA
Telephone: N/A
Last EDR Contact: 05/06/2020
Next Scheduled EDR Contact: 07/13/2020
Data Release Frequency: Quarterly

NPL LIENS: Federal Superfund Liens

Federal Superfund Liens. Under the authority granted the USEPA by CERCLA of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner received notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

Date of Government Version: 10/15/1991
Date Data Arrived at EDR: 02/02/1994
Date Made Active in Reports: 03/30/1994
Number of Days to Update: 56

Source: EPA
Telephone: 202-564-4267
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

Federal Delisted NPL site list

Delisted NPL: National Priority List Deletions

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Date of Government Version: 01/30/2020
Date Data Arrived at EDR: 02/05/2020
Date Made Active in Reports: 02/14/2020
Number of Days to Update: 9

Source: EPA
Telephone: N/A
Last EDR Contact: 05/06/2020
Next Scheduled EDR Contact: 07/13/2020
Data Release Frequency: Quarterly

Federal CERCLIS list

FEDERAL FACILITY: Federal Facility Site Information listing

A listing of National Priority List (NPL) and Base Realignment and Closure (BRAC) sites found in the Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) Database where EPA Federal Facilities Restoration and Reuse Office is involved in cleanup activities.

Date of Government Version: 04/03/2019
Date Data Arrived at EDR: 04/05/2019
Date Made Active in Reports: 05/14/2019
Number of Days to Update: 39

Source: Environmental Protection Agency
Telephone: 703-603-8704
Last EDR Contact: 04/03/2020
Next Scheduled EDR Contact: 07/13/2020
Data Release Frequency: Varies

SEMS: Superfund Enterprise Management System

SEMS (Superfund Enterprise Management System) tracks hazardous waste sites, potentially hazardous waste sites, and remedial activities performed in support of EPA's Superfund Program across the United States. The list was formerly know as CERCLIS, renamed to SEMS by the EPA in 2015. The list contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). This dataset also contains sites which are either proposed to or on the National Priorities List (NPL) and the sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 01/30/2020
Date Data Arrived at EDR: 02/05/2020
Date Made Active in Reports: 02/14/2020
Number of Days to Update: 9

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 05/06/2020
Next Scheduled EDR Contact: 07/27/2020
Data Release Frequency: Quarterly

Federal CERCLIS NFRAP site list

SEMS-ARCHIVE: Superfund Enterprise Management System Archive

SEMS-ARCHIVE (Superfund Enterprise Management System Archive) tracks sites that have no further interest under the Federal Superfund Program based on available information. The list was formerly known as the CERCLIS-NFRAP, renamed to SEMS ARCHIVE by the EPA in 2015. EPA may perform a minimal level of assessment work at a site while it is archived if site conditions change and/or new information becomes available. Archived sites have been removed and archived from the inventory of SEMS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list the site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. The decision does not necessarily mean that there is no hazard associated with a given site; it only means that. based upon available information, the location is not judged to be potential NPL site.

Date of Government Version: 01/30/2020
Date Data Arrived at EDR: 02/05/2020
Date Made Active in Reports: 02/14/2020
Number of Days to Update: 9

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 05/06/2020
Next Scheduled EDR Contact: 07/27/2020
Data Release Frequency: Quarterly

Federal RCRA CORRACTS facilities list

CORRACTS: Corrective Action Report

CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 12/16/2019
Date Data Arrived at EDR: 12/16/2019
Date Made Active in Reports: 12/20/2019
Number of Days to Update: 4

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 03/25/2020
Next Scheduled EDR Contact: 07/06/2020
Data Release Frequency: Quarterly

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF: RCRA - Treatment, Storage and Disposal

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Transporters are individuals or entities that move hazardous waste from the generator offsite to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

Date of Government Version: 12/16/2019
Date Data Arrived at EDR: 12/16/2019
Date Made Active in Reports: 12/20/2019
Number of Days to Update: 4

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 03/25/2020
Next Scheduled EDR Contact: 07/06/2020
Data Release Frequency: Quarterly

Federal RCRA generators list

RCRA-LQG: RCRA - Large Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

Date of Government Version: 12/16/2019
Date Data Arrived at EDR: 12/16/2019
Date Made Active in Reports: 12/20/2019
Number of Days to Update: 4

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 03/25/2020
Next Scheduled EDR Contact: 07/06/2020
Data Release Frequency: Quarterly

RCRA-SQG: RCRA - Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

Date of Government Version: 12/16/2019
Date Data Arrived at EDR: 12/16/2019
Date Made Active in Reports: 12/20/2019
Number of Days to Update: 4

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 03/25/2020
Next Scheduled EDR Contact: 07/06/2020
Data Release Frequency: Quarterly

RCRA-VSQG: RCRA - Very Small Quantity Generators (Formerly Conditionally Exempt Small Quantity Generators)

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Very small quantity generators (VSQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

Date of Government Version: 12/16/2019
Date Data Arrived at EDR: 12/16/2019
Date Made Active in Reports: 12/20/2019
Number of Days to Update: 4

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 03/25/2020
Next Scheduled EDR Contact: 07/06/2020
Data Release Frequency: Quarterly

Federal institutional controls / engineering controls registries

LUCIS: Land Use Control Information System

LUCIS contains records of land use control information pertaining to the former Navy Base Realignment and Closure properties.

Date of Government Version: 11/04/2019
Date Data Arrived at EDR: 11/13/2019
Date Made Active in Reports: 01/28/2020
Number of Days to Update: 76

Source: Department of the Navy
Telephone: 843-820-7326
Last EDR Contact: 02/10/2020
Next Scheduled EDR Contact: 05/25/2020
Data Release Frequency: Varies

US ENG CONTROLS: Engineering Controls Sites List

A listing of sites with engineering controls in place. Engineering controls include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health.

Date of Government Version: 11/22/2019
Date Data Arrived at EDR: 11/22/2019
Date Made Active in Reports: 01/28/2020
Number of Days to Update: 67

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 02/20/2020
Next Scheduled EDR Contact: 06/08/2020
Data Release Frequency: Varies

US INST CONTROLS: Institutional Controls Sites List

A listing of sites with institutional controls in place. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of the institutional controls.

Date of Government Version: 11/22/2019
Date Data Arrived at EDR: 11/22/2019
Date Made Active in Reports: 01/28/2020
Number of Days to Update: 67

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 02/20/2020
Next Scheduled EDR Contact: 06/08/2020
Data Release Frequency: Varies

Federal ERNS list

ERNS: Emergency Response Notification System

Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 12/16/2019
Date Data Arrived at EDR: 12/19/2019
Date Made Active in Reports: 03/06/2020
Number of Days to Update: 78

Source: National Response Center, United States Coast Guard
Telephone: 202-267-2180
Last EDR Contact: 03/24/2020
Next Scheduled EDR Contact: 07/06/2020
Data Release Frequency: Quarterly

State- and tribal - equivalent NPL

RESPONSE: State Response Sites

Identifies confirmed release sites where DTSC is involved in remediation, either in a lead or oversight capacity. These confirmed release sites are generally high-priority and high potential risk.

Date of Government Version: 01/27/2020
Date Data Arrived at EDR: 01/28/2020
Date Made Active in Reports: 04/09/2020
Number of Days to Update: 72

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 04/28/2020
Next Scheduled EDR Contact: 08/10/2020
Data Release Frequency: Quarterly

State- and tribal - equivalent CERCLIS

ENVIROSTOR: EnviroStor Database

The Department of Toxic Substances Control's (DTSC's) Site Mitigation and Brownfields Reuse Program's (SMBRP's) EnviroStor database identifes sites that have known contamination or sites for which there may be reasons to investigate further. The database includes the following site types: Federal Superfund sites (National Priorities List (NPL)); State Response, including Military Facilities and State Superfund; Voluntary Cleanup; and School sites. EnviroStor provides similar information to the information that was available in CalSites, and provides additional site information, including, but not limited to, identification of formerly-contaminated properties that have been released for reuse, properties where environmental deed restrictions have been recorded to prevent inappropriate land uses, and risk characterization information that is used to assess potential impacts to public health and the environment at contaminated sites.

Date of Government Version: 01/27/2020
Date Data Arrived at EDR: 01/28/2020
Date Made Active in Reports: 04/09/2020
Number of Days to Update: 72

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 04/28/2020
Next Scheduled EDR Contact: 08/10/2020
Data Release Frequency: Quarterly

State and tribal landfill and/or solid waste disposal site lists

SWF/LF (SWIS): Solid Waste Information System

Active, Closed and Inactive Landfills. SWF/LF records typically contain an inve ntory of solid waste disposal facilities or landfills. These may be active or i nactive facilities or open dumps that failed to meet RCRA Section 4004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 02/10/2020
Date Data Arrived at EDR: 02/11/2020
Date Made Active in Reports: 04/20/2020
Number of Days to Update: 69

Source: Department of Resources Recycling and Recovery
Telephone: 916-341-6320
Last EDR Contact: 02/11/2020
Next Scheduled EDR Contact: 05/25/2020
Data Release Frequency: Quarterly

State and tribal leaking storage tank lists

LUST REG 9: Leaking Underground Storage Tank Report
Orange, Riverside, San Diego counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 03/01/2001
Date Data Arrived at EDR: 04/23/2001
Date Made Active in Reports: 05/21/2001
Number of Days to Update: 28

Source: California Regional Water Quality Control Board San Diego Region (9)
Telephone: 858-637-5595
Last EDR Contact: 09/26/2011
Next Scheduled EDR Contact: 01/09/2012
Data Release Frequency: No Update Planned

LUST REG 8: Leaking Underground Storage Tanks
California Regional Water Quality Control Board Santa Ana Region (8). For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 02/14/2005
Date Data Arrived at EDR: 02/15/2005
Date Made Active in Reports: 03/28/2005
Number of Days to Update: 41

Source: California Regional Water Quality Control Board Santa Ana Region (8)
Telephone: 909-782-4496
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

LUST REG 7: Leaking Underground Storage Tank Case Listing
Leaking Underground Storage Tank locations. Imperial, Riverside, San Diego, Santa Barbara counties.

Date of Government Version: 02/26/2004
Date Data Arrived at EDR: 02/26/2004
Date Made Active in Reports: 03/24/2004
Number of Days to Update: 27

Source: California Regional Water Quality Control Board Colorado River Basin Region (7)
Telephone: 760-776-8943
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

LUST REG 5: Leaking Underground Storage Tank Database
Leaking Underground Storage Tank locations. Alameda, Alpine, Amador, Butte, Colusa, Contra Costa, Calveras, El Dorado, Fresno, Glenn, Kern, Kings, Lake, Lassen, Madera, Mariposa, Merced, Modoc, Napa, Nevada, Placer, Plumas, Sacramento, San Joaquin, Shasta, Solano, Stanislaus, Sutter, Tehama, Tulare, Tuolumne, Yolo, Yuba counties.

Date of Government Version: 07/01/2008
Date Data Arrived at EDR: 07/22/2008
Date Made Active in Reports: 07/31/2008
Number of Days to Update: 9

Source: California Regional Water Quality Control Board Central Valley Region (5)
Telephone: 916-464-4834
Last EDR Contact: 07/01/2011
Next Scheduled EDR Contact: 10/17/2011
Data Release Frequency: No Update Planned

LUST REG 4: Underground Storage Tank Leak List
Los Angeles, Ventura counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 09/07/2004
Date Data Arrived at EDR: 09/07/2004
Date Made Active in Reports: 10/12/2004
Number of Days to Update: 35

Source: California Regional Water Quality Control Board Los Angeles Region (4)
Telephone: 213-576-6710
Last EDR Contact: 09/06/2011
Next Scheduled EDR Contact: 12/19/2011
Data Release Frequency: No Update Planned

LUST REG 3: Leaking Underground Storage Tank Database
Leaking Underground Storage Tank locations. Monterey, San Benito, San Luis Obispo, Santa Barbara, Santa Cruz counties.

Date of Government Version: 05/19/2003
Date Data Arrived at EDR: 05/19/2003
Date Made Active in Reports: 06/02/2003
Number of Days to Update: 14

Source: California Regional Water Quality Control Board Central Coast Region (3)
Telephone: 805-542-4786
Last EDR Contact: 07/18/2011
Next Scheduled EDR Contact: 10/31/2011
Data Release Frequency: No Update Planned

LUST REG 2: Fuel Leak List

Leaking Underground Storage Tank locations. Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano, Sonoma counties.

Date of Government Version: 09/30/2004
Date Data Arrived at EDR: 10/20/2004
Date Made Active in Reports: 11/19/2004
Number of Days to Update: 30

Source: California Regional Water Quality Control Board San Francisco Bay Region (2)
Telephone: 510-622-2433
Last EDR Contact: 09/19/2011
Next Scheduled EDR Contact: 01/02/2012
Data Release Frequency: No Update Planned

LUST REG 1: Active Toxic Site Investigation

Del Norte, Humboldt, Lake, Mendocino, Modoc, Siskiyou, Sonoma, Trinity counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 02/01/2001
Date Data Arrived at EDR: 02/28/2001
Date Made Active in Reports: 03/29/2001
Number of Days to Update: 29

Source: California Regional Water Quality Control Board North Coast (1)
Telephone: 707-570-3769
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

LUST REG 6V: Leaking Underground Storage Tank Case Listing

Leaking Underground Storage Tank locations. Inyo, Kern, Los Angeles, Mono, San Bernardino counties.

Date of Government Version: 06/07/2005
Date Data Arrived at EDR: 06/07/2005
Date Made Active in Reports: 06/29/2005
Number of Days to Update: 22

Source: California Regional Water Quality Control Board Victorville Branch Office (6)
Telephone: 760-241-7365
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: No Update Planned

LUST REG 6L: Leaking Underground Storage Tank Case Listing

For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 09/09/2003
Date Data Arrived at EDR: 09/10/2003
Date Made Active in Reports: 10/07/2003
Number of Days to Update: 27

Source: California Regional Water Quality Control Board Lahontan Region (6)
Telephone: 530-542-5572
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: No Update Planned

LUST: Leaking Underground Fuel Tank Report (GEOTRACKER)

Leaking Underground Storage Tank (LUST) Sites included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

Date of Government Version: 12/09/2019
Date Data Arrived at EDR: 12/10/2019
Date Made Active in Reports: 02/14/2020
Number of Days to Update: 66

Source: State Water Resources Control Board
Telephone: see region list
Last EDR Contact: 03/10/2020
Next Scheduled EDR Contact: 06/22/2020
Data Release Frequency: Quarterly

INDIAN LUST R1: Leaking Underground Storage Tanks on Indian Land

A listing of leaking underground storage tank locations on Indian Land.

Date of Government Version: 10/01/2019
Date Data Arrived at EDR: 12/04/2019
Date Made Active in Reports: 02/10/2020
Number of Days to Update: 68

Source: EPA Region 1
Telephone: 617-918-1313
Last EDR Contact: 04/24/2020
Next Scheduled EDR Contact: 08/03/2020
Data Release Frequency: Varies

INDIAN LUST R5: Leaking Underground Storage Tanks on Indian Land

Leaking underground storage tanks located on Indian Land in Michigan, Minnesota and Wisconsin.

Date of Government Version: 10/01/2019
Date Data Arrived at EDR: 12/04/2019
Date Made Active in Reports: 02/10/2020
Number of Days to Update: 68

Source: EPA, Region 5
Telephone: 312-886-7439
Last EDR Contact: 04/24/2020
Next Scheduled EDR Contact: 08/03/2020
Data Release Frequency: Varies

INDIAN LUST R6: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in New Mexico and Oklahoma.

Date of Government Version: 10/02/2019
Date Data Arrived at EDR: 12/04/2019
Date Made Active in Reports: 02/10/2020
Number of Days to Update: 68

Source: EPA Region 6
Telephone: 214-665-6597
Last EDR Contact: 04/24/2020
Next Scheduled EDR Contact: 08/03/2020
Data Release Frequency: Varies

INDIAN LUST R8: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Colorado, Montana, North Dakota, South Dakota, Utah and Wyoming.

Date of Government Version: 10/03/2019
Date Data Arrived at EDR: 12/04/2019
Date Made Active in Reports: 02/14/2020
Number of Days to Update: 72

Source: EPA Region 8
Telephone: 303-312-6271
Last EDR Contact: 04/24/2020
Next Scheduled EDR Contact: 08/03/2020
Data Release Frequency: Varies

INDIAN LUST R4: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Florida, Mississippi and North Carolina.

Date of Government Version: 10/10/2019
Date Data Arrived at EDR: 12/05/2019
Date Made Active in Reports: 02/10/2020
Number of Days to Update: 67

Source: EPA Region 4
Telephone: 404-562-8677
Last EDR Contact: 04/24/2020
Next Scheduled EDR Contact: 08/03/2020
Data Release Frequency: Varies

INDIAN LUST R7: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Iowa, Kansas, and Nebraska

Date of Government Version: 10/15/2019
Date Data Arrived at EDR: 12/17/2019
Date Made Active in Reports: 02/10/2020
Number of Days to Update: 55

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 04/24/2020
Next Scheduled EDR Contact: 08/03/2020
Data Release Frequency: Varies

INDIAN LUST R10: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Alaska, Idaho, Oregon and Washington.

Date of Government Version: 10/11/2019
Date Data Arrived at EDR: 12/04/2019
Date Made Active in Reports: 02/10/2020
Number of Days to Update: 68

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 04/23/2020
Next Scheduled EDR Contact: 08/02/2020
Data Release Frequency: Varies

INDIAN LUST R9: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Arizona, California, New Mexico and Nevada

Date of Government Version: 10/04/2019
Date Data Arrived at EDR: 12/04/2019
Date Made Active in Reports: 02/27/2020
Number of Days to Update: 85

Source: Environmental Protection Agency
Telephone: 415-972-3372
Last EDR Contact: 04/24/2020
Next Scheduled EDR Contact: 08/03/2020
Data Release Frequency: Varies

CPS-SLIC: Statewide SLIC Cases (GEOTRACKER)

Cleanup Program Sites (CPS; also known as Site Cleanups [SC] and formerly known as Spills, Leaks, Investigations, and Cleanups [SLIC] sites) included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

Date of Government Version: 12/09/2019
Date Data Arrived at EDR: 12/10/2019
Date Made Active in Reports: 02/18/2020
Number of Days to Update: 70

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 03/10/2020
Next Scheduled EDR Contact: 06/22/2020
Data Release Frequency: Varies

SLIC REG 1: Active Toxic Site Investigations

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/03/2003
Date Data Arrived at EDR: 04/07/2003
Date Made Active in Reports: 04/25/2003
Number of Days to Update: 18

Source: California Regional Water Quality Control Board, North Coast Region (1)
Telephone: 707-576-2220
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

SLIC REG 2: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/30/2004
Date Data Arrived at EDR: 10/20/2004
Date Made Active in Reports: 11/19/2004
Number of Days to Update: 30

Source: Regional Water Quality Control Board San Francisco Bay Region (2)
Telephone: 510-286-0457
Last EDR Contact: 09/19/2011
Next Scheduled EDR Contact: 01/02/2012
Data Release Frequency: No Update Planned

SLIC REG 3: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 05/18/2006
Date Data Arrived at EDR: 05/18/2006
Date Made Active in Reports: 06/15/2006
Number of Days to Update: 28

Source: California Regional Water Quality Control Board Central Coast Region (3)
Telephone: 805-549-3147
Last EDR Contact: 07/18/2011
Next Scheduled EDR Contact: 10/31/2011
Data Release Frequency: No Update Planned

SLIC REG 4: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 11/17/2004
Date Data Arrived at EDR: 11/18/2004
Date Made Active in Reports: 01/04/2005
Number of Days to Update: 47

Source: Region Water Quality Control Board Los Angeles Region (4)
Telephone: 213-576-6600
Last EDR Contact: 07/01/2011
Next Scheduled EDR Contact: 10/17/2011
Data Release Frequency: No Update Planned

SLIC REG 5: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/01/2005
Date Data Arrived at EDR: 04/05/2005
Date Made Active in Reports: 04/21/2005
Number of Days to Update: 16

Source: Regional Water Quality Control Board Central Valley Region (5)
Telephone: 916-464-3291
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: No Update Planned

SLIC REG 6V: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 05/24/2005
Date Data Arrived at EDR: 05/25/2005
Date Made Active in Reports: 06/16/2005
Number of Days to Update: 22

Source: Regional Water Quality Control Board, Victorville Branch
Telephone: 619-241-6583
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

SLIC REG 6L: SLIC Sites
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/07/2004
Date Data Arrived at EDR: 09/07/2004
Date Made Active in Reports: 10/12/2004
Number of Days to Update: 35

Source: California Regional Water Quality Control Board, Lahontan Region
Telephone: 530-542-5574
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

SLIC REG 7: SLIC List
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 11/24/2004
Date Data Arrived at EDR: 11/29/2004
Date Made Active in Reports: 01/04/2005
Number of Days to Update: 36

Source: California Regional Quality Control Board, Colorado River Basin Region
Telephone: 760-346-7491
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

SLIC REG 8: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/03/2008
Date Data Arrived at EDR: 04/03/2008
Date Made Active in Reports: 04/14/2008
Number of Days to Update: 11

Source: California Region Water Quality Control Board Santa Ana Region (8)
Telephone: 951-782-3298
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: No Update Planned

SLIC REG 9: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/10/2007
Date Data Arrived at EDR: 09/11/2007
Date Made Active in Reports: 09/28/2007
Number of Days to Update: 17

Source: California Regional Water Quality Control Board San Diego Region (9)
Telephone: 858-467-2980
Last EDR Contact: 08/08/2011
Next Scheduled EDR Contact: 11/21/2011
Data Release Frequency: No Update Planned

State and tribal registered storage tank lists

FEMA UST: Underground Storage Tank Listing
A listing of all FEMA owned underground storage tanks.

Date of Government Version: 08/27/2019
Date Data Arrived at EDR: 08/28/2019
Date Made Active in Reports: 11/11/2019
Number of Days to Update: 75

Source: FEMA
Telephone: 202-646-5797
Last EDR Contact: 03/19/2020
Next Scheduled EDR Contact: 07/20/2020
Data Release Frequency: Varies

UST CLOSURE: Proposed Closure of Underground Storage Tank (UST) Cases

UST cases that are being considered for closure by either the State Water Resources Control Board or the Executive Director have been posted for a 60-day public comment period. UST Case Closures being proposed for consideration by the State Water Resources Control Board. These are primarily UST cases that meet closure criteria under the decisional framework in State Water Board Resolution No. 92-49 and other Board orders. UST Case Closures proposed for consideration by the Executive Director pursuant to State Water Board Resolution No. 2012-0061. These are cases that meet the criteria of the Low-Threat UST Case Closure Policy. UST Case Closure Review Denials and Approved Orders.

Date of Government Version: 12/06/2019
Date Data Arrived at EDR: 12/10/2019
Date Made Active in Reports: 02/25/2020
Number of Days to Update: 77

Source: State Water Resources Control Board
Telephone: 916-327-7844
Last EDR Contact: 03/11/2020
Next Scheduled EDR Contact: 06/22/2020
Data Release Frequency: Varies

MILITARY UST SITES: Military UST Sites (GEOTRACKER)

Military ust sites

Date of Government Version: 12/09/2019
Date Data Arrived at EDR: 12/10/2019
Date Made Active in Reports: 02/18/2020
Number of Days to Update: 70

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 03/10/2020
Next Scheduled EDR Contact: 06/22/2020
Data Release Frequency: Varies

UST: Active UST Facilities

Active UST facilities gathered from the local regulatory agencies

Date of Government Version: 12/09/2019
Date Data Arrived at EDR: 12/10/2019
Date Made Active in Reports: 02/21/2020
Number of Days to Update: 73

Source: SWRCB
Telephone: 916-341-5851
Last EDR Contact: 03/10/2020
Next Scheduled EDR Contact: 06/22/2020
Data Release Frequency: Semi-Annually

AST: Aboveground Petroleum Storage Tank Facilities

A listing of aboveground storage tank petroleum storage tank locations.

Date of Government Version: 07/06/2016
Date Data Arrived at EDR: 07/12/2016
Date Made Active in Reports: 09/19/2016
Number of Days to Update: 69

Source: California Environmental Protection Agency
Telephone: 916-327-5092
Last EDR Contact: 03/12/2020
Next Scheduled EDR Contact: 06/29/2020
Data Release Frequency: Varies

INDIAN UST R10: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 10 (Alaska, Idaho, Oregon, Washington, and Tribal Nations).

Date of Government Version: 10/11/2019
Date Data Arrived at EDR: 12/04/2019
Date Made Active in Reports: 02/10/2020
Number of Days to Update: 68

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 04/24/2020
Next Scheduled EDR Contact: 08/03/2020
Data Release Frequency: Varies

INDIAN UST R1: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 1 (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont and ten Tribal Nations).

Date of Government Version: 10/01/2019
Date Data Arrived at EDR: 12/04/2019
Date Made Active in Reports: 02/10/2020
Number of Days to Update: 68

Source: EPA, Region 1
Telephone: 617-918-1313
Last EDR Contact: 04/24/2020
Next Scheduled EDR Contact: 08/03/2020
Data Release Frequency: Varies

INDIAN UST R4: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 4 (Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee and Tribal Nations)

Date of Government Version: 10/10/2019
Date Data Arrived at EDR: 12/05/2019
Date Made Active in Reports: 02/10/2020
Number of Days to Update: 67

Source: EPA Region 4
Telephone: 404-562-9424
Last EDR Contact: 04/24/2020
Next Scheduled EDR Contact: 08/03/2020
Data Release Frequency: Varies

INDIAN UST R5: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 5 (Michigan, Minnesota and Wisconsin and Tribal Nations).

Date of Government Version: 10/01/2019
Date Data Arrived at EDR: 12/04/2019
Date Made Active in Reports: 02/10/2020
Number of Days to Update: 68

Source: EPA Region 5
Telephone: 312-886-6136
Last EDR Contact: 04/24/2020
Next Scheduled EDR Contact: 08/03/2020
Data Release Frequency: Varies

INDIAN UST R6: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 6 (Louisiana, Arkansas, Oklahoma, New Mexico, Texas and 65 Tribes).

Date of Government Version: 10/02/2019
Date Data Arrived at EDR: 12/04/2019
Date Made Active in Reports: 02/10/2020
Number of Days to Update: 68

Source: EPA Region 6
Telephone: 214-665-7591
Last EDR Contact: 04/24/2020
Next Scheduled EDR Contact: 08/03/2020
Data Release Frequency: Varies

INDIAN UST R7: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 7 (Iowa, Kansas, Missouri, Nebraska, and 9 Tribal Nations).

Date of Government Version: 10/11/2019
Date Data Arrived at EDR: 12/04/2019
Date Made Active in Reports: 02/10/2020
Number of Days to Update: 68

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 04/24/2020
Next Scheduled EDR Contact: 08/03/2020
Data Release Frequency: Varies

INDIAN UST R8: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 8 (Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming and 27 Tribal Nations).

Date of Government Version: 10/03/2019
Date Data Arrived at EDR: 12/04/2019
Date Made Active in Reports: 02/14/2020
Number of Days to Update: 72

Source: EPA Region 8
Telephone: 303-312-6137
Last EDR Contact: 04/24/2020
Next Scheduled EDR Contact: 08/03/2020
Data Release Frequency: Varies

INDIAN UST R9: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 9 (Arizona, California, Hawaii, Nevada, the Pacific Islands, and Tribal Nations).

Date of Government Version: 10/04/2019
Date Data Arrived at EDR: 12/04/2019
Date Made Active in Reports: 02/27/2020
Number of Days to Update: 85

Source: EPA Region 9
Telephone: 415-972-3368
Last EDR Contact: 04/24/2020
Next Scheduled EDR Contact: 08/03/2020
Data Release Frequency: Varies

State and tribal voluntary cleanup sites

VCP: Voluntary Cleanup Program Properties

Contains low threat level properties with either confirmed or unconfirmed releases and the project proponents have request that DTSC oversee investigation and/or cleanup activities and have agreed to provide coverage for DTSC's costs.

Date of Government Version: 01/27/2020
Date Data Arrived at EDR: 01/28/2020
Date Made Active in Reports: 04/09/2020
Number of Days to Update: 72

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 04/28/2020
Next Scheduled EDR Contact: 08/10/2020
Data Release Frequency: Quarterly

INDIAN VCP R1: Voluntary Cleanup Priority Listing

A listing of voluntary cleanup priority sites located on Indian Land located in Region 1.

Date of Government Version: 07/27/2015
Date Data Arrived at EDR: 09/29/2015
Date Made Active in Reports: 02/18/2016
Number of Days to Update: 142

Source: EPA, Region 1
Telephone: 617-918-1102
Last EDR Contact: 03/18/2020
Next Scheduled EDR Contact: 07/06/2020
Data Release Frequency: Varies

INDIAN VCP R7: Voluntary Cleanup Priority Lisitng

A listing of voluntary cleanup priority sites located on Indian Land located in Region 7.

Date of Government Version: 03/20/2008
Date Data Arrived at EDR: 04/22/2008
Date Made Active in Reports: 05/19/2008
Number of Days to Update: 27

Source: EPA, Region 7
Telephone: 913-551-7365
Last EDR Contact: 04/20/2009
Next Scheduled EDR Contact: 07/20/2009
Data Release Frequency: Varies

State and tribal Brownfields sites

BROWNFIELDS: Considered Brownfieds Sites Listing

A listing of sites the SWRCB considers to be Brownfields since these are sites have come to them through the MOA Process.

Date of Government Version: 12/18/2019
Date Data Arrived at EDR: 12/19/2019
Date Made Active in Reports: 02/19/2020
Number of Days to Update: 62

Source: State Water Resources Control Board
Telephone: 916-323-7905
Last EDR Contact: 03/24/2020
Next Scheduled EDR Contact: 07/06/2020
Data Release Frequency: Quarterly

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS: A Listing of Brownfields Sites

Brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Cleaning up and reinvesting in these properties takes development pressures off of undeveloped, open land, and both improves and protects the environment. Assessment, Cleanup and Redevelopment Exchange System (ACRES) stores information reported by EPA Brownfields grant recipients on brownfields properties assessed or cleaned up with grant funding as well as information on Targeted Brownfields Assessments performed by EPA Regions. A listing of ACRES Brownfield sites is obtained from Cleanups in My Community. Cleanups in My Community provides information on Brownfields properties for which information is reported back to EPA, as well as areas served by Brownfields grant programs.

Date of Government Version: 12/02/2019
Date Data Arrived at EDR: 12/16/2019
Date Made Active in Reports: 03/06/2020
Number of Days to Update: 81

Source: Environmental Protection Agency
Telephone: 202-566-2777
Last EDR Contact: 03/17/2020
Next Scheduled EDR Contact: 06/29/2020
Data Release Frequency: Semi-Annually

Local Lists of Landfill / Solid Waste Disposal Sites

WMUDS/SWAT: Waste Management Unit Database

Waste Management Unit Database System. WMUDS is used by the State Water Resources Control Board staff and the Regional Water Quality Control Boards for program tracking and inventory of waste management units. WMUDS is composed of the following databases: Facility Information, Scheduled Inspections Information, Waste Management Unit Information, SWAT Program Information, SWAT Report Summary Information, SWAT Report Summary Data, Chapter 15 (formerly Subchapter 15) Information, Chapter 15 Monitoring Parameters, TPCA Program Information, RCRA Program Information, Closure Information, and Interested Parties Information.

Date of Government Version: 04/01/2000
Date Data Arrived at EDR: 04/10/2000
Date Made Active in Reports: 05/10/2000
Number of Days to Update: 30

Source: State Water Resources Control Board
Telephone: 916-227-4448
Last EDR Contact: 04/16/2020
Next Scheduled EDR Contact: 08/10/2020
Data Release Frequency: No Update Planned

SWRCY: Recycler Database

A listing of recycling facilities in California.

Date of Government Version: 12/09/2019
Date Data Arrived at EDR: 12/10/2019
Date Made Active in Reports: 02/19/2020
Number of Days to Update: 71

Source: Department of Conservation
Telephone: 916-323-3836
Last EDR Contact: 03/10/2020
Next Scheduled EDR Contact: 06/22/2020
Data Release Frequency: Quarterly

HAULERS: Registered Waste Tire Haulers Listing

A listing of registered waste tire haulers.

Date of Government Version: 11/15/2019
Date Data Arrived at EDR: 11/15/2019
Date Made Active in Reports: 01/23/2020
Number of Days to Update: 69

Source: Integrated Waste Management Board
Telephone: 916-341-6422
Last EDR Contact: 05/06/2020
Next Scheduled EDR Contact: 08/24/2020
Data Release Frequency: Varies

INDIAN ODI: Report on the Status of Open Dumps on Indian Lands

Location of open dumps on Indian land.

Date of Government Version: 12/31/1998
Date Data Arrived at EDR: 12/03/2007
Date Made Active in Reports: 01/24/2008
Number of Days to Update: 52

Source: Environmental Protection Agency
Telephone: 703-308-8245
Last EDR Contact: 04/16/2020
Next Scheduled EDR Contact: 08/10/2020
Data Release Frequency: Varies

ODI: Open Dump Inventory

An open dump is defined as a disposal facility that does not comply with one or more of the Part 257 or Part 258 Subtitle D Criteria.

Date of Government Version: 06/30/1985
Date Data Arrived at EDR: 08/09/2004
Date Made Active in Reports: 09/17/2004
Number of Days to Update: 39

Source: Environmental Protection Agency
Telephone: 800-424-9346
Last EDR Contact: 06/09/2004
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

DEBRIS REGION 9: Torres Martinez Reservation Illegal Dump Site Locations

A listing of illegal dump sites location on the Torres Martinez Indian Reservation located in eastern Riverside County and northern Imperial County, California.

Date of Government Version: 01/12/2009
Date Data Arrived at EDR: 05/07/2009
Date Made Active in Reports: 09/21/2009
Number of Days to Update: 137

Source: EPA, Region 9
Telephone: 415-947-4219
Last EDR Contact: 04/09/2020
Next Scheduled EDR Contact: 08/03/2020
Data Release Frequency: No Update Planned

IHS OPEN DUMPS: Open Dumps on Indian Land

A listing of all open dumps located on Indian Land in the United States.

Date of Government Version: 04/01/2014
Date Data Arrived at EDR: 08/06/2014
Date Made Active in Reports: 01/29/2015
Number of Days to Update: 176

Source: Department of Health & Human Serivces, Indian Health Service
Telephone: 301-443-1452
Last EDR Contact: 05/01/2020
Next Scheduled EDR Contact: 08/10/2020
Data Release Frequency: Varies

Local Lists of Hazardous waste / Contaminated Sites

US HIST CDL: National Clandestine Laboratory Register

A listing of clandestine drug lab locations that have been removed from the DEAs National Clandestine Laboratory Register.

Date of Government Version: 06/11/2019
Date Data Arrived at EDR: 06/13/2019
Date Made Active in Reports: 09/03/2019
Number of Days to Update: 82

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 02/21/2020
Next Scheduled EDR Contact: 06/08/2020
Data Release Frequency: No Update Planned

HIST CAL-SITES: Calsites Database

The Calsites database contains potential or confirmed hazardous substance release properties. In 1996, California EPA reevaluated and significantly reduced the number of sites in the Calsites database. No longer updated by the state agency. It has been replaced by ENVIROSTOR.

Date of Government Version: 08/08/2005
Date Data Arrived at EDR: 08/03/2006
Date Made Active in Reports: 08/24/2006
Number of Days to Update: 21

Source: Department of Toxic Substance Control
Telephone: 916-323-3400
Last EDR Contact: 02/23/2009
Next Scheduled EDR Contact: 05/25/2009
Data Release Frequency: No Update Planned

SCH: School Property Evaluation Program

This category contains proposed and existing school sites that are being evaluated by DTSC for possible hazardous materials contamination. In some cases, these properties may be listed in the CalSites category depending on the level of threat to public health and safety or the environment they pose.

Date of Government Version: 01/27/2020
Date Data Arrived at EDR: 01/28/2020
Date Made Active in Reports: 04/09/2020
Number of Days to Update: 72

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 04/28/2020
Next Scheduled EDR Contact: 08/10/2020
Data Release Frequency: Quarterly

CDL: Clandestine Drug Labs

A listing of drug lab locations. Listing of a location in this database does not indicate that any illegal drug lab materials were or were not present there, and does not constitute a determination that the location either requires or does not require additional cleanup work.

Date of Government Version: 12/31/2018
Date Data Arrived at EDR: 02/05/2020
Date Made Active in Reports: 04/15/2020
Number of Days to Update: 70

Source: Department of Toxic Substances Control
Telephone: 916-255-6504
Last EDR Contact: 04/20/2020
Next Scheduled EDR Contact: 07/20/2020
Data Release Frequency: Varies

CERS HAZ WASTE: CERS HAZ WASTE

List of sites in the California Environmental Protection Agency (CalEPA) Regulated Site Portal which fall under the Hazardous Chemical Management, Hazardous Waste Onsite Treatment, Household Hazardous Waste Collection, Hazardous Waste Generator, and RCRA LQ HW Generator programs.

Date of Government Version: 01/21/2020
Date Data Arrived at EDR: 01/22/2020
Date Made Active in Reports: 04/01/2020
Number of Days to Update: 70

Source: CalEPA
Telephone: 916-323-2514
Last EDR Contact: 04/21/2020
Next Scheduled EDR Contact: 08/03/2020
Data Release Frequency: Quarterly

TOXIC PITS: Toxic Pits Cleanup Act Sites

Toxic PITS Cleanup Act Sites. TOXIC PITS identifies sites suspected of containing hazardous substances where cleanup has not yet been completed.

Date of Government Version: 07/01/1995
Date Data Arrived at EDR: 08/30/1995
Date Made Active in Reports: 09/26/1995
Number of Days to Update: 27

Source: State Water Resources Control Board
Telephone: 916-227-4364
Last EDR Contact: 01/26/2009
Next Scheduled EDR Contact: 04/27/2009
Data Release Frequency: No Update Planned

US CDL: Clandestine Drug Labs

A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

Date of Government Version: 06/11/2019
Date Data Arrived at EDR: 06/13/2019
Date Made Active in Reports: 09/03/2019
Number of Days to Update: 82

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 02/21/2020
Next Scheduled EDR Contact: 06/08/2020
Data Release Frequency: Quarterly

PFAS: PFAS Contamination Site Location Listing

A listing of PFAS contaminated sites included in the GeoTracker database.

Date of Government Version: 12/09/2019
Date Data Arrived at EDR: 12/10/2019
Date Made Active in Reports: 02/19/2020
Number of Days to Update: 71

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 03/10/2020
Next Scheduled EDR Contact: 06/22/2020
Data Release Frequency: Varies

Local Lists of Registered Storage Tanks

SWEEPS UST: SWEEPS UST Listing

Statewide Environmental Evaluation and Planning System. This underground storage tank listing was updated and maintained by a company contacted by the SWRCB in the early 1990's. The listing is no longer updated or maintained. The local agency is the contact for more information on a site on the SWEEPS list.

Date of Government Version: 06/01/1994
Date Data Arrived at EDR: 07/07/2005
Date Made Active in Reports: 08/11/2005
Number of Days to Update: 35

Source: State Water Resources Control Board
Telephone: N/A
Last EDR Contact: 06/03/2005
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

UST MENDOCINO: Mendocino County UST Database

A listing of underground storage tank locations in Mendocino County.

Date of Government Version: 12/19/2019
Date Data Arrived at EDR: 12/23/2019
Date Made Active in Reports: 02/21/2020
Number of Days to Update: 60

Source: Department of Public Health
Telephone: 707-463-4466
Last EDR Contact: 02/21/2020
Next Scheduled EDR Contact: 06/08/2020
Data Release Frequency: Annually

HIST UST: Hazardous Substance Storage Container Database

The Hazardous Substance Storage Container Database is a historical listing of UST sites. Refer to local/county source for current data.

Date of Government Version: 10/15/1990
Date Data Arrived at EDR: 01/25/1991
Date Made Active in Reports: 02/12/1991
Number of Days to Update: 18

Source: State Water Resources Control Board
Telephone: 916-341-5851
Last EDR Contact: 07/26/2001
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

SAN FRANCISCO AST: Aboveground Storage Tank Site Listing

Aboveground storage tank sites

Date of Government Version: 08/01/2019
Date Data Arrived at EDR: 08/02/2019
Date Made Active in Reports: 10/11/2019
Number of Days to Update: 70

Source: San Francisco County Department of Public Health
Telephone: 415-252-3896
Last EDR Contact: 04/23/2020
Next Scheduled EDR Contact: 08/17/2020
Data Release Frequency: Varies

CA FID UST: Facility Inventory Database

The Facility Inventory Database (FID) contains a historical listing of active and inactive underground storage tank locations from the State Water Resource Control Board. Refer to local/county source for current data.

Date of Government Version: 10/31/1994
Date Data Arrived at EDR: 09/05/1995
Date Made Active in Reports: 09/29/1995
Number of Days to Update: 24

Source: California Environmental Protection Agency
Telephone: 916-341-5851
Last EDR Contact: 12/28/1998
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

CERS TANKS: California Environmental Reporting System (CERS) Tanks

List of sites in the California Environmental Protection Agency (CalEPA) Regulated Site Portal which fall under the Aboveground Petroleum Storage and Underground Storage Tank regulatory programs.

Date of Government Version: 01/21/2020
Date Data Arrived at EDR: 01/22/2020
Date Made Active in Reports: 04/01/2020
Number of Days to Update: 70

Source: California Environmental Protection Agency
Telephone: 916-323-2514
Last EDR Contact: 04/21/2020
Next Scheduled EDR Contact: 08/03/2020
Data Release Frequency: Quarterly

Local Land Records

LIENS: Environmental Liens Listing

A listing of property locations with environmental liens for California where DTSC is a lien holder.

Date of Government Version: 12/02/2019
Date Data Arrived at EDR: 12/04/2019
Date Made Active in Reports: 02/04/2020
Number of Days to Update: 62

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 02/27/2020
Next Scheduled EDR Contact: 06/15/2020
Data Release Frequency: Varies

LIENS 2: CERCLA Lien Information

A Federal CERCLA ('Superfund') lien can exist by operation of law at any site or property at which EPA has spent Superfund monies. These monies are spent to investigate and address releases and threatened releases of contamination. CERCLIS provides information as to the identity of these sites and properties.

Date of Government Version: 01/30/2020
Date Data Arrived at EDR: 02/05/2020
Date Made Active in Reports: 02/14/2020
Number of Days to Update: 9

Source: Environmental Protection Agency
Telephone: 202-564-6023
Last EDR Contact: 05/06/2020
Next Scheduled EDR Contact: 07/13/2020
Data Release Frequency: Semi-Annually

DEED: Deed Restriction Listing

Site Mitigation and Brownfields Reuse Program Facility Sites with Deed Restrictions & Hazardous Waste Management Program Facility Sites with Deed / Land Use Restriction. The DTSC Site Mitigation and Brownfields Reuse Program (SMBRP) list includes sites cleaned up under the program's oversight and generally does not include current or former hazardous waste facilities that required a hazardous waste facility permit. The list represents deed restrictions that are active. Some sites have multiple deed restrictions. The DTSC Hazardous Waste Management Program (HWMP) has developed a list of current or former hazardous waste facilities that have a recorded land use restriction at the local county recorder's office. The land use restrictions on this list were required by the DTSC HWMP as a result of the presence of hazardous substances that remain on site after the facility (or part of the facility) has been closed or cleaned up. The types of land use restriction include deed notice, deed restriction, or a land use restriction that binds current and future owners.

Date of Government Version: 12/03/2019
Date Data Arrived at EDR: 12/04/2019
Date Made Active in Reports: 02/04/2020
Number of Days to Update: 62

Source: DTSC and SWRCB
Telephone: 916-323-3400
Last EDR Contact: 03/03/2020
Next Scheduled EDR Contact: 06/15/2020
Data Release Frequency: Semi-Annually

Records of Emergency Release Reports

HMIRS: Hazardous Materials Information Reporting System

Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 12/05/2019
Date Data Arrived at EDR: 12/06/2019
Date Made Active in Reports: 02/14/2020
Number of Days to Update: 70

Source: U.S. Department of Transportation
Telephone: 202-366-4555
Last EDR Contact: 03/24/2020
Next Scheduled EDR Contact: 07/06/2020
Data Release Frequency: Quarterly

CHMIRS: California Hazardous Material Incident Report System

California Hazardous Material Incident Reporting System. CHMIRS contains information on reported hazardous material incidents (accidental releases or spills).

Date of Government Version: 12/24/2019
Date Data Arrived at EDR: 01/22/2020
Date Made Active in Reports: 03/30/2020
Number of Days to Update: 68

Source: Office of Emergency Services
Telephone: 916-845-8400
Last EDR Contact: 04/21/2020
Next Scheduled EDR Contact: 08/03/2020
Data Release Frequency: Semi-Annually

LDS: Land Disposal Sites Listing (GEOTRACKER)

Land Disposal sites (Landfills) included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

Date of Government Version: 12/09/2019
Date Data Arrived at EDR: 12/10/2019
Date Made Active in Reports: 02/14/2020
Number of Days to Update: 66

Source: State Water Qualilty Control Board
Telephone: 866-480-1028
Last EDR Contact: 03/10/2020
Next Scheduled EDR Contact: 06/22/2020
Data Release Frequency: Quarterly

MCS: Military Cleanup Sites Listing (GEOTRACKER)

Military sites (consisting of: Military UST sites; Military Privatized sites; and Military Cleanup sites [formerly known as DoD non UST]) included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

Date of Government Version: 12/09/2019
Date Data Arrived at EDR: 12/10/2019
Date Made Active in Reports: 02/18/2020
Number of Days to Update: 70

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 03/10/2020
Next Scheduled EDR Contact: 06/22/2020
Data Release Frequency: Quarterly

SPILLS 90: SPILLS90 data from FirstSearch

Spills 90 includes those spill and release records available exclusively from FirstSearch databases. Typically, they may include chemical, oil and/or hazardous substance spills recorded after 1990. Duplicate records that are already included in EDR incident and release records are not included in Spills 90.

Date of Government Version: 06/06/2012
Date Data Arrived at EDR: 01/03/2013
Date Made Active in Reports: 02/22/2013
Number of Days to Update: 50

Source: FirstSearch
Telephone: N/A
Last EDR Contact: 01/03/2013
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

Other Ascertainable Records

RCRA NonGen / NLR: RCRA - Non Generators / No Longer Regulated

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

Date of Government Version: 12/16/2019
Date Data Arrived at EDR: 12/16/2019
Date Made Active in Reports: 12/20/2019
Number of Days to Update: 4

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 03/25/2020
Next Scheduled EDR Contact: 07/06/2020
Data Release Frequency: Quarterly

FUDS: Formerly Used Defense Sites

The listing includes locations of Formerly Used Defense Sites properties where the US Army Corps of Engineers is actively working or will take necessary cleanup actions.

Date of Government Version: 11/12/2019
Date Data Arrived at EDR: 11/19/2019
Date Made Active in Reports: 01/28/2020
Number of Days to Update: 70

Source: U.S. Army Corps of Engineers
Telephone: 202-528-4285
Last EDR Contact: 02/19/2020
Next Scheduled EDR Contact: 06/01/2020
Data Release Frequency: Varies

DOD: Department of Defense Sites

This data set consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 11/10/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 62

Source: USGS
Telephone: 888-275-8747
Last EDR Contact: 04/10/2020
Next Scheduled EDR Contact: 07/20/2020
Data Release Frequency: Semi-Annually

FEDLAND: Federal and Indian Lands

Federally and Indian administrated lands of the United States. Lands included are administrated by: Army Corps of Engineers, Bureau of Reclamation, National Wild and Scenic River, National Wildlife Refuge, Public Domain Land, Wilderness, Wilderness Study Area, Wildlife Management Area, Bureau of Indian Affairs, Bureau of Land Management, Department of Justice, Forest Service, Fish and Wildlife Service, National Park Service.

Date of Government Version: 04/02/2018
Date Data Arrived at EDR: 04/11/2018
Date Made Active in Reports: 11/06/2019
Number of Days to Update: 574

Source: U.S. Geological Survey
Telephone: 888-275-8747
Last EDR Contact: 04/06/2020
Next Scheduled EDR Contact: 07/20/2020
Data Release Frequency: N/A

SCRD DRYCLEANERS: State Coalition for Remediation of Drycleaners Listing

The State Coalition for Remediation of Drycleaners was established in 1998, with support from the U.S. EPA Office of Superfund Remediation and Technology Innovation. It is comprised of representatives of states with established drycleaner remediation programs. Currently the member states are Alabama, Connecticut, Florida, Illinois, Kansas, Minnesota, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Texas, and Wisconsin.

Date of Government Version: 01/01/2017
Date Data Arrived at EDR: 02/03/2017
Date Made Active in Reports: 04/07/2017
Number of Days to Update: 63

Source: Environmental Protection Agency
Telephone: 615-532-8599
Last EDR Contact: 02/13/2020
Next Scheduled EDR Contact: 05/25/2020
Data Release Frequency: Varies

US FIN ASSUR: Financial Assurance Information

All owners and operators of facilities that treat, store, or dispose of hazardous waste are required to provide proof that they will have sufficient funds to pay for the clean up, closure, and post-closure care of their facilities.

Date of Government Version: 12/16/2019
Date Data Arrived at EDR: 12/19/2019
Date Made Active in Reports: 02/27/2020
Number of Days to Update: 70

Source: Environmental Protection Agency
Telephone: 202-566-1917
Last EDR Contact: 03/24/2020
Next Scheduled EDR Contact: 07/06/2020
Data Release Frequency: Quarterly

EPA WATCH LIST: EPA WATCH LIST

EPA maintains a "Watch List" to facilitate dialogue between EPA, state and local environmental agencies on enforcement matters relating to facilities with alleged violations identified as either significant or high priority. Being on the Watch List does not mean that the facility has actually violated the law only that an investigation by EPA or a state or local environmental agency has led those organizations to allege that an unproven violation has in fact occurred. Being on the Watch List does not represent a higher level of concern regarding the alleged violations that were detected, but instead indicates cases requiring additional dialogue between EPA, state and local agencies - primarily because of the length of time the alleged violation has gone unaddressed or unresolved.

Date of Government Version: 08/30/2013
Date Data Arrived at EDR: 03/21/2014
Date Made Active in Reports: 06/17/2014
Number of Days to Update: 88

Source: Environmental Protection Agency
Telephone: 617-520-3000
Last EDR Contact: 05/04/2020
Next Scheduled EDR Contact: 08/17/2020
Data Release Frequency: Quarterly

2020 COR ACTION: 2020 Corrective Action Program List

The EPA has set ambitious goals for the RCRA Corrective Action program by creating the 2020 Corrective Action Universe. This RCRA cleanup baseline includes facilities expected to need corrective action. The 2020 universe contains a wide variety of sites. Some properties are heavily contaminated while others were contaminated but have since been cleaned up. Still others have not been fully investigated yet, and may require little or no remediation. Inclusion in the 2020 Universe does not necessarily imply failure on the part of a facility to meet its RCRA obligations.

Date of Government Version: 09/30/2017
Date Data Arrived at EDR: 05/08/2018
Date Made Active in Reports: 07/20/2018
Number of Days to Update: 73

Source: Environmental Protection Agency
Telephone: 703-308-4044
Last EDR Contact: 02/07/2020
Next Scheduled EDR Contact: 05/18/2020
Data Release Frequency: Varies

TSCA: Toxic Substances Control Act

Toxic Substances Control Act. TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant site.

Date of Government Version: 12/31/2016
Date Data Arrived at EDR: 06/21/2017
Date Made Active in Reports: 01/05/2018
Number of Days to Update: 198

Source: EPA
Telephone: 202-260-5521
Last EDR Contact: 03/20/2020
Next Scheduled EDR Contact: 06/29/2020
Data Release Frequency: Every 4 Years

TRIS: Toxic Chemical Release Inventory System

Toxic Release Inventory System. TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.

Date of Government Version: 12/31/2018
Date Data Arrived at EDR: 02/05/2020
Date Made Active in Reports: 04/24/2020
Number of Days to Update: 79

Source: EPA
Telephone: 202-566-0250
Last EDR Contact: 02/05/2020
Next Scheduled EDR Contact: 06/01/2020
Data Release Frequency: Annually

SSTS: Section 7 Tracking Systems

Section 7 of the Federal Insecticide, Fungicide and Rodenticide Act, as amended (92 Stat. 829) requires all registered pesticide-producing establishments to submit a report to the Environmental Protection Agency by March 1st each year. Each establishment must report the types and amounts of pesticides, active ingredients and devices being produced, and those having been produced and sold or distributed in the past year.

Date of Government Version: 05/01/2019
Date Data Arrived at EDR: 10/23/2019
Date Made Active in Reports: 01/15/2020
Number of Days to Update: 84

Source: EPA
Telephone: 202-564-4203
Last EDR Contact: 04/21/2020
Next Scheduled EDR Contact: 08/03/2020
Data Release Frequency: Annually

ROD: Records Of Decision

Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid in the cleanup.

Date of Government Version: 01/30/2020
Date Data Arrived at EDR: 02/05/2020
Date Made Active in Reports: 02/14/2020
Number of Days to Update: 9

Source: EPA
Telephone: 703-416-0223
Last EDR Contact: 05/06/2020
Next Scheduled EDR Contact: 06/15/2020
Data Release Frequency: Annually

RMP: Risk Management Plans

When Congress passed the Clean Air Act Amendments of 1990, it required EPA to publish regulations and guidance for chemical accident prevention at facilities using extremely hazardous substances. The Risk Management Program Rule (RMP Rule) was written to implement Section 112(r) of these amendments. The rule, which built upon existing industry codes and standards, requires companies of all sizes that use certain flammable and toxic substances to develop a Risk Management Program, which includes a(n): Hazard assessment that details the potential effects of an accidental release, an accident history of the last five years, and an evaluation of worst-case and alternative accidental releases; Prevention program that includes safety precautions and maintenance, monitoring, and employee training measures; and Emergency response program that spells out emergency health care, employee training measures and procedures for informing the public and response agencies (e.g the fire department) should an accident occur.

Date of Government Version: 11/05/2019
Date Data Arrived at EDR: 11/20/2019
Date Made Active in Reports: 04/17/2020
Number of Days to Update: 149

Source: Environmental Protection Agency
Telephone: 202-564-8600
Last EDR Contact: 04/15/2020
Next Scheduled EDR Contact: 08/03/2020
Data Release Frequency: Varies

RAATS: RCRA Administrative Action Tracking System

RCRA Administration Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA. For administration actions after September 30, 1995, data entry in the RAATS database was discontinued. EPA will retain a copy of the database for historical records. It was necessary to terminate RAATS because a decrease in agency resources made it impossible to continue to update the information contained in the database.

Date of Government Version: 04/17/1995
Date Data Arrived at EDR: 07/03/1995
Date Made Active in Reports: 08/07/1995
Number of Days to Update: 35

Source: EPA
Telephone: 202-564-4104
Last EDR Contact: 06/02/2008
Next Scheduled EDR Contact: 09/01/2008
Data Release Frequency: No Update Planned

PRP: Potentially Responsible Parties
A listing of verified Potentially Responsible Parties

Date of Government Version: 01/30/2020
Date Data Arrived at EDR: 02/06/2020
Date Made Active in Reports: 02/14/2020
Number of Days to Update: 8

Source: EPA
Telephone: 202-564-6023
Last EDR Contact: 05/06/2020
Next Scheduled EDR Contact: 08/17/2020
Data Release Frequency: Quarterly

PADS: PCB Activity Database System
PCB Activity Database. PADS Identifies generators, transporters, commercial storers and/or brokers and disposers of PCB's who are required to notify the EPA of such activities.

Date of Government Version: 10/09/2019
Date Data Arrived at EDR: 10/11/2019
Date Made Active in Reports: 12/20/2019
Number of Days to Update: 70

Source: EPA
Telephone: 202-566-0500
Last EDR Contact: 04/10/2020
Next Scheduled EDR Contact: 07/20/2020
Data Release Frequency: Annually

ICIS: Integrated Compliance Information System
The Integrated Compliance Information System (ICIS) supports the information needs of the national enforcement and compliance program as well as the unique needs of the National Pollutant Discharge Elimination System (NPDES) program.

Date of Government Version: 11/18/2016
Date Data Arrived at EDR: 11/23/2016
Date Made Active in Reports: 02/10/2017
Number of Days to Update: 79

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 03/26/2020
Next Scheduled EDR Contact: 07/20/2020
Data Release Frequency: Quarterly

FTTS: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act). To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25

Source: EPA/Office of Prevention, Pesticides and Toxic Substances
Telephone: 202-566-1667
Last EDR Contact: 08/18/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: No Update Planned

FTTS INSP: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
A listing of FIFRA/TSCA Tracking System (FTTS) inspections and enforcements.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25

Source: EPA
Telephone: 202-566-1667
Last EDR Contact: 08/18/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: No Update Planned

MLTS: Material Licensing Tracking System
MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 10/25/2019
Date Data Arrived at EDR: 10/25/2019
Date Made Active in Reports: 01/15/2020
Number of Days to Update: 82

Source: Nuclear Regulatory Commission
Telephone: 301-415-7169
Last EDR Contact: 04/10/2020
Next Scheduled EDR Contact: 08/03/2020
Data Release Frequency: Quarterly

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

COAL ASH DOE: Steam-Electric Plant Operation Data
A listing of power plants that store ash in surface ponds.

Date of Government Version: 12/31/2018
Date Data Arrived at EDR: 12/04/2019
Date Made Active in Reports: 01/15/2020
Number of Days to Update: 42
Source: Department of Energy
Telephone: 202-586-8719
Last EDR Contact: 03/06/2020
Next Scheduled EDR Contact: 06/15/2020
Data Release Frequency: Varies

COAL ASH EPA: Coal Combustion Residues Surface Impoundments List
A listing of coal combustion residues surface impoundments with high hazard potential ratings.

Date of Government Version: 01/12/2017
Date Data Arrived at EDR: 03/05/2019
Date Made Active in Reports: 11/11/2019
Number of Days to Update: 251
Source: Environmental Protection Agency
Telephone: N/A
Last EDR Contact: 02/27/2020
Next Scheduled EDR Contact: 06/15/2020
Data Release Frequency: Varies

PCB TRANSFORMER: PCB Transformer Registration Database
The database of PCB transformer registrations that includes all PCB registration submittals.

Date of Government Version: 09/13/2019
Date Data Arrived at EDR: 11/06/2019
Date Made Active in Reports: 02/10/2020
Number of Days to Update: 96
Source: Environmental Protection Agency
Telephone: 202-566-0517
Last EDR Contact: 02/07/2020
Next Scheduled EDR Contact: 05/18/2020
Data Release Frequency: Varies

RADINFO: Radiation Information Database
The Radiation Information Database (RADINFO) contains information about facilities that are regulated by U.S. Environmental Protection Agency (EPA) regulations for radiation and radioactivity.

Date of Government Version: 07/01/2019
Date Data Arrived at EDR: 07/01/2019
Date Made Active in Reports: 09/23/2019
Number of Days to Update: 84
Source: Environmental Protection Agency
Telephone: 202-343-9775
Last EDR Contact: 07/01/2019
Next Scheduled EDR Contact: 07/13/2020
Data Release Frequency: Quarterly

HIST FTTS: FIFRA/TSCA Tracking System Administrative Case Listing
A complete administrative case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40
Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2007
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

HIST FTTS INSP: FIFRA/TSCA Tracking System Inspection & Enforcement Case Listing
A complete inspection and enforcement case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2008
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

DOT OPS: Incident and Accident Data

Department of Transporation, Office of Pipeline Safety Incident and Accident data.

Date of Government Version: 01/02/2020
Date Data Arrived at EDR: 01/28/2020
Date Made Active in Reports: 04/17/2020
Number of Days to Update: 80

Source: Department of Transporation, Office of Pipeline Safety
Telephone: 202-366-4595
Last EDR Contact: 04/28/2020
Next Scheduled EDR Contact: 08/10/2020
Data Release Frequency: Quarterly

CONSENT: Superfund (CERCLA) Consent Decrees

Major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites. Released periodically by United States District Courts after settlement by parties to litigation matters.

Date of Government Version: 12/31/2019
Date Data Arrived at EDR: 01/17/2020
Date Made Active in Reports: 03/06/2020
Number of Days to Update: 49

Source: Department of Justice, Consent Decree Library
Telephone: Varies
Last EDR Contact: 03/26/2020
Next Scheduled EDR Contact: 07/20/2020
Data Release Frequency: Varies

BRS: Biennial Reporting System

The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities.

Date of Government Version: 12/31/2015
Date Data Arrived at EDR: 02/22/2017
Date Made Active in Reports: 09/28/2017
Number of Days to Update: 218

Source: EPA/NTIS
Telephone: 800-424-9346
Last EDR Contact: 03/25/2020
Next Scheduled EDR Contact: 07/06/2020
Data Release Frequency: Biennially

INDIAN RESERV: Indian Reservations

This map layer portrays Indian administered lands of the United States that have any area equal to or greater than 640 acres.

Date of Government Version: 12/31/2014
Date Data Arrived at EDR: 07/14/2015
Date Made Active in Reports: 01/10/2017
Number of Days to Update: 546

Source: USGS
Telephone: 202-208-3710
Last EDR Contact: 04/10/2020
Next Scheduled EDR Contact: 07/20/2020
Data Release Frequency: Semi-Annually

FUSRAP: Formerly Utilized Sites Remedial Action Program

DOE established the Formerly Utilized Sites Remedial Action Program (FUSRAP) in 1974 to remediate sites where radioactive contamination remained from Manhattan Project and early U.S. Atomic Energy Commission (AEC) operations.

Date of Government Version: 08/08/2017
Date Data Arrived at EDR: 09/11/2018
Date Made Active in Reports: 09/14/2018
Number of Days to Update: 3

Source: Department of Energy
Telephone: 202-586-3559
Last EDR Contact: 04/29/2020
Next Scheduled EDR Contact: 08/17/2020
Data Release Frequency: Varies

UMTRA: Uranium Mill Tailings Sites

Uranium ore was mined by private companies for federal government use in national defense programs. When the mills shut down, large piles of the sand-like material (mill tailings) remain after uranium has been extracted from the ore. Levels of human exposure to radioactive materials from the piles are low; however, in some cases tailings were used as construction materials before the potential health hazards of the tailings were recognized.

Date of Government Version: 08/30/2019
Date Data Arrived at EDR: 11/15/2019
Date Made Active in Reports: 01/28/2020
Number of Days to Update: 74

Source: Department of Energy
Telephone: 505-845-0011
Last EDR Contact: 02/21/2020
Next Scheduled EDR Contact: 06/01/2020
Data Release Frequency: Varies

LEAD SMELTER 1: Lead Smelter Sites

A listing of former lead smelter site locations.

Date of Government Version: 01/30/2020
Date Data Arrived at EDR: 02/05/2020
Date Made Active in Reports: 02/14/2020
Number of Days to Update: 9

Source: Environmental Protection Agency
Telephone: 703-603-8787
Last EDR Contact: 05/06/2020
Next Scheduled EDR Contact: 07/13/2020
Data Release Frequency: Varies

LEAD SMELTER 2: Lead Smelter Sites

A list of several hundred sites in the U.S. where secondary lead smelting was done from 1931and 1964. These sites may pose a threat to public health through ingestion or inhalation of contaminated soil or dust

Date of Government Version: 04/05/2001
Date Data Arrived at EDR: 10/27/2010
Date Made Active in Reports: 12/02/2010
Number of Days to Update: 36

Source: American Journal of Public Health
Telephone: 703-305-6451
Last EDR Contact: 12/02/2009
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

US AIRS (AFS): Aerometric Information Retrieval System Facility Subsystem (AFS)

The database is a sub-system of Aerometric Information Retrieval System (AIRS). AFS contains compliance data on air pollution point sources regulated by the U.S. EPA and/or state and local air regulatory agencies. This information comes from source reports by various stationary sources of air pollution, such as electric power plants, steel mills, factories, and universities, and provides information about the air pollutants they produce. Action, air program, air program pollutant, and general level plant data. It is used to track emissions and compliance data from industrial plants.

Date of Government Version: 10/12/2016
Date Data Arrived at EDR: 10/26/2016
Date Made Active in Reports: 02/03/2017
Number of Days to Update: 100

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 09/26/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Annually

US AIRS MINOR: Air Facility System Data

A listing of minor source facilities.

Date of Government Version: 10/12/2016
Date Data Arrived at EDR: 10/26/2016
Date Made Active in Reports: 02/03/2017
Number of Days to Update: 100

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 09/26/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Annually

MINES VIOLATIONS: MSHA Violation Assessment Data

Mines violation and assessment information. Department of Labor, Mine Safety & Health Administration.

Date of Government Version: 12/03/2019
Date Data Arrived at EDR: 12/03/2019
Date Made Active in Reports: 01/28/2020
Number of Days to Update: 56

Source: DOL, Mine Safety & Health Admi
Telephone: 202-693-9424
Last EDR Contact: 03/02/2020
Next Scheduled EDR Contact: 06/15/2020
Data Release Frequency: Quarterly

US MINES: Mines Master Index File

Contains all mine identification numbers issued for mines active or opened since 1971. The data also includes violation information.

Date of Government Version: 11/06/2019
Date Data Arrived at EDR: 11/25/2019
Date Made Active in Reports: 01/28/2020
Number of Days to Update: 64

Source: Department of Labor, Mine Safety and Health Administration
Telephone: 303-231-5959
Last EDR Contact: 02/25/2020
Next Scheduled EDR Contact: 06/08/2020
Data Release Frequency: Semi-Annually

US MINES 2: Ferrous and Nonferrous Metal Mines Database Listing

This map layer includes ferrous (ferrous metal mines are facilities that extract ferrous metals, such as iron ore or molybdenum) and nonferrous (Nonferrous metal mines are facilities that extract nonferrous metals, such as gold, silver, copper, zinc, and lead) metal mines in the United States.

Date of Government Version: 12/05/2005
Date Data Arrived at EDR: 02/29/2008
Date Made Active in Reports: 04/18/2008
Number of Days to Update: 49

Source: USGS
Telephone: 703-648-7709
Last EDR Contact: 02/28/2020
Next Scheduled EDR Contact: 06/08/2020
Data Release Frequency: Varies

US MINES 3: Active Mines & Mineral Plants Database Listing

Active Mines and Mineral Processing Plant operations for commodities monitored by the Minerals Information Team of the USGS.

Date of Government Version: 04/14/2011
Date Data Arrived at EDR: 06/08/2011
Date Made Active in Reports: 09/13/2011
Number of Days to Update: 97

Source: USGS
Telephone: 703-648-7709
Last EDR Contact: 02/28/2020
Next Scheduled EDR Contact: 06/08/2020
Data Release Frequency: Varies

ABANDONED MINES: Abandoned Mines

An inventory of land and water impacted by past mining (primarily coal mining) is maintained by OSMRE to provide information needed to implement the Surface Mining Control and Reclamation Act of 1977 (SMCRA). The inventory contains information on the location, type, and extent of AML impacts, as well as, information on the cost associated with the reclamation of those problems. The inventory is based upon field surveys by State, Tribal, and OSMRE program officials. It is dynamic to the extent that it is modified as new problems are identified and existing problems are reclaimed.

Date of Government Version: 12/09/2019
Date Data Arrived at EDR: 12/11/2019
Date Made Active in Reports: 02/27/2020
Number of Days to Update: 78

Source: Department of Interior
Telephone: 202-208-2609
Last EDR Contact: 03/05/2020
Next Scheduled EDR Contact: 06/22/2020
Data Release Frequency: Quarterly

FINDS: Facility Index System/Facility Registry System

Facility Index System. FINDS contains both facility information and 'pointers' to other sources that contain more detail. EDR includes the following FINDS databases in this report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System).

Date of Government Version: 11/22/2019
Date Data Arrived at EDR: 12/04/2019
Date Made Active in Reports: 03/02/2020
Number of Days to Update: 89

Source: EPA
Telephone: (415) 947-8000
Last EDR Contact: 03/03/2020
Next Scheduled EDR Contact: 06/15/2020
Data Release Frequency: Quarterly

UXO: Unexploded Ordnance Sites

A listing of unexploded ordnance site locations

Date of Government Version: 12/31/2017
Date Data Arrived at EDR: 01/17/2019
Date Made Active in Reports: 04/01/2019
Number of Days to Update: 74

Source: Department of Defense
Telephone: 703-704-1564
Last EDR Contact: 04/03/2020
Next Scheduled EDR Contact: 07/27/2020
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

DOCKET HWC: Hazardous Waste Compliance Docket Listing
A complete list of the Federal Agency Hazardous Waste Compliance Docket Facilities.

Date of Government Version: 05/31/2018
Date Data Arrived at EDR: 07/26/2018
Date Made Active in Reports: 10/05/2018
Number of Days to Update: 71
Source: Environmental Protection Agency
Telephone: 202-564-0527
Last EDR Contact: 02/21/2020
Next Scheduled EDR Contact: 06/08/2020
Data Release Frequency: Varies

ECHO: Enforcement & Compliance History Information
ECHO provides integrated compliance and enforcement information for about 800,000 regulated facilities nationwide.

Date of Government Version: 01/05/2020
Date Data Arrived at EDR: 01/07/2020
Date Made Active in Reports: 03/06/2020
Number of Days to Update: 59
Source: Environmental Protection Agency
Telephone: 202-564-2280
Last EDR Contact: 04/07/2020
Next Scheduled EDR Contact: 07/20/2020
Data Release Frequency: Quarterly

FUELS PROGRAM: EPA Fuels Program Registered Listing
This listing includes facilities that are registered under the Part 80 (Code of Federal Regulations) EPA Fuels Programs. All companies now are required to submit new and updated registrations.

Date of Government Version: 11/18/2019
Date Data Arrived at EDR: 11/19/2019
Date Made Active in Reports: 01/28/2020
Number of Days to Update: 70
Source: EPA
Telephone: 800-385-6164
Last EDR Contact: 02/19/2020
Next Scheduled EDR Contact: 06/01/2020
Data Release Frequency: Quarterly

CA BOND EXP. PLAN: Bond Expenditure Plan
Department of Health Services developed a site-specific expenditure plan as the basis for an appropriation of Hazardous Substance Cleanup Bond Act funds. It is not updated.

Date of Government Version: 01/01/1989
Date Data Arrived at EDR: 07/27/1994
Date Made Active in Reports: 08/02/1994
Number of Days to Update: 6
Source: Department of Health Services
Telephone: 916-255-2118
Last EDR Contact: 05/31/1994
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

CORTESE: "Cortese" Hazardous Waste & Substances Sites List
The sites for the list are designated by the State Water Resource Control Board (LUST), the Integrated Waste Board (SWF/LS), and the Department of Toxic Substances Control (Cal-Sites).

Date of Government Version: 12/18/2019
Date Data Arrived at EDR: 12/20/2019
Date Made Active in Reports: 02/20/2020
Number of Days to Update: 62
Source: CAL EPA/Office of Emergency Information
Telephone: 916-323-3400
Last EDR Contact: 03/24/2020
Next Scheduled EDR Contact: 07/06/2020
Data Release Frequency: Quarterly

CUPA SAN FRANCISCO CO: CUPA Facility Listing
Cupa facilities

Date of Government Version: 02/03/2020
Date Data Arrived at EDR: 02/04/2020
Date Made Active in Reports: 04/09/2020
Number of Days to Update: 65
Source: San Francisco County Department of Environmental Health
Telephone: 415-252-3896
Last EDR Contact: 04/23/2020
Next Scheduled EDR Contact: 08/17/2020
Data Release Frequency: Varies

CUPA LIVERMORE-PLEASANTON: CUPA Facility Listing
list of facilities associated with the various CUPA programs in Livermore-Pleasanton

Date of Government Version: 05/01/2019
Date Data Arrived at EDR: 05/14/2019
Date Made Active in Reports: 07/17/2019
Number of Days to Update: 64

Source: Livermore-Pleasanton Fire Department
Telephone: 925-454-2361
Last EDR Contact: 02/14/2020
Next Scheduled EDR Contact: 05/25/2020
Data Release Frequency: Varies

DRYCLEAN SOUTH COAST: South Coast Air Quality Management District Drycleaner Listing
A listing of dry cleaners in the South Coast Air Quality Management District

Date of Government Version: 01/31/2020
Date Data Arrived at EDR: 01/31/2020
Date Made Active in Reports: 04/09/2020
Number of Days to Update: 69

Source: South Coast Air Quality Management District
Telephone: 909-396-3211
Last EDR Contact: 02/21/2020
Next Scheduled EDR Contact: 06/08/2020
Data Release Frequency: Varies

DRYCLEANERS: Cleaner Facilities
A list of drycleaner related facilities that have EPA ID numbers. These are facilities with certain SIC codes: power laundries, family and commercial; garment pressing and cleaner's agents; linen supply; coin-operated laundries and cleaning; drycleaning plants, except rugs; carpet and upholster cleaning; industrial launderers; laundry and garment services.

Date of Government Version: 12/04/2019
Date Data Arrived at EDR: 01/29/2020
Date Made Active in Reports: 04/09/2020
Number of Days to Update: 71

Source: Department of Toxic Substance Control
Telephone: 916-327-4498
Last EDR Contact: 02/27/2020
Next Scheduled EDR Contact: 06/15/2020
Data Release Frequency: Annually

DRYCLEAN AVAQMD: Antelope Valley Air Quality Management District Drycleaner Listing
A listing of dry cleaners in the Antelope Valley Air Quality Management District.

Date of Government Version: 12/02/2019
Date Data Arrived at EDR: 12/03/2019
Date Made Active in Reports: 02/04/2020
Number of Days to Update: 63

Source: Antelope Valley Air Quality Management District
Telephone: 661-723-8070
Last EDR Contact: 02/27/2020
Next Scheduled EDR Contact: 06/15/2020
Data Release Frequency: Varies

EMI: Emissions Inventory Data
Toxics and criteria pollutant emissions data collected by the ARB and local air pollution agencies.

Date of Government Version: 12/31/2017
Date Data Arrived at EDR: 06/24/2019
Date Made Active in Reports: 08/22/2019
Number of Days to Update: 59

Source: California Air Resources Board
Telephone: 916-322-2990
Last EDR Contact: 03/20/2020
Next Scheduled EDR Contact: 06/29/2020
Data Release Frequency: Varies

ENF: Enforcement Action Listing
A listing of Water Board Enforcement Actions. Formal is everything except Oral/Verbal Communication, Notice of Violation, Expedited Payment Letter, and Staff Enforcement Letter.

Date of Government Version: 04/03/2020
Date Data Arrived at EDR: 04/07/2020
Date Made Active in Reports: 04/15/2020
Number of Days to Update: 8

Source: State Water Resoruces Control Board
Telephone: 916-445-9379
Last EDR Contact: 04/03/2020
Next Scheduled EDR Contact: 08/03/2020
Data Release Frequency: Varies

Financial Assurance 1: Financial Assurance Information Listing
Financial Assurance information

Date of Government Version: 01/21/2020
Date Data Arrived at EDR: 01/23/2020
Date Made Active in Reports: 04/01/2020
Number of Days to Update: 69

Source: Department of Toxic Substances Control
Telephone: 916-255-3628
Last EDR Contact: 04/09/2020
Next Scheduled EDR Contact: 08/03/2020
Data Release Frequency: Varies

Financial Assurance 2: Financial Assurance Information Listing

A listing of financial assurance information for solid waste facilities. Financial assurance is intended to ensure that resources are available to pay for the cost of closure, post-closure care, and corrective measures if the owner or operator of a regulated facility is unable or unwilling to pay.

Date of Government Version: 02/19/2020
Date Data Arrived at EDR: 02/20/2020
Date Made Active in Reports: 04/24/2020
Number of Days to Update: 64

Source: California Integrated Waste Management Board
Telephone: 916-341-6066
Last EDR Contact: 04/29/2020
Next Scheduled EDR Contact: 08/24/2020
Data Release Frequency: Varies

HAZNET: Facility and Manifest Data

Facility and Manifest Data. The data is extracted from the copies of hazardous waste manifests received each year by the DTSC. The annual volume of manifests is typically 700,000 - 1,000,000 annually, representing approximately 350,000 - 500,000 shipments. Data are from the manifests submitted without correction, and therefore many contain some invalid values for data elements such as generator ID, TSD ID, waste category, and disposal method. This database begins with calendar year 1993.

Date of Government Version: 12/31/2017
Date Data Arrived at EDR: 05/29/2019
Date Made Active in Reports: 07/22/2019
Number of Days to Update: 54

Source: California Environmental Protection Agency
Telephone: 916-255-1136
Last EDR Contact: 04/15/2020
Next Scheduled EDR Contact: 07/20/2020
Data Release Frequency: Annually

ICE: ICE

Contains data pertaining to the Permitted Facilities with Inspections / Enforcements sites tracked in Envirostor.

Date of Government Version: 02/18/2020
Date Data Arrived at EDR: 02/19/2020
Date Made Active in Reports: 04/24/2020
Number of Days to Update: 65

Source: Department of Toxic Subsances Control
Telephone: 877-786-9427
Last EDR Contact: 02/19/2020
Next Scheduled EDR Contact: 06/01/2020
Data Release Frequency: Quarterly

HIST CORTESE: Hazardous Waste & Substance Site List

The sites for the list are designated by the State Water Resource Control Board [LUST], the Integrated Waste Board [SWF/LS], and the Department of Toxic Substances Control [CALSITES]. This listing is no longer updated by the state agency.

Date of Government Version: 04/01/2001
Date Data Arrived at EDR: 01/22/2009
Date Made Active in Reports: 04/08/2009
Number of Days to Update: 76

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 01/22/2009
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

HWP: EnviroStor Permitted Facilities Listing

Detailed information on permitted hazardous waste facilities and corrective action ("cleanups") tracked in EnviroStor.

Date of Government Version: 02/18/2020
Date Data Arrived at EDR: 02/19/2020
Date Made Active in Reports: 04/24/2020
Number of Days to Update: 65

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 02/19/2020
Next Scheduled EDR Contact: 06/01/2020
Data Release Frequency: Quarterly

HWT: Registered Hazardous Waste Transporter Database

A listing of hazardous waste transporters. In California, unless specifically exempted, it is unlawful for any person to transport hazardous wastes unless the person holds a valid registration issued by DTSC. A hazardous waste transporter registration is valid for one year and is assigned a unique registration number.

Date of Government Version: 01/06/2020
Date Data Arrived at EDR: 01/07/2020
Date Made Active in Reports: 03/05/2020
Number of Days to Update: 58

Source: Department of Toxic Substances Control
Telephone: 916-440-7145
Last EDR Contact: 04/09/2020
Next Scheduled EDR Contact: 07/20/2020
Data Release Frequency: Quarterly

MINES: Mines Site Location Listing
A listing of mine site locations from the Office of Mine Reclamation.

Date of Government Version: 12/09/2019
Date Data Arrived at EDR: 12/10/2019
Date Made Active in Reports: 02/24/2020
Number of Days to Update: 76
Source: Department of Conservation
Telephone: 916-322-1080
Last EDR Contact: 03/10/2020
Next Scheduled EDR Contact: 06/22/2020
Data Release Frequency: Quarterly

MWMP: Medical Waste Management Program Listing
The Medical Waste Management Program (MWMP) ensures the proper handling and disposal of medical waste by permitting and inspecting medical waste Offsite Treatment Facilities (PDF) and Transfer Stations (PDF) throughout the state. MWMP also oversees all Medical Waste Transporters.

Date of Government Version: 11/22/2019
Date Data Arrived at EDR: 12/04/2019
Date Made Active in Reports: 02/04/2020
Number of Days to Update: 62
Source: Department of Public Health
Telephone: 916-558-1784
Last EDR Contact: 03/03/2020
Next Scheduled EDR Contact: 06/15/2020
Data Release Frequency: Varies

NPDES: NPDES Permits Listing
A listing of NPDES permits, including stormwater.

Date of Government Version: 02/10/2020
Date Data Arrived at EDR: 02/11/2020
Date Made Active in Reports: 04/20/2020
Number of Days to Update: 69
Source: State Water Resources Control Board
Telephone: 916-445-9379
Last EDR Contact: 02/11/2020
Next Scheduled EDR Contact: 05/25/2020
Data Release Frequency: Quarterly

PEST LIC: Pesticide Regulation Licenses Listing
A listing of licenses and certificates issued by the Department of Pesticide Regulation. The DPR issues licenses and/or certificates to: Persons and businesses that apply or sell pesticides; Pest control dealers and brokers; Persons who advise on agricultural pesticide applications.

Date of Government Version: 12/03/2019
Date Data Arrived at EDR: 12/04/2019
Date Made Active in Reports: 02/04/2020
Number of Days to Update: 62
Source: Department of Pesticide Regulation
Telephone: 916-445-4038
Last EDR Contact: 03/03/2020
Next Scheduled EDR Contact: 06/15/2020
Data Release Frequency: Quarterly

PROC: Certified Processors Database
A listing of certified processors.

Date of Government Version: 12/09/2019
Date Data Arrived at EDR: 12/10/2019
Date Made Active in Reports: 02/19/2020
Number of Days to Update: 71
Source: Department of Conservation
Telephone: 916-323-3836
Last EDR Contact: 03/10/2020
Next Scheduled EDR Contact: 06/22/2020
Data Release Frequency: Quarterly

NOTIFY 65: Proposition 65 Records
Listings of all Proposition 65 incidents reported to counties by the State Water Resources Control Board and the Regional Water Quality Control Board. This database is no longer updated by the reporting agency.

Date of Government Version: 12/11/2019
Date Data Arrived at EDR: 12/12/2019
Date Made Active in Reports: 02/21/2020
Number of Days to Update: 71
Source: State Water Resources Control Board
Telephone: 916-445-3846
Last EDR Contact: 03/12/2020
Next Scheduled EDR Contact: 06/29/2020
Data Release Frequency: No Update Planned

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

UIC: UIC Listing
A listing of wells identified as underground injection wells, in the California Oil and Gas Wells database.

Date of Government Version: 12/06/2019
Date Data Arrived at EDR: 12/10/2019
Date Made Active in Reports: 02/19/2020
Number of Days to Update: 71
Source: Deaprtment of Conservation
Telephone: 916-445-2408
Last EDR Contact: 03/10/2020
Next Scheduled EDR Contact: 06/22/2020
Data Release Frequency: Varies

UIC GEO: Underground Injection Control Sites (GEOTRACKER)
Underground control injection sites

Date of Government Version: 12/09/2019
Date Data Arrived at EDR: 12/10/2019
Date Made Active in Reports: 02/18/2020
Number of Days to Update: 70
Source: State Water Resource Control Board
Telephone: 866-480-1028
Last EDR Contact: 03/10/2020
Next Scheduled EDR Contact: 06/22/2020
Data Release Frequency: Varies

WASTEWATER PITS: Oil Wastewater Pits Listing
Water officials discovered that oil producers have been dumping chemical-laden wastewater into hundreds of unlined pits that are operating without proper permits. Inspections completed by the Central Valley Regional Water Quality Control Board revealed the existence of previously unidentified waste sites. The water boards review found that more than one-third of the region's active disposal pits are operating without permission.

Date of Government Version: 11/19/2019
Date Data Arrived at EDR: 01/07/2020
Date Made Active in Reports: 03/09/2020
Number of Days to Update: 62
Source: RWQCB, Central Valley Region
Telephone: 559-445-5577
Last EDR Contact: 04/10/2020
Next Scheduled EDR Contact: 07/20/2020
Data Release Frequency: Varies

WDS: Waste Discharge System
Sites which have been issued waste discharge requirements.

Date of Government Version: 06/19/2007
Date Data Arrived at EDR: 06/20/2007
Date Made Active in Reports: 06/29/2007
Number of Days to Update: 9
Source: State Water Resources Control Board
Telephone: 916-341-5227
Last EDR Contact: 02/14/2020
Next Scheduled EDR Contact: 06/01/2020
Data Release Frequency: No Update Planned

WIP: Well Investigation Program Case List
Well Investigation Program case in the San Gabriel and San Fernando Valley area.

Date of Government Version: 07/03/2009
Date Data Arrived at EDR: 07/21/2009
Date Made Active in Reports: 08/03/2009
Number of Days to Update: 13
Source: Los Angeles Water Quality Control Board
Telephone: 213-576-6726
Last EDR Contact: 03/18/2020
Next Scheduled EDR Contact: 07/06/2020
Data Release Frequency: No Update Planned

MILITARY PRIV SITES: Military Privatized Sites (GEOTRACKER)
Military privatized sites

Date of Government Version: 12/09/2019
Date Data Arrived at EDR: 12/10/2019
Date Made Active in Reports: 02/18/2020
Number of Days to Update: 70
Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 03/10/2020
Next Scheduled EDR Contact: 06/22/2020
Data Release Frequency: Varies

PROJECT: Project Sites (GEOTRACKER)
Projects sites

Date of Government Version: 12/09/2019
Date Data Arrived at EDR: 12/10/2019
Date Made Active in Reports: 02/18/2020
Number of Days to Update: 70

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 03/10/2020
Next Scheduled EDR Contact: 06/22/2020
Data Release Frequency: Varies

WDR: Waste Discharge Requirements Listing

In general, the Waste Discharge Requirements (WDRs) Program (sometimes also referred to as the "Non Chapter 15 (Non 15) Program") regulates point discharges that are exempt pursuant to Subsection 20090 of Title 27 and not subject to the Federal Water Pollution Control Act. Exemptions from Title 27 may be granted for nine categories of discharges (e.g., sewage, wastewater, etc.) that meet, and continue to meet, the preconditions listed for each specific exemption. The scope of the WDRs Program also includes the discharge of wastes classified as inert, pursuant to section 20230 of Title 27.

Date of Government Version: 12/09/2019
Date Data Arrived at EDR: 12/10/2019
Date Made Active in Reports: 02/19/2020
Number of Days to Update: 71

Source: State Water Resources Control Board
Telephone: 916-341-5810
Last EDR Contact: 03/10/2020
Next Scheduled EDR Contact: 06/22/2020
Data Release Frequency: Quarterly

CIWQS: California Integrated Water Quality System

The California Integrated Water Quality System (CIWQS) is a computer system used by the State and Regional Water Quality Control Boards to track information about places of environmental interest, manage permits and other orders, track inspections, and manage violations and enforcement activities.

Date of Government Version: 12/03/2019
Date Data Arrived at EDR: 12/04/2019
Date Made Active in Reports: 02/04/2020
Number of Days to Update: 62

Source: State Water Resources Control Board
Telephone: 866-794-4977
Last EDR Contact: 03/03/2020
Next Scheduled EDR Contact: 06/15/2020
Data Release Frequency: Varies

CERS: CalEPA Regulated Site Portal Data

The CalEPA Regulated Site Portal database combines data about environmentally regulated sites and facilities in California into a single database. It combines data from a variety of state and federal databases, and provides an overview of regulated activities across the spectrum of environmental programs for any given location in California. These activities include hazardous materials and waste, state and federal cleanups, impacted ground and surface waters, and toxic materials

Date of Government Version: 01/21/2020
Date Data Arrived at EDR: 01/22/2020
Date Made Active in Reports: 04/01/2020
Number of Days to Update: 70

Source: California Environmental Protection Agency
Telephone: 916-323-2514
Last EDR Contact: 04/21/2020
Next Scheduled EDR Contact: 08/03/2020
Data Release Frequency: Varies

NON-CASE INFO: Non-Case Information Sites (GEOTRACKER)

Non-Case Information sites

Date of Government Version: 12/09/2019
Date Data Arrived at EDR: 12/10/2019
Date Made Active in Reports: 02/18/2020
Number of Days to Update: 70

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 03/10/2020
Next Scheduled EDR Contact: 06/22/2020
Data Release Frequency: Varies

OTHER OIL GAS: Other Oil & Gas Projects Sites (GEOTRACKER)

Other Oil & Gas Projects sites

Date of Government Version: 12/09/2019
Date Data Arrived at EDR: 12/10/2019
Date Made Active in Reports: 02/18/2020
Number of Days to Update: 70

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 03/10/2020
Next Scheduled EDR Contact: 06/22/2020
Data Release Frequency: Varies

PROD WATER PONDS: Produced Water Ponds Sites (GEOTRACKER)
Produced water ponds sites

Date of Government Version: 12/09/2019
Date Data Arrived at EDR: 12/10/2019
Date Made Active in Reports: 02/18/2020
Number of Days to Update: 70

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 03/10/2020
Next Scheduled EDR Contact: 06/22/2020
Data Release Frequency: Varies

SAMPLING POINT: Sampling Point ? Public Sites (GEOTRACKER)
Sampling point - public sites

Date of Government Version: 12/09/2019
Date Data Arrived at EDR: 12/10/2019
Date Made Active in Reports: 02/18/2020
Number of Days to Update: 70

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 03/10/2020
Next Scheduled EDR Contact: 06/22/2020
Data Release Frequency: Varies

WELL STIM PROJ: Well Stimulation Project (GEOTRACKER)
Includes areas of groundwater monitoring plans, a depiction of the monitoring network, and the facilities, boundaries, and subsurface characteristics of the oilfield and the features (oil and gas wells, produced water ponds, UIC wells, water supply wells, etc?) being monitored

Date of Government Version: 12/09/2019
Date Data Arrived at EDR: 12/10/2019
Date Made Active in Reports: 02/18/2020
Number of Days to Update: 70

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 03/10/2020
Next Scheduled EDR Contact: 06/22/2020
Data Release Frequency: Varies

MINES MRDS: Mineral Resources Data System
Mineral Resources Data System

Date of Government Version: 04/06/2018
Date Data Arrived at EDR: 10/21/2019
Date Made Active in Reports: 10/24/2019
Number of Days to Update: 3

Source: USGS
Telephone: 703-648-6533
Last EDR Contact: 02/28/2020
Next Scheduled EDR Contact: 06/08/2020
Data Release Frequency: Varies

HWTS: Hazardous Waste Tracking System
The Hazardous Waste Tracking System (HWTS) is the Department of Toxic Substances Control?s data repository for hazardous waste Identification (ID) numbers and manifest information. HWTS generates reports on hazardous waste shipments for generators, transporters, and TSDFs.

Date of Government Version: 10/15/2019
Date Data Arrived at EDR: 11/14/2019
Date Made Active in Reports: 02/07/2020
Number of Days to Update: 85

Source: Department of Toxic Substances Control
Telephone: 916-324-2444
Last EDR Contact: 03/26/2020
Next Scheduled EDR Contact: 07/20/2020
Data Release Frequency: Varies

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP: EDR Proprietary Manufactured Gas Plants
The EDR Proprietary Manufactured Gas Plant Database includes records of coal gas plants (manufactured gas plants) compiled by EDR's researchers. Manufactured gas sites were used in the United States from the 1800's to 1950's to produce a gas that could be distributed and used as fuel. These plants used whale oil, rosin, coal, or a mixture of coal, oil, and water that also produced a significant amount of waste. Many of the byproducts of the gas production, such as coal tar (oily waste containing volatile and non-volatile chemicals), sludges, oils and other compounds are potentially hazardous to human health and the environment. The byproduct from this process was frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

EDR Hist Auto: EDR Exclusive Historical Auto Stations

EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR Hist Cleaner: EDR Exclusive Historical Cleaners

EDR has searched selected national collections of business directories and has collected listings of potential dry cleaner sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include dry cleaning establishments. The categories reviewed included, but were not limited to dry cleaners, cleaners, laundry, laundromat, cleaning/laundry, wash & dry etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA LF: Recovered Government Archive Solid Waste Facilities List

The EDR Recovered Government Archive Landfill database provides a list of landfills derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Resources Recycling and Recovery in California.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 01/13/2014
Number of Days to Update: 196

Source: Department of Resources Recycling and Recovery
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

RGA LUST: Recovered Government Archive Leaking Underground Storage Tank

The EDR Recovered Government Archive Leaking Underground Storage Tank database provides a list of LUST incidents derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the State Water Resources Control Board in California.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 12/30/2013
Number of Days to Update: 182

Source: State Water Resources Control Board
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

COUNTY RECORDS

ALAMEDA COUNTY:

CS ALAMEDA: Contaminated Sites
A listing of contaminated sites overseen by the Toxic Release Program (oil and groundwater contamination from chemical releases and spills) and the Leaking Underground Storage Tank Program (soil and ground water contamination from leaking petroleum USTs).

Date of Government Version: 01/09/2019
Date Data Arrived at EDR: 01/11/2019
Date Made Active in Reports: 03/05/2019
Number of Days to Update: 53

Source: Alameda County Environmental Health Services
Telephone: 510-567-6700
Last EDR Contact: 03/26/2020
Next Scheduled EDR Contact: 07/20/2020
Data Release Frequency: Semi-Annually

UST ALAMEDA: Underground Tanks
Underground storage tank sites located in Alameda county.

Date of Government Version: 01/06/2020
Date Data Arrived at EDR: 01/07/2020
Date Made Active in Reports: 03/06/2020
Number of Days to Update: 59

Source: Alameda County Environmental Health Services
Telephone: 510-567-6700
Last EDR Contact: 04/20/2020
Next Scheduled EDR Contact: 07/20/2020
Data Release Frequency: Semi-Annually

AMADOR COUNTY:

CUPA AMADOR: CUPA Facility List
Cupa Facility List

Date of Government Version: 09/06/2019
Date Data Arrived at EDR: 09/10/2019
Date Made Active in Reports: 10/31/2019
Number of Days to Update: 51

Source: Amador County Environmental Health
Telephone: 209-223-6439
Last EDR Contact: 02/27/2020
Next Scheduled EDR Contact: 06/15/2020
Data Release Frequency: Varies

BUTTE COUNTY:

CUPA BUTTE: CUPA Facility Listing
Cupa facility list.

Date of Government Version: 04/21/2017
Date Data Arrived at EDR: 04/25/2017
Date Made Active in Reports: 08/09/2017
Number of Days to Update: 106

Source: Public Health Department
Telephone: 530-538-7149
Last EDR Contact: 03/26/2020
Next Scheduled EDR Contact: 07/20/2020
Data Release Frequency: No Update Planned

CALVERAS COUNTY:

CUPA CALVERAS: CUPA Facility Listing
Cupa Facility Listing

Date of Government Version: 12/02/2019
Date Data Arrived at EDR: 12/03/2019
Date Made Active in Reports: 02/04/2020
Number of Days to Update: 63

Source: Calveras County Environmental Health
Telephone: 209-754-6399
Last EDR Contact: 03/18/2020
Next Scheduled EDR Contact: 07/06/2020
Data Release Frequency: Quarterly

COLUSA COUNTY:

CUPA COLUSA: CUPA Facility List
Cupa facility list.

Date of Government Version: 08/14/2019
Date Data Arrived at EDR: 08/20/2019
Date Made Active in Reports: 10/18/2019
Number of Days to Update: 59

Source: Health & Human Services
Telephone: 530-458-0396
Last EDR Contact: 04/06/2020
Next Scheduled EDR Contact: 08/17/2020
Data Release Frequency: Semi-Annually

CONTRA COSTA COUNTY:

SL CONTRA COSTA: Site List
List includes sites from the underground tank, hazardous waste generator and business plan/2185 programs.

Date of Government Version: 02/14/2020
Date Data Arrived at EDR: 02/18/2020
Date Made Active in Reports: 04/24/2020
Number of Days to Update: 66

Source: Contra Costa Health Services Department
Telephone: 925-646-2286
Last EDR Contact: 04/16/2020
Next Scheduled EDR Contact: 08/10/2020
Data Release Frequency: Semi-Annually

DEL NORTE COUNTY:

CUPA DEL NORTE: CUPA Facility List
Cupa Facility list

Date of Government Version: 12/27/2019
Date Data Arrived at EDR: 01/28/2020
Date Made Active in Reports: 04/09/2020
Number of Days to Update: 72

Source: Del Norte County Environmental Health Division
Telephone: 707-465-0426
Last EDR Contact: 04/16/2020
Next Scheduled EDR Contact: 08/10/2020
Data Release Frequency: Varies

EL DORADO COUNTY:

CUPA EL DORADO: CUPA Facility List
CUPA facility list.

Date of Government Version: 12/31/2019
Date Data Arrived at EDR: 01/03/2020
Date Made Active in Reports: 03/05/2020
Number of Days to Update: 62

Source: El Dorado County Environmental Management Department
Telephone: 530-621-6623
Last EDR Contact: 05/06/2020
Next Scheduled EDR Contact: 08/10/2020
Data Release Frequency: Varies

FRESNO COUNTY:

CUPA FRESNO: CUPA Resources List
Certified Unified Program Agency. CUPA's are responsible for implementing a unified hazardous materials and hazardous waste management regulatory program. The agency provides oversight of businesses that deal with hazardous materials, operate underground storage tanks or aboveground storage tanks.

Date of Government Version: 10/08/2019
Date Data Arrived at EDR: 10/10/2019
Date Made Active in Reports: 12/11/2019
Number of Days to Update: 62

Source: Dept. of Community Health
Telephone: 559-445-3271
Last EDR Contact: 03/31/2020
Next Scheduled EDR Contact: 07/13/2020
Data Release Frequency: Semi-Annually

GLENN COUNTY:

CUPA GLENN: CUPA Facility List
Cupa facility list

Date of Government Version: 01/22/2018
Date Data Arrived at EDR: 01/24/2018
Date Made Active in Reports: 03/14/2018
Number of Days to Update: 49

Source: Glenn County Air Pollution Control District
Telephone: 830-934-6500
Last EDR Contact: 04/09/2020
Next Scheduled EDR Contact: 08/03/2020
Data Release Frequency: No Update Planned

HUMBOLDT COUNTY:

CUPA HUMBOLDT: CUPA Facility List
CUPA facility list.

Date of Government Version: 11/13/2019
Date Data Arrived at EDR: 11/14/2019
Date Made Active in Reports: 01/23/2020
Number of Days to Update: 70

Source: Humboldt County Environmental Health
Telephone: N/A
Last EDR Contact: 03/26/2020
Next Scheduled EDR Contact: 06/01/2020
Data Release Frequency: Semi-Annually

IMPERIAL COUNTY:

CUPA IMPERIAL: CUPA Facility List
Cupa facility list.

Date of Government Version: 01/21/2020
Date Data Arrived at EDR: 01/23/2020
Date Made Active in Reports: 03/30/2020
Number of Days to Update: 67

Source: San Diego Border Field Office
Telephone: 760-339-2777
Last EDR Contact: 04/09/2020
Next Scheduled EDR Contact: 08/03/2020
Data Release Frequency: Varies

INYO COUNTY:

CUPA INYO: CUPA Facility List
Cupa facility list.

Date of Government Version: 04/02/2018
Date Data Arrived at EDR: 04/03/2018
Date Made Active in Reports: 06/14/2018
Number of Days to Update: 72

Source: Inyo County Environmental Health Services
Telephone: 760-878-0238
Last EDR Contact: 02/13/2020
Next Scheduled EDR Contact: 06/01/2020
Data Release Frequency: Varies

KERN COUNTY:

UST KERN: Underground Storage Tank Sites & Tank Listing
Kern County Sites and Tanks Listing.

Date of Government Version: 01/31/2020
Date Data Arrived at EDR: 02/05/2020
Date Made Active in Reports: 04/15/2020
Number of Days to Update: 70

Source: Kern County Environment Health Services Department
Telephone: 661-862-8700
Last EDR Contact: 04/23/2020
Next Scheduled EDR Contact: 08/17/2020
Data Release Frequency: Quarterly

KINGS COUNTY:

CUPA KINGS: CUPA Facility List

A listing of sites included in the county's Certified Unified Program Agency database. California's Secretary for Environmental Protection established the unified hazardous materials and hazardous waste regulatory program as required by chapter 6.11 of the California Health and Safety Code. The Unified Program consolidates the administration, permits, inspections, and enforcement activities.

Date of Government Version: 02/13/2020
Date Data Arrived at EDR: 02/14/2020
Date Made Active in Reports: 04/24/2020
Number of Days to Update: 70

Source: Kings County Department of Public Health
Telephone: 559-584-1411
Last EDR Contact: 02/13/2020
Next Scheduled EDR Contact: 06/01/2020
Data Release Frequency: Varies

LAKE COUNTY:

CUPA LAKE: CUPA Facility List

Cupa facility list

Date of Government Version: 01/15/2020
Date Data Arrived at EDR: 01/16/2020
Date Made Active in Reports: 04/01/2020
Number of Days to Update: 76

Source: Lake County Environmental Health
Telephone: 707-263-1164
Last EDR Contact: 04/13/2020
Next Scheduled EDR Contact: 07/27/2020
Data Release Frequency: Varies

LASSEN COUNTY:

CUPA LASSEN: CUPA Facility List

Cupa facility list

Date of Government Version: 01/30/2020
Date Data Arrived at EDR: 01/31/2020
Date Made Active in Reports: 04/09/2020
Number of Days to Update: 69

Source: Lassen County Environmental Health
Telephone: 530-251-8528
Last EDR Contact: 04/09/2020
Next Scheduled EDR Contact: 08/03/2020
Data Release Frequency: Varies

LOS ANGELES COUNTY:

AOCONCERN: Key Areas of Concerns in Los Angeles County

San Gabriel Valley areas where VOC contamination is at or above the MCL as designated by region 9 EPA office. Date of Government Version: 3/30/2009 Exide Site area is a cleanup plan of lead-impacted soil surrounding the former Exide Facility as designated by the DTSC. Date of Government Version: 7/17/2017

Date of Government Version: 03/30/2009
Date Data Arrived at EDR: 03/31/2009
Date Made Active in Reports: 10/23/2009
Number of Days to Update: 206

Source: N/A
Telephone: N/A
Last EDR Contact: 03/12/2020
Next Scheduled EDR Contact: 06/29/2020
Data Release Frequency: No Update Planned

HMS LOS ANGELES: HMS: Street Number List

Industrial Waste and Underground Storage Tank Sites.

Date of Government Version: 01/15/2020
Date Data Arrived at EDR: 01/16/2020
Date Made Active in Reports: 02/07/2020
Number of Days to Update: 22

Source: Department of Public Works
Telephone: 626-458-3517
Last EDR Contact: 03/26/2020
Next Scheduled EDR Contact: 07/20/2020
Data Release Frequency: Semi-Annually

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

LF LOS ANGELES: List of Solid Waste Facilities
Solid Waste Facilities in Los Angeles County.

Date of Government Version: 01/13/2020
Date Data Arrived at EDR: 01/14/2020
Date Made Active in Reports: 03/24/2020
Number of Days to Update: 70

Source: La County Department of Public Works
Telephone: 818-458-5185
Last EDR Contact: 04/14/2020
Next Scheduled EDR Contact: 07/27/2020
Data Release Frequency: Varies

LF LOS ANGELES CITY: City of Los Angeles Landfills
Landfills owned and maintained by the City of Los Angeles.

Date of Government Version: 01/01/2019
Date Data Arrived at EDR: 01/15/2019
Date Made Active in Reports: 03/07/2019
Number of Days to Update: 51

Source: Engineering & Construction Division
Telephone: 213-473-7869
Last EDR Contact: 04/02/2020
Next Scheduled EDR Contact: 07/27/2020
Data Release Frequency: Varies

LOS ANGELES AST: Active & Inactive AST Inventory
A listing of active & inactive above ground petroleum storage tank site locations, located in the City of Los Angeles.

Date of Government Version: 06/01/2019
Date Data Arrived at EDR: 06/25/2019
Date Made Active in Reports: 08/22/2019
Number of Days to Update: 58

Source: Los Angeles Fire Department
Telephone: 213-978-3800
Last EDR Contact: 03/27/2020
Next Scheduled EDR Contact: 07/06/2020
Data Release Frequency: Varies

LOS ANGELES CO LF METHANE: Methane Producing Landfills
This data was created on April 30, 2012 to represent known disposal sites in Los Angeles County that may produce and emanate methane gas. The shapefile contains disposal sites within Los Angeles County that once accepted degradable refuse material. Information used to create this data was extracted from a landfill survey performed by County Engineers (Major Waste System Map, 1973) as well as historical records from CalRecycle, Regional Water Quality Control Board, and Los Angeles County Department of Public Health

Date of Government Version: 04/30/2012
Date Data Arrived at EDR: 04/17/2019
Date Made Active in Reports: 05/29/2019
Number of Days to Update: 42

Source: Los Angeles County Department of Public Works
Telephone: 626-458-6973
Last EDR Contact: 04/17/2020
Next Scheduled EDR Contact: 07/27/2020
Data Release Frequency: No Update Planned

LOS ANGELES HM: Active & Inactive Hazardous Materials Inventory
A listing of active & inactive hazardous materials facility locations, located in the City of Los Angeles.

Date of Government Version: 06/01/2019
Date Data Arrived at EDR: 06/25/2019
Date Made Active in Reports: 08/22/2019
Number of Days to Update: 58

Source: Los Angeles Fire Department
Telephone: 213-978-3800
Last EDR Contact: 03/27/2020
Next Scheduled EDR Contact: 07/06/2020
Data Release Frequency: Varies

LOS ANGELES UST: Active & Inactive UST Inventory
A listing of active & inactive underground storage tank site locations and underground storage tank historical sites, located in the City of Los Angeles.

Date of Government Version: 06/01/2019
Date Data Arrived at EDR: 06/25/2019
Date Made Active in Reports: 08/22/2019
Number of Days to Update: 58

Source: Los Angeles Fire Department
Telephone: 213-978-3800
Last EDR Contact: 03/27/2020
Next Scheduled EDR Contact: 07/06/2020
Data Release Frequency: Varies

SITE MIT LOS ANGELES: Site Mitigation List
Industrial sites that have had some sort of spill or complaint.

Date of Government Version: 12/31/2019
Date Data Arrived at EDR: 01/14/2020
Date Made Active in Reports: 03/24/2020
Number of Days to Update: 70
Source: Community Health Services
Telephone: 323-890-7806
Last EDR Contact: 04/14/2020
Next Scheduled EDR Contact: 07/27/2020
Data Release Frequency: Annually

UST EL SEGUNDO: City of El Segundo Underground Storage Tank
Underground storage tank sites located in El Segundo city.

Date of Government Version: 01/21/2017
Date Data Arrived at EDR: 04/19/2017
Date Made Active in Reports: 05/10/2017
Number of Days to Update: 21
Source: City of El Segundo Fire Department
Telephone: 310-524-2236
Last EDR Contact: 04/02/2020
Next Scheduled EDR Contact: 07/27/2020
Data Release Frequency: No Update Planned

UST LONG BEACH: City of Long Beach Underground Storage Tank
Underground storage tank sites located in the city of Long Beach.

Date of Government Version: 04/22/2019
Date Data Arrived at EDR: 04/23/2019
Date Made Active in Reports: 06/27/2019
Number of Days to Update: 65
Source: City of Long Beach Fire Department
Telephone: 562-570-2563
Last EDR Contact: 04/09/2020
Next Scheduled EDR Contact: 08/03/2020
Data Release Frequency: Varies

UST TORRANCE: City of Torrance Underground Storage Tank
Underground storage tank sites located in the city of Torrance.

Date of Government Version: 06/27/2019
Date Data Arrived at EDR: 07/30/2019
Date Made Active in Reports: 10/02/2019
Number of Days to Update: 64
Source: City of Torrance Fire Department
Telephone: 310-618-2973
Last EDR Contact: 04/09/2020
Next Scheduled EDR Contact: 08/03/2020
Data Release Frequency: Semi-Annually

MADERA COUNTY:

CUPA MADERA: CUPA Facility List
A listing of sites included in the county's Certified Unified Program Agency database. California's Secretary for Environmental Protection established the unified hazardous materials and hazardous waste regulatory program as required by chapter 6.11 of the California Health and Safety Code. The Unified Program consolidates the administration, permits, inspections, and enforcement activities.

Date of Government Version: 11/18/2019
Date Data Arrived at EDR: 11/20/2019
Date Made Active in Reports: 01/27/2020
Number of Days to Update: 68
Source: Madera County Environmental Health
Telephone: 559-675-7823
Last EDR Contact: 02/14/2020
Next Scheduled EDR Contact: 06/01/2020
Data Release Frequency: Varies

MARIN COUNTY:

UST MARIN: Underground Storage Tank Sites
Currently permitted USTs in Marin County.

Date of Government Version: 09/26/2018
Date Data Arrived at EDR: 10/04/2018
Date Made Active in Reports: 11/02/2018
Number of Days to Update: 29
Source: Public Works Department Waste Management
Telephone: 415-473-6647
Last EDR Contact: 03/20/2020
Next Scheduled EDR Contact: 07/13/2020
Data Release Frequency: Semi-Annually

MERCED COUNTY:

CUPA MERCED: CUPA Facility List
CUPA facility list.

Date of Government Version: 11/18/2019
Date Data Arrived at EDR: 11/20/2019
Date Made Active in Reports: 01/03/2020
Number of Days to Update: 44

Source: Merced County Environmental Health
Telephone: 209-381-1094
Last EDR Contact: 02/13/2020
Next Scheduled EDR Contact: 06/01/2020
Data Release Frequency: Varies

MONO COUNTY:

CUPA MONO: CUPA Facility List
CUPA Facility List

Date of Government Version: 11/20/2019
Date Data Arrived at EDR: 12/02/2019
Date Made Active in Reports: 02/07/2020
Number of Days to Update: 67

Source: Mono County Health Department
Telephone: 760-932-5580
Last EDR Contact: 02/21/2020
Next Scheduled EDR Contact: 06/08/2020
Data Release Frequency: Varies

MONTEREY COUNTY:

CUPA MONTEREY: CUPA Facility Listing
CUPA Program listing from the Environmental Health Division.

Date of Government Version: 11/06/2019
Date Data Arrived at EDR: 11/07/2019
Date Made Active in Reports: 01/08/2020
Number of Days to Update: 62

Source: Monterey County Health Department
Telephone: 831-796-1297
Last EDR Contact: 04/13/2020
Next Scheduled EDR Contact: 07/13/2020
Data Release Frequency: Varies

NAPA COUNTY:

LUST NAPA: Sites With Reported Contamination
A listing of leaking underground storage tank sites located in Napa county.

Date of Government Version: 01/09/2017
Date Data Arrived at EDR: 01/11/2017
Date Made Active in Reports: 03/02/2017
Number of Days to Update: 50

Source: Napa County Department of Environmental Management
Telephone: 707-253-4269
Last EDR Contact: 02/21/2020
Next Scheduled EDR Contact: 06/08/2020
Data Release Frequency: No Update Planned

UST NAPA: Closed and Operating Underground Storage Tank Sites
Underground storage tank sites located in Napa county.

Date of Government Version: 09/05/2019
Date Data Arrived at EDR: 09/09/2019
Date Made Active in Reports: 10/31/2019
Number of Days to Update: 52

Source: Napa County Department of Environmental Management
Telephone: 707-253-4269
Last EDR Contact: 03/05/2020
Next Scheduled EDR Contact: 06/08/2020
Data Release Frequency: No Update Planned

NEVADA COUNTY:

CUPA NEVADA: CUPA Facility List
CUPA facility list.

Date of Government Version: 02/05/2020
Date Data Arrived at EDR: 02/06/2020
Date Made Active in Reports: 04/15/2020
Number of Days to Update: 69

Source: Community Development Agency
Telephone: 530-265-1467
Last EDR Contact: 05/06/2020
Next Scheduled EDR Contact: 08/10/2020
Data Release Frequency: Varies

ORANGE COUNTY:

IND_SITE ORANGE: List of Industrial Site Cleanups
Petroleum and non-petroleum spills.

Date of Government Version: 01/02/2020
Date Data Arrived at EDR: 02/05/2020
Date Made Active in Reports: 04/15/2020
Number of Days to Update: 70

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 05/04/2020
Next Scheduled EDR Contact: 08/17/2020
Data Release Frequency: Annually

LUST ORANGE: List of Underground Storage Tank Cleanups
Orange County Underground Storage Tank Cleanups (LUST).

Date of Government Version: 01/02/2020
Date Data Arrived at EDR: 02/05/2020
Date Made Active in Reports: 04/15/2020
Number of Days to Update: 70

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 05/04/2020
Next Scheduled EDR Contact: 08/17/2020
Data Release Frequency: Quarterly

UST ORANGE: List of Underground Storage Tank Facilities
Orange County Underground Storage Tank Facilities (UST).

Date of Government Version: 01/02/2020
Date Data Arrived at EDR: 02/04/2020
Date Made Active in Reports: 04/10/2020
Number of Days to Update: 66

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 05/05/2020
Next Scheduled EDR Contact: 08/17/2020
Data Release Frequency: Quarterly

PLACER COUNTY:

MS PLACER: Master List of Facilities
List includes aboveground tanks, underground tanks and cleanup sites.

Date of Government Version: 12/02/2019
Date Data Arrived at EDR: 12/03/2019
Date Made Active in Reports: 02/07/2020
Number of Days to Update: 66

Source: Placer County Health and Human Services
Telephone: 530-745-2363
Last EDR Contact: 02/27/2020
Next Scheduled EDR Contact: 06/15/2020
Data Release Frequency: Semi-Annually

PLUMAS COUNTY:

CUPA PLUMAS: CUPA Facility List
Plumas County CUPA Program facilities.

Date of Government Version: 03/31/2019
Date Data Arrived at EDR: 04/23/2019
Date Made Active in Reports: 06/26/2019
Number of Days to Update: 64

Source: Plumas County Environmental Health
Telephone: 530-283-6355
Last EDR Contact: 04/09/2020
Next Scheduled EDR Contact: 08/03/2020
Data Release Frequency: Varies

RIVERSIDE COUNTY:

LUST RIVERSIDE: Listing of Underground Tank Cleanup Sites
Riverside County Underground Storage Tank Cleanup Sites (LUST).

Date of Government Version: 10/17/2019
Date Data Arrived at EDR: 10/22/2019
Date Made Active in Reports: 12/13/2019
Number of Days to Update: 52
Source: Department of Environmental Health
Telephone: 951-358-5055
Last EDR Contact: 02/10/2020
Next Scheduled EDR Contact: 06/29/2020
Data Release Frequency: Quarterly

UST RIVERSIDE: Underground Storage Tank Tank List
Underground storage tank sites located in Riverside county.

Date of Government Version: 10/17/2019
Date Data Arrived at EDR: 10/22/2019
Date Made Active in Reports: 01/03/2020
Number of Days to Update: 73
Source: Department of Environmental Health
Telephone: 951-358-5055
Last EDR Contact: 02/10/2020
Next Scheduled EDR Contact: 06/29/2020
Data Release Frequency: Quarterly

SACRAMENTO COUNTY:

CS SACRAMENTO: Toxic Site Clean-Up List
List of sites where unauthorized releases of potentially hazardous materials have occurred.

Date of Government Version: 11/14/2019
Date Data Arrived at EDR: 12/23/2019
Date Made Active in Reports: 02/20/2020
Number of Days to Update: 59
Source: Sacramento County Environmental Management
Telephone: 916-875-8406
Last EDR Contact: 03/31/2020
Next Scheduled EDR Contact: 07/13/2020
Data Release Frequency: Quarterly

ML SACRAMENTO: Master Hazardous Materials Facility List
Any business that has hazardous materials on site - hazardous material storage sites, underground storage tanks, waste generators.

Date of Government Version: 11/14/2019
Date Data Arrived at EDR: 12/23/2019
Date Made Active in Reports: 02/21/2020
Number of Days to Update: 60
Source: Sacramento County Environmental Management
Telephone: 916-875-8406
Last EDR Contact: 03/31/2020
Next Scheduled EDR Contact: 07/13/2020
Data Release Frequency: Quarterly

SAN BENITO COUNTY:

CUPA SAN BENITO: CUPA Facility List
Cupa facility list

Date of Government Version: 02/12/2020
Date Data Arrived at EDR: 02/13/2020
Date Made Active in Reports: 04/23/2020
Number of Days to Update: 70
Source: San Benito County Environmental Health
Telephone: N/A
Last EDR Contact: 04/23/2020
Next Scheduled EDR Contact: 08/17/2020
Data Release Frequency: Varies

SAN BERNARDINO COUNTY:

PERMITS SAN BERNARDINO: Hazardous Material Permits
This listing includes underground storage tanks, medical waste handlers/generators, hazardous materials handlers, hazardous waste generators, and waste oil generators/handlers.

Date of Government Version: 11/26/2019
Date Data Arrived at EDR: 11/27/2019
Date Made Active in Reports: 02/04/2020
Number of Days to Update: 69

Source: San Bernardino County Fire Department Hazardous Materials Division
Telephone: 909-387-3041
Last EDR Contact: 04/23/2020
Next Scheduled EDR Contact: 08/17/2020
Data Release Frequency: Quarterly

SAN DIEGO COUNTY:

HMMD SAN DIEGO: Hazardous Materials Management Division Database

The database includes: HE58 - This report contains the business name, site address, business phone number, establishment 'H' permit number, type of permit, and the business status. HE17 - In addition to providing the same information provided in the HE58 listing, HE17 provides inspection dates, violations received by the establishment, hazardous waste generated, the quantity, method of storage, treatment/disposal of waste and the hauler, and information on underground storage tanks. Unauthorized Release List - Includes a summary of environmental contamination cases in San Diego County (underground tank cases, non-tank cases, groundwater contamination, and soil contamination are included.)

Date of Government Version: 12/03/2019
Date Data Arrived at EDR: 12/04/2019
Date Made Active in Reports: 02/04/2020
Number of Days to Update: 62

Source: Hazardous Materials Management Division
Telephone: 619-338-2268
Last EDR Contact: 03/03/2020
Next Scheduled EDR Contact: 06/15/2020
Data Release Frequency: Quarterly

LF SAN DIEGO: Solid Waste Facilities

San Diego County Solid Waste Facilities.

Date of Government Version: 04/18/2018
Date Data Arrived at EDR: 04/24/2018
Date Made Active in Reports: 06/19/2018
Number of Days to Update: 56

Source: Department of Health Services
Telephone: 619-338-2209
Last EDR Contact: 04/09/2020
Next Scheduled EDR Contact: 08/03/2020
Data Release Frequency: Varies

SAN DIEGO CO LOP: Local Oversight Program Listing

A listing of all LOP release sites that are or were under the County of San Diego's jurisdiction. Included are closed or transferred cases, open cases, and cases that did not have a case type indicated. The cases without a case type are mostly complaints; however, some of them could be LOP cases.

Date of Government Version: 12/26/2019
Date Data Arrived at EDR: 01/22/2020
Date Made Active in Reports: 04/01/2020
Number of Days to Update: 70

Source: Department of Environmental Health
Telephone: 858-505-6874
Last EDR Contact: 04/09/2020
Next Scheduled EDR Contact: 08/03/2020
Data Release Frequency: Varies

SAN DIEGO CO SAM: Environmental Case Listing

The listing contains all underground tank release cases and projects pertaining to properties contaminated with hazardous substances that are actively under review by the Site Assessment and Mitigation Program.

Date of Government Version: 03/23/2010
Date Data Arrived at EDR: 06/15/2010
Date Made Active in Reports: 07/09/2010
Number of Days to Update: 24

Source: San Diego County Department of Environmental Health
Telephone: 619-338-2371
Last EDR Contact: 02/27/2020
Next Scheduled EDR Contact: 06/15/2020
Data Release Frequency: No Update Planned

SAN FRANCISCO COUNTY:

LUST SAN FRANCISCO: Local Oversite Facilities

A listing of leaking underground storage tank sites located in San Francisco county.

Date of Government Version: 09/19/2008
Date Data Arrived at EDR: 09/19/2008
Date Made Active in Reports: 09/29/2008
Number of Days to Update: 10

Source: Department Of Public Health San Francisco County
Telephone: 415-252-3920
Last EDR Contact: 04/23/2020
Next Scheduled EDR Contact: 08/17/2020
Data Release Frequency: No Update Planned

UST SAN FRANCISCO: Underground Storage Tank Information
Underground storage tank sites located in San Francisco county.

Date of Government Version: 01/08/2020
Date Data Arrived at EDR: 01/09/2020
Date Made Active in Reports: 03/06/2020
Number of Days to Update: 57

Source: Department of Public Health
Telephone: 415-252-3920
Last EDR Contact: 04/23/2020
Next Scheduled EDR Contact: 08/17/2020
Data Release Frequency: Quarterly

SAN JOAQUIN COUNTY:

UST SAN JOAQUIN: San Joaquin Co. UST
A listing of underground storage tank locations in San Joaquin county.

Date of Government Version: 06/22/2018
Date Data Arrived at EDR: 06/26/2018
Date Made Active in Reports: 07/11/2018
Number of Days to Update: 15

Source: Environmental Health Department
Telephone: N/A
Last EDR Contact: 03/12/2020
Next Scheduled EDR Contact: 06/29/2020
Data Release Frequency: Semi-Annually

SAN LUIS OBISPO COUNTY:

CUPA SAN LUIS OBISPO: CUPA Facility List
Cupa Facility List.

Date of Government Version: 02/18/2020
Date Data Arrived at EDR: 02/20/2020
Date Made Active in Reports: 04/24/2020
Number of Days to Update: 64

Source: San Luis Obispo County Public Health Department
Telephone: 805-781-5596
Last EDR Contact: 02/14/2020
Next Scheduled EDR Contact: 06/01/2020
Data Release Frequency: Varies

SAN MATEO COUNTY:

BI SAN MATEO: Business Inventory
List includes Hazardous Materials Business Plan, hazardous waste generators, and underground storage tanks.

Date of Government Version: 02/20/2020
Date Data Arrived at EDR: 02/20/2020
Date Made Active in Reports: 04/24/2020
Number of Days to Update: 64

Source: San Mateo County Environmental Health Services Division
Telephone: 650-363-1921
Last EDR Contact: 02/20/2020
Next Scheduled EDR Contact: 06/22/2020
Data Release Frequency: Annually

LUST SAN MATEO: Fuel Leak List
A listing of leaking underground storage tank sites located in San Mateo county.

Date of Government Version: 03/29/2019
Date Data Arrived at EDR: 03/29/2019
Date Made Active in Reports: 05/29/2019
Number of Days to Update: 61

Source: San Mateo County Environmental Health Services Division
Telephone: 650-363-1921
Last EDR Contact: 03/05/2020
Next Scheduled EDR Contact: 06/22/2020
Data Release Frequency: Semi-Annually

SANTA BARBARA COUNTY:

CUPA SANTA BARBARA: CUPA Facility Listing
CUPA Program Listing from the Environmental Health Services division.

Date of Government Version: 09/08/2011
Date Data Arrived at EDR: 09/09/2011
Date Made Active in Reports: 10/07/2011
Number of Days to Update: 28

Source: Santa Barbara County Public Health Department
Telephone: 805-686-8167
Last EDR Contact: 02/14/2020
Next Scheduled EDR Contact: 06/01/2020
Data Release Frequency: No Update Planned

SANTA CLARA COUNTY:

CUPA SANTA CLARA: Cupa Facility List
Cupa facility list

Date of Government Version: 02/14/2020
Date Data Arrived at EDR: 02/19/2020
Date Made Active in Reports: 04/24/2020
Number of Days to Update: 65

Source: Department of Environmental Health
Telephone: 408-918-1973
Last EDR Contact: 02/14/2020
Next Scheduled EDR Contact: 06/01/2020
Data Release Frequency: Varies

HIST LUST SANTA CLARA: HIST LUST - Fuel Leak Site Activity Report
A listing of open and closed leaking underground storage tanks. This listing is no longer updated by the county. Leaking underground storage tanks are now handled by the Department of Environmental Health.

Date of Government Version: 03/29/2005
Date Data Arrived at EDR: 03/30/2005
Date Made Active in Reports: 04/21/2005
Number of Days to Update: 22

Source: Santa Clara Valley Water District
Telephone: 408-265-2600
Last EDR Contact: 03/23/2009
Next Scheduled EDR Contact: 06/22/2009
Data Release Frequency: No Update Planned

LUST SANTA CLARA: LOP Listing
A listing of leaking underground storage tanks located in Santa Clara county.

Date of Government Version: 03/03/2014
Date Data Arrived at EDR: 03/05/2014
Date Made Active in Reports: 03/18/2014
Number of Days to Update: 13

Source: Department of Environmental Health
Telephone: 408-918-3417
Last EDR Contact: 02/21/2020
Next Scheduled EDR Contact: 06/08/2020
Data Release Frequency: No Update Planned

SAN JOSE HAZMAT: Hazardous Material Facilities
Hazardous material facilities, including underground storage tank sites.

Date of Government Version: 10/30/2019
Date Data Arrived at EDR: 11/01/2019
Date Made Active in Reports: 01/08/2020
Number of Days to Update: 68

Source: City of San Jose Fire Department
Telephone: 408-535-7694
Last EDR Contact: 04/23/2020
Next Scheduled EDR Contact: 08/17/2020
Data Release Frequency: Annually

SANTA CRUZ COUNTY:

CUPA SANTA CRUZ: CUPA Facility List
CUPA facility listing.

Date of Government Version: 01/21/2017
Date Data Arrived at EDR: 02/22/2017
Date Made Active in Reports: 05/23/2017
Number of Days to Update: 90

Source: Santa Cruz County Environmental Health
Telephone: 831-464-2761
Last EDR Contact: 02/14/2020
Next Scheduled EDR Contact: 06/01/2020
Data Release Frequency: Varies

SHASTA COUNTY:

CUPA SHASTA: CUPA Facility List
Cupa Facility List.

Date of Government Version: 06/15/2017
Date Data Arrived at EDR: 06/19/2017
Date Made Active in Reports: 08/09/2017
Number of Days to Update: 51

Source: Shasta County Department of Resource Management
Telephone: 530-225-5789
Last EDR Contact: 02/14/2020
Next Scheduled EDR Contact: 06/01/2020
Data Release Frequency: Varies

SOLANO COUNTY:

LUST SOLANO: Leaking Underground Storage Tanks
A listing of leaking underground storage tank sites located in Solano county.

Date of Government Version: 06/04/2019
Date Data Arrived at EDR: 06/06/2019
Date Made Active in Reports: 08/13/2019
Number of Days to Update: 68

Source: Solano County Department of Environmental Management
Telephone: 707-784-6770
Last EDR Contact: 02/27/2020
Next Scheduled EDR Contact: 06/15/2020
Data Release Frequency: Quarterly

UST SOLANO: Underground Storage Tanks
Underground storage tank sites located in Solano county.

Date of Government Version: 12/09/2019
Date Data Arrived at EDR: 12/11/2019
Date Made Active in Reports: 02/21/2020
Number of Days to Update: 72

Source: Solano County Department of Environmental Management
Telephone: 707-784-6770
Last EDR Contact: 02/27/2020
Next Scheduled EDR Contact: 06/15/2020
Data Release Frequency: Quarterly

SONOMA COUNTY:

CUPA SONOMA: Cupa Facility List
Cupa Facility list

Date of Government Version: 02/25/2020
Date Data Arrived at EDR: 02/26/2020
Date Made Active in Reports: 03/11/2020
Number of Days to Update: 14

Source: County of Sonoma Fire & Emergency Services Department
Telephone: 707-565-1174
Last EDR Contact: 03/18/2020
Next Scheduled EDR Contact: 07/06/2020
Data Release Frequency: Varies

LUST SONOMA: Leaking Underground Storage Tank Sites
A listing of leaking underground storage tank sites located in Sonoma county.

Date of Government Version: 01/02/2020
Date Data Arrived at EDR: 01/03/2020
Date Made Active in Reports: 03/05/2020
Number of Days to Update: 62

Source: Department of Health Services
Telephone: 707-565-6565
Last EDR Contact: 04/06/2020
Next Scheduled EDR Contact: 07/06/2020
Data Release Frequency: Quarterly

STANISLAUS COUNTY:

CUPA STANISLAUS: CUPA Facility List
Cupa facility list

Date of Government Version: 02/04/2020
Date Data Arrived at EDR: 02/05/2020
Date Made Active in Reports: 04/15/2020
Number of Days to Update: 70

Source: Stanislaus County Department of Ennvironmental Protection
Telephone: 209-525-6751
Last EDR Contact: 04/02/2020
Next Scheduled EDR Contact: 07/27/2020
Data Release Frequency: Varies

SUTTER COUNTY:

UST SUTTER: Underground Storage Tanks
Underground storage tank sites located in Sutter county.

Date of Government Version: 12/02/2019
Date Data Arrived at EDR: 12/03/2019
Date Made Active in Reports: 02/07/2020
Number of Days to Update: 66

Source: Sutter County Environmental Health Services
Telephone: 530-822-7500
Last EDR Contact: 02/27/2020
Next Scheduled EDR Contact: 06/15/2020
Data Release Frequency: Semi-Annually

TEHAMA COUNTY:

CUPA TEHAMA: CUPA Facility List
Cupa facilities

Date of Government Version: 05/20/2019
Date Data Arrived at EDR: 05/21/2019
Date Made Active in Reports: 07/18/2019
Number of Days to Update: 58

Source: Tehama County Department of Environmental Health
Telephone: 530-527-8020
Last EDR Contact: 03/17/2020
Next Scheduled EDR Contact: 05/18/2020
Data Release Frequency: Varies

TRINITY COUNTY:

CUPA TRINITY: CUPA Facility List
Cupa facility list

Date of Government Version: 01/21/2020
Date Data Arrived at EDR: 01/23/2020
Date Made Active in Reports: 03/30/2020
Number of Days to Update: 67

Source: Department of Toxic Substances Control
Telephone: 760-352-0381
Last EDR Contact: 04/09/2020
Next Scheduled EDR Contact: 08/03/2020
Data Release Frequency: Varies

TULARE COUNTY:

CUPA TULARE: CUPA Facility List
Cupa program facilities

Date of Government Version: 02/10/2020
Date Data Arrived at EDR: 02/11/2020
Date Made Active in Reports: 04/20/2020
Number of Days to Update: 69

Source: Tulare County Environmental Health Services Division
Telephone: 559-624-7400
Last EDR Contact: 04/23/2020
Next Scheduled EDR Contact: 08/17/2020
Data Release Frequency: Varies

TUOLUMNE COUNTY:

CUPA TUOLUMNE: CUPA Facility List
Cupa facility list

Date of Government Version: 04/23/2018
Date Data Arrived at EDR: 04/25/2018
Date Made Active in Reports: 06/25/2018
Number of Days to Update: 61

Source: Divison of Environmental Health
Telephone: 209-533-5633
Last EDR Contact: 04/09/2020
Next Scheduled EDR Contact: 08/03/2020
Data Release Frequency: Varies

VENTURA COUNTY:

BWT VENTURA: Business Plan, Hazardous Waste Producers, and Operating Underground Tanks
The BWT list indicates by site address whether the Environmental Health Division has Business Plan (B), Waste Producer (W), and/or Underground Tank (T) information.

Date of Government Version: 12/26/2019
Date Data Arrived at EDR: 01/24/2020
Date Made Active in Reports: 04/01/2020
Number of Days to Update: 68
Source: Ventura County Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 04/20/2020
Next Scheduled EDR Contact: 08/03/2020
Data Release Frequency: Quarterly

LF VENTURA: Inventory of Illegal Abandoned and Inactive Sites
Ventura County Inventory of Closed, Illegal Abandoned, and Inactive Sites.

Date of Government Version: 12/01/2011
Date Data Arrived at EDR: 12/01/2011
Date Made Active in Reports: 01/19/2012
Number of Days to Update: 49
Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 03/20/2020
Next Scheduled EDR Contact: 07/13/2020
Data Release Frequency: No Update Planned

LUST VENTURA: Listing of Underground Tank Cleanup Sites
Ventura County Underground Storage Tank Cleanup Sites (LUST).

Date of Government Version: 05/29/2008
Date Data Arrived at EDR: 06/24/2008
Date Made Active in Reports: 07/31/2008
Number of Days to Update: 37
Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 04/29/2020
Next Scheduled EDR Contact: 08/24/2020
Data Release Frequency: No Update Planned

MED WASTE VENTURA: Medical Waste Program List
To protect public health and safety and the environment from potential exposure to disease causing agents, the Environmental Health Division Medical Waste Program regulates the generation, handling, storage, treatment and disposal of medical waste throughout the County.

Date of Government Version: 12/26/2019
Date Data Arrived at EDR: 01/24/2020
Date Made Active in Reports: 04/01/2020
Number of Days to Update: 68
Source: Ventura County Resource Management Agency
Telephone: 805-654-2813
Last EDR Contact: 04/20/2020
Next Scheduled EDR Contact: 08/03/2020
Data Release Frequency: Quarterly

UST VENTURA: Underground Tank Closed Sites List
Ventura County Operating Underground Storage Tank Sites (UST)/Underground Tank Closed Sites List.

Date of Government Version: 11/26/2019
Date Data Arrived at EDR: 12/10/2019
Date Made Active in Reports: 02/21/2020
Number of Days to Update: 73
Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 03/10/2020
Next Scheduled EDR Contact: 06/22/2020
Data Release Frequency: Quarterly

YOLO COUNTY:

UST YOLO: Underground Storage Tank Comprehensive Facility Report
Underground storage tank sites located in Yolo county.

Date of Government Version: 12/12/2019
Date Data Arrived at EDR: 01/15/2020
Date Made Active in Reports: 03/25/2020
Number of Days to Update: 70
Source: Yolo County Department of Health
Telephone: 530-666-8646
Last EDR Contact: 03/20/2020
Next Scheduled EDR Contact: 07/13/2020
Data Release Frequency: Annually

YUBA COUNTY:

CUPA YUBA: CUPA Facility List
CUPA facility listing for Yuba County.

Date of Government Version: 01/27/2020
Date Data Arrived at EDR: 02/12/2020
Date Made Active in Reports: 04/23/2020
Number of Days to Update: 71

Source: Yuba County Environmental Health Department
Telephone: 530-749-7523
Last EDR Contact: 04/16/2020
Next Scheduled EDR Contact: 08/10/2020
Data Release Frequency: Varies

OTHER DATABASE(S)

Depending on the geographic area covered by this report, the data provided in these specialty databases may or may not be complete. For example, the existence of wetlands information data in a specific report does not mean that all wetlands in the area covered by the report are included. Moreover, the absence of any reported wetlands information does not necessarily mean that wetlands do not exist in the area covered by the report.

CT MANIFEST: Hazardous Waste Manifest Data
Facility and manifest data. Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a tsd facility.

Date of Government Version: 01/30/2020
Date Data Arrived at EDR: 01/30/2020
Date Made Active in Reports: 03/09/2020
Number of Days to Update: 39

Source: Department of Energy & Environmental Protection
Telephone: 860-424-3375
Last EDR Contact: 01/30/2020
Next Scheduled EDR Contact: 05/25/2020
Data Release Frequency: No Update Planned

NJ MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2018
Date Data Arrived at EDR: 04/10/2019
Date Made Active in Reports: 05/16/2019
Number of Days to Update: 36

Source: Department of Environmental Protection
Telephone: N/A
Last EDR Contact: 04/10/2020
Next Scheduled EDR Contact: 07/20/2020
Data Release Frequency: Annually

NY MANIFEST: Facility and Manifest Data
Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a TSD facility.

Date of Government Version: 01/01/2019
Date Data Arrived at EDR: 05/01/2019
Date Made Active in Reports: 06/21/2019
Number of Days to Update: 51

Source: Department of Environmental Conservation
Telephone: 518-402-8651
Last EDR Contact: 04/29/2020
Next Scheduled EDR Contact: 08/10/2020
Data Release Frequency: Quarterly

PA MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 06/30/2018
Date Data Arrived at EDR: 07/19/2019
Date Made Active in Reports: 09/10/2019
Number of Days to Update: 53

Source: Department of Environmental Protection
Telephone: 717-783-8990
Last EDR Contact: 04/02/2020
Next Scheduled EDR Contact: 07/27/2020
Data Release Frequency: Annually

RI MANIFEST: Manifest information
Hazardous waste manifest information

Date of Government Version: 12/31/2018
Date Data Arrived at EDR: 10/02/2019
Date Made Active in Reports: 12/10/2019
Number of Days to Update: 69

Source: Department of Environmental Management
Telephone: 401-222-2797
Last EDR Contact: 02/18/2020
Next Scheduled EDR Contact: 06/01/2020
Data Release Frequency: Annually

WI MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 05/31/2018
Date Data Arrived at EDR: 06/19/2019
Date Made Active in Reports: 09/03/2019
Number of Days to Update: 76

Source: Department of Natural Resources
Telephone: N/A
Last EDR Contact: 03/09/2020
Next Scheduled EDR Contact: 06/22/2020
Data Release Frequency: Annually

Oil/Gas Pipelines
Source: Endeavor Business Media
Petroleum Bundle (Crude Oil, Refined Products, Petrochemicals, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)) N = Natural Gas Bundle (Natural Gas, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)). This map includes information copyrighted by Endeavor Business Media. This information is provided on a best effort basis and Endeavor Business Media does not guarantee its accuracy nor warrant its fitness for any particular purpose. Such information has been reprinted with the permission of Endeavor Business Media.

Electric Power Transmission Line Data
Source: Endeavor Business Media
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Sensitive Receptors: There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges. These sensitive receptors typically include the elderly, the sick, and children. While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities - schools, daycares, hospitals, medical centers, and nursing homes - where individuals who are sensitive receptors are likely to be located.

AHA Hospitals:
Source: American Hospital Association, Inc.
Telephone: 312-280-5991
The database includes a listing of hospitals based on the American Hospital Association's annual survey of hospitals.

Medical Centers: Provider of Services Listing
Source: Centers for Medicare & Medicaid Services
Telephone: 410-786-3000
A listing of hospitals with Medicare provider number, produced by Centers of Medicare & Medicaid Services, a federal agency within the U.S. Department of Health and Human Services.

Nursing Homes
Source: National Institutes of Health
Telephone: 301-594-6248
Information on Medicare and Medicaid certified nursing homes in the United States.

Public Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on elementary and secondary public education in the United States. It is a comprehensive, annual, national statistical database of all public elementary and secondary schools and school districts, which contains data that are comparable across all states.

Private Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on private school locations in the United States.

Daycare Centers: Licensed Facilities
Source: Department of Social Services
Telephone: 916-657-4041

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.
Source: FEMA
Telephone: 877-336-2627
Date of Government Version: 2003, 2015

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005 and 2010 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetland Inventory
Source: Department of Fish and Wildlife
Telephone: 916-445-0411

Current USGS 7.5 Minute Topographic Map
Source: U.S. Geological Survey

STREET AND ADDRESS INFORMATION

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GEOCHECK ®- PHYSICAL SETTING SOURCE ADDENDUM

TARGET PROPERTY ADDRESS

NW CORNER RAMONA EXPY & N PERRIS BLVD
NOT REPORTED
PERRIS, CA 92571

TARGET PROPERTY COORDINATES

Latitude (North):	33.845625 - 33° 50' 44.25''
Longitude (West):	117.228504 - 117° 13' 42.61''
Universal Tranverse Mercator:	Zone 11
UTM X (Meters):	478859.6
UTM Y (Meters):	3744869.0
Elevation:	1460 ft. above sea level

USGS TOPOGRAPHIC MAP

Target Property Map:	5641330 PERRIS, CA
Version Date:	2012

EDR's GeoCheck Physical Setting Source Addendum is provided to assist the environmental professional in forming an opinion about the impact of potential contaminant migration.

Assessment of the impact of contaminant migration generally has two principle investigative components:

1. Groundwater flow direction, and
2. Groundwater flow velocity.

Groundwater flow direction may be impacted by surface topography, hydrology, hydrogeology, characteristics of the soil, and nearby wells. Groundwater flow velocity is generally impacted by the nature of the geologic strata.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW DIRECTION INFORMATION

Groundwater flow direction for a particular site is best determined by a qualified environmental professional using site-specific well data. If such data is not reasonably ascertainable, it may be necessary to rely on other sources of information, such as surface topographic information, hydrologic information, hydrogeologic data collected on nearby properties, and regional groundwater flow information (from deep aquifers).

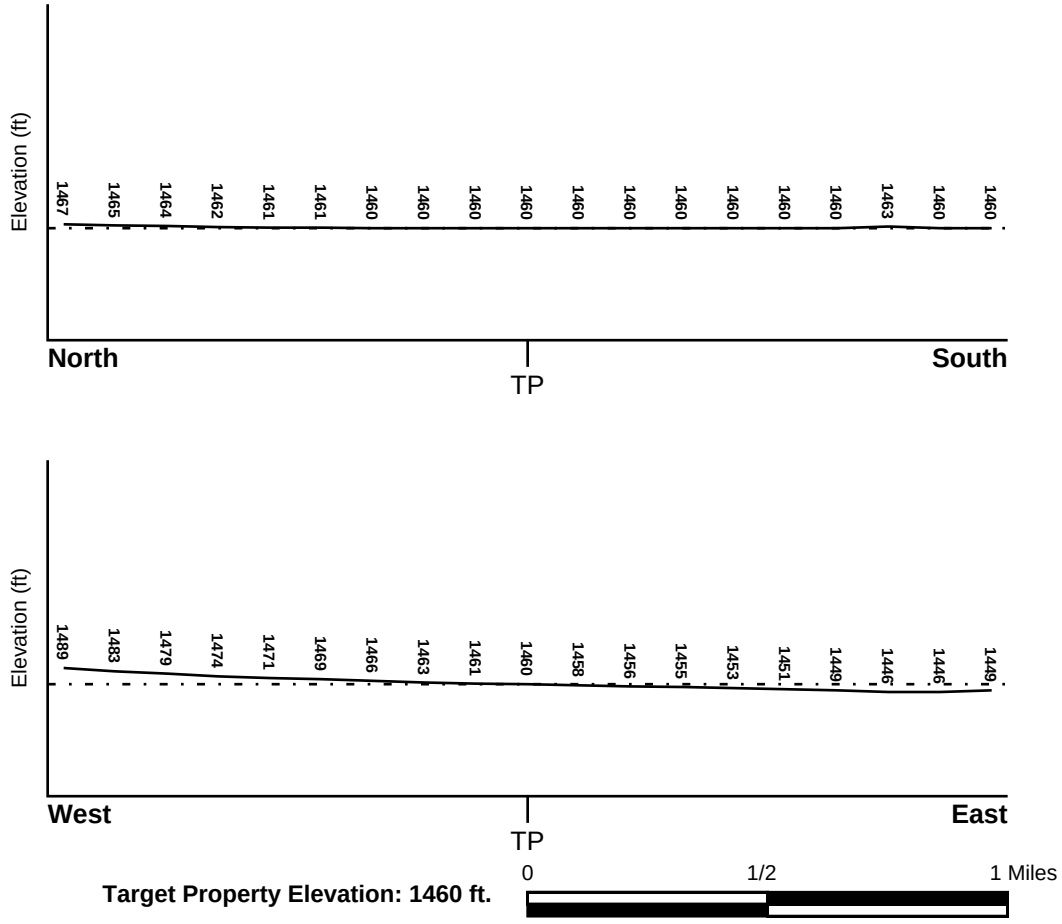
TOPOGRAPHIC INFORMATION

Surface topography may be indicative of the direction of surficial groundwater flow. This information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

TARGET PROPERTY TOPOGRAPHY

General Topographic Gradient: General East

SURROUNDING TOPOGRAPHY: ELEVATION PROFILES



Source: Topography has been determined from the USGS 7.5' Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

HYDROLOGIC INFORMATION

Surface water can act as a hydrologic barrier to groundwater flow. Such hydrologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Refer to the Physical Setting Source Map following this summary for hydrologic information (major waterways and bodies of water).

FEMA FLOOD ZONE

Flood Plain Panel at Target Property	FEMA Source Type
06065C1430H	FEMA FIRM Flood data

Additional Panels in search area:	FEMA Source Type
Not Reported	

NATIONAL WETLAND INVENTORY

NWI Quad at Target Property	NWI Electronic Data Coverage
NOT AVAILABLE	YES - refer to the Overview Map and Detail Map

HYDROGEOLOGIC INFORMATION

Hydrogeologic information obtained by installation of wells on a specific site can often be an indicator of groundwater flow direction in the immediate area. Such hydrogeologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Site-Specific Hydrogeological Data*:

Search Radius:	1.25 miles
Status:	Not found

AQUIFLOW®

Search Radius: 1.000 Mile.

EDR has developed the AQUIFLOW Information System to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted by environmental professionals to regulatory authorities at select sites and has extracted the date of the report, groundwater flow direction as determined hydrogeologically, and the depth to water table.

MAP ID	LOCATION FROM TP	GENERAL DIRECTION GROUNDWATER FLOW
Not Reported		

* ©1996 Site−specific hydrogeological data gathered by CERCLIS Alerts, Inc., Bainbridge Island, WA. All rights reserved. All of the information and opinions presented are those of the cited EPA report(s), which were completed under a Comprehensive Environmental Response Compensation and Liability Information System (CERCLIS) investigation.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW VELOCITY INFORMATION

Groundwater flow velocity information for a particular site is best determined by a qualified environmental professional using site specific geologic and soil strata data. If such data are not reasonably ascertainable, it may be necessary to rely on other sources of information, including geologic age identification, rock stratigraphic unit and soil characteristics data collected on nearby properties and regional soil information. In general, contaminant plumes move more quickly through sandy-gravelly types of soils than silty-clayey types of soils.

GEOLOGIC INFORMATION IN GENERAL AREA OF TARGET PROPERTY

Geologic information can be used by the environmental professional in forming an opinion about the relative speed at which contaminant migration may be occurring.

ROCK STRATIGRAPHIC UNIT

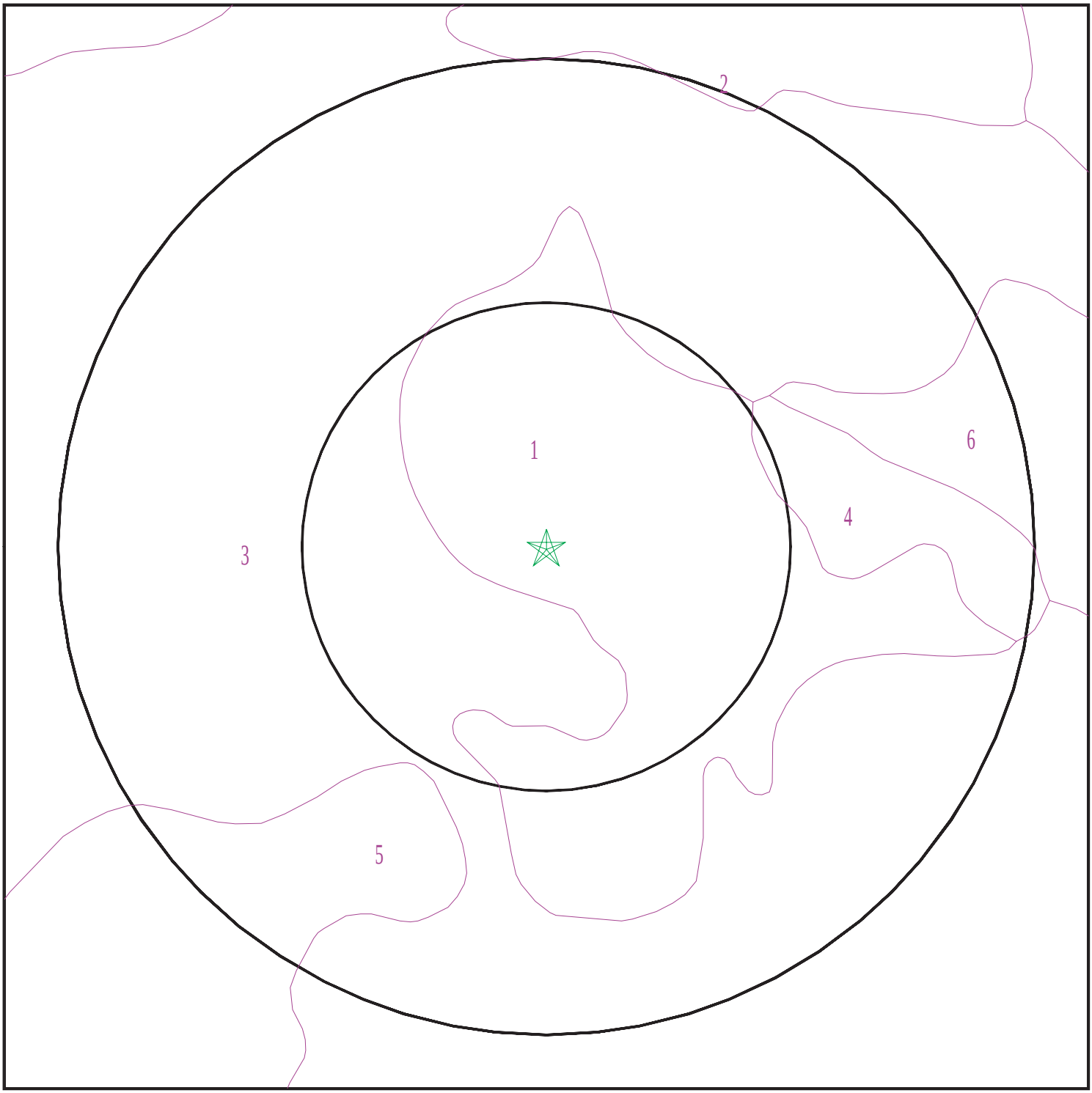
Era:	Mesozoic
System:	Cretaceous
Series:	Cretaceous granitic rocks
Code:	Kg *(decoded above as Era, System & Series)*

GEOLOGIC AGE IDENTIFICATION

Category: Plutonic and Intrusive Rocks

Geologic Age and Rock Stratigraphic Unit Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - a digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

SSURGO SOIL MAP - 6058931.2s



Target Property
SSURGO Soil
Water

0 1/16 1/8 1/4 Miles

N

SITE NAME:	NW Corner Ramona Expy & N Perris Blvd	CLIENT:	Environmental & Regulatory Specialists, Inc.
ADDRESS:	Not Reported Perris CA 92571	CONTACT:	Joe Tyndall
		INQUIRY #:	6058931.2s
LAT/LONG:	33.845625 / 117.228504	DATE:	May 07, 2020 5:33 pm

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GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

DOMINANT SOIL COMPOSITION IN GENERAL AREA OF TARGET PROPERTY

The U.S. Department of Agriculture's (USDA) Soil Conservation Service (SCS) leads the National Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. The following information is based on Soil Conservation Service SSURGO data.

Soil Map ID: 1

Soil Component Name: PACHAPPA

Soil Surface Texture: fine sandy loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Low

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information

	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	20 inches	fine sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 14 Min: 4	Max: 7.8 Min: 6.6
2	20 inches	62 inches	loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 14 Min: 4	Max: 7.8 Min: 6.6

Soil Map ID: 2

Soil Component Name: DOMINO

Soil Surface Texture: silt loam

Hydrologic Group: Class C - Slow infiltration rates. Soils with layers impeding downward movement of water, or soils with moderately fine or fine textures.

Soil Drainage Class: Moderately well drained

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	14 inches	silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 4 Min: 1.4	Max: 8.4 Min: 7.9
2	14 inches	27 inches	silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 4 Min: 1.4	Max: 8.4 Min: 7.9
3	27 inches	35 inches	cemented	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 4 Min: 1.4	Max: 8.4 Min: 7.9
4	35 inches	62 inches	loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 4 Min: 1.4	Max: 8.4 Min: 7.9

Soil Map ID: 3

Soil Component Name: EXETER

Soil Surface Texture: sandy loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	16 inches	sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 4 Min: 1.4	Max: 8.4 Min: 7.4
2	16 inches	37 inches	sandy clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 4 Min: 1.4	Max: 8.4 Min: 7.4
3	37 inches	50 inches	indurated	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 4 Min: 1.4	Max: 8.4 Min: 7.4
4	50 inches	59 inches	stratified sandy loam to silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 4 Min: 1.4	Max: 8.4 Min: 7.4

Soil Map ID: 4

Soil Component Name: HANFORD

Soil Surface Texture: coarse sandy loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Somewhat excessively drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Low

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	7 inches	coarse sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 141 Min: 42	Max: 7.8 Min: 5.6
2	7 inches	40 inches	fine sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 141 Min: 42	Max: 7.8 Min: 5.6
3	40 inches	59 inches	stratified loamy sand to coarse sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 141 Min: 42	Max: 7.8 Min: 5.6

Soil Map ID: 5

Soil Component Name: GREENFIELD

Soil Surface Texture: sandy loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Low

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	25 inches	sandy loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 42 Min: 14	Max: 8.4 Min: 6.6
2	25 inches	42 inches	fine sandy loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 42 Min: 14	Max: 8.4 Min: 6.6
3	42 inches	59 inches	loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 42 Min: 14	Max: 8.4 Min: 6.6
4	59 inches	72 inches	stratified loamy sand to sandy loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 42 Min: 14	Max: 8.4 Min: 6.6

Soil Map ID: 6

Soil Component Name: EXETER

Soil Surface Texture: sandy loam

Hydrologic Group: Class C - Slow infiltration rates. Soils with layers impeding downward movement of water, or soils with moderately fine or fine textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	16 inches	sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 4 Min: 1.4	Max: 8.4 Min: 7.4
2	16 inches	37 inches	sandy clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 4 Min: 1.4	Max: 8.4 Min: 7.4
3	37 inches	50 inches	indurated	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 4 Min: 1.4	Max: 8.4 Min: 7.4
4	50 inches	59 inches	stratified sandy loam to silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 4 Min: 1.4	Max: 8.4 Min: 7.4

LOCAL / REGIONAL WATER AGENCY RECORDS

EDR Local/Regional Water Agency records provide water well information to assist the environmental professional in assessing sources that may impact ground water flow direction, and in forming an opinion about the impact of contaminant migration on nearby drinking water wells.

WELL SEARCH DISTANCE INFORMATION

DATABASE	SEARCH DISTANCE (miles)
Federal USGS	1.000
Federal FRDS PWS	Nearest PWS within 1 mile
State Database	1.000

FEDERAL USGS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

FEDERAL USGS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
A3	USGS40000138560	1/4 - 1/2 Mile West
5	USGS40000138576	1/4 - 1/2 Mile WNW
B9	USGS40000138517	1/2 - 1 Mile South
C10	USGS40000138607	1/2 - 1 Mile NNE
C11	USGS40000138608	1/2 - 1 Mile NNE
D12	USGS40000138509	1/2 - 1 Mile South
14	USGS40000138615	1/2 - 1 Mile NNW
15	USGS40000138621	1/2 - 1 Mile North

FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

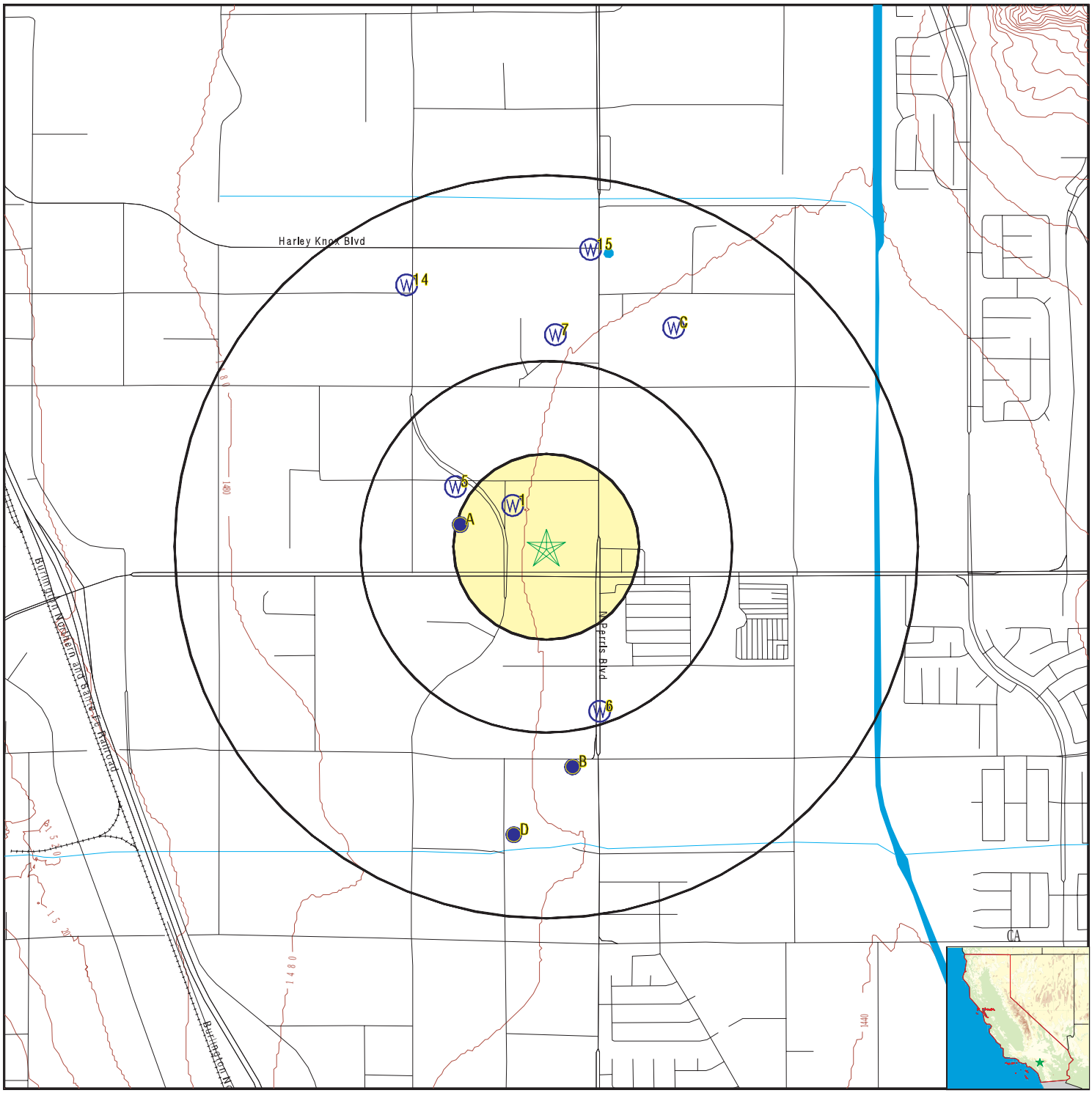
MAP ID	WELL ID	LOCATION FROM TP
No PWS System Found		

Note: PWS System location is not always the same as well location.

STATE DATABASE WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
1	4816	1/8 - 1/4 Mile NW
A2	CADWR8000005837	1/8 - 1/4 Mile WNW
A4	4815	1/4 - 1/2 Mile WNW
6	CADWR8000005806	1/4 - 1/2 Mile SSE
7	4814	1/2 - 1 Mile North
B8	CADWR8000005790	1/2 - 1 Mile South
D13	CADWR8000005777	1/2 - 1 Mile South

PHYSICAL SETTING SOURCE MAP - 6058931.2s



- County Boundary
- Major Roads
- Contour Lines
- Earthquake Fault Lines
- Earthquake epicenter, Richter 5 or greater
- Water Wells
- Public Water Supply Wells
- Cluster of Multiple Icons
- Groundwater Flow Direction
- GI Indeterminate Groundwater Flow at Location
- GV Groundwater Flow Varies at Location
- HD Closest Hydrogeological Data
- Oil, gas or related wells

SITE NAME:	NW Corner Ramona Expy & N Perris Blvd	CLIENT:	Environmental & Regulatory Specialists, Inc.
ADDRESS:	Not Reported Perris CA 92571	CONTACT:	Joe Tyndall
LAT/LONG:	33.845625 / 117.228504	INQUIRY #:	6058931.2s
		DATE:	May 07, 2020 5:33 pm

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GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

1
NW
1/8 - 1/4 Mile
Higher | **CA WELLS** | **4816**

Seq:	4816	Prim sta c:	04S/03W-06Q04 S
Frds no:	3310009045	County:	33
District:	14	User id:	WAT
System no:	3310009	Water type:	G
Source nam:	PERRY STREET #2 WELL	Station ty:	WELL/AMBNT/MUN/INTAKE
Latitude:	335050.0	Longitude:	1171345.0
Precision:	3	Status:	AR
Comment 1:	Not Reported	Comment 2:	Not Reported
Comment 3:	Not Reported	Comment 4:	Not Reported
Comment 5:	Not Reported	Comment 6:	Not Reported
Comment 7:	Not Reported		

System no:	3310009	System nam:	Eastern Municipal Wd
Hqname:	EASTERN MUNICIPAL WATER DIST	Address:	P.O. Box 8300
City:	San Jacinto	State:	CA
Zip:	92381	Zip ext:	1300
Pop serv:	253705	Connection:	84839
Area serve:	HEMET-SAN JACINTO-SUN CITY		

Sample date:	18-JAN-18	Finding:	5.
Chemical:	NITRATE (AS N)	Report units:	MG/L
Dlr:	0.4		

Sample date:	03-OCT-17	Finding:	4.9
Chemical:	NITRATE (AS N)	Report units:	MG/L
Dlr:	0.4		

Sample date:	01-AUG-17	Finding:	1.6
Chemical:	GROSS BETA MDA95	Report units:	PCI/L
Dlr:	0.		

Sample date:	01-AUG-17	Finding:	0.506
Chemical:	RADIUM 228 MDA95	Report units:	PCI/L
Dlr:	0.		

Sample date:	01-AUG-17	Finding:	1350.
Chemical:	SPECIFIC CONDUCTANCE	Report units:	US
Dlr:	0.		

Sample date:	01-AUG-17	Finding:	7.3
Chemical:	PH, LABORATORY	Report units:	Not Reported
Dlr:	0.		

Sample date:	01-AUG-17	Finding:	150.
Chemical:	ALKALINITY (TOTAL) AS CACO3	Report units:	MG/L
Dlr:	0.		

Sample date:	01-AUG-17	Finding:	180.
Chemical:	BICARBONATE ALKALINITY	Report units:	MG/L
Dlr:	0.		

Sample date:	01-AUG-17	Finding:	5.2
Chemical:	NITRATE (AS N)	Report units:	MG/L
Dlr:	0.4		

Sample date:	01-AUG-17	Finding:	420.
Chemical:	HARDNESS (TOTAL) AS CACO3	Report units:	MG/L
Dlr:	0.		
Sample date:	01-AUG-17	Finding:	120.
Chemical:	CALCIUM	Report units:	MG/L
Dlr:	0.		
Sample date:	01-AUG-17	Finding:	29.
Chemical:	MAGNESIUM	Report units:	MG/L
Dlr:	0.		
Sample date:	01-AUG-17	Finding:	120.
Chemical:	SODIUM	Report units:	MG/L
Dlr:	0.		
Sample date:	01-AUG-17	Finding:	320.
Chemical:	CHLORIDE	Report units:	MG/L
Dlr:	0.		
Sample date:	01-AUG-17	Finding:	64.
Chemical:	SULFATE	Report units:	MG/L
Dlr:	0.5		
Sample date:	01-AUG-17	Finding:	0.38
Chemical:	FLUORIDE (F) (NATURAL-SOURCE)	Report units:	MG/L
Dlr:	0.1		
Sample date:	01-AUG-17	Finding:	45.
Chemical:	SILICA	Report units:	MG/L
Dlr:	0.		
Sample date:	01-AUG-17	Finding:	260.
Chemical:	BARIUM	Report units:	UG/L
Dlr:	100.		
Sample date:	01-AUG-17	Finding:	620.
Chemical:	BORON	Report units:	UG/L
Dlr:	100.		
Sample date:	01-AUG-17	Finding:	980.
Chemical:	TOTAL DISSOLVED SOLIDS	Report units:	MG/L
Dlr:	0.		
Sample date:	01-AUG-17	Finding:	4.4
Chemical:	TURBIDITY, LABORATORY	Report units:	NTU
Dlr:	0.1		
Sample date:	01-AUG-17	Finding:	11.9
Chemical:	AGGRSSIVE INDEX (CORROSIVITY)	Report units:	Not Reported
Dlr:	0.		
Sample date:	01-AUG-17	Finding:	1.2
Chemical:	CHROMIUM, HEXAVALENT	Report units:	UG/L
Dlr:	1.		
Sample date:	01-AUG-17	Finding:	7.58
Chemical:	GROSS ALPHA	Report units:	PCI/L
Dlr:	3.		
Sample date:	01-AUG-17	Finding:	2.13
Chemical:	GROSS ALPHA COUNTING ERROR	Report units:	PCI/L

Dlr:	0.		
Sample date:	01-AUG-17	Finding:	4.82
Chemical:	GROSS BETA	Report units:	PCI/L
Dlr:	4.		
Sample date:	01-AUG-17	Finding:	1.53
Chemical:	GROSS BETA COUNTING ERROR	Report units:	PCI/L
Dlr:	0.		
Sample date:	01-AUG-17	Finding:	0.145
Chemical:	RADIUM 226 COUNTING ERROR	Report units:	PCI/L
Dlr:	0.		
Sample date:	01-AUG-17	Finding:	0.44
Chemical:	RADIUM 228 COUNTING ERROR	Report units:	PCI/L
Dlr:	0.		
Sample date:	01-AUG-17	Finding:	4.51
Chemical:	URANIUM (PCI/L)	Report units:	PCI/L
Dlr:	1.		
Sample date:	01-AUG-17	Finding:	1.49
Chemical:	URANIUM COUNTING ERROR	Report units:	PCI/L
Dlr:	0.		
Sample date:	01-AUG-17	Finding:	2.07
Chemical:	GROSS ALPHA MDA95	Report units:	PCI/L
Dlr:	0.		
Sample date:	01-AUG-17	Finding:	0.47
Chemical:	URANIUM MDA95	Report units:	PCI/L
Dlr:	0.		
Sample date:	01-AUG-17	Finding:	0.363
Chemical:	RADIUM 226 MDA95	Report units:	PCI/L
Dlr:	0.		
Sample date:	20-JUL-17	Finding:	5.1
Chemical:	NITRATE (AS N)	Report units:	MG/L
Dlr:	0.4		
Sample date:	19-APR-17	Finding:	1.3
Chemical:	NITRATE (AS N)	Report units:	MG/L
Dlr:	0.4		
Sample date:	10-JAN-17	Finding:	5.2
Chemical:	NITRATE (AS N)	Report units:	MG/L
Dlr:	0.4		
Sample date:	10-OCT-16	Finding:	5.2
Chemical:	NITRATE (AS N)	Report units:	MG/L
Dlr:	0.4		
Sample date:	13-SEP-16	Finding:	5.
Chemical:	NITRATE (AS N)	Report units:	MG/L
Dlr:	0.4		
Sample date:	02-AUG-16	Finding:	29.
Chemical:	MAGNESIUM	Report units:	MG/L
Dlr:	0.		

Sample date:	02-AUG-16	Finding:	11.9
Chemical:	AGGRSSIVE INDEX (CORROSIVITY)	Report units:	Not Reported
Dlr:	0.		
Sample date:	02-AUG-16	Finding:	5.1
Chemical:	NITRATE + NITRITE (AS N)	Report units:	MG/L
Dlr:	0.4		
Sample date:	02-AUG-16	Finding:	1530.
Chemical:	SPECIFIC CONDUCTANCE	Report units:	US
Dlr:	0.		
Sample date:	02-AUG-16	Finding:	7.3
Chemical:	PH, LABORATORY	Report units:	Not Reported
Dlr:	0.		
Sample date:	02-AUG-16	Finding:	140.
Chemical:	ALKALINITY (TOTAL) AS CACO3	Report units:	MG/L
Dlr:	0.		
Sample date:	02-AUG-16	Finding:	170.
Chemical:	BICARBONATE ALKALINITY	Report units:	MG/L
Dlr:	0.		
Sample date:	02-AUG-16	Finding:	5.1
Chemical:	NITRATE (AS N)	Report units:	MG/L
Dlr:	0.4		
Sample date:	02-AUG-16	Finding:	0.42
Chemical:	TOTAL ORGANIC CARBON (TOC)	Report units:	MG/L
Dlr:	0.3		
Sample date:	02-AUG-16	Finding:	410.
Chemical:	HARDNESS (TOTAL) AS CACO3	Report units:	MG/L
Dlr:	0.		
Sample date:	02-AUG-16	Finding:	120.
Chemical:	CALCIUM	Report units:	MG/L
Dlr:	0.		
Sample date:	02-AUG-16	Finding:	120.
Chemical:	SODIUM	Report units:	MG/L
Dlr:	0.		
Sample date:	02-AUG-16	Finding:	310.
Chemical:	CHLORIDE	Report units:	MG/L
Dlr:	0.		
Sample date:	02-AUG-16	Finding:	63.
Chemical:	SULFATE	Report units:	MG/L
Dlr:	0.5		
Sample date:	02-AUG-16	Finding:	0.39
Chemical:	FLUORIDE (F) (NATURAL-SOURCE)	Report units:	MG/L
Dlr:	0.1		
Sample date:	02-AUG-16	Finding:	42.
Chemical:	SILICA	Report units:	MG/L
Dlr:	0.		
Sample date:	02-AUG-16	Finding:	270.
Chemical:	BARIUM	Report units:	UG/L

Dlr:	100.		
Sample date:	02-AUG-16	Finding:	610.
Chemical:	BORON	Report units:	UG/L
Dlr:	100.		
Sample date:	02-AUG-16	Finding:	890.
Chemical:	TOTAL DISSOLVED SOLIDS	Report units:	MG/L
Dlr:	0.		
Sample date:	16-JUN-16	Finding:	5.
Chemical:	NITRATE (AS N)	Report units:	MG/L
Dlr:	0.4		
Sample date:	02-MAR-16	Finding:	4.9
Chemical:	NITRATE (AS N)	Report units:	MG/L
Dlr:	0.4		
Sample date:	09-FEB-16	Finding:	4.9
Chemical:	NITRATE (AS N)	Report units:	MG/L
Dlr:	0.4		
Sample date:	17-NOV-15	Finding:	4.8
Chemical:	NITRATE (AS N)	Report units:	MG/L
Dlr:	0.4		
Sample date:	05-AUG-15	Finding:	1490.
Chemical:	SPECIFIC CONDUCTANCE	Report units:	US
Dlr:	0.		
Sample date:	05-AUG-15	Finding:	7.2
Chemical:	PH, LABORATORY	Report units:	Not Reported
Dlr:	0.		
Sample date:	05-AUG-15	Finding:	150.
Chemical:	ALKALINITY (TOTAL) AS CACO3	Report units:	MG/L
Dlr:	0.		
Sample date:	05-AUG-15	Finding:	180.
Chemical:	BICARBONATE ALKALINITY	Report units:	MG/L
Dlr:	0.		
Sample date:	05-AUG-15	Finding:	0.48
Chemical:	TOTAL ORGANIC CARBON (TOC)	Report units:	MG/L
Dlr:	0.3		
Sample date:	05-AUG-15	Finding:	440.
Chemical:	HARDNESS (TOTAL) AS CACO3	Report units:	MG/L
Dlr:	0.		
Sample date:	05-AUG-15	Finding:	130.
Chemical:	CALCIUM	Report units:	MG/L
Dlr:	0.		
Sample date:	05-AUG-15	Finding:	31.
Chemical:	MAGNESIUM	Report units:	MG/L
Dlr:	0.		
Sample date:	05-AUG-15	Finding:	130.
Chemical:	SODIUM	Report units:	MG/L
Dlr:	0.		

Sample date:	05-AUG-15	Finding:	320.
Chemical:	CHLORIDE	Report units:	MG/L
Dlr:	0.		
Sample date:	05-AUG-15	Finding:	62.
Chemical:	SULFATE	Report units:	MG/L
Dlr:	0.5		
Sample date:	05-AUG-15	Finding:	0.43
Chemical:	FLUORIDE (F) (NATURAL-SOURCE)	Report units:	MG/L
Dlr:	0.1		
Sample date:	05-AUG-15	Finding:	46.
Chemical:	SILICA	Report units:	MG/L
Dlr:	0.		
Sample date:	05-AUG-15	Finding:	270.
Chemical:	BARIUM	Report units:	UG/L
Dlr:	100.		
Sample date:	05-AUG-15	Finding:	630.
Chemical:	BORON	Report units:	UG/L
Dlr:	100.		
Sample date:	05-AUG-15	Finding:	980.
Chemical:	TOTAL DISSOLVED SOLIDS	Report units:	MG/L
Dlr:	0.		
Sample date:	05-AUG-15	Finding:	23.
Chemical:	NITRATE (AS NO3)	Report units:	MG/L
Dlr:	2.		
Sample date:	05-AUG-15	Finding:	0.2
Chemical:	TURBIDITY, LABORATORY	Report units:	NTU
Dlr:	0.1		
Sample date:	05-AUG-15	Finding:	11.9
Chemical:	AGGRSSIVE INDEX (CORROSIVITY)	Report units:	Not Reported
Dlr:	0.		
Sample date:	05-AUG-15	Finding:	5.2
Chemical:	NITRATE (AS N)	Report units:	MG/L
Dlr:	0.4		
Sample date:	05-AUG-15	Finding:	5200.
Chemical:	NITRATE + NITRITE (AS N)	Report units:	MG/L
Dlr:	0.4		
Sample date:	22-APR-15	Finding:	23.
Chemical:	NITRATE (AS NO3)	Report units:	MG/L
Dlr:	2.		
Sample date:	14-JAN-15	Finding:	20.
Chemical:	NITRATE (AS NO3)	Report units:	MG/L
Dlr:	2.		
Sample date:	14-AUG-14	Finding:	940.
Chemical:	TOTAL DISSOLVED SOLIDS	Report units:	MG/L
Dlr:	0.		
Sample date:	14-AUG-14	Finding:	0.179
Chemical:	RA-226 OR TOTAL RA BY 903.0 C.E.	Report units:	PCI/L

Dlr:	0.		
Sample date:	14-AUG-14	Finding:	0.116
Chemical:	RA-226 FOR CWS OR TOTAL RA FOR NTNC BY 903.0		
Report units:	PCI/L	Dlr:	0.
Sample date:	14-AUG-14	Finding:	1.72
Chemical:	GROSS BETA MDA95	Report units:	PCI/L
Dlr:	0.		
Sample date:	14-AUG-14	Finding:	1370.
Chemical:	SPECIFIC CONDUCTANCE	Report units:	US
Dlr:	0.		
Sample date:	14-AUG-14	Finding:	7.4
Chemical:	PH, LABORATORY	Report units:	Not Reported
Dlr:	0.		
Sample date:	14-AUG-14	Finding:	140.
Chemical:	ALKALINITY (TOTAL) AS CACO3	Report units:	MG/L
Dlr:	0.		
Sample date:	14-AUG-14	Finding:	170.
Chemical:	BICARBONATE ALKALINITY	Report units:	MG/L
Dlr:	0.		
Sample date:	14-AUG-14	Finding:	430.
Chemical:	HARDNESS (TOTAL) AS CACO3	Report units:	MG/L
Dlr:	0.		
Sample date:	14-AUG-14	Finding:	120.
Chemical:	CALCIUM	Report units:	MG/L
Dlr:	0.		
Sample date:	14-AUG-14	Finding:	30.
Chemical:	MAGNESIUM	Report units:	MG/L
Dlr:	0.		
Sample date:	14-AUG-14	Finding:	120.
Chemical:	SODIUM	Report units:	MG/L
Dlr:	0.		
Sample date:	14-AUG-14	Finding:	3.6
Chemical:	POTASSIUM	Report units:	MG/L
Dlr:	0.		
Sample date:	14-AUG-14	Finding:	330.
Chemical:	CHLORIDE	Report units:	MG/L
Dlr:	0.		
Sample date:	14-AUG-14	Finding:	61.
Chemical:	SULFATE	Report units:	MG/L
Dlr:	0.5		
Sample date:	14-AUG-14	Finding:	0.39
Chemical:	FLUORIDE (F) (NATURAL-SOURCE)	Report units:	MG/L
Dlr:	0.1		
Sample date:	14-AUG-14	Finding:	45.
Chemical:	SILICA	Report units:	MG/L
Dlr:	0.		

Sample date:	14-AUG-14	Finding:	270.
Chemical:	BARIUM	Report units:	UG/L
Dlr:	100.		
Sample date:	14-AUG-14	Finding:	620.
Chemical:	BORON	Report units:	UG/L
Dlr:	100.		
Sample date:	14-AUG-14	Finding:	0.47
Chemical:	RADIUM, TOTAL, MDA95-NTNC ONLY, BY 903.0		
Report units:	PCI/L	Dlr:	0.
Sample date:	14-AUG-14	Finding:	0.101
Chemical:	LANGELIER INDEX AT SOURCE TEMP.	Report units:	Not Reported
Dlr:	0.		
Sample date:	14-AUG-14	Finding:	22.
Chemical:	NITRATE (AS NO3)	Report units:	MG/L
Dlr:	2.		
Sample date:	14-AUG-14	Finding:	1.8
Chemical:	TURBIDITY, LABORATORY	Report units:	NTU
Dlr:	0.1		
Sample date:	14-AUG-14	Finding:	12.
Chemical:	AGGRSSIVE INDEX (CORROSIVITY)	Report units:	Not Reported
Dlr:	0.		
Sample date:	14-AUG-14	Finding:	1.2
Chemical:	CHROMIUM, HEXAVALENT	Report units:	UG/L
Dlr:	1.		
Sample date:	14-AUG-14	Finding:	0.54
Chemical:	TRICHLOROETHYLENE	Report units:	UG/L
Dlr:	0.5		
Sample date:	14-AUG-14	Finding:	6.04
Chemical:	GROSS ALPHA	Report units:	PCI/L
Dlr:	3.		
Sample date:	14-AUG-14	Finding:	2.51
Chemical:	GROSS ALPHA COUNTING ERROR	Report units:	PCI/L
Dlr:	0.		
Sample date:	14-AUG-14	Finding:	1.53
Chemical:	GROSS BETA COUNTING ERROR	Report units:	PCI/L
Dlr:	0.		
Sample date:	14-AUG-14	Finding:	0.462
Chemical:	RADIUM 228 COUNTING ERROR	Report units:	PCI/L
Dlr:	0.		
Sample date:	14-AUG-14	Finding:	3.7
Chemical:	URANIUM (PCI/L)	Report units:	PCI/L
Dlr:	1.		
Sample date:	14-AUG-14	Finding:	1.24
Chemical:	URANIUM COUNTING ERROR	Report units:	PCI/L
Dlr:	0.		
Sample date:	14-AUG-14	Finding:	2.08
Chemical:	GROSS ALPHA MDA95	Report units:	PCI/L

Dlr:	0.		
Sample date:	14-AUG-14	Finding:	0.3
Chemical:	URANIUM MDA95	Report units:	PCI/L
Dlr:	0.		
Sample date:	14-AUG-14	Finding:	0.253
Chemical:	RADIUM 228 MDA95	Report units:	PCI/L
Dlr:	0.		
Sample date:	24-APR-14	Finding:	20.
Chemical:	NITRATE (AS NO3)	Report units:	MG/L
Dlr:	2.		
Sample date:	27-JAN-14	Finding:	21.
Chemical:	NITRATE (AS NO3)	Report units:	MG/L
Dlr:	2.		
Sample date:	04-NOV-13	Finding:	20.
Chemical:	NITRATE (AS NO3)	Report units:	MG/L
Dlr:	2.		
Sample date:	04-NOV-13	Finding:	0.53
Chemical:	TRICHLOROETHYLENE	Report units:	UG/L
Dlr:	0.5		
Sample date:	14-AUG-13	Finding:	3.4
Chemical:	POTASSIUM	Report units:	MG/L
Dlr:	0.		
Sample date:	14-AUG-13	Finding:	0.55
Chemical:	TRICHLOROETHYLENE	Report units:	UG/L
Dlr:	0.5		
Sample date:	14-AUG-13	Finding:	4600.
Chemical:	NITRATE + NITRITE (AS N)	Report units:	MG/L
Dlr:	0.4		
Sample date:	14-AUG-13	Finding:	1410.
Chemical:	SPECIFIC CONDUCTANCE	Report units:	US
Dlr:	0.		
Sample date:	14-AUG-13	Finding:	7.2
Chemical:	PH, LABORATORY	Report units:	Not Reported
Dlr:	0.		
Sample date:	14-AUG-13	Finding:	160.
Chemical:	ALKALINITY (TOTAL) AS CACO3	Report units:	MG/L
Dlr:	0.		
Sample date:	14-AUG-13	Finding:	190.
Chemical:	BICARBONATE ALKALINITY	Report units:	MG/L
Dlr:	0.		
Sample date:	14-AUG-13	Finding:	390.
Chemical:	HARDNESS (TOTAL) AS CACO3	Report units:	MG/L
Dlr:	0.		
Sample date:	14-AUG-13	Finding:	110.
Chemical:	CALCIUM	Report units:	MG/L
Dlr:	0.		

Sample date:	14-AUG-13	Finding:	27.
Chemical:	MAGNESIUM	Report units:	MG/L
Dlr:	0.		
Sample date:	14-AUG-13	Finding:	110.
Chemical:	SODIUM	Report units:	MG/L
Dlr:	0.		
Sample date:	14-AUG-13	Finding:	270.
Chemical:	CHLORIDE	Report units:	MG/L
Dlr:	0.		
Sample date:	14-AUG-13	Finding:	57.
Chemical:	SULFATE	Report units:	MG/L
Dlr:	0.5		
Sample date:	14-AUG-13	Finding:	0.35
Chemical:	FLUORIDE (F) (NATURAL-SOURCE)	Report units:	MG/L
Dlr:	0.1		
Sample date:	14-AUG-13	Finding:	41.
Chemical:	SILICA	Report units:	MG/L
Dlr:	0.		
Sample date:	14-AUG-13	Finding:	250.
Chemical:	BARIUM	Report units:	UG/L
Dlr:	100.		
Sample date:	14-AUG-13	Finding:	560.
Chemical:	BORON	Report units:	UG/L
Dlr:	100.		
Sample date:	14-AUG-13	Finding:	850.
Chemical:	TOTAL DISSOLVED SOLIDS	Report units:	MG/L
Dlr:	0.		
Sample date:	14-AUG-13	Finding:	20.
Chemical:	NITRATE (AS NO3)	Report units:	MG/L
Dlr:	2.		
Sample date:	14-AUG-13	Finding:	0.2
Chemical:	TURBIDITY, LABORATORY	Report units:	NTU
Dlr:	0.1		
Sample date:	09-APR-13	Finding:	23.
Chemical:	NITRATE (AS NO3)	Report units:	MG/L
Dlr:	2.		
Sample date:	28-JAN-13	Finding:	0.65
Chemical:	TRICHLOROETHYLENE	Report units:	UG/L
Dlr:	0.5		
Sample date:	28-JAN-13	Finding:	20.
Chemical:	NITRATE (AS NO3)	Report units:	MG/L
Dlr:	2.		
Sample date:	08-OCT-12	Finding:	0.62
Chemical:	TRICHLOROETHYLENE	Report units:	UG/L
Dlr:	0.5		
Sample date:	01-AUG-12	Finding:	22.
Chemical:	NITRATE (AS NO3)	Report units:	MG/L

Dlr:	2.		
Sample date:	01-AUG-12	Finding:	0.63
Chemical:	TRICHLOROETHYLENE	Report units:	UG/L
Dlr:	0.5		
Sample date:	01-AUG-12	Finding:	5000.
Chemical:	NITRATE + NITRITE (AS N)	Report units:	MG/L
Dlr:	0.4		
Sample date:	09-APR-12	Finding:	22.
Chemical:	NITRATE (AS NO3)	Report units:	MG/L
Dlr:	2.		
Sample date:	09-APR-12	Finding:	0.71
Chemical:	TRICHLOROETHYLENE	Report units:	UG/L
Dlr:	0.5		
Sample date:	11-JAN-12	Finding:	0.6
Chemical:	TRICHLOROETHYLENE	Report units:	UG/L
Dlr:	0.5		

A2
WNW
1/8 - 1/4 Mile
Higher

CA WELLS **CADWR8000005837**

State Well #:	Not Reported	Station ID:	48225
Well Name:	EMWD11044	Well Use:	Irrigation
Well Type:	Single Well	Well Depth:	807
Basin Name:	San Jacinto	Well Completion Rpt #:	Not Reported

A3
West
1/4 - 1/2 Mile
Higher

FED USGS **USGS40000138560**

Organization ID:	USGS-CA		
Organization Name:	USGS California Water Science Center		
Monitor Location:	004S003W06Q001S	Type:	Well
Description:	Not Reported	HUC:	18070202
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	California Coastal Basin aquifers		
Formation Type:	Not Reported	Aquifer Type:	Not Reported
Construction Date:	Not Reported	Well Depth:	Not Reported
Well Depth Units:	Not Reported	Well Hole Depth:	Not Reported
Well Hole Depth Units:	Not Reported		

A4
WNW
1/4 - 1/2 Mile
Higher

CA WELLS **4815**

Seq:	4815	Prim sta c:	04S/03W-06Q03 S
Frds no:	3310009010	County:	33
District:	14	User id:	WAT

System no:	3310009	Water type:	G
Source nam:	WELL 1341 PERRY - ABANDONED	Station ty:	WELL/AMBNT
Latitude:	335049.0	Longitude:	1171355.0
Precision:	2	Status:	AB
Comment 1:	Not Reported	Comment 2:	Not Reported
Comment 3:	Not Reported	Comment 4:	Not Reported
Comment 5:	Not Reported	Comment 6:	Not Reported
Comment 7:	Not Reported		

System no:	3310009	System nam:	Eastern Municipal Wd
Hqname:	EASTERN MUNICIPAL WATER DIST	Address:	P.O. Box 8300
City:	San Jacinto	State:	CA
Zip:	92381	Zip ext:	1300
Pop serv:	253705	Connection:	84839
Area serve:	HEMET-SAN JACINTO-SUN CITY		

5
WNW **FED USGS** **USGS40000138576**
1/4 - 1/2 Mile
Higher

Organization ID:	USGS-CA		
Organization Name:	USGS California Water Science Center		
Monitor Location:	004S003W06Q004S	Type:	Well
Description:	Not Reported	HUC:	Not Reported
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	California Coastal Basin aquifers		
Formation Type:	Cenozoic Erathem	Aquifer Type:	Unconfined single aquifer
Construction Date:	19940115	Well Depth:	760
Well Depth Units:	ft	Well Hole Depth:	905
Well Hole Depth Units:	ft		

Ground water levels,Number of Measurements:	1	Level reading date:	2001-03-12
Feet below surface:	109.8	Feet to sea level:	Not Reported
Note:	Not Reported		

6
SSE **CA WELLS** **CADWR8000005806**
1/4 - 1/2 Mile
Lower

State Well #:	Not Reported	Station ID:	48226
Well Name:	EMWD11048	Well Use:	Irrigation
Well Type:	Single Well	Well Depth:	465
Basin Name:	San Jacinto	Well Completion Rpt #:	Not Reported

7
North **CA WELLS** **4814**
1/2 - 1 Mile
Higher

Seq:	4814	Prim sta c:	04S/03W-06H02 S
Frds no:	3310700002	County:	33
District:	14	User id:	WAT
System no:	3310700	Water type:	G
Source nam:	WELL 06 - ABANDONED	Station ty:	WELL/AMBNT

Latitude:	335114.0	Longitude:	1171338.0
Precision:	2	Status:	AB
Comment 1:	Not Reported	Comment 2:	Not Reported
Comment 3:	Not Reported	Comment 4:	Not Reported
Comment 5:	Not Reported	Comment 6:	Not Reported
Comment 7:	Not Reported		

System no:	3310700	System nam:	March Afb
Hqname:	MARCH AFB	Address:	722 CES/CC 840 MACDILL,BLD2506
City:	MARCH AFB	State:	CA
Zip:	92518	Zip ext:	Not Reported
Pop serv:	8186	Connection:	2348
Area serve:	MARCH AFB		

B8
South
1/2 - 1 Mile
Lower

CA WELLS **CADWR8000005790**

State Well #:	Not Reported	Station ID:	48227
Well Name:	EMWD11049	Well Use:	Irrigation
Well Type:	Single Well	Well Depth:	432
Basin Name:	San Jacinto	Well Completion Rpt #:	Not Reported

B9
South
1/2 - 1 Mile
Lower

FED USGS **USGS40000138517**

Organization ID:	USGS-CA		
Organization Name:	USGS California Water Science Center		
Monitor Location:	004S003W07J002S	Type:	Well
Description:	Not Reported	HUC:	18070202
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	California Coastal Basin aquifers		
Formation Type:	Not Reported	Aquifer Type:	Not Reported
Construction Date:	Not Reported	Well Depth:	Not Reported
Well Depth Units:	Not Reported	Well Hole Depth:	Not Reported
Well Hole Depth Units:	Not Reported		

C10
NNE
1/2 - 1 Mile
Lower

FED USGS **USGS40000138607**

Organization ID:	USGS-CA		
Organization Name:	USGS California Water Science Center		
Monitor Location:	004S003W06H001S	Type:	Well
Description:	Not Reported	HUC:	18070202
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	California Coastal Basin aquifers		
Formation Type:	Not Reported	Aquifer Type:	Not Reported
Construction Date:	Not Reported	Well Depth:	Not Reported
Well Depth Units:	Not Reported	Well Hole Depth:	Not Reported
Well Hole Depth Units:	Not Reported		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

C11
NNE
1/2 - 1 Mile
Lower

FED USGS **USGS40000138608**

Organization ID:	USGS-CA		
Organization Name:	USGS California Water Science Center		
Monitor Location:	004S003W06H002S	Type:	Well
Description:	Not Reported	HUC:	18070202
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	California Coastal Basin aquifers		
Formation Type:	Not Reported	Aquifer Type:	Not Reported
Construction Date:	Not Reported	Well Depth:	Not Reported
Well Depth Units:	Not Reported	Well Hole Depth:	Not Reported
Well Hole Depth Units:	Not Reported		

D12
South
1/2 - 1 Mile
Higher

FED USGS **USGS40000138509**

Organization ID:	USGS-CA		
Organization Name:	USGS California Water Science Center		
Monitor Location:	004S003W07J001S	Type:	Well
Description:	Not Reported	HUC:	18070202
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	California Coastal Basin aquifers		
Formation Type:	Not Reported	Aquifer Type:	Not Reported
Construction Date:	Not Reported	Well Depth:	420
Well Depth Units:	ft	Well Hole Depth:	420
Well Hole Depth Units:	ft		

D13
South
1/2 - 1 Mile
Higher

CA WELLS **CADWR8000005777**

State Well #:	Not Reported	Station ID:	48228
Well Name:	EMWD12404	Well Use:	Irrigation
Well Type:	Single Well	Well Depth:	0
Basin Name:	San Jacinto	Well Completion Rpt #:	Not Reported

14
NNW
1/2 - 1 Mile
Higher

FED USGS **USGS40000138615**

Organization ID:	USGS-CA		
Organization Name:	USGS California Water Science Center		
Monitor Location:	004S003W06C001S	Type:	Well
Description:	Not Reported	HUC:	18070202
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported

Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	California Coastal Basin aquifers		
Formation Type:	Not Reported	Aquifer Type:	Not Reported
Construction Date:	Not Reported	Well Depth:	Not Reported
Well Depth Units:	Not Reported	Well Hole Depth:	Not Reported
Well Hole Depth Units:	Not Reported		

15
North
1/2 - 1 Mile
Higher

FED USGS **USGS40000138621**

Organization ID:	USGS-CA		
Organization Name:	USGS California Water Science Center		
Monitor Location:	004S003W06A003S	Type:	Well
Description:	Not Reported	HUC:	18070202
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	California Coastal Basin aquifers		
Formation Type:	Not Reported	Aquifer Type:	Not Reported
Construction Date:	Not Reported	Well Depth:	Not Reported
Well Depth Units:	Not Reported	Well Hole Depth:	Not Reported
Well Hole Depth Units:	Not Reported		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS
RADON

AREA RADON INFORMATION

State Database: CA Radon

Radon Test Results

Zipcode	Num Tests	> 4 pCi/L
92571	1	0

Federal EPA Radon Zone for RIVERSIDE County: 2

Note: Zone 1 indoor average level > 4 pCi/L.
: Zone 2 indoor average level >= 2 pCi/L and <= 4 pCi/L.
: Zone 3 indoor average level < 2 pCi/L.

Federal Area Radon Information for RIVERSIDE COUNTY, CA

Number of sites tested: 12

Area	Average Activity	% <4 pCi/L	% 4-20 pCi/L	% >20 pCi/L
Living Area - 1st Floor	0.117 pCi/L	100%	0%	0%
Living Area - 2nd Floor	0.450 pCi/L	100%	0%	0%
Basement	1.700 pCi/L	100%	0%	0%

PHYSICAL SETTING SOURCE RECORDS SEARCHED

TOPOGRAPHIC INFORMATION

USGS 7.5' Digital Elevation Model (DEM)
Source: United States Geologic Survey
EDR acquired the USGS 7.5' Digital Elevation Model in 2002 and updated it in 2006. The 7.5 minute DEM corresponds to the USGS 1:24,000- and 1:25,000-scale topographic quadrangle maps. The DEM provides elevation data with consistent elevation units and projection.

Current USGS 7.5 Minute Topographic Map
Source: U.S. Geological Survey

HYDROLOGIC INFORMATION

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.
Source: FEMA
Telephone: 877-336-2627
Date of Government Version: 2003, 2015

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005 and 2010 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetland Inventory
Source: Department of Fish and Wildlife
Telephone: 916-445-0411

HYDROGEOLOGIC INFORMATION

AQUIFLOW^{R} Information System
Source: EDR proprietary database of groundwater flow information
EDR has developed the AQUIFLOW Information System (AIS) to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted to regulatory authorities at select sites and has extracted the date of the report, hydrogeologically determined groundwater flow direction and depth to water table information.

GEOLOGIC INFORMATION

Geologic Age and Rock Stratigraphic Unit
Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - A digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

STATSGO: State Soil Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)
The U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) leads the national Conservation Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps.

SSURGO: Soil Survey Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)
Telephone: 800-672-5559
SSURGO is the most detailed level of mapping done by the Natural Resources Conservation Service, mapping scales generally range from 1:12,000 to 1:63,360. Field mapping methods using national standards are used to construct the soil maps in the Soil Survey Geographic (SSURGO) database. SSURGO digitizing duplicates the original soil survey maps. This level of mapping is designed for use by landowners, townships and county natural resource planning and management.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

LOCAL / REGIONAL WATER AGENCY RECORDS

FEDERAL WATER WELLS

PWS: Public Water Systems
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Public Water System data from the Federal Reporting Data System. A PWS is any water system which provides water to at least 25 people for at least 60 days annually. PWSs provide water from wells, rivers and other sources.

PWS ENF: Public Water Systems Violation and Enforcement Data
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SDWIS) after August 1995. Prior to August 1995, the data came from the Federal Reporting Data System (FRDS).

USGS Water Wells: USGS National Water Inventory System (NWIS)
This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on wells, springs, and other sources of groundwater.

STATE RECORDS

Water Well Database
Source: Department of Water Resources
Telephone: 916-651-9648

California Drinking Water Quality Database
Source: Department of Public Health
Telephone: 916-324-2319
The database includes all drinking water compliance and special studies monitoring for the state of California since 1984. It consists of over 3,200,000 individual analyses along with well and water system information.

OTHER STATE DATABASE INFORMATION

California Oil and Gas Well Locations
Source: Dept of Conservation, Geologic Energy Management Division
Telephone: 916-323-1779
Oil and Gas well locations in the state.

California Earthquake Fault Lines
Source: California Division of Mines and Geology
The fault lines displayed on EDR's Topographic map are digitized quaternary fault lines prepared in 1975 by the United State Geological Survey. Additional information (also from 1975) regarding activity at specific fault lines comes from California's Preliminary Fault Activity Map prepared by the California Division of Mines and Geology.

RADON

State Database: CA Radon
Source: Department of Public Health
Telephone: 916-210-8558
Radon Database for California

Area Radon Information
Source: USGS
Telephone: 703-356-4020
The National Radon Database has been developed by the U.S. Environmental Protection Agency (USEPA) and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey. The study covers the years 1986 - 1992. Where necessary data has been supplemented by information collected at private sources such as universities and research institutions.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

EPA Radon Zones
Source: EPA
Telephone: 703-356-4020
Sections 307 & 309 of IRAA directed EPA to list and identify areas of U.S. with the potential for elevated indoor radon levels.

OTHER

Airport Landing Facilities: Private and public use landing facilities
Source: Federal Aviation Administration, 800-457-6656

Epicenters: World earthquake epicenters, Richter 5 or greater
Source: Department of Commerce, National Oceanic and Atmospheric Administration

California Earthquake Fault Lines: The fault lines displayed on EDR's Topographic map are digitized quaternary fault lines, prepared in 1975 by the United State Geological Survey. Additional information (also from 1975) regarding activity at specific fault lines comes from California's Preliminary Fault Activity Map prepared by the California Division of Mines and Geology.

STREET AND ADDRESS INFORMATION

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APPENDIX II

EDR Sanborn Map Report, dated May 7, 2020

NW Corner Ramona Expy & N Perris Blvd

Not Reported

Perris, CA 92571

Inquiry Number: 6058931.3

May 07, 2020

Certified Sanborn® Map Report

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

Certified Sanborn® Map Report

05/07/20

Site Name:

NW Corner Ramona Expy & N
Not Reported
Perris, CA 92571
EDR Inquiry # 6058931.3

Client Name:

Environmental & Regulatory Specialists, I
223 62nd Street
Newport Beach, CA 92663
Contact: Joe Tyndall

The Sanborn Library has been searched by EDR and maps covering the target property location as provided by Environmental & Regulatory Specialists, Inc. were identified for the years listed below. The Sanborn Library is the largest, most complete collection of fire insurance maps. The collection includes maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow, and others. Only Environmental Data Resources Inc. (EDR) is authorized to grant rights for commercial reproduction of maps by the Sanborn Library LLC, the copyright holder for the collection. Results can be authenticated by visiting www.edrnet.com/sanborn.

The Sanborn Library is continually enhanced with newly identified map archives. This report accesses all maps in the collection as of the day this report was generated.

Certified Sanborn Results:

Certification # 840E-430D-AF92

PO # 20-03

Project Perris Phase I

UNMAPPED PROPERTY

This report certifies that the complete holdings of the Sanborn Library, LLC collection have been searched based on client supplied target property information, and fire insurance maps covering the target property were not found.

Sanborn® Library search results

Certification #: 840E-430D-AF92

The Sanborn Library includes more than 1.2 million fire insurance maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow and others which track historical property usage in approximately 12,000 American cities and towns. Collections searched:

- ☑ Library of Congress
- ☑ University Publications of America
- ☑ EDR Private Collection

The Sanborn Library LLC Since 1866™

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APPENDIX III

EDR City Directory Image Report, dated May 11, 2020

NW Corner Ramona Expy & N Perris Blvd
Not Reported
Perris, CA 92571

Inquiry Number: 6058931.5
May 11, 2020

The EDR-City Directory Image Report

Environmental Data Resources Inc

6 Armstrong Road
Shelton, CT 06484
800.352.0050
www.edrnet.com

TABLE OF CONTENTS

SECTION

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

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EXECUTIVE SUMMARY

DESCRIPTION

Environmental Data Resources, Inc.'s (EDR) City Directory Report is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's City Directory Report includes a search of available city directory data at 5 year intervals.

RECORD SOURCES

EDR's Digital Archive combines historical directory listings from sources such as Cole Information and Dun & Bradstreet. These standard sources of property information complement and enhance each other to provide a more comprehensive report.

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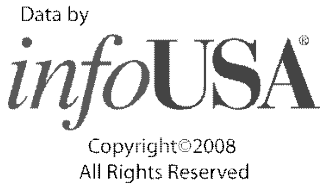


RESEARCH SUMMARY

The following research sources were consulted in the preparation of this report. A check mark indicates where information was identified in the source and provided in this report.

Year	Target Street	Cross Street	Source
2017	☐	☑	EDR Digital Archive
2014	☐	☑	EDR Digital Archive
2010	☐	☑	EDR Digital Archive
2005	☐	☑	EDR Digital Archive
2000	☐	☑	EDR Digital Archive
1995	☐	☑	EDR Digital Archive
1992	☐	☑	EDR Digital Archive
1986	☐	☑	Haines Criss-Cross Directory
1979	☐	☐	Haines Criss-Cross Directory
1974	☐	☐	Haines Criss-Cross Directory
1971	☐	☐	Haines Criss-Cross Directory

FINDINGS

TARGET PROPERTY STREET

Not Reported
Perris, CA 92571

No Addresses Found

FINDINGS

CROSS STREETS

Year	*CD Image*	*Source*	
N PERRIS BLVD			
2017	pg. A1	EDR Digital Archive	
2014	pg. A3	EDR Digital Archive	
2010	pg. A5	EDR Digital Archive	
2005	pg. A7	EDR Digital Archive	
2000	pg. A9	EDR Digital Archive	
1995	pg. A11	EDR Digital Archive	
1992	pg. A13	EDR Digital Archive	
1986	pg. A14	Haines Criss-Cross Directory	
1979	-	Haines Criss-Cross Directory	Target and Adjoining not listed in Source
1974	-	Haines Criss-Cross Directory	Target and Adjoining not listed in Source
1971	-	Haines Criss-Cross Directory	Street not listed in Source
RAMONA BLVD			
1986	-	Haines Criss-Cross Directory	Target and Adjoining not listed in Source
1979	-	Haines Criss-Cross Directory	Target and Adjoining not listed in Source
1974	-	Haines Criss-Cross Directory	Street not listed in Source
1971	-	Haines Criss-Cross Directory	Street not listed in Source
RAMONA EXPY			
2017	pg. A2	EDR Digital Archive	
2014	pg. A4	EDR Digital Archive	
2010	pg. A6	EDR Digital Archive	
2005	pg. A8	EDR Digital Archive	
2000	pg. A10	EDR Digital Archive	
1995	pg. A12	EDR Digital Archive	
1992	-	EDR Digital Archive	Target and Adjoining not listed in Source

City Directory Images

Target Street	Cross Street	Source
-	✓	EDR Digital Archive

N PERRIS BLVD 2017

3515	DRAKE SUPPLY COMPANY
	EAGLE EYE ENGINE REBUILDERS
	LAKESIDE TRANSMISSIONS
3553	ABELS WINDOW TINTING
	ADVANCE MUFFLER
	ADVANCE MUFFLER & BRAKES IN PERRIS
	AMIGOS AUTO REPAIR
	EAGLE EYE CYLINDER HEADS & AUTO REPA
	EMPIRE COMMUNICATION SVCS
	LOS PRIMOS AUTO REPAIR
	PENIS POLICE STORE FRONT
	THE CAMP
3575	PERRIS TIRES & WHEELS
3675	PERRIS TIRES & WHEELS
3845	WEST COAST MOTORSPORTS
3865	CALVARY APOSTOLIC CHURCH
	RENTARIA WHEELS & TIRES
3895	LIDIAS HAIR DESIGN
	MELWANI, KUMAR
	TONE ZONE FITNESS
	U S CUSTOM SOUND
3995	CIRCLE K
	MOBIL
4039	CAR ENTERPRISES
	SHELL
	SUBWAY
4040	AMPM
	SAFAR & SAFAR BROTHERS INC
4164	BILLIARD SPORTS BAR LLC
	LABOR INTERNATIONAL
	LAKE PERRIS AUTO REPAIR
	LAKESIDE MARKET
	LOWEST PRICE SMOG CHECK
	LOWEST PRICED SMOGS
4194	ACE TAX & REALTY
	ACE TAX INCOME TAX SERVICE
	HURTADO, ARMANDO N
4765	NURSERY & ROCK SUPPLY

Target Street	Cross Street	Source
-	✓	EDR Digital Archive

RAMONA EXPY 2017

18	JIFFY LUBE
64	MCDONALDS
85	ANTOJITOS MEXICANOS
	AUI HOME FINANCE
	EL CAJON CELLULARS
	JAMON INC ESCROW DIV
	LULU HAWAIIAN BBQ
	MIKEYS GOLD & SILVER
	PREFERRED REALTOR ASSOCIATES INC
	SUELDO & PERELECHE DENTAL INC
	TUS CASITAS INSURANCE
	V SPA
115	CASA MEXICANA RESTAURANT & BAR
	GODS HELPING HAND
118	JIFFY LUBE
120	GARAGE DOOR REPAIR
	GARAGEDOOR REPAIR PERRIS
	MARLIN LLC
	SMOKE PLUS
	STARBUCKS
	STARBUCKS COFFEE
	TAQUERIA DON JOSE
145	BOOST MOBILE
	FARMER BOYS
	MENDEZ MEAT MARKET
	PANADERIA LAS CONCHITAS
	US JOES EXPRESS SMOG
165	CERVANTES FIESTA MEXICAN FOOD
	JUGOS Y BIONICOS EL PARAISO
	PERRIS EXPRESS BARBERSHOP
	PERRIS WATER PLUS
	RAMONA CLEANERS
185	EXPRESS GADGET REPAIR
	EXPRESSWAY TIRES
748	HARRYS CAFE
764	ALABBASI
	MENDYK CHIROPRACTIC INC
	R HOA
	REALTY EXECUTIVES INTERNATIONAL
	SERVICE TO GOOD MINISTRIES
780	DISH NETWORK
	HAIR LOFT
	NUSA INC
	R HOA
	SUBWAY
	VALENTINOS PIZZA & SPORTS BAR
796	CHEVRON

Target Street	Cross Street	Source
-	✓	EDR Digital Archive

N PERRIS BLVD 2014

3010	PERRIS MINI STORAGE
	PERRIS MINI STORAGE INC
3100	PACIFIC VALLEY HOMES
3411	AVALON SHUTTERS
	PH CONSTRUCTION
3515	DRAKE SUPPLY COMPANY
	EAGLE EYE CYLINDER HEADS & A
	LAKESIDE TRANSMISSIONS
3519	SOVEREIGN GRACE COMMUNITY CHURCH
3532	ROMERO, IRENE
3553	ABELS WINDOW TINTING
	ADVANCE MUFFLER RICOS MUFFLERS &
	ADVANCE MUFFLER RICOS MUFFLERS & B
	AMIGOS AUTO REPAIR
	COMFORT ZONE HEATING & AIR
	PERRIS POLICE STORE FRONT
	XCLUSIVE KUSTOMZ
3575	PERRIS TIRES & WHEELS
3845	WEST COAST MOTORSPORTS
3865	CALVARY APOSTOLIC CHURCH
	RENTARIA WHEELS & TIRES
3895	FARMERS INSURANCE GROUP
	GARTH D MOORE INS
	LIDIAS HAIR DESIGN
	MELWANI, KUMAR
	PERRIS ISLAMIC CENTER
	U S CUSTOM SOUND
3979	JOMAA, M
3995	CIRCLE K
4039	C A R ENTERPRISES
	SUBWAY SANDWICHES
4040	SAFAR & SAFAR BROTHERS INC
4164	BILLIARD SPORTS BAR LLC
	LAKE PERRIS AUTO REPAIR
	LAKESIDE MARKET
	PERRIS SMOG
4194	ACE TAX & REALTY
	ACE TAX INCOME TAX SERVICE
	HURTADO, ARMANDO N
4378	OCCUPANT UNKNOWN,
4765	NURSERY & ROCK SUPPLY

Target Street	Cross Street	Source
-	✓	EDR Digital Archive

RAMONA EXPY 2014

18	JIFFY LUBE
85	ANTOJITOS MEXICANOS
	AUI HOME FINANCE
	EL CAJON CELLULARS
	ISLAND HEALTH CENTER
	LAKE PERRIS MARKET & DELI
	LULU HAWAIIAN BBQ
	REAL ESTATE FIRST
	SUELDO & PERELECHE DENTAL INC
	TUS CASITAS INSURANCE
	UHAUL
115	CASA MEXICANA
	GODS HELPING HAND
120	MARLIN LLC
	PAPA JOHNS PIZZA
	TAQUERIA DON JOSE
145	EL CAJON MUSICAL & CELLULAR
	MENDEZ MEAT MARKET
	MI OFICINA INCOME TAX
	PANADERIA LAS CONCHITAS
	US JOES EXPRESS SMOG
165	ALBERTOS MEXICAN FOOD
	BCMG PERFUMES
	CERVANTES FIESTA MEXICAN FOOD
	JUGOS Y BIONICOS EL PARAISO
	PERRIS WATER PLUS
	RAMONA CLEANERS
185	DIANAS NAILS
	EXPRESSWAY TIRES
375	CAMPER RESORTS OF AMERICA
	PETERS, SUSA A
	PONCE, ABRIEL
	TALIAFERRO, JAMES E
730	LOFT, HAIR
748	HARRYS CAFE
764	REALTY EXECUTIVES INTERNATIONL
780	NARA HOOKAH LOUNGE
	RAMONA SUBWAY 41227
	VALENTINOS PIZZA & BBQ
796	CHEVRON
	CHEVRON STATION EXTRA MILE PERRIS

Target Street	Cross Street	Source
-	✓	EDR Digital Archive

N PERRIS BLVD 2010

3010	PERRIS MINI STORAGE
3100	GOLDEN WEST HOMES
	PACIFIC VALLEY HOMES
3411	NATIONAL RV PARTS & SVC
3515	DRAKE SUPPLY CO
	LAKESIDE TRANSMISSIONS
3519	KINGDOM CHRISTIAN FELLOWSHIP
3532	PASCUAL, CHRYSTY L
3553	ADVANCE MUFFLER & BRAKES
	DANICO
	HUANG, LINGKAU K
	NOVA RACING
	PERRIS POLICE STORE FRONT
	XCLUSIVE KUSTOMZ
3575	JS PARTY JUMPERS
	LITTLE SMOG SHOP
	PERRIS TIRES & WHEELS INC
3865	ORTEGAS WHEELS & TIRE AUTO
3895	AL LOBATO TARBELL REALTORS
	ED WILSON INSURANCE
	GARTH D MOORE INSURANCE
	LIDIAS HAIR DESIGN
	PERRIS ISLAMIC CTR
	QUINN COMMUNITY OUTREACH
3979	JOMAA, M
3995	MOBIL
4039	CAR ENTERPRISES INC
	SUBWAY
4040	SAFAR & SAFAR BROTHERS INC
4104	HURTADO, ARMANDO
4164	BEST FOR LESS TIRES
	LAKESIDE MARKET
4194	ACE TAX INCOME TAX SVC
	OCCUPANT UNKNOWN,
	PAY LESS 4 INSURANCE SVC
	ZOOM APPRAISALS

Target Street	Cross Street	Source
-	✓	EDR Digital Archive

RAMONA EXPY 2010

18	JIFFY LUBE
64	MC DONALDS
85	ANTOJITOS MEXICANOS
	APOLLO PROPERTY MANAGEMENT
	AUI HOME FINANCE
	EMPIRE VALLEY REALTY
	LAKE PERRIS MARKET & DELI
	LULU BBQ
	NANCY PUEBLA RESTAURANT
	RANCHO DENTAL GROUP
	TEE BABYS SOUL FOOD
	THERAPY CENTER
	TUS CASITAS INSURANCE
	VERO POSTAL TERMINAL
	XTRI BUSINESS SVC INC
115	CASA MEXICANA RESTAURANT
120	CASA GRILL
	MARLIN LLC
	PAPA JOHNS PIZZA
	STARBUCKS
145	FARMER BOYS
	MENDEZ MEAT MARKET
	PANADERIA LAS CONCHITAS
	STOP N GO SMOG
165	DLAGO TAX SVC
	JUGOS Y BIONICOS EL PARAISO
	PERRIS EXPRESS BARBERSHOP
	PERRIS WATER PLUS
	RAMONA CLEANERS
375	CAMPER RESORTS OF AMERICA
	DAVIS, PAMELA S
730	LOFT, HAIR
	LOST HAIR
764	PREMIER LOAN SVC
780	L3 NAILS & SPA INC
	OLD CHICAGO
	RUMZ SMOKE SHOP
	SUBWAY
796	CHEVRON

Target Street	Cross Street	Source
-	✓	EDR Digital Archive

N PERRIS BLVD 2005

3010	PERRIS MINI STORAGE INC
3411	NATIONAL R V INC
3515	LAKESIDE TRANSMISSIONS
	PERRIS INDUSTRIAL & TRUCK SUPPLY
	RELAY ELECTRIC & AUTOMOTIVE REPAIR
3519	FREEDOM COMMUNITY CHRISTIAN
	OCCUPANT UNKNOWN,
	PAINTED RHINO
3532	ROMERO, PARTICIA
3553	ADVANCE MUFFLER
	ADVANCE MUFFLERS
	AMIGOS AUTO REPAIR
	DANICO
	DISCOUNT AUTO BODY
	VILLASENOR, JAIME
3575	EXPRESS PROPERTY MANAGEMENT
	PERRIS TIRES & WHEELS
	THE LITTLE SMOG SHOP
3691	OCCUPANT UNKNOWN,
3845	WEST COAST MOTORSPORT
3865	BEST FOR LESS TIRES
	CALVARY APOSTOLIC CHURCH
	INTERSTATE BRAND CORP
3895	ALANO CLUB PERRIS & MORENO VLY
	COMFORT, MINISTERIES
	ED WILSON INSURANCE AGENCY
	GARTH D MOORE INS
	NAILS BY TIFFANY
	PATYS FASHION 4 U
	SUE, B S
3995	EXXON MOBILE
	MOBIL OIL CORP SOI
4039	TEXACO STAR MART
4164	GOLDEN, P
	LAKESIDE MARKET
4194	ACE TAX INCOME TAX SERVICE
	HURTADO ARMANDO RE & NOTARY
	HURTADO, ARMANDO N
4765	ASHLEY AND MARYS NURSERY

Target Street	Cross Street	Source
-	✓	EDR Digital Archive

RAMONA EXPY 2005

85	ALLEN, ERNEST E
	EMPIRE VALLEY REALTY
	JAMON INC
	LAKE PERRIS MARKET & DELI
	VAL VERDE TEACHERS ASSOCIATION
115	SIZZLING STEER STEAK HO
145	BRADS CARTS AND PARTS
	NAILS AND SPA COM
	SMOG N RUN
165	DLAGO TAX SERVICE
	ITS SHOWTIME VIDEO
	KENYAS ICE CREAM
	MARTINEZ, ALICIA
	PERRIS EXPRESS BARBER SHOP
185	ACTION SURVEYS
	GET WET WATER CRAFT RENTALS
	LAKE PERRIS WEATHERCRAFT RENTALS
375	CAMPER RESORTS OF AMERICA
	O B BUEZO HOUSE KEEPING
	OB BUEZO HOUSE KEEPING
	WIELIN, RONALD A

Target Street	Cross Street	Source
-	✓	EDR Digital Archive

N PERRIS BLVD 2000

3100	GOLDEN WEST HOMES
3411	NATIONAL R V PARTS & SERVICE
	NATIONAL RV INCORPORATED
3515	GARCIAS GARAGE
	WISE BUYS
3532	PASCUAL, CHRYSTY L
3553	AUTOMATIC TIMER SERVICE
	DANICO
	PERRIS VALLEY ELECTRICAL & LIGHTING SUPPLY
3845	FIRESTONE BUILDING MATERIALS & HARDWARE
	WEST COAST MOTORSPORTS
3865	BEST FOR LESS TIRES
	FIRST BETHEL BODY OF CHRIST CHURCHES
	WEBER MILLBROOK BAKERY
3895	DIAMOND JEWELERS
	ED WILSON INSURANCE AGENCY
	NAILS BY TIFFANY
	SHEKINAH CHRISTIAN CENTER
3977	CLASS LEASING INCORPORATED
3995	MOBIL OIL CORPORATION SOI
4039	TEXACO STARMART
4040	A & J RANCH MARKET

Target Street	Cross Street	Source
-	✓	EDR Digital Archive

RAMONA EXPY 2000

165 DLAGO TAX SERVICE
185 ACTION SURVEYS
GET WET WATER CRAFT RENTALS

Target Street	Cross Street	Source
-	✓	EDR Digital Archive

N PERRIS BLVD 1995

3411	NATIONAL RV HOLDINGS INC
3515	A & S BODY SHOP
	GAILS CERAMICS
	PERRIS TIRES & WHEELS
	S & R TOWING
	TEAM RACING
3519	VALLEY RESOURCE CTR
3553	ACE GLASS
	AUTOMATIC TIMER SVC
	DANICO
	FREEDOM COMMUNITY CHRISTIAN
	LEADERS SANDWICHES
	LIVING GOSPEL
	PERRIS VALLEY ELECTRICAL SUPL
	REBECAS TRAVEL
	WOODGOODS
3691	PEREZ, E
3845	FIRESTONE BUILDING MATERIALS
3865	BEST FOR LESS TIRES
	MANNINO, SAM
	WEBER MILLBROOK BAKERY
3895	ALANO CLUB OF PERRIS
	APOLLO REALTY
	DODGE, TAMMY A
	ED WILSON INSURANCE
	FARMERS INSURANCE GROUP
	PULLIAM PROPERTIES INC
	SUE BABES STYLIN
3985	DIAMOND JEWELERS
3995	MOBIL OIL CORP
4040	A & J RANCH MARKET
4164	GOLDEN PHEASANT
	LAKESIDE MARKET
4194	NEWKIRK, RICHARD
4765	JULIANS GARDENS

Target Street	Cross Street	Source
-	✓	EDR Digital Archive

RAMONA EXPY 1995

85	CASTANEDA ASSOCIATES
	LAKE PERRIS MARKET & DELI
	WESTERN UNION
115	E H HANSEN REAL ESTATE
145	FARMER BOYS RESTAURANT
185	COMMUNITY TRAINING PROGRAM
	HOME EDUCATION PROGRAM
375	CAMPERS RESORTS OF AMERICA
	DOUBLE K GENERAL STORE

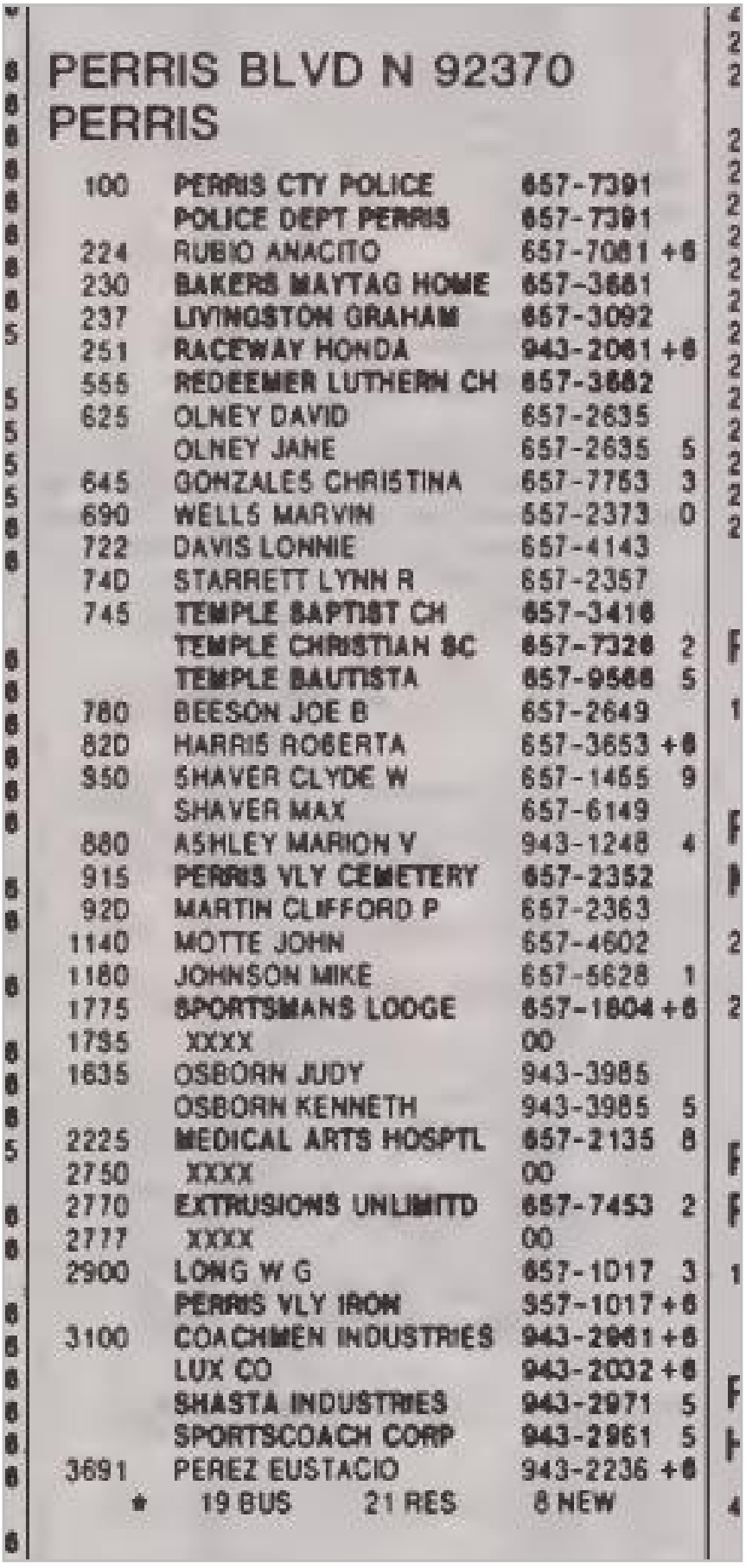
Target Street	Cross Street	Source
-	✓	EDR Digital Archive

N PERRIS BLVD 1992

3411	NATL RV INC
3515	A&C AUTO REPAIR
	CAR CONNECTION
	COMPUTER BIN
	GAILS CERAMICS
	PERRIS TIRES&WHEELS
3519	VALLEY RESOURCE CTR
3553	ACE GLASS
	ARTISTIC DANCE&GYM
	AUTOMTC TIMER SERV
	DANICO
	DOCU FORMS
	FITZPATRICK TL&DSGN
	J&R HEATING&AIR CND
	JESUS CHRISTIAN CTR
	LEADERS SANDWICHES
	NU TECH CONSTR
	PERRIS VLY ELCTL
	SERVICE PLUS AUTO
	WILLIAMS HUSTL&BUST
3691	PEREZ, E
3845	TRU VALUE HARDWARE
3865	D&D MEATS
	ESPERANZA HI SC
	MAIL JUNCTION
	WEBER MILLBRK BKRY
3895	ALANO CLUB PERRIS
	AMER MRTG PLAN
	ED WILSON INS AGCY
	FORTRESS OF HAIR
	GARTH D MOORE INS
	JOHN, JOAN
	SHIRTS N STUFF
3977	PERRIS CMNTY SCHOOL
3995	MOBIL OIL CORP SOI
4040	A&J RANCH MARKET
4164	APPLIANCE WARE HS
	GOLDEN PHEASANT
	LAKESIDE MARKET
4194	NEWKIRK, RICHARD

Target Street	Cross Street	Source
-	✓	Haines Criss-Cross Directory

N PERRIS BLVD 1986



PERRIS BLVD N 92370
PERRIS

100	PERRIS CTY POLICE	657-7391	
	POLICE DEPT PERRIS	657-7391	
224	RUBIO ANACITO	657-7081	+6
230	BAKERS MAYTAG HOME	657-3681	
237	LIVINGSTON GRAHAM	657-3092	
251	RACEWAY HONDA	943-2061	+6
555	REDEEMER LUTHERN CH	657-3682	
625	OLNEY DAVID	657-2635	
	OLNEY JANE	657-2635	5
645	GONZALES CHRISTINA	657-7753	3
690	WELLS MARVIN	657-2373	0
722	DAVIS LONNIE	657-4143	
740	STARRETT LYNN R	657-2357	
745	TEMPLE BAPTIST CH	657-3416	
	TEMPLE CHRISTIAN SC	657-7320	2
	TEMPLE BAUTISTA	657-9566	5
780	BEESON JOE B	657-2649	
820	HARRIS ROBERTA	657-3653	+6
950	SHAVER CLYDE W	657-1455	9
	SHAVER MAX	657-6149	
880	ASHLEY MARION V	943-1248	4
915	PERRIS VLY CEMETERY	657-2352	
920	MARTIN CLIFFORD P	657-2363	
1140	MOTTE JOHN	657-4602	
1180	JOHNSON MIKE	657-5628	1
1775	SPORTSMANS LODGE	657-1804	+6
1795	XXXX	00	
1835	OSBORN JUDY	943-3985	
	OSBORN KENNETH	943-3985	5
2225	MEDICAL ARTS HOSPTL	657-2135	8
2750	XXXX	00	
2770	EXTRUSIONS UNLIMITD	657-7453	2
2777	XXXX	00	
2900	LONG W G	657-1017	3
	PERRIS VLY IRON	357-1017	+6
3100	COACHMEN INDUSTRIES	943-2961	+6
	LUX CO	943-2032	+6
	SHASTA INDUSTRIES	943-2971	5
	SPORTSCOACH CORP	943-2961	5
3691	PEREZ EUSTACIO	943-2236	+6

* 19 BUS 21 RES 8 NEW

APPENDIX IV

EDR Aerial Photo Decade Package, dated May 8, 2020

NW Corner Ramona Expy & N Perris Blvd

Not Reported

Perris, CA 92571

Inquiry Number: 6058931.8

May 08, 2020

The EDR Aerial Photo Decade Package

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

EDR Aerial Photo Decade Package

05/08/20

Site Name:

NW Corner Ramona Expy & N
Not Reported
Perris, CA 92571
EDR Inquiry # 6058931.8

Client Name:

Environmental & Regulatory Specialists,
223 62nd Street
Newport Beach, CA 92663
Contact: Joe Tyndall

Environmental Data Resources, Inc. (EDR) Aerial Photo Decade Package is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's professional researchers provide digitally reproduced historical aerial photographs, and when available, provide one photo per decade.

Search Results:

Year	Scale	Details	Source
2016	1"=500'	Flight Year: 2016	USDA/NAIP
2012	1"=500'	Flight Year: 2012	USDA/NAIP
2009	1"=500'	Flight Year: 2009	USDA/NAIP
2006	1"=500'	Flight Year: 2006	USDA/NAIP
2002	1"=500'	Acquisition Date: June 06, 2002	USGS/DOQQ
1997	1"=500'	Flight Date: October 16, 1997	USGS
1989	1"=500'	Flight Date: August 15, 1989	USDA
1985	1"=500'	Flight Date: July 28, 1985	USDA
1978	1"=500'	Flight Date: September 20, 1978	USDA
1967	1"=500'	Flight Date: May 15, 1967	USDA
1961	1"=500'	Flight Date: June 14, 1961	USDA
1959	1"=500'	Flight Date: September 05, 1959	USDA
1953	1"=500'	Flight Date: August 28, 1953	USDA
1949	1"=500'	Flight Date: May 08, 1949	USDA
1938	1"=500'	Flight Date: June 14, 1938	USDA

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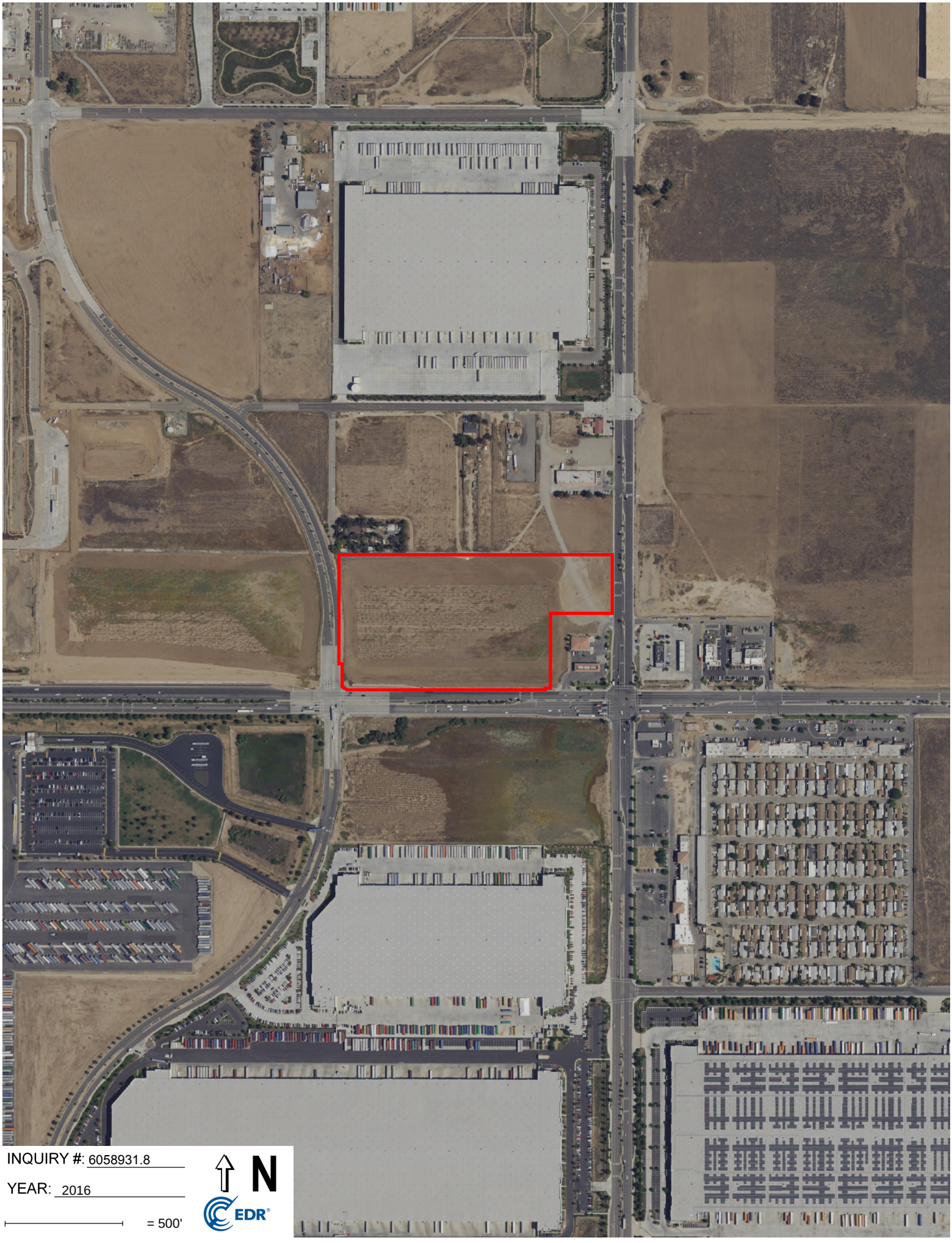
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YEAR: 2016
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N
EDR


INQUIRY #: 6058931.8
YEAR: 2012
= 500'
N
EDR

INQUIRY #: 6058931.8

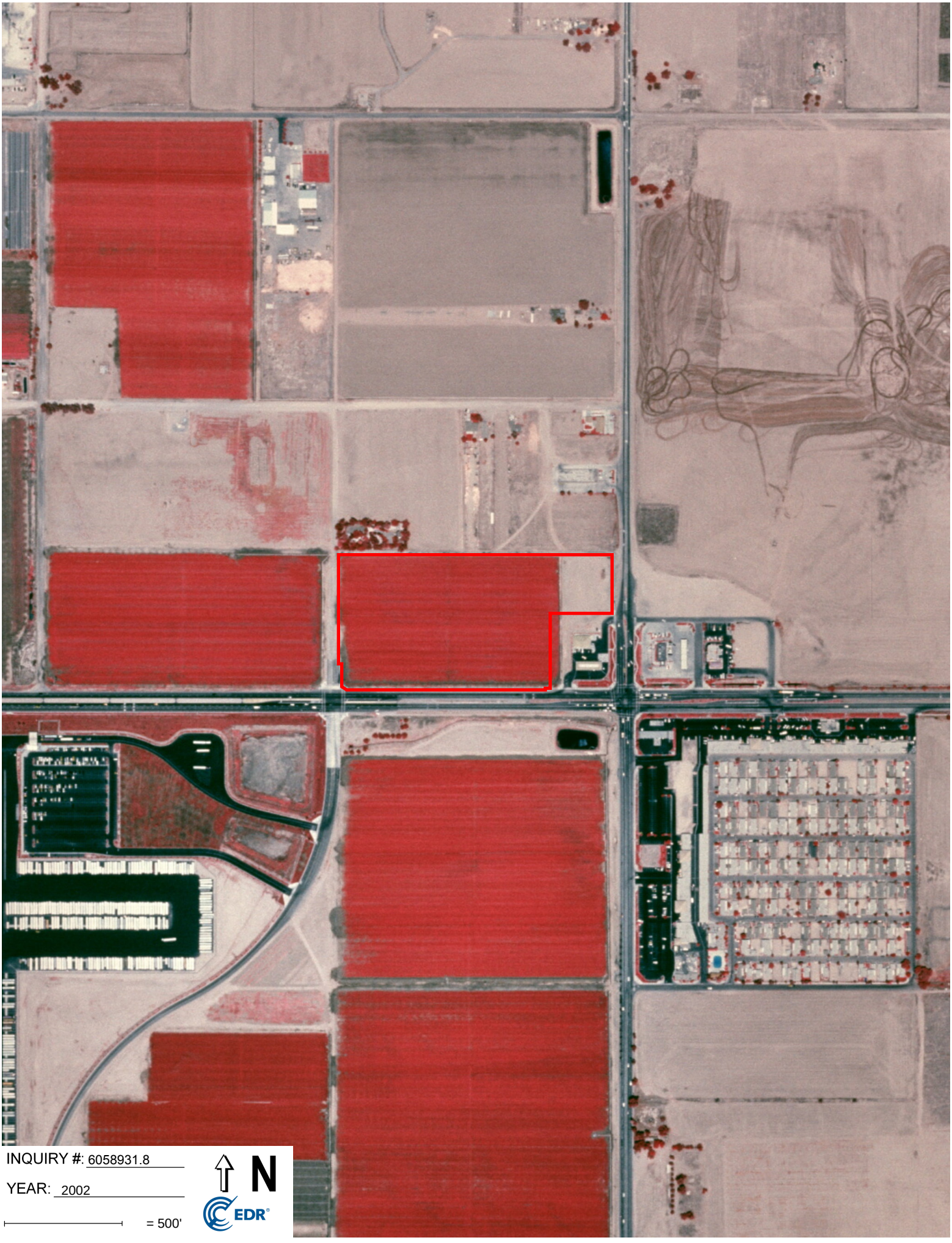
YEAR: 2009

= 500'

N

EDR


INQUIRY #: 6058931.8
YEAR: 2006
= 500'
N
EDR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YEAR: 2002
= 500'
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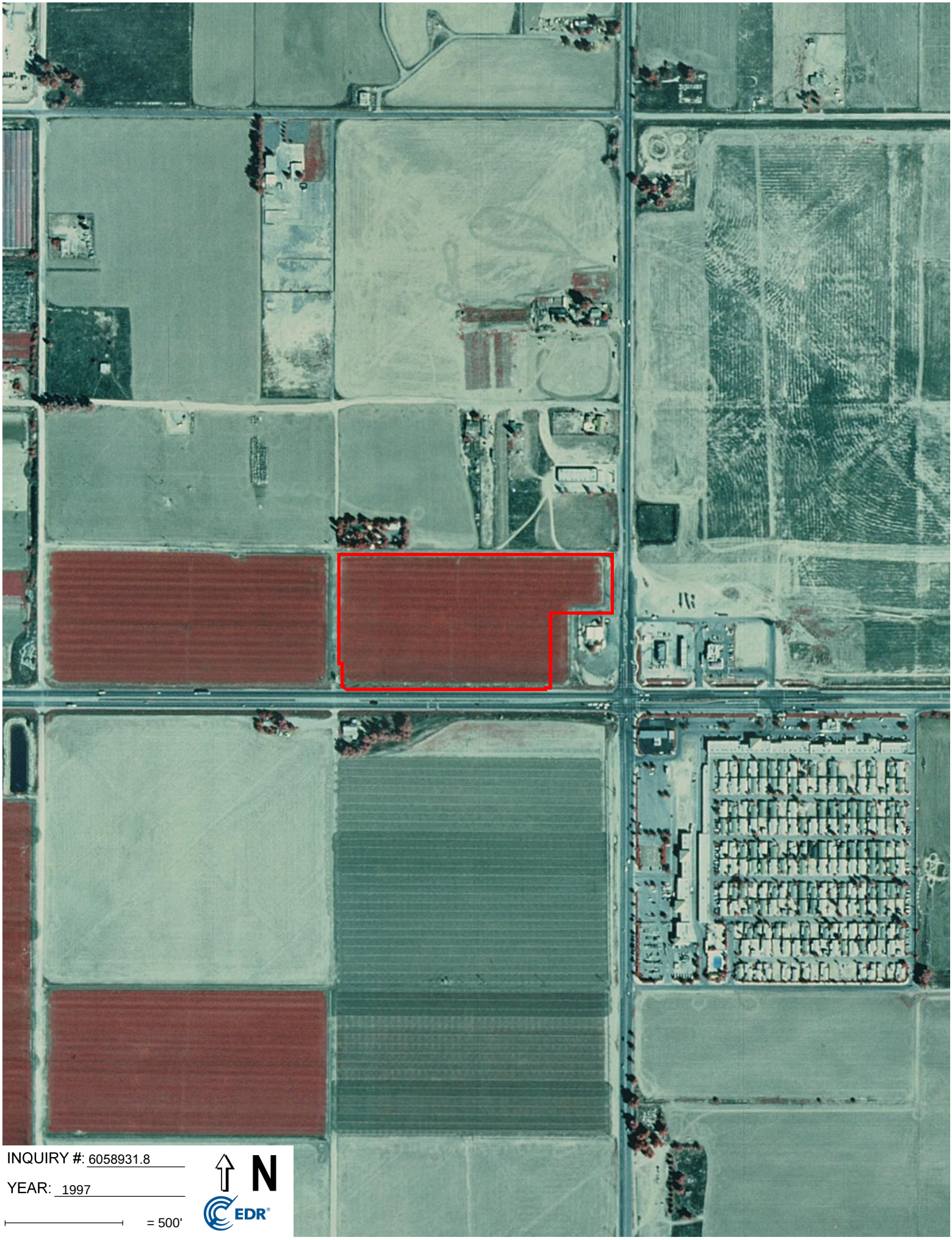
EDR



INQUIRY #: 6058931.8

YEAR: 1997

= 500'

N

EDR

INQUIRY #: 6058931.8

YEAR: 1989

= 500'

N

EDR

INQUIRY #: 6058931.8

YEAR: 1985

= 500'

N

EDR

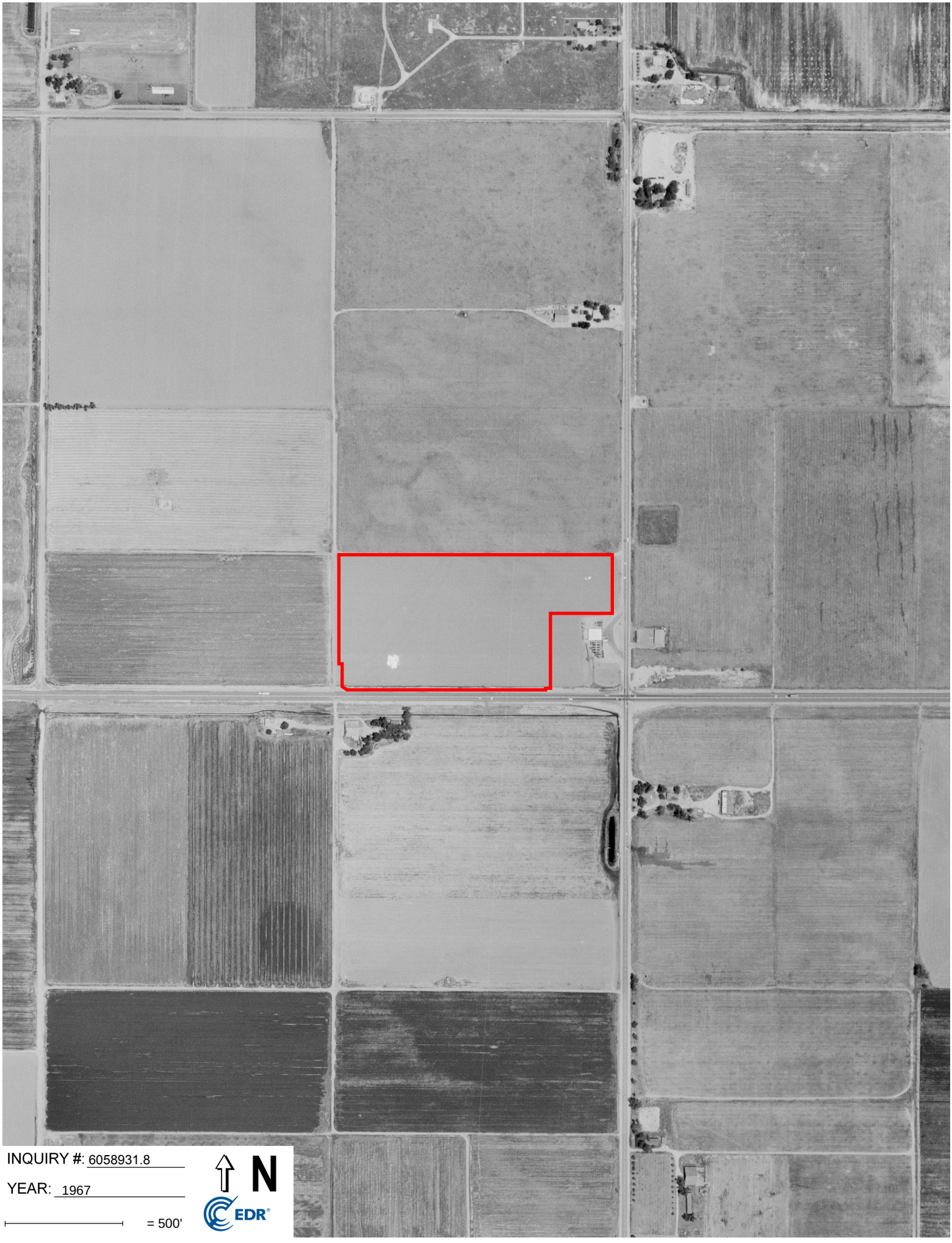
INQUIRY #: 6058931.8

YEAR: 1978

= 500'

N

EDR



INQUIRY #: 6058931.8

YEAR: 1967

= 500'

N

EDR

INQUIRY #: 6058931.8

YEAR: 1961

= 500'

N

EDR

INQUIRY #: 6058931.8

YEAR: 1959

= 500'

N

EDR

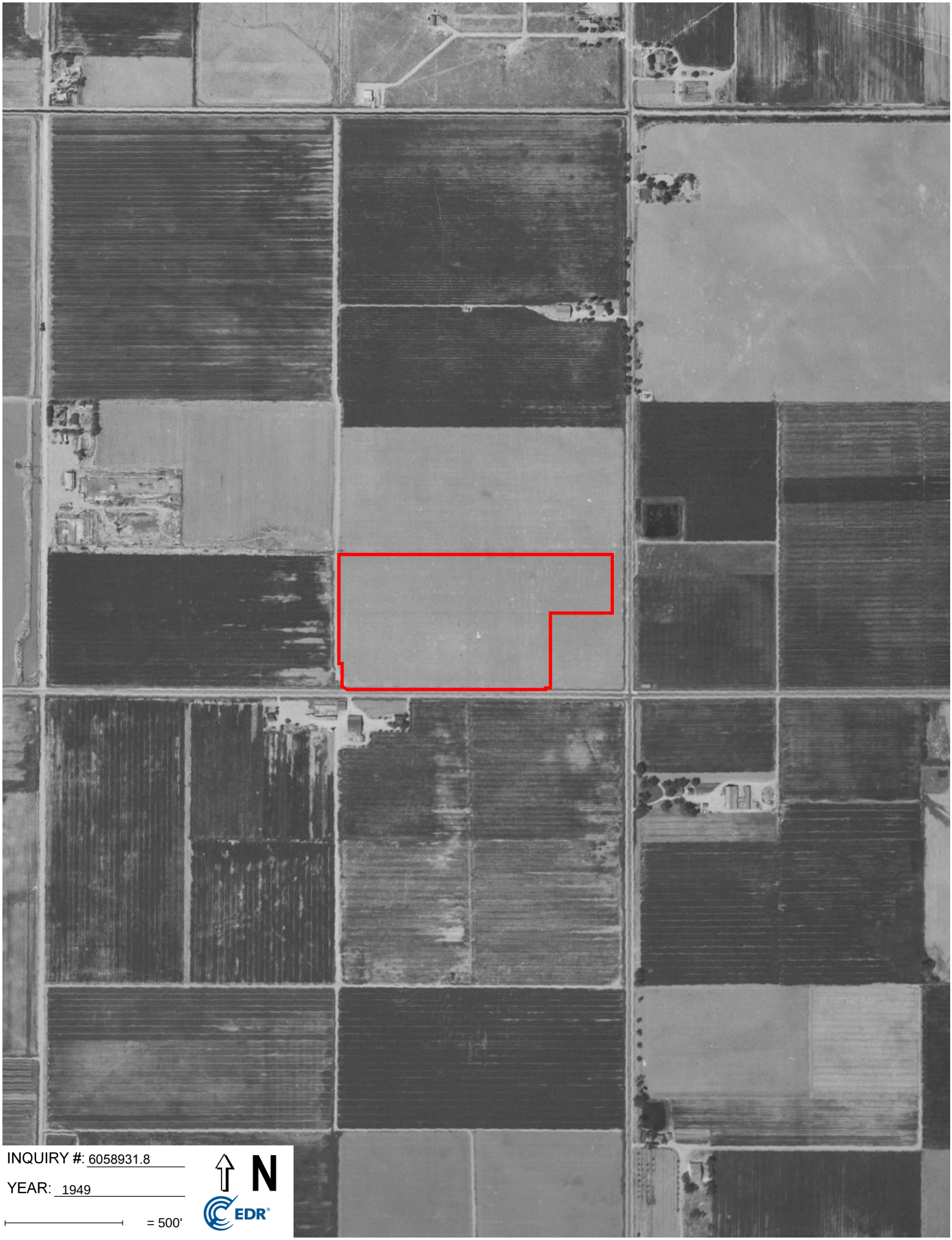
INQUIRY #: 6058931.8

YEAR: 1953

= 500'

N

EDR



INQUIRY #: 6058931.8

YEAR: 1949

= 500'

N

EDR

INQUIRY #: 6058931.8

YEAR: 1938

= 500'

N

EDR

APPENDIX V

EDR Historical Topographic Map Report, dated May 7, 2020

NW Corner Ramona Expy & N Perris Blvd

Not Reported

Perris, CA 92571

Inquiry Number: 6058931.4

May 07, 2020

EDR Historical Topo Map Report

with QuadMatch™

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

EDR Historical Topo Map Report

05/07/20

Site Name:

NW Corner Ramona Expy & N
Not Reported
Perris, CA 92571
EDR Inquiry # 6058931.4

Client Name:

Environmental & Regulatory Specialists, I
223 62nd Street
Newport Beach, CA 92663
Contact: Joe Tyndall

EDR Topographic Map Library has been searched by EDR and maps covering the target property location as provided by Environmental & Regulatory Specialists, Inc. were identified for the years listed below. EDR's Historical Topo Map Report is designed to assist professionals in evaluating potential liability on a target property resulting from past activities. EDRs Historical Topo Map Report includes a search of a collection of public and private color historical topographic maps, dating back to the late 1800s.

Search Results:

P.O.# 20-03

Project: Perris Phase I

Coordinates:

Latitude:	33.845625 33° 50' 44" North
Longitude:	-117.228504 -117° 13' 43" West
UTM Zone:	Zone 11 North
UTM X Meters:	478860.03
UTM Y Meters:	3745062.88
Elevation:	1460.00' above sea level

Maps Provided:

2012
1979
1967
1953
1943
1942
1901

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Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

2012 Source Sheets

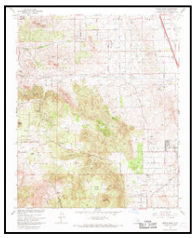
Perris
2012
7.5-minute, 24000

Steele Peak
2012
7.5-minute, 24000

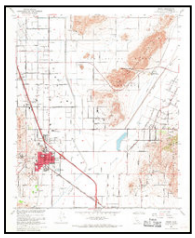
1979 Source Sheets

Perris
1979
7.5-minute, 24000
Aerial Photo Revised 1978

1967 Source Sheets



Steele Peak
1967
7.5-minute, 24000
Aerial Photo Revised 1966



Perris
1967
7.5-minute, 24000
Aerial Photo Revised 1966

1953 Source Sheets

Perris
1953
7.5-minute, 24000
Aerial Photo Revised 1951

Steele Peak
1953
7.5-minute, 24000
Aerial Photo Revised 1951

Topo Sheet Key

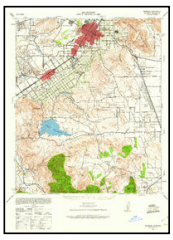
This EDR Topo Map Report is based upon the following USGS topographic map sheets.

1943 Source Sheets

PERRIS
1943
15-minute, 62500

1942 Source Sheets

Perris
1942
15-minute, 62500
Aerial Photo Revised 1939



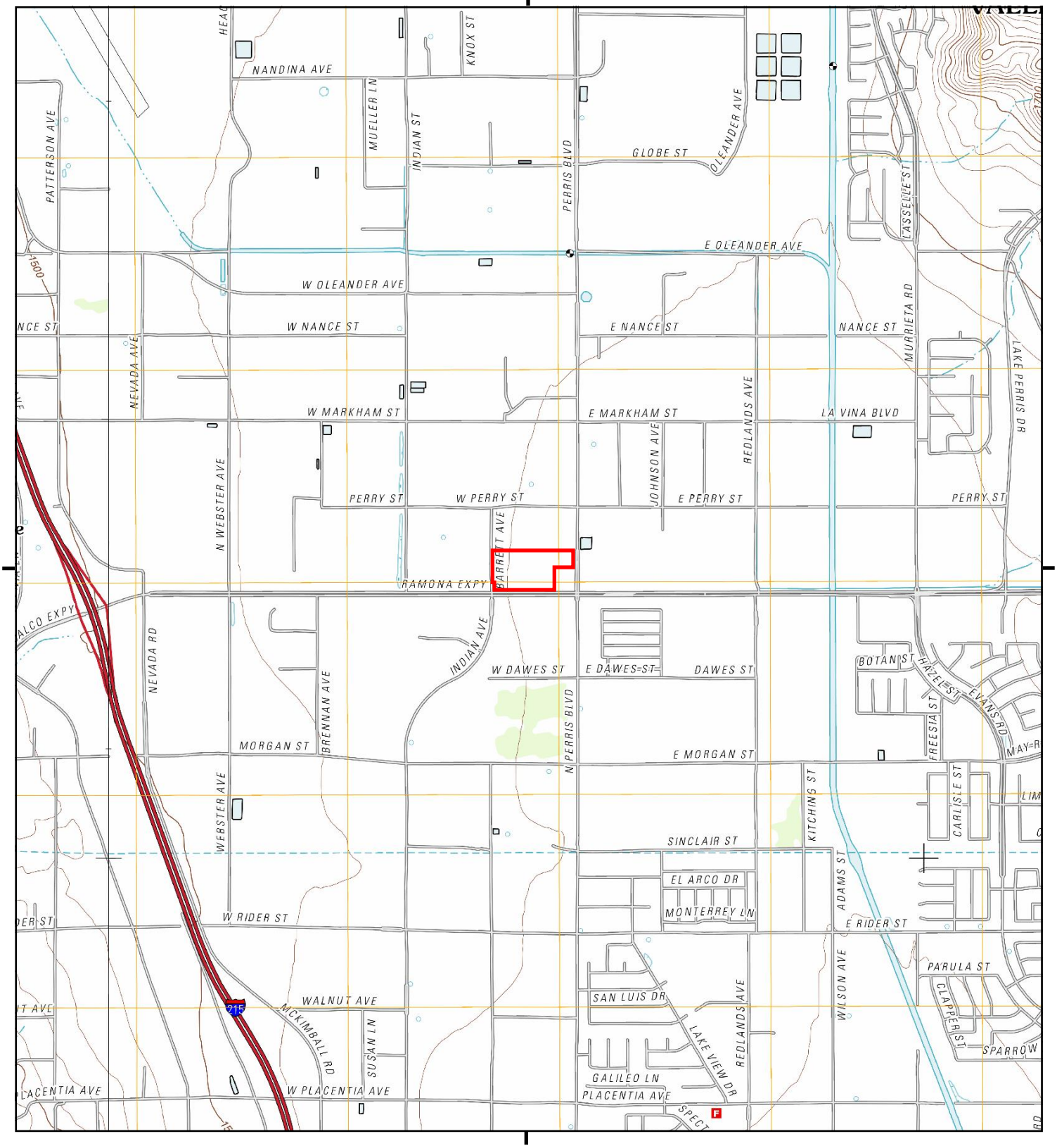
Riverside
1942
15-minute, 62500
Aerial Photo Revised 1939

1901 Source Sheets

Elsinore
1901
30-minute, 125000

Historical Topo Map

2012



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

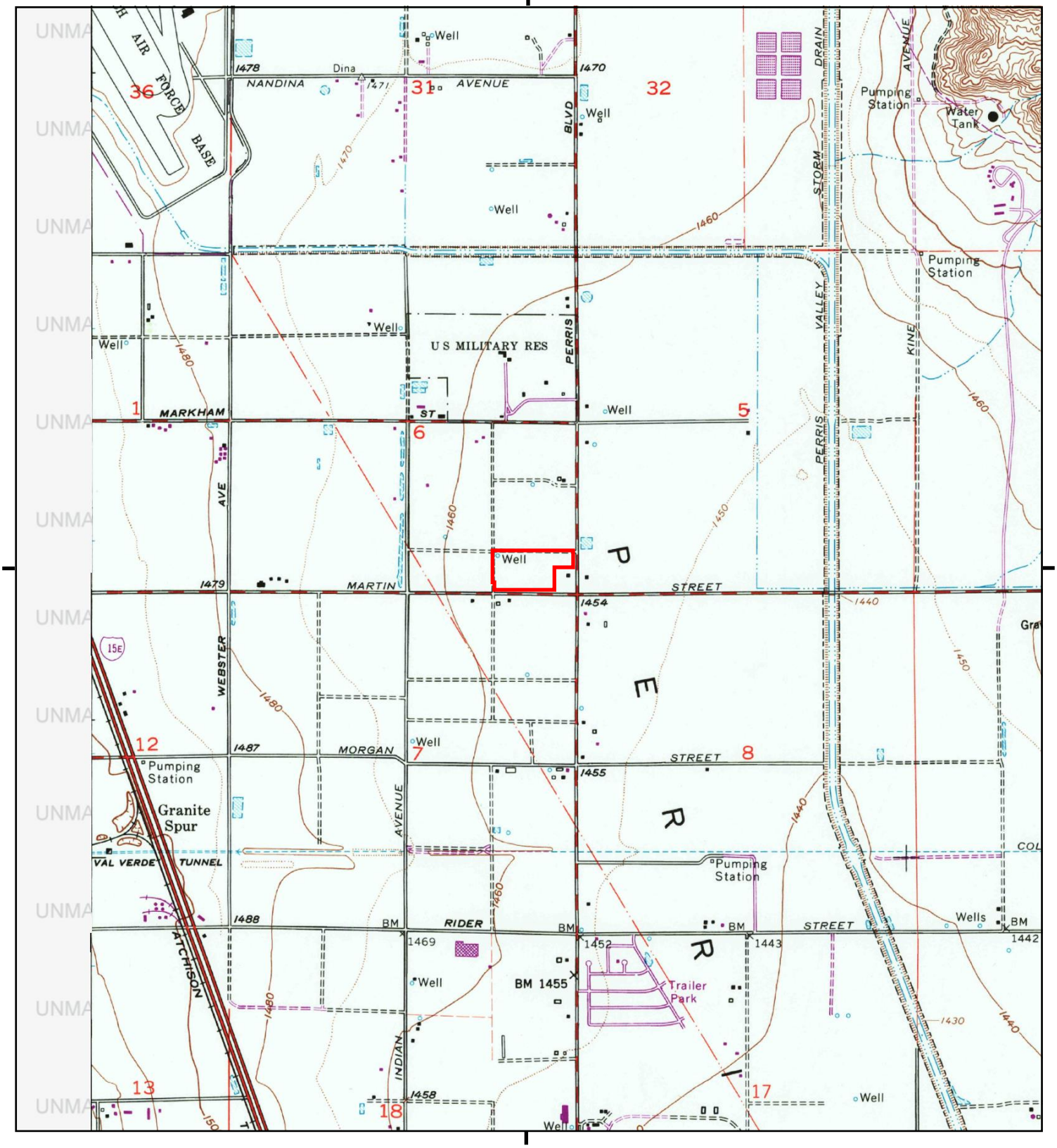
TP, Perris, 2012, 7.5-minute
SW, Steele Peak, 2012, 7.5-minute

SITE NAME: NW Corner Ramona Expy & N Perris Blvd
ADDRESS: Not Reported
Perris, CA 92571
CLIENT: Environmental & Regulatory Specialists, I

N

Historical Topo Map

1979



This report includes information from the following map sheet(s).

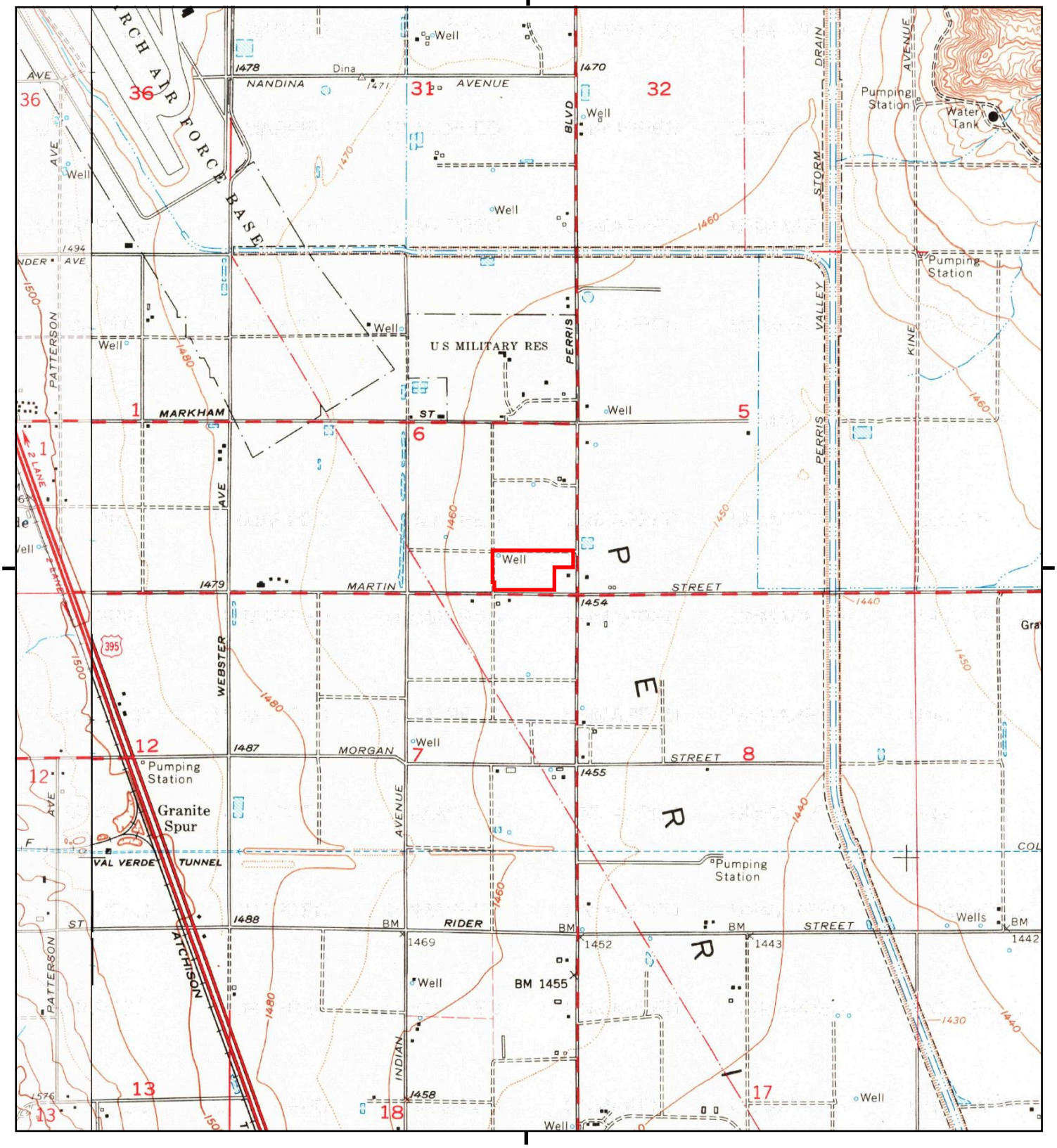
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Perris, 1979, 7.5-minute

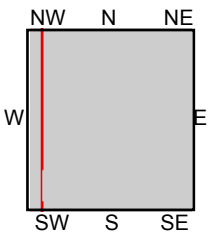
SITE NAME: NW Corner Ramona Expy & N Perris Blvd
ADDRESS: Not Reported
Perris, CA 92571
CLIENT: Environmental & Regulatory Specialists, I

N



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5



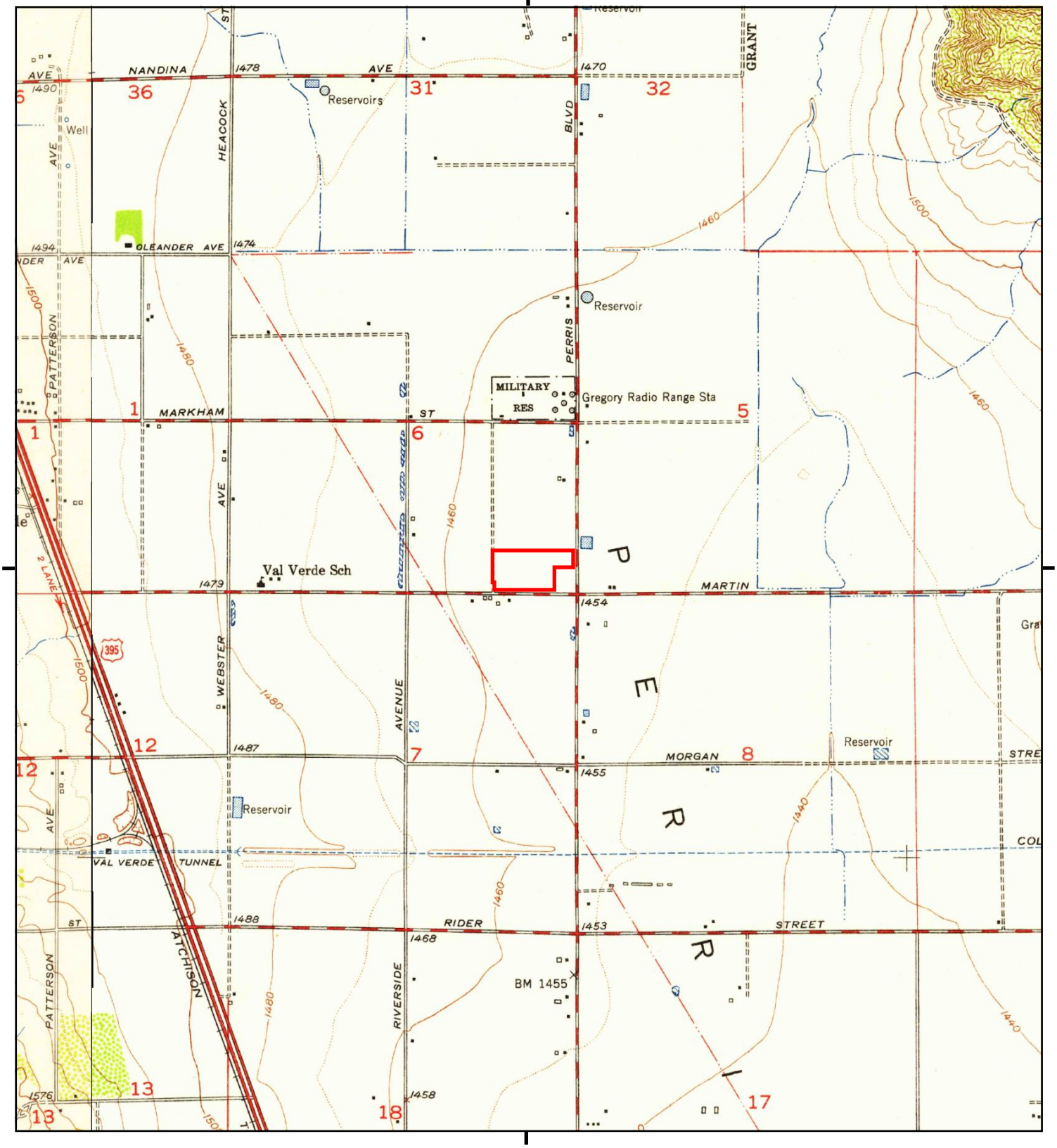
TP, Perris, 1967, 7.5-minute
SW, Steele Peak, 1967, 7.5-minute

SITE NAME: NW Corner Ramona Expy & N Perris Blvd
ADDRESS: Not Reported
Perris, CA 92571
CLIENT: Environmental & Regulatory Specialists, I

N

Historical Topo Map

1953



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

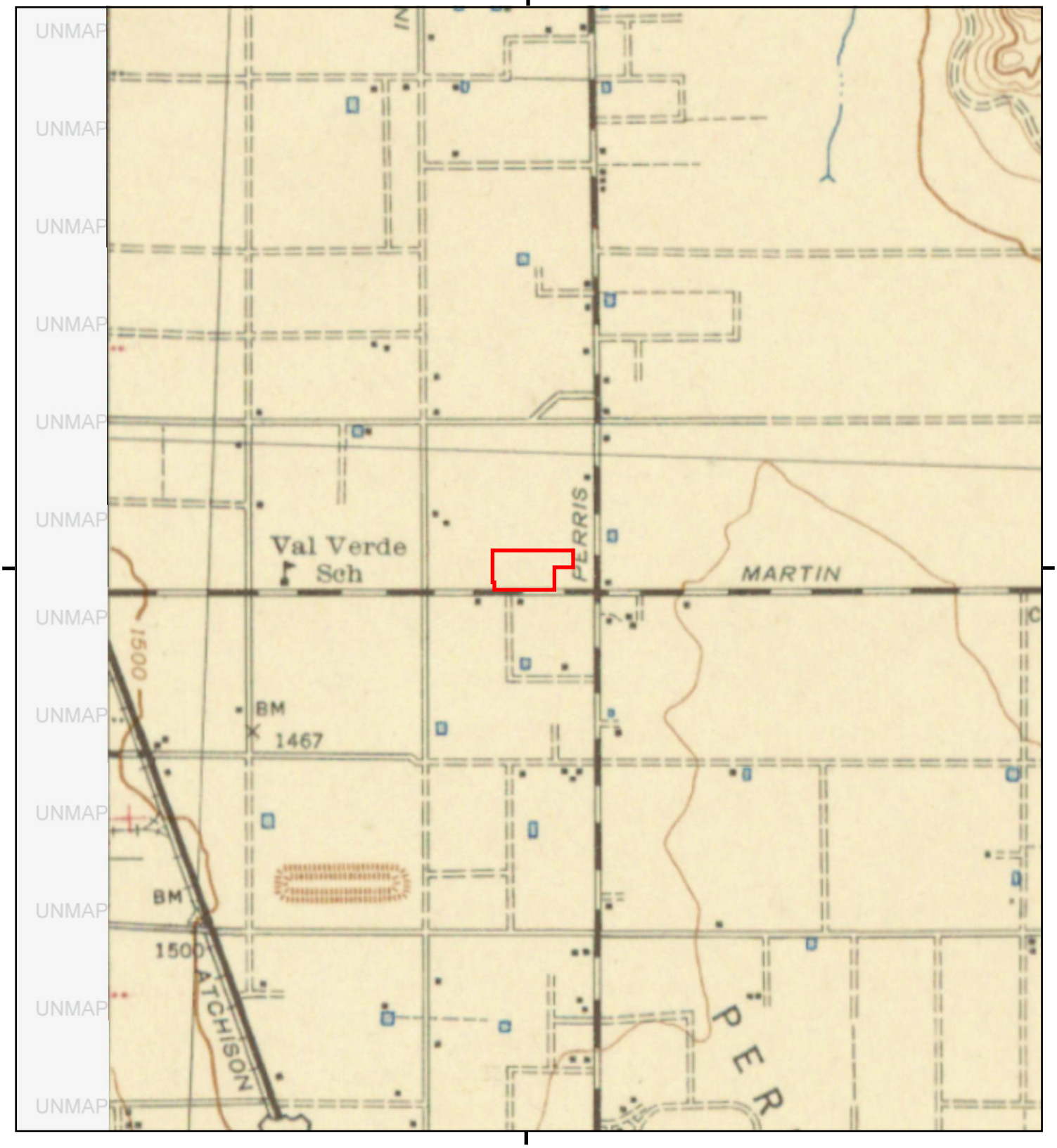
TP, Perris, 1953, 7.5-minute
SW, Steele Peak, 1953, 7.5-minute

SITE NAME: NW Corner Ramona Expy & N Perris Blvd
ADDRESS: Not Reported
Perris, CA 92571
CLIENT: Environmental & Regulatory Specialists, I

N

Historical Topo Map

1943



This report includes information from the following map sheet(s).

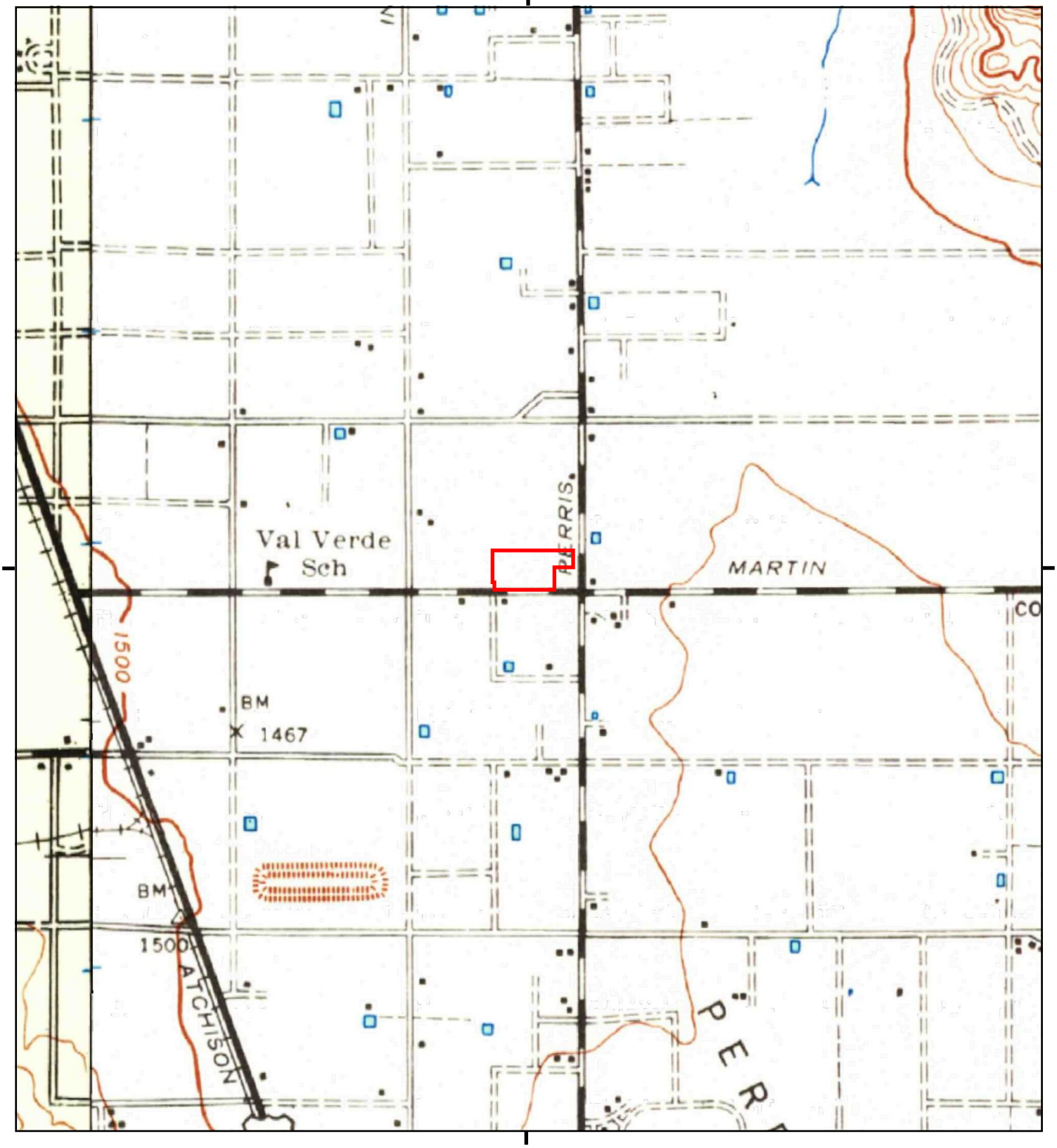
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, PERRIS, 1943, 15-minute

SITE NAME: NW Corner Ramona Expy & N Perris Blvd
ADDRESS: Not Reported
Perris, CA 92571
CLIENT: Environmental & Regulatory Specialists, I

N



This report includes information from the following map sheet(s).

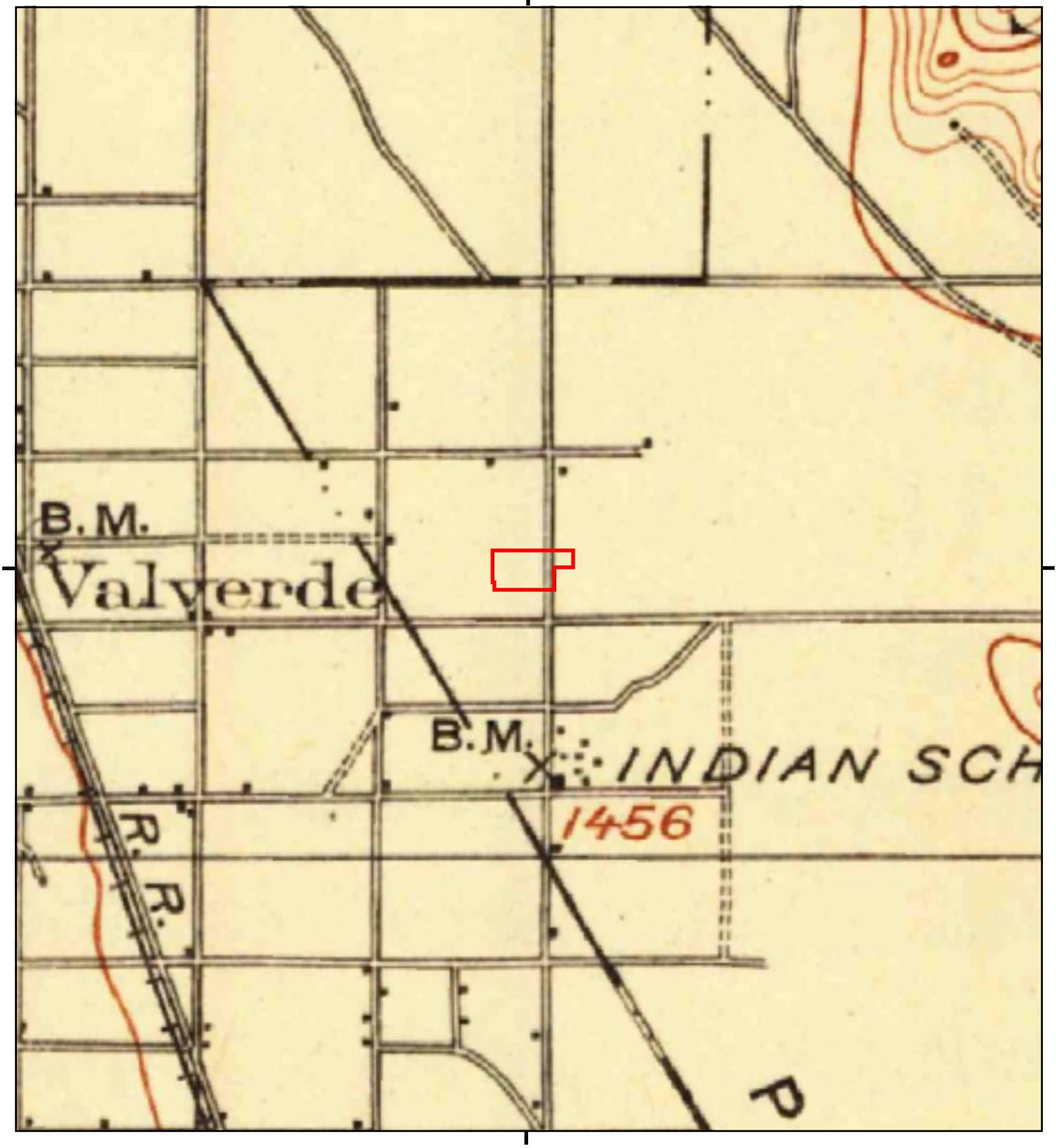
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Perris, 1942, 15-minute
W, Riverside, 1942, 15-minute

SITE NAME: NW Corner Ramona Expy & N Perris Blvd
ADDRESS: Not Reported
Perris, CA 92571
CLIENT: Environmental & Regulatory Specialists, I

N



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Elsinore, 1901, 30-minute

SITE NAME: NW Corner Ramona Expy & N Perris Blvd
ADDRESS: Not Reported
Perris, CA 92571
CLIENT: Environmental & Regulatory Specialists, I

N

APPENDIX VI

EDR Vapor Encroachment Screen - dated May 17, 2020

NW Corner Ramona Expy & N Perris Blvd
Not Reported
Perris, CA 92571

Inquiry Number: 6058931.2s
May 17, 2020

EDR Vapor Encroachment Screen

Prepared using EDR's Vapor Encroachment Worksheet

EDR® Environmental Data Resources Inc

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

TABLE OF CONTENTS

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

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The EDR Vapor Encroachment Worksheet enables EDR's customers to make certain online modifications that effects maps, text and calculations contained in this Report. As a result, maps, text and calculations contained in this Report may have been so modified. EDR has not taken any action to verify any such modifications, and this report and the findings set forth herein must be read in light of this fact. Environmental Data Resources shall not be responsible for any customer's decision to include or not include in any final report any records determined to be within the relevant minimum search distances.

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EXECUTIVE SUMMARY

A search of available environmental records was conducted by EDR. The report was designed to assist parties seeking to meet the search requirements of the ASTM Standard Practice for Assessment of Vapor Encroachment into Structures on Property Involved in Real Estate Transactions (E 2600).

STANDARD ENVIRONMENTAL RECORDS	Default Area of Concern (Miles)*	property	1/10	> 1/10
Federal NPL site list	1.0	0	0	0
Federal Delisted NPL site list	1.0	0	0	0
Federal CERCLIS list	0.5	0	0	0
Federal CERCLIS NFRAP site list	0.5	0	0	0
Federal RCRA CORRACTS facilities list	1.0	0	0	0
Federal RCRA non-CORRACTS TSD facilities list	0.5	0	0	0
Federal RCRA generators list	0.25	0	0	0
Federal institutional controls / engineering controls registries	0.5	0	0	0
Federal ERNS list	0.001	0	0	-
State- and tribal - equivalent NPL	1.0	0	0	0
State- and tribal - equivalent CERCLIS	1.0	0	0	0
State and tribal landfill and/or solid waste disposal site lists	0.5	0	0	0
State and tribal leaking storage tank lists	0.5	0	0	0
State and tribal registered storage tank lists	0.25	0	0	0
State and tribal institutional control / engineering control registries	not searched	-	-	-
State and tribal voluntary cleanup sites	0.5	0	0	0
State and tribal Brownfields sites	0.5	0	0	0

ADDITIONAL ENVIRONMENTAL RECORDS				
Local Brownfield lists	0.5	0	0	0
Local Lists of Landfill / Solid Waste Disposal Sites	0.5	0	0	0
Local Lists of Hazardous waste / Contaminated Sites	1.0	0	1	1
Local Lists of Registered Storage Tanks	0.25	0	1	0
Local Land Records	0.5	0	0	0
Records of Emergency Release Reports	0.5	0	0	0
Other Ascertainable Records	1.0	0	1	1

EDR HIGH RISK HISTORICAL RECORDS				
EDR Exclusive Records	1.0	0	0	0
Exclusive Recovered Govt. Archives	0.001	0	0	-

EXECUTIVE SUMMARY

EDR RECOVERED GOVERNMENT ARCHIVES

EDR Exclusive Records	1.0	0	0	0
Exclusive Recovered Govt. Archives	0.001	0	0	-

*The Default Area of Concern may be adjusted by the environmental professional using experience and professional judgement. Each category may include several databases, and each database may have a different distance. A list of individual databases is provided at the back of this report.

EXECUTIVE SUMMARY

TARGET PROPERTY INFORMATION

ADDRESS

NW CORNER RAMONA EXPY & N PERRIS BLVD
NOT REPORTED
PERRIS, CA 92571

COORDINATES

Latitude (North):	33.845625 - 33° 50′ 44.25659″
Longitude (West):	117.228504 - 117° 13′ 42.60132″
Elevation:	1460 ft. above sea level

EXECUTIVE SUMMARY

SEARCH RESULTS

Unmappable (orphan) sites are not considered in the foregoing analysis.

STANDARD ENVIRONMENTAL RECORDS

Name	Address	Dist/Dir	Map ID	Page
Not Reported				

ADDITIONAL ENVIRONMENTAL RECORDS

Name	Address	Dist/Dir	Map ID	Page
UNITED FACILITIES INC. CERS TANKS: CERS TANKS CERS: CERS CERS HAZ WASTE: CERS HAZ WASTE	4120 INDIAN AVE	<1/10 NW	▲ 1	8
ROSS STORES INC CIWQS: CIWQS CERS: CERS CERS HAZ WASTE: CERS HAZ WASTE HAZNET: HAZNET HWTS: HWTS	4378 N PERRIS BLVD	1/10 - 1/3 N	▲ 2	14

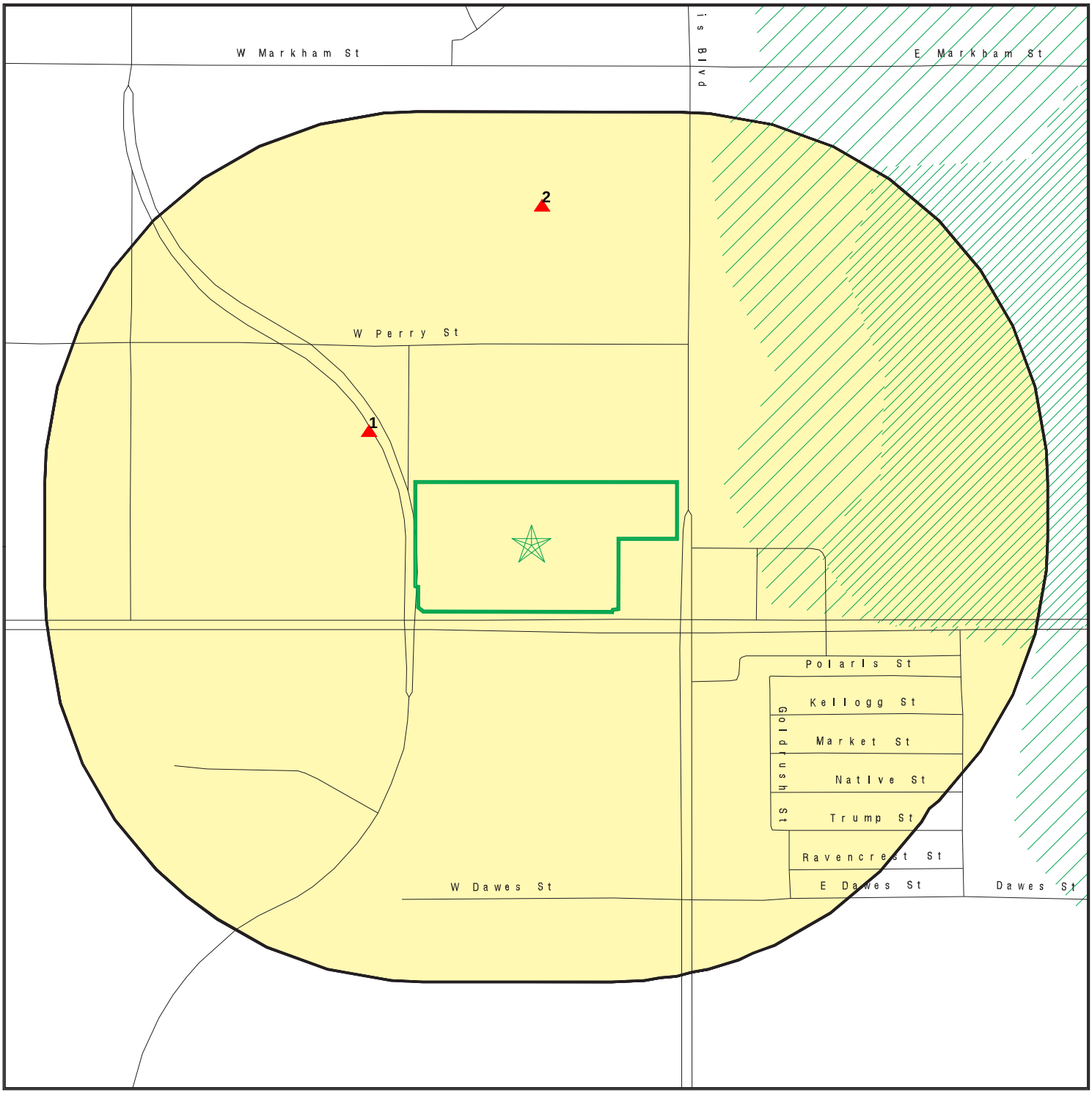
EDR HIGH RISK HISTORICAL RECORDS

Name	Address	Dist/Dir	Map ID	Page
Not Reported				

EDR RECOVERED GOVERNMENT ARCHIVES

Name	Address	Dist/Dir	Map ID	Page
Not Reported				

PRIMARY MAP - 6058931.2S



Target Property

Sites at elevations higher than or equal to the target property

Sites at elevations lower than the target property

Manufactured Gas Plants

National Priority List Sites

Dept. Defense Sites

0 300 1/3 1/2 Miles

Indian Reservations BIA

Special Flood Hazard Area (1%)

0.2% Annual Chance Flood Hazard

Areas of Concern

N

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME:	NW Corner Ramona Expy & N Perris Blvd	CLIENT:	Environmental & Regulatory Specialists, Inc.
ADDRESS:	Not Reported Perris CA 92571	CONTACT:	Joe Tyndall
LAT/LONG:	33.845625 / 117.228504	INQUIRY #:	6058931.2s
		DATE:	May 07, 2020 5:33 pm

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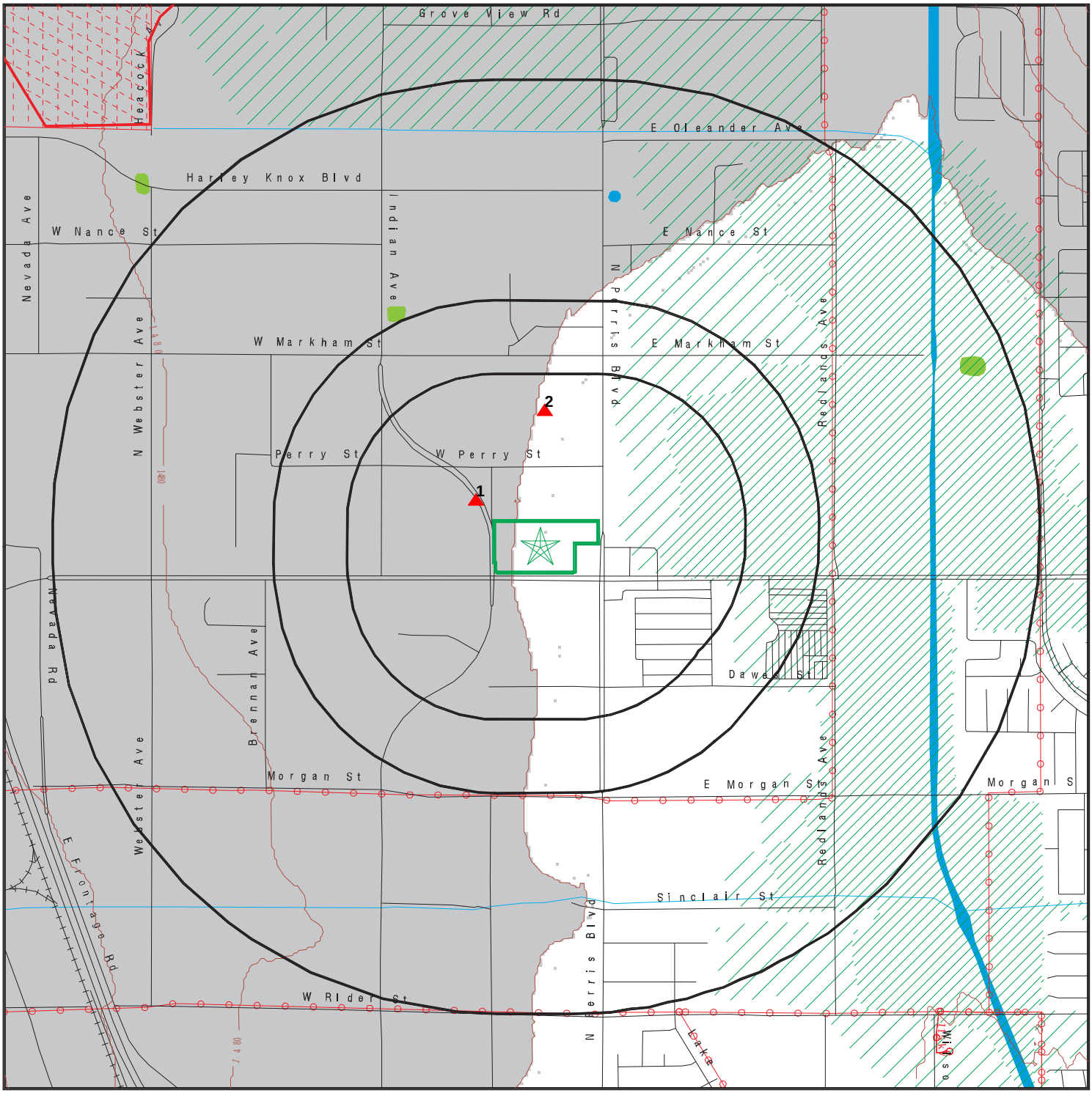
SECONDARY MAP - 6058931.2S



- Target Property
- Sites at elevations higher than or equal to the target property
- Sites at elevations lower than the target property
- Manufactured Gas Plants
- National Priority List Sites
- Dept. Defense Sites
- Indian Reservations BIA
- Power transmission lines
- Special Flood Hazard Area (1%)
- 0.2% Annual Chance Flood Hazard
- National Wetland Inventory
- State Wetlands
- Upgradient Area
- Areas of Concern

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME:	NW Corner Ramona Expy & N Perris Blvd	CLIENT:	Environmental & Regulatory Specialists, Inc.
ADDRESS:	Not Reported Perris CA 92571	CONTACT:	Joe Tyndall
LAT/LONG:	33.845625 / 117.228504	INQUIRY #:	6058931.2s
		DATE:	May 07, 2020 5:32 pm

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MAP FINDINGS

LEGEND

FACILITY NAME **FACILITY ADDRESS, CITY, ST, ZIP**		EDR SITE ID NUMBER
◆ **MAP ID#**	Direction Distance Range (Distance feet / miles) Relative Elevation Feet Above Sea Level	ASTM 2600 Record Sources found in this report. Each database searched has been assigned to one or more categories. For detailed information about categorization, see the section of the report Records Searched and Currency.

Worksheet:

Comments:
Comments may be added on the online Vapor Encroachment Worksheet.

DATABASE ACRONYM: Applicable categories (A hoverbox with database description).

UNITED FACILITIES INC. 4120 INDIAN AVE, PERRIS, CA, 92571			S123517618
▲ 1	NW <1/10	(322 ft. / 0.061 mi.)	Local Lists of Hazardous waste / Contaminated Sites Local Lists of Registered Storage Tanks Other Ascertainable Records
	2 ft. Higher Elevation	1462 ft. Above Sea Level	

Worksheet:

CERS HAZ WASTE: Local Lists of Hazardous waste / Contaminated Sites

Name:	UNITED FACILITIES INC.
Address:	4120 INDIAN AVE
City,State,Zip:	PERRIS, CA 92571
Site ID:	412573
CERS ID:	10714651
CERS Description:	Hazardous Waste Generator

CERS TANKS: Local Lists of Registered Storage Tanks

Name:	UNITED FACILITIES INC.
Address:	4120 INDIAN AVE
City,State,Zip:	PERRIS, CA 92571
Site ID:	412573
CERS ID:	10714651
CERS Description:	Aboveground Petroleum Storage

CERS: Other Ascertainable Records

Name:	UNITED FACILITIES INC.
Address:	4120 INDIAN AVE
City,State,Zip:	PERRIS, CA 92571
Site ID:	412573
CERS ID:	10714651
CERS Description:	Chemical Storage Facilities

UNITED FACILITIES INC., 4120 INDIAN AVE, PERRIS, CA 92571 (Continued)

Violations:

Site ID:	412573
Site Name:	United Facilities Inc.
Violation Date:	08-24-2018
Citation:	HSC 6.67 25270.4.5(a) - California Health and Safety Code, Chapter 6.67, Section(s) 25270.4.5(a)
Violation Description:	Failure to maintain a complete copy of the SPCC Plan at the facility if the facility is normally attended at least four hours per day, or at the nearest field office if the facility is not so attended.
Violation Notes:	Returned to compliance on 09/21/2018.
Violation Division:	Riverside County Department of Env Health
Violation Program:	APSA
Violation Source:	CERS

Site ID:	412573
Site Name:	United Facilities Inc.
Violation Date:	11-15-2016
Citation:	Un-Specified
Violation Description:	Business Plan Program - Operations/Maintenance - General Local Ordinance
Violation Notes:	Returned to compliance on 08/14/2017. Diesel fuel tank was observed without proper labeling.
Violation Division:	Riverside County Department of Env Health
Violation Program:	HMRRP
Violation Source:	CERS

Site ID:	412573
Site Name:	United Facilities Inc.
Violation Date:	11-15-2016
Citation:	Un-Specified
Violation Description:	Business Plan Program - Operations/Maintenance - General Local Ordinance
Violation Notes:	Returned to compliance on 08/14/2017. The entrances to the facility was observed without NFPA704 signs.
Violation Division:	Riverside County Department of Env Health
Violation Program:	HMRRP
Violation Source:	CERS

Site ID:	412573
Site Name:	United Facilities Inc.
Violation Date:	08-24-2018
Citation:	HSC 6.67 25270.4.5(a) - California Health and Safety Code, Chapter 6.67, Section(s) 25270.4.5(a)
Violation Description:	Failure to prepare a Spill Prevention, Control, and Countermeasures (SPCC) Plan.
Violation Notes:	Returned to compliance on 09/21/2018.
Violation Division:	Riverside County Department of Env Health
Violation Program:	APSA
Violation Source:	CERS

Site ID:	412573
Site Name:	United Facilities Inc.
Violation Date:	11-15-2016
Citation:	19 CCR 6.95 25508(a)(1) - California Code of Regulations, Title 19, Chapter 6.95, Section(s) 25508(a)(1)
Violation Description:	Failure to complete and electronically submit the Business Activities Page and/or Business Owner Operator Identification Page.
Violation Notes:	Returned to compliance on 08/14/2017.
Violation Division:	Riverside County Department of Env Health
Violation Program:	HMRRP

UNITED FACILITIES INC., 4120 INDIAN AVE, PERRIS, CA 92571 (Continued)

Violation Source:	CERS
Site ID:	412573
Site Name:	United Facilities Inc.
Violation Date:	11-15-2016
Citation:	HSC 6.95 25505(a)(4) - California Health and Safety Code, Chapter 6.95, Section(s) 25505(a)(4)
Violation Description:	Failure to provide initial and annual training to all employees in safety procedures in the event of a release or threatened release of a hazardous material or failure to document and maintain training records for a minimum of three years.
Violation Notes:	Returned to compliance on 08/14/2017.
Violation Division:	Riverside County Department of Env Health
Violation Program:	HMRRP
Violation Source:	CERS
Site ID:	412573
Site Name:	United Facilities Inc.
Violation Date:	08-24-2018
Citation:	HSC 6.67 25270.4.5 (a) - California Health and Safety Code, Chapter 6.67 , Section(s) 25270.4.5 (a)
Violation Description:	Failure to have management or a professional engineer certify the SPCC Plan and comply with certification requirements at a qualified facility.
Violation Notes:	Returned to compliance on 09/21/2018.
Violation Division:	Riverside County Department of Env Health
Violation Program:	APSA
Violation Source:	CERS
Site ID:	412573
Site Name:	United Facilities Inc.
Violation Date:	11-13-2019
Citation:	Un-Specified
Violation Description:	Business Plan Program - Operations/Maintenance - General Local Ordinance
Violation Notes:	Returned to compliance on 12/16/2019. OBSERVATION: Observed faded/peeling NFPA-704 signs located on the Diesel tank and both Diesel generators. CORRECTIVE ACTION: Owner/operator shall replace all faded or otherwise unrecognizable NFPA-704 signs. Submit photos to this department.
Violation Division:	Riverside County Department of Env Health
Violation Program:	HMRRP
Violation Source:	CERS
Site ID:	412573
Site Name:	United Facilities Inc.
Violation Date:	11-15-2016
Citation:	HSC 6.95 25508(a)(1) - California Health and Safety Code, Chapter 6.95, Section(s) 25508(a)(1)
Violation Description:	Failure to establish and electronically submit an adequate training program in safety procedures in the event of a release or threatened release of a hazardous material.
Violation Notes:	Returned to compliance on 08/14/2017.
Violation Division:	Riverside County Department of Env Health
Violation Program:	HMRRP
Violation Source:	CERS
Site ID:	412573
Site Name:	United Facilities Inc.
Violation Date:	11-15-2016
Citation:	HSC 6.95 25508(a)(1) - California Health and Safety Code, Chapter 6.95, Section(s) 25508(a)(1)
Violation Description:	Failure to complete and electronically submit a business plan when storing/handling a hazardous material at or above reportable quantities.
Violation Notes:	Returned to compliance on 08/14/2017.

UNITED FACILITIES INC., 4120 INDIAN AVE, PERRIS, CA 92571 (Continued)

Violation Division:	Riverside County Department of Env Health
Violation Program:	HMRRP
Violation Source:	CERS
Site ID:	412573
Site Name:	United Facilities Inc.
Violation Date:	11-15-2016
Citation:	HSC 6.95 25508(a)(1) - California Health and Safety Code, Chapter 6.95, Section(s) 25508(a)(1)
Violation Description:	Failure to establish and electronically submit an adequate emergency response plan and procedures for a release or threatened release of a hazardous material.
Violation Notes:	Returned to compliance on 08/14/2017.
Violation Division:	Riverside County Department of Env Health
Violation Program:	HMRRP
Violation Source:	CERS
Site ID:	412573
Site Name:	United Facilities Inc.
Violation Date:	11-15-2016
Citation:	HSC 6.95 25508(a)(1) - California Health and Safety Code, Chapter 6.95, Section(s) 25508(a)(1)
Violation Description:	Failure to complete and electronically submit hazardous material inventory information for all reportable hazardous materials on site at or above reportable quantities.
Violation Notes:	Returned to compliance on 08/14/2017.
Violation Division:	Riverside County Department of Env Health
Violation Program:	HMRRP
Violation Source:	CERS
Site ID:	412573
Site Name:	United Facilities Inc.
Violation Date:	11-15-2016
Citation:	HSC 6.95 25507 - California Health and Safety Code, Chapter 6.95, Section(s) 25507
Violation Description:	Failure to adequately establish and implement a business plan when storing/handling a hazardous material at or above reportable quantities.
Violation Notes:	Returned to compliance on 08/14/2017.
Violation Division:	Riverside County Department of Env Health
Violation Program:	HMRRP
Violation Source:	CERS
Site ID:	412573
Site Name:	United Facilities Inc.
Violation Date:	11-15-2016
Citation:	HSC 6.95 25508(a)(1) - California Health and Safety Code, Chapter 6.95, Section(s) 25508(a)(1)
Violation Description:	Failure to complete and electronically submit a site map with all required content.
Violation Notes:	Returned to compliance on 08/14/2017.
Violation Division:	Riverside County Department of Env Health
Violation Program:	HMRRP
Violation Source:	CERS

Evaluation:

Eval General Type:	Other/Unknown
Eval Date:	08-14-2017
Violations Found:	No
Eval Type:	Other, not routine, done by local agency

UNITED FACILITIES INC., 4120 INDIAN AVE, PERRIS, CA 92571 (Continued)

Eval Notes:	Not Reported
Eval Division:	Riverside County Department of Env Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	08-24-2018
Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	Not Reported
Eval Division:	Riverside County Department of Env Health
Eval Program:	APSA
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	11-15-2016
Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	Not Reported
Eval Division:	Riverside County Department of Env Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	11-13-2019
Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	Not Reported
Eval Division:	Riverside County Department of Env Health
Eval Program:	HMRRP
Eval Source:	CERS

Coordinates:

Site ID:	412573
Facility Name:	United Facilities Inc.
Env Int Type Code:	APSA
Program ID:	10714651
Coord Name:	Not Reported
Ref Point Type Desc:	Center of a facility or station.
Latitude:	33.845460
Longitude:	-117.230540

Affiliation:

Affiliation Type Desc:	Environmental Contact
Entity Name:	Raymond Gonzales
Entity Title:	Not Reported
Affiliation Address:	4120 Indian Ave
Affiliation City:	Perris
Affiliation State:	CA
Affiliation Country:	Not Reported

UNITED FACILITIES INC., 4120 INDIAN AVE, PERRIS, CA 92571 (Continued)

Affiliation Zip:	92571
Affiliation Phone:	Not Reported
Affiliation Type Desc:	Identification Signer
Entity Name:	Raymond Gonzales
Entity Title:	Facility Manager
Affiliation Address:	Not Reported
Affiliation City:	Not Reported
Affiliation State:	Not Reported
Affiliation Country:	Not Reported
Affiliation Zip:	Not Reported
Affiliation Phone:	Not Reported
Affiliation Type Desc:	Legal Owner
Entity Name:	Unire Real Estate
Entity Title:	Not Reported
Affiliation Address:	1800 East Imperial Hwy
Affiliation City:	Brea
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	92821
Affiliation Phone:	(714) 990-2100
Affiliation Type Desc:	Operator
Entity Name:	United Facilities Inc.
Entity Title:	Not Reported
Affiliation Address:	Not Reported
Affiliation City:	Not Reported
Affiliation State:	Not Reported
Affiliation Country:	Not Reported
Affiliation Zip:	Not Reported
Affiliation Phone:	(909) 224-4970
Affiliation Type Desc:	CUPA District
Entity Name:	Riverside Cnty Env Health
Entity Title:	Not Reported
Affiliation Address:	4065 County Circle Drive, Room 104
Affiliation City:	Riverside
Affiliation State:	CA
Affiliation Country:	Not Reported
Affiliation Zip:	92503
Affiliation Phone:	(951) 358-5055
Affiliation Type Desc:	Document Preparer
Entity Name:	Raymond Gonzales
Entity Title:	Not Reported
Affiliation Address:	Not Reported
Affiliation City:	Not Reported
Affiliation State:	Not Reported
Affiliation Country:	Not Reported
Affiliation Zip:	Not Reported
Affiliation Phone:	Not Reported

UNITED FACILITIES INC., 4120 INDIAN AVE, PERRIS, CA 92571 (Continued)

Affiliation Type Desc:	Parent Corporation
Entity Name:	United Facilities Inc
Entity Title:	Not Reported
Affiliation Address:	Not Reported
Affiliation City:	Not Reported
Affiliation State:	Not Reported
Affiliation Country:	Not Reported
Affiliation Zip:	Not Reported
Affiliation Phone:	Not Reported

Affiliation Type Desc:	Facility Mailing Address
Entity Name:	Mailing Address
Entity Title:	Not Reported
Affiliation Address:	4120 Indian Ave
Affiliation City:	Perris
Affiliation State:	CA
Affiliation Country:	Not Reported
Affiliation Zip:	92571
Affiliation Phone:	Not Reported

ROSS STORES INC 4378 N PERRIS BLVD, PERRIS, CA, 925717900			S111215871
▲ 2	N 1/10 - 1/3	(1305 ft. / 0.247 mi.)	Local Lists of Hazardous waste / Contaminated Sites Other Ascertainable Records
	Equal Elevation	1460 ft. Above Sea Level	

Worksheet:

CERS HAZ WASTE: Local Lists of Hazardous waste / Contaminated Sites

Name:	SWH3 ROSS
Address:	4378 N PERRIS BLVD
City,State,Zip:	PERRIS, CA 92571
Site ID:	72886
CERS ID:	10482409
CERS Description:	Hazardous Waste Generator

HAZNET: Other Ascertainable Records

Name:	ROSS STORES INC
Address:	4378 N PERRIS BLVD
Address 2:	Not Reported
City,State,Zip:	PERRIS, CA 925717900
Contact:	JOSHUA SHEIBE
Telephone:	9514895724
Mailing Name:	Not Reported
Mailing Address:	17800 PERRIS BLVD
Year:	2017
Gepaid:	CAL000394795
TSD EPA ID:	CAD982444481

ROSS STORES INC, 4378 N PERRIS BLVD, PERRIS, CA 925717900 (Continued)

CA Waste Code:	221 - Waste oil and mixed oil
Disposal Method:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons:	0.209
Year:	2017
Gepaid:	CAL000394795
TSD EPA ID:	CAD982444481
CA Waste Code:	352 - Other organic solids
Disposal Method:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons:	0.05
Year:	2016
Gepaid:	CAL000394795
TSD EPA ID:	CAD982444481
CA Waste Code:	352 - Other organic solids
Disposal Method:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons:	0.02
Year:	2016
Gepaid:	CAL000394795
TSD EPA ID:	CAD982444481
CA Waste Code:	221 - Waste oil and mixed oil
Disposal Method:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons:	0.114
Year:	2015
Gepaid:	CAL000394795
TSD EPA ID:	CAD982444481
CA Waste Code:	352 - Other organic solids
Disposal Method:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons:	0.125
Year:	2015
Gepaid:	CAL000394795
TSD EPA ID:	CAD982444481
CA Waste Code:	221 - Waste oil and mixed oil
Disposal Method:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons:	0.513

Additional Info:

Year:	2015
Gen EPA ID:	CAL000394795
Shipment Date:	20151216
Creation Date:	2/9/2016 22:15:57
Receipt Date:	20151217
Manifest ID:	015033198JJK
Trans EPA ID:	CAR000172460
Trans Name:	ENVIRONMENTAL LOGISTICS INC
Trans 2 EPA ID:	Not Reported
Trans 2 Name:	Not Reported
TSDF EPA ID:	CAD982444481

ROSS STORES INC, 4378 N PERRIS BLVD, PERRIS, CA 925717900 (Continued)

Trans Name:	FILTER RECYCLING SERVICES INC
TSDF Alt EPA ID:	Not Reported
TSDF Alt Name:	Not Reported
CA Waste Code:	221 - Waste oil and mixed oil
RCRA Code:	Not Reported
Disposal Method:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.304
Waste Quantity:	80
Quantity Unit:	G
Additional Code 1:	Not Reported
Additional Code 2:	Not Reported
Additional Code 3:	Not Reported
Additional Code 4:	Not Reported
Additional Code 5:	Not Reported
Shipment Date:	20151216
Creation Date:	2/9/2016 22:15:57
Receipt Date:	20151217
Manifest ID:	015033198JJK
Trans EPA ID:	CAR000172460
Trans Name:	ENVIRONMENTAL LOGISTICS INC
Trans 2 EPA ID:	Not Reported
Trans 2 Name:	Not Reported
TSDF EPA ID:	CAD982444481
Trans Name:	FILTER RECYCLING SERVICES INC
TSDF Alt EPA ID:	Not Reported
TSDF Alt Name:	Not Reported
CA Waste Code:	352 - Other organic solids
RCRA Code:	Not Reported
Disposal Method:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.05
Waste Quantity:	100
Quantity Unit:	P
Additional Code 1:	Not Reported
Additional Code 2:	Not Reported
Additional Code 3:	Not Reported
Additional Code 4:	Not Reported
Additional Code 5:	Not Reported
Shipment Date:	20150424
Creation Date:	6/25/2015 22:15:58
Receipt Date:	20150428
Manifest ID:	013863947JJK
Trans EPA ID:	CAR000172460
Trans Name:	ENVIRONMENTAL LOGISTICS INC
Trans 2 EPA ID:	Not Reported
Trans 2 Name:	Not Reported
TSDF EPA ID:	CAD982444481
Trans Name:	FILTER RECYCLING SERVICES INC
TSDF Alt EPA ID:	Not Reported
TSDF Alt Name:	Not Reported

ROSS STORES INC, 4378 N PERRIS BLVD, PERRIS, CA 925717900 (Continued)

CA Waste Code:	221 - Waste oil and mixed oil
RCRA Code:	Not Reported
Disposal Method:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.209
Waste Quantity:	55
Quantity Unit:	G
Additional Code 1:	Not Reported
Additional Code 2:	Not Reported
Additional Code 3:	Not Reported
Additional Code 4:	Not Reported
Additional Code 5:	Not Reported
Shipment Date:	20150226
Creation Date:	5/18/2015 22:15:34
Receipt Date:	20150227
Manifest ID:	013863528JJK
Trans EPA ID:	CAR000172460
Trans Name:	ENVIRONMENTAL LOGISTICS INC
Trans 2 EPA ID:	Not Reported
Trans 2 Name:	Not Reported
TSDF EPA ID:	CAD982444481
Trans Name:	FILTER RECYCLING SERVICES INC
TSDF Alt EPA ID:	Not Reported
TSDF Alt Name:	Not Reported
CA Waste Code:	352 - Other organic solids
RCRA Code:	Not Reported
Disposal Method:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.075
Waste Quantity:	150
Quantity Unit:	P
Additional Code 1:	Not Reported
Additional Code 2:	Not Reported
Additional Code 3:	Not Reported
Additional Code 4:	Not Reported
Additional Code 5:	Not Reported

Additional Info:

Year:	2017
Gen EPA ID:	CAL000394795
Shipment Date:	20170111
Creation Date:	3/21/2017 18:30:31
Receipt Date:	20170113
Manifest ID:	016467843JJK
Trans EPA ID:	CAR000172460
Trans Name:	ENVIRONMENTAL LOGISTICS, INC.
Trans 2 EPA ID:	Not Reported
Trans 2 Name:	Not Reported
TSDF EPA ID:	CAD982444481
Trans Name:	FILTER RECYCLING SERVICES, INC.

ROSS STORES INC, 4378 N PERRIS BLVD, PERRIS, CA 925717900 (Continued)

TSDF Alt EPA ID:	Not Reported
TSDF Alt Name:	Not Reported
CA Waste Code:	221 - Waste oil and mixed oil
RCRA Code:	Not Reported
Disposal Method:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.209
Waste Quantity:	55
Quantity Unit:	G
Additional Code 1:	Not Reported
Additional Code 2:	Not Reported
Additional Code 3:	Not Reported
Additional Code 4:	Not Reported
Additional Code 5:	Not Reported
Shipment Date:	20170111
Creation Date:	3/21/2017 18:30:31
Receipt Date:	20170113
Manifest ID:	016467843JJK
Trans EPA ID:	CAR000172460
Trans Name:	ENVIRONMENTAL LOGISTICS, INC.
Trans 2 EPA ID:	Not Reported
Trans 2 Name:	Not Reported
TSDF EPA ID:	CAD982444481
Trans Name:	FILTER RECYCLING SERVICES, INC.
TSDF Alt EPA ID:	Not Reported
TSDF Alt Name:	Not Reported
CA Waste Code:	352 - Other organic solids
RCRA Code:	Not Reported
Disposal Method:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.05
Waste Quantity:	100
Quantity Unit:	P
Additional Code 1:	Not Reported
Additional Code 2:	Not Reported
Additional Code 3:	Not Reported
Additional Code 4:	Not Reported
Additional Code 5:	Not Reported

Additional Info:

Year:	2016
Gen EPA ID:	CAL000394795
Shipment Date:	20151216
Creation Date:	2/9/2016 22:15:57
Receipt Date:	20151217
Manifest ID:	015033198JJK
Trans EPA ID:	CAR000172460
Trans Name:	ENVIRONMENTAL LOGISTICS INC
Trans 2 EPA ID:	Not Reported
Trans 2 Name:	Not Reported

ROSS STORES INC, 4378 N PERRIS BLVD, PERRIS, CA 925717900 (Continued)

TSDF EPA ID:	CAD982444481
Trans Name:	FILTER RECYCLING SERVICES INC
TSDF Alt EPA ID:	Not Reported
TSDF Alt Name:	Not Reported
CA Waste Code:	221 - Waste oil and mixed oil
RCRA Code:	Not Reported
Disposal Method:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.304
Waste Quantity:	80
Quantity Unit:	G
Additional Code 1:	Not Reported
Additional Code 2:	Not Reported
Additional Code 3:	Not Reported
Additional Code 4:	Not Reported
Additional Code 5:	Not Reported
Shipment Date:	20151216
Creation Date:	2/9/2016 22:15:57
Receipt Date:	20151217
Manifest ID:	015033198JJK
Trans EPA ID:	CAR000172460
Trans Name:	ENVIRONMENTAL LOGISTICS INC
Trans 2 EPA ID:	Not Reported
Trans 2 Name:	Not Reported
TSDF EPA ID:	CAD982444481
Trans Name:	FILTER RECYCLING SERVICES INC
TSDF Alt EPA ID:	Not Reported
TSDF Alt Name:	Not Reported
CA Waste Code:	352 - Other organic solids
RCRA Code:	Not Reported
Disposal Method:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.05
Waste Quantity:	100
Quantity Unit:	P
Additional Code 1:	Not Reported
Additional Code 2:	Not Reported
Additional Code 3:	Not Reported
Additional Code 4:	Not Reported
Additional Code 5:	Not Reported
Shipment Date:	20150424
Creation Date:	6/25/2015 22:15:58
Receipt Date:	20150428
Manifest ID:	013863947JJK
Trans EPA ID:	CAR000172460
Trans Name:	ENVIRONMENTAL LOGISTICS INC
Trans 2 EPA ID:	Not Reported
Trans 2 Name:	Not Reported
TSDF EPA ID:	CAD982444481
Trans Name:	FILTER RECYCLING SERVICES INC
TSDF Alt EPA ID:	Not Reported

ROSS STORES INC, 4378 N PERRIS BLVD, PERRIS, CA 925717900 (Continued)

TSDF Alt Name:	Not Reported
CA Waste Code:	221 - Waste oil and mixed oil
RCRA Code:	Not Reported
Disposal Method:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.209
Waste Quantity:	55
Quantity Unit:	G
Additional Code 1:	Not Reported
Additional Code 2:	Not Reported
Additional Code 3:	Not Reported
Additional Code 4:	Not Reported
Additional Code 5:	Not Reported
Shipment Date:	20150226
Creation Date:	5/18/2015 22:15:34
Receipt Date:	20150227
Manifest ID:	013863528JJK
Trans EPA ID:	CAR000172460
Trans Name:	ENVIRONMENTAL LOGISTICS INC
Trans 2 EPA ID:	Not Reported
Trans 2 Name:	Not Reported
TSDF EPA ID:	CAD982444481
Trans Name:	FILTER RECYCLING SERVICES INC
TSDF Alt EPA ID:	Not Reported
TSDF Alt Name:	Not Reported
CA Waste Code:	352 - Other organic solids
RCRA Code:	Not Reported
Disposal Method:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.075
Waste Quantity:	150
Quantity Unit:	P
Additional Code 1:	Not Reported
Additional Code 2:	Not Reported
Additional Code 3:	Not Reported
Additional Code 4:	Not Reported
Additional Code 5:	Not Reported

CIWQS: Other Ascertainable Records

Name:	PERRIS LOGISTICS CENTER
Address:	4378 NORTH PERRIS BOULEVARD
City,State,Zip:	PERRIS, CA 92571
Agency:	Oakmont Perris Markham LLC
Agency Address:	155 North Riverview Drive, Anaheim, CA 92808
Place/Project Type:	Construction - Industrial
SIC/NAICS:	Not Reported
Region:	8
Program:	CONSTW
Regulatory Measure Status:	Terminated
Regulatory Measure Type:	Storm water construction
Order Number:	2009-0009-DWQ

ROSS STORES INC, 4378 N PERRIS BLVD, PERRIS, CA 925717900 (Continued)

WDID:	8 33C361232
NPDES Number:	CAS000002
Adoption Date:	Not Reported
Effective Date:	06/16/2011
Termination Date:	11/19/2012
Expiration/Review Date:	Not Reported
Design Flow:	Not Reported
Major/Minor:	Not Reported
Complexity:	Not Reported
TTWQ:	Not Reported
Enforcement Actions within 5 years:	0
Violations within 5 years:	0
Latitude:	33.851338
Longitude:	-117.226078

CERS: Other Ascertainable Records

Name:	SWH3 ROSS
Address:	4378 N PERRIS BLVD
City,State,Zip:	PERRIS, CA 92571
Site ID:	72886
CERS ID:	10482409
CERS Description:	Chemical Storage Facilities

Violations:

Site ID:	72886
Site Name:	SWH3 Ross
Violation Date:	04-15-2014
Citation:	HSC 6.95 Multiple - California Health and Safety Code, Chapter 6.95, Section(s) Multiple
Violation Description:	Business Plan Program - Administration/Documentation - General
Violation Notes:	Returned to compliance on 06/12/2014.
Violation Division:	Riverside County Department of Env Health
Violation Program:	HMRRP
Violation Source:	CERS

Site ID:	72886
Site Name:	SWH3 Ross
Violation Date:	04-15-2014
Citation:	HSC 6.11 25404.1 - California Health and Safety Code, Chapter 6.11, Section(s) 25404.1
Violation Description:	Failure to obtain and/or maintain an active hazardous waste generator permit.
Violation Notes:	Returned to compliance on 06/12/2014.
Violation Division:	Riverside County Department of Env Health
Violation Program:	HW
Violation Source:	CERS

Site ID:	72886
Site Name:	SWH3 Ross
Violation Date:	04-15-2014
Citation:	HSC 6.95 Multiple - California Health and Safety Code, Chapter 6.95, Section(s) Multiple
Violation Description:	Business Plan Program - Operations/Maintenance - General
Violation Notes:	Returned to compliance on 06/12/2014. [LOCAL ORDINANCE VIOLATION 104C] Hazardous materials storage area(s) have been posted appropriately.

ROSS STORES INC, 4378 N PERRIS BLVD, PERRIS, CA 925717900 (Continued)

Violation Division:	Riverside County Department of Env Health
Violation Program:	HMRRP
Violation Source:	CERS
Site ID:	72886
Site Name:	SWH3 Ross
Violation Date:	06-19-2018
Citation:	HSC 6.95 25505(a)(4) - California Health and Safety Code, Chapter 6.95, Section(s) 25505(a)(4)
Violation Description:	Failure to provide initial and annual training to all employees in safety procedures in the event of a release or threatened release of a hazardous material or failure to document and maintain training records for a minimum of three years.
Violation Notes:	Returned to compliance on 06/27/2018.
Violation Division:	Riverside County Department of Env Health
Violation Program:	HMRRP
Violation Source:	CERS
Site ID:	72886
Site Name:	SWH3 Ross
Violation Date:	06-19-2018
Citation:	HSC 6.5 25250.1; 25250.18; 25250.19(b)(2) - California Health and Safety Code, Chapter 6.5, Section(s) 25250.1; 25250.18; 25250.19(b)(2)
Violation Description:	"Failure to record in an operating log and retain for three years the following information for each shipment of recycled or exempted oil: 1) The name and address of the used oil recycling facility or generator claiming the oil meets the requirements of HSC 6.5 25250.1. 2) The name and address of the facility receiving the shipment. 3) The quantity of oil delivered. 4) The date of shipment or delivery. 5) A cross-reference to the records and documentation required under HSC 6.5 25250.1."
Violation Notes:	Returned to compliance on 06/27/2018.
Violation Division:	Riverside County Department of Env Health
Violation Program:	HW
Violation Source:	CERS
Site ID:	72886
Site Name:	SWH3 Ross
Violation Date:	06-19-2018
Citation:	22 CCR 12 66262.40(a) - California Code of Regulations, Title 22, Chapter 12, Section(s) 66262.40(a)
Violation Description:	Failure to keep a copy of each properly signed manifest for at least three years from the date the waste was accepted by the initial transporter. The manifest signed at the time the waste was accepted for transport shall be kept until receiving a signed copy from the designated facility which received the waste.
Violation Notes:	Returned to compliance on 06/27/2018.
Violation Division:	Riverside County Department of Env Health
Violation Program:	HW
Violation Source:	CERS
Site ID:	72886
Site Name:	SWH3 Ross
Violation Date:	04-15-2014
Citation:	HSC 6.95 Multiple - California Health and Safety Code, Chapter 6.95, Section(s) Multiple
Violation Description:	Business Plan Program - Administration/Documentation - General
Violation Notes:	Returned to compliance on 06/12/2014. [LOCAL ORDINANCE VIOLATION 104A] NFPA 704 sign(s) have been posted appropriately.
Violation Division:	Riverside County Department of Env Health
Violation Program:	HMRRP
Violation Source:	CERS
Site ID:	72886
Site Name:	SWH3 Ross

ROSS STORES INC, 4378 N PERRIS BLVD, PERRIS, CA 925717900 (Continued)

Violation Date:	06-19-2018
Citation:	Un-Specified
Violation Description:	Business Plan Program - Operations/Maintenance - General Local Ordinance
Violation Notes:	Returned to compliance on 07/25/2018.
Violation Division:	Riverside County Department of Env Health
Violation Program:	HMRRP
Violation Source:	CERS

Evaluation:

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	06-19-2018
Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	Not Reported
Eval Division:	Riverside County Department of Env Health
Eval Program:	HMRRP
Eval Source:	CERS

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	04-15-2014
Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	Not Reported
Eval Division:	Riverside County Department of Env Health
Eval Program:	HMRRP
Eval Source:	CERS

Eval General Type:	Other/Unknown
Eval Date:	06-12-2014
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Not Reported
Eval Division:	Riverside County Department of Env Health
Eval Program:	HMRRP
Eval Source:	CERS

Eval General Type:	Other/Unknown
Eval Date:	06-12-2014
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Not Reported
Eval Division:	Riverside County Department of Env Health
Eval Program:	HW
Eval Source:	CERS

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	06-19-2018
Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	Not Reported
Eval Division:	Riverside County Department of Env Health

ROSS STORES INC, 4378 N PERRIS BLVD, PERRIS, CA 925717900 (Continued)

Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	04-15-2014
Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	Not Reported
Eval Division:	Riverside County Department of Env Health
Eval Program:	HW
Eval Source:	CERS

Enforcement Action:

Site ID:	72886
Site Name:	SWH3 Ross
Site Address:	4378 N PERRIS BLVD
Site City:	PERRIS
Site Zip:	92571
Enf Action Date:	04-15-2014
Enf Action Type:	Notice of Violation (Unified Program)
Enf Action Description:	Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes:	Not Reported
Enf Action Division:	Riverside County Department of Env Health
Enf Action Program:	HMRRP
Enf Action Source:	CERS
Site ID:	72886
Site Name:	SWH3 Ross
Site Address:	4378 N PERRIS BLVD
Site City:	PERRIS
Site Zip:	92571
Enf Action Date:	04-15-2014
Enf Action Type:	Notice of Violation (Unified Program)
Enf Action Description:	Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes:	Not Reported
Enf Action Division:	Riverside County Department of Env Health
Enf Action Program:	HW
Enf Action Source:	CERS

Coordinates:

Site ID:	72886
Facility Name:	SWH3 Ross
Env Int Type Code:	HWG
Program ID:	10482409
Coord Name:	Not Reported
Ref Point Type Desc:	Center of a facility or station.
Latitude:	33.851380
Longitude:	-117.226110

Affiliation:

ROSS STORES INC, 4378 N PERRIS BLVD, PERRIS, CA 925717900 (Continued)

Affiliation Type Desc:	Identification Signer
Entity Name:	Joshua Sheibe
Entity Title:	Loss Prevention & Safety Manager
Affiliation Address:	Not Reported
Affiliation City:	Not Reported
Affiliation State:	Not Reported
Affiliation Country:	Not Reported
Affiliation Zip:	Not Reported
Affiliation Phone:	Not Reported
Affiliation Type Desc:	Legal Owner
Entity Name:	Ross Stores Inc
Entity Title:	Not Reported
Affiliation Address:	5130 Hacienda Drive
Affiliation City:	Dublin
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	94568
Affiliation Phone:	(925) 965-4400
Affiliation Type Desc:	CUPA District
Entity Name:	Riverside Cnty Env Health
Entity Title:	Not Reported
Affiliation Address:	4065 County Circle Drive, Room 104
Affiliation City:	Riverside
Affiliation State:	CA
Affiliation Country:	Not Reported
Affiliation Zip:	92503
Affiliation Phone:	(951) 358-5055
Affiliation Type Desc:	Environmental Contact
Entity Name:	Paul Mosqueda
Entity Title:	Not Reported
Affiliation Address:	4378 Perris Blvd
Affiliation City:	Perris
Affiliation State:	CA
Affiliation Country:	Not Reported
Affiliation Zip:	92571
Affiliation Phone:	Not Reported
Affiliation Type Desc:	Property Owner
Entity Name:	Ross Stores Inc
Entity Title:	Not Reported
Affiliation Address:	4378 Perris Blvd
Affiliation City:	Moreno Valley
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	92571
Affiliation Phone:	(925) 965-4400
Affiliation Type Desc:	Operator
Entity Name:	Ross Stores Inc

ROSS STORES INC, 4378 N PERRIS BLVD, PERRIS, CA 925717900 (Continued)

Entity Title:	Not Reported
Affiliation Address:	Not Reported
Affiliation City:	Not Reported
Affiliation State:	Not Reported
Affiliation Country:	Not Reported
Affiliation Zip:	Not Reported
Affiliation Phone:	(951) 489-5795
Affiliation Type Desc:	Document Preparer
Entity Name:	Green Environmental Management
Entity Title:	Not Reported
Affiliation Address:	Not Reported
Affiliation City:	Not Reported
Affiliation State:	Not Reported
Affiliation Country:	Not Reported
Affiliation Zip:	Not Reported
Affiliation Phone:	Not Reported
Affiliation Type Desc:	Facility Mailing Address
Entity Name:	Mailing Address
Entity Title:	Not Reported
Affiliation Address:	4378 Perris Blvd
Affiliation City:	Perris
Affiliation State:	CA
Affiliation Country:	Not Reported
Affiliation Zip:	92571
Affiliation Phone:	Not Reported
Affiliation Type Desc:	Parent Corporation
Entity Name:	SWH3 Ross
Entity Title:	Not Reported
Affiliation Address:	Not Reported
Affiliation City:	Not Reported
Affiliation State:	Not Reported
Affiliation Country:	Not Reported
Affiliation Zip:	Not Reported
Affiliation Phone:	Not Reported

HWTS: Other Ascertainable Records

Name:	ROSS STORES INC
Address:	4378 N PERRIS BLVD
Address 2:	Not Reported
City,State,Zip:	PERRIS, CA 925717900
EPA ID:	CAL000394795
Inactive Date:	Not Reported
Create Date:	03/07/2014
Last Act Date:	12/15/2018
Mailing Name:	Not Reported
Mailing Address:	17800 PERRIS BLVD
Mailing Address 2:	Not Reported

ROSS STORES INC, 4378 N PERRIS BLVD, PERRIS, CA 925717900 (Continued)

Mailing City,State,Zip:	MORENO VALLEY, CA 925519520
Owner Name:	ROSS STORES INC
Owner Address:	5130 HACIENDA DR
Owner Address 2:	Not Reported
Owner City,State,Zip:	DUBLIN, CA 945880000
Contact Name:	JOSHUA SHEIBE
Contact Address:	17800 PERRIS BLVD
Contact Address 2:	Not Reported
City,State,Zip:	MORENO VALLEY, CA 92551

NAICS:

EPA ID:	CAL000394795
Create Date:	2014-03-07 14:37:20
NAICS Code:	53113
NAICS Description:	Lessors of Miniwarehouses and Self-Storage Units
Issued EPA ID Date:	2014-03-07 14:37:20
Inactive Date:	Not Reported
Facility Name:	ROSS STORES INC
Facility Address:	4378 N PERRIS BLVD
Facility Address 2:	Not Reported
Facility City:	PERRIS
Facility County:	33
Facility State:	CA
Facility Zip:	925717900

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

St	Acronym	Full Name	Government Agency	Gov Date	Arvl. Date	Active Date
ENVIRONMENTAL RECORDS						
Federal NPL site list						
US	NPL	National Priority List	EPA	01/30/2020	02/05/2020	02/14/2020
US	Proposed NPL	Proposed National Priority List Sites	EPA	01/30/2020	02/05/2020	02/14/2020
US	NPL LIENS	Federal Superfund Liens	EPA	10/15/1991	02/02/1994	03/30/1994
Federal CERCLIS list						
US	SEMS	Superfund Enterprise Management System	EPA	01/30/2020	02/05/2020	02/14/2020
Federal RCRA CORRACTS facilities list						
US	CORRACTS	Corrective Action Report	EPA	12/16/2019	12/16/2019	12/20/2019
Federal RCRA TSD facilities list						
US	RCRA-TSDF	RCRA - Treatment, Storage and Disposal	Environmental Protection Agency	12/16/2019	12/16/2019	12/20/2019
Federal RCRA generators list						
US	RCRA-LQG	RCRA - Large Quantity Generators	Environmental Protection Agency	12/16/2019	12/16/2019	12/20/2019
US	RCRA-SQG	RCRA - Small Quantity Generators	Environmental Protection Agency	12/16/2019	12/16/2019	12/20/2019
US	RCRA-VSQG	RCRA - Very Small Quantity Generators (Formerly Conditionall	Environmental Protection Agency	12/16/2019	12/16/2019	12/20/2019
Federal institutional controls / engineering controls registries						
US	LUCIS	Land Use Control Information System	Department of the Navy	11/04/2019	11/13/2019	01/28/2020
US	US ENG CONTROLS	Engineering Controls Sites List	Environmental Protection Agency	11/22/2019	11/22/2019	01/28/2020
US	US INST CONTROLS	Institutional Controls Sites List	Environmental Protection Agency	11/22/2019	11/22/2019	01/28/2020
Federal ERNS list						
US	ERNS	Emergency Response Notification System	National Response Center, United States Coast	12/16/2019	12/19/2019	03/06/2020
State and tribal - equivalent NPL						
CA	RESPONSE	State Response Sites	Department of Toxic Substances Control	01/27/2020	01/28/2020	04/09/2020
State and tribal - equivalent CERCLIS						
CA	ENVIROSTOR	EnviroStor Database	Department of Toxic Substances Control	01/27/2020	01/28/2020	04/09/2020
State and tribal landfill / solid waste disposal						
CA	SWF/LF (SWIS)	Solid Waste Information System	Department of Resources Recycling and Recover	02/10/2020	02/11/2020	04/20/2020
State and tribal leaking storage tank lists						
CA	LUST REG 6V	Leaking Underground Storage Tank Case Listing	California Regional Water Quality Control Boa	06/07/2005	06/07/2005	06/29/2005
CA	LUST REG 1	Active Toxic Site Investigation	California Regional Water Quality Control Boa	02/01/2001	02/28/2001	03/29/2001
CA	LUST REG 7	Leaking Underground Storage Tank Case Listing	California Regional Water Quality Control Boa	02/26/2004	02/26/2004	03/24/2004
CA	LUST REG 8	Leaking Underground Storage Tanks	California Regional Water Quality Control Boa	02/14/2005	02/15/2005	03/28/2005
CA	LUST REG 2	Fuel Leak List	California Regional Water Quality Control Boa	09/30/2004	10/20/2004	11/19/2004
CA	LUST REG 3	Leaking Underground Storage Tank Database	California Regional Water Quality Control Boa	05/19/2003	05/19/2003	06/02/2003
CA	LUST REG 4	Underground Storage Tank Leak List	California Regional Water Quality Control Boa	09/07/2004	09/07/2004	10/12/2004

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

St	Acronym	Full Name	Government Agency	Gov Date	Arvl. Date	Active Date
CA	LUST REG 6L	Leaking Underground Storage Tank Case Listing	California Regional Water Quality Control Boa	09/09/2003	09/10/2003	10/07/2003
CA	LUST REG 5	Leaking Underground Storage Tank Database	California Regional Water Quality Control Boa	07/01/2008	07/22/2008	07/31/2008
CA	LUST	Leaking Underground Fuel Tank Report (GEOTRACKER)	State Water Resources Control Board	12/09/2019	12/10/2019	02/14/2020
CA	LUST REG 9	Leaking Underground Storage Tank Report	California Regional Water Quality Control Boa	03/01/2001	04/23/2001	05/21/2001
US	INDIAN LUST R4	Leaking Underground Storage Tanks on Indian Land	EPA Region 4	10/10/2019	12/05/2019	02/10/2020
US	INDIAN LUST R10	Leaking Underground Storage Tanks on Indian Land	EPA Region 10	10/11/2019	12/04/2019	02/10/2020
US	INDIAN LUST R8	Leaking Underground Storage Tanks on Indian Land	EPA Region 8	10/03/2019	12/04/2019	02/14/2020
US	INDIAN LUST R7	Leaking Underground Storage Tanks on Indian Land	EPA Region 7	10/15/2019	12/17/2019	02/10/2020
US	INDIAN LUST R9	Leaking Underground Storage Tanks on Indian Land	Environmental Protection Agency	10/04/2019	12/04/2019	02/27/2020
US	INDIAN LUST R1	Leaking Underground Storage Tanks on Indian Land	EPA Region 1	10/01/2019	12/04/2019	02/10/2020
US	INDIAN LUST R6	Leaking Underground Storage Tanks on Indian Land	EPA Region 6	10/02/2019	12/04/2019	02/10/2020
US	INDIAN LUST R5	Leaking Underground Storage Tanks on Indian Land	EPA, Region 5	10/01/2019	12/04/2019	02/10/2020
CA	CPS-SLIC	Statewide SLIC Cases (GEOTRACKER)	State Water Resources Control Board	12/09/2019	12/10/2019	02/18/2020
CA	SLIC REG 1	Active Toxic Site Investigations	California Regional Water Quality Control Boa	04/03/2003	04/07/2003	04/25/2003
CA	SLIC REG 2	Spills, Leaks, Investigation & Cleanup Cost Recovery Listing	Regional Water Quality Control Board San Fran	09/30/2004	10/20/2004	11/19/2004
CA	SLIC REG 3	Spills, Leaks, Investigation & Cleanup Cost Recovery Listing	California Regional Water Quality Control Boa	05/18/2006	05/18/2006	06/15/2006
CA	SLIC REG 4	Spills, Leaks, Investigation & Cleanup Cost Recovery Listing	Region Water Quality Control Board Los Angele	11/17/2004	11/18/2004	01/04/2005
CA	SLIC REG 5	Spills, Leaks, Investigation & Cleanup Cost Recovery Listing	Regional Water Quality Control Board Central	04/01/2005	04/05/2005	04/21/2005
CA	SLIC REG 6V	Spills, Leaks, Investigation & Cleanup Cost Recovery Listing	Regional Water Quality Control Board, Victorv	05/24/2005	05/25/2005	06/16/2005
CA	SLIC REG 6L	SLIC Sites	California Regional Water Quality Control Boa	09/07/2004	09/07/2004	10/12/2004
CA	SLIC REG 7	SLIC List	California Regional Quality Control Board, Co	11/24/2004	11/29/2004	01/04/2005
CA	SLIC REG 8	Spills, Leaks, Investigation & Cleanup Cost Recovery Listing	California Region Water Quality Control Board	04/03/2008	04/03/2008	04/14/2008
CA	SLIC REG 9	Spills, Leaks, Investigation & Cleanup Cost Recovery Listing	California Regional Water Quality Control Boa	09/10/2007	09/11/2007	09/28/2007
State and tribal registered storage tank lists						
CA	UST	Active UST Facilities	SWRCB	12/09/2019	12/10/2019	02/21/2020
CA	MILITARY UST SITES	Military UST Sites (GEOTRACKER)	State Water Resources Control Board	12/09/2019	12/10/2019	02/18/2020
CA	UST CLOSURE	Proposed Closure of Underground Storage Tank (UST) Cases	State Water Resources Control Board	12/06/2019	12/10/2019	02/25/2020
CA	UST MENDOCINO	Mendocino County UST Database	Department of Public Health	12/19/2019	12/23/2019	02/21/2020
CA	AST	Aboveground Petroleum Storage Tank Facilities	California Environmental Protection Agency	07/06/2016	07/12/2016	09/19/2016
US	INDIAN UST R4	Underground Storage Tanks on Indian Land	EPA Region 4	10/10/2019	12/05/2019	02/10/2020
US	INDIAN UST R9	Underground Storage Tanks on Indian Land	EPA Region 9	10/04/2019	12/04/2019	02/27/2020
US	INDIAN UST R10	Underground Storage Tanks on Indian Land	EPA Region 10	10/11/2019	12/04/2019	02/10/2020
US	INDIAN UST R1	Underground Storage Tanks on Indian Land	EPA, Region 1	10/01/2019	12/04/2019	02/10/2020
US	INDIAN UST R8	Underground Storage Tanks on Indian Land	EPA Region 8	10/03/2019	12/04/2019	02/14/2020
US	INDIAN UST R7	Underground Storage Tanks on Indian Land	EPA Region 7	10/11/2019	12/04/2019	02/10/2020
US	INDIAN UST R6	Underground Storage Tanks on Indian Land	EPA Region 6	10/02/2019	12/04/2019	02/10/2020
US	INDIAN UST R5	Underground Storage Tanks on Indian Land	EPA Region 5	10/01/2019	12/04/2019	02/10/2020
US	FEMA UST	Underground Storage Tank Listing	FEMA	08/27/2019	08/28/2019	11/11/2019

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

St	Acronym	Full Name	Government Agency	Gov Date	Arvl. Date	Active Date
State and tribal voluntary cleanup sites						
US	INDIAN VCP R1	Voluntary Cleanup Priority Listing	EPA, Region 1	07/27/2015	09/29/2015	02/18/2016
US	INDIAN VCP R7	Voluntary Cleanup Priority Lisitng	EPA, Region 7	03/20/2008	04/22/2008	05/19/2008
CA	VCP	Voluntary Cleanup Program Properties	Department of Toxic Substances Control	01/27/2020	01/28/2020	04/09/2020
State and tribal Brownfields sites						
CA	BROWNFIELDS	Considered Brownfieds Sites Listing	State Water Resources Control Board	12/18/2019	12/19/2019	02/19/2020
Other Records						
US	CONSENT	Superfund (CERCLA) Consent Decrees	Department of Justice, Consent Decree Library	12/31/2019	01/17/2020	03/06/2020
US	ROD	Records Of Decision	EPA	01/30/2020	02/05/2020	02/14/2020
US	LIENS 2	CERCLA Lien Information	Environmental Protection Agency	01/30/2020	02/05/2020	02/14/2020
CA	HIST CAL-SITES	Calsites Database	Department of Toxic Substance Control	08/08/2005	08/03/2006	08/24/2006
US	DEBRIS REGION 9	Torres Martinez Reservation Illegal Dump Site Locations	EPA, Region 9	01/12/2009	05/07/2009	09/21/2009
CA	SWRCY	Recycler Database	Department of Conservation	12/09/2019	12/10/2019	02/19/2020
CA	CA FID UST	Facility Inventory Database	California Environmental Protection Agency	10/31/1994	09/05/1995	09/29/1995
CA	HIST UST	Hazardous Substance Storage Container Database	State Water Resources Control Board	10/15/1990	01/25/1991	02/12/1991
CA	SAN FRANCISCO AST	Aboveground Storage Tank Site Listing	San Francisco County Department of Public Hea	08/01/2019	08/02/2019	10/11/2019
CA	SWEEPS UST	SWEEPS UST Listing	State Water Resources Control Board	06/01/1994	07/07/2005	08/11/2005
US	FUSRAP	Formerly Utilized Sites Remedial Action Program	Department of Energy	08/08/2017	09/11/2018	09/14/2018
US	LEAD SMELTER 1	Lead Smelter Sites	Environmental Protection Agency	01/30/2020	02/05/2020	02/14/2020
US	EPA WATCH LIST	EPA WATCH LIST	Environmental Protection Agency	08/30/2013	03/21/2014	06/17/2014
US	US AIRS MINOR	Air Facility System Data	EPA	10/12/2016	10/26/2016	02/03/2017
US	US AIRS (AFS)	Aerometric Information Retrieval System Facility Subsystem (	EPA	10/12/2016	10/26/2016	02/03/2017
US	SCRD DRYCLEANERS	State Coalition for Remediation of Drycleaners Listing	Environmental Protection Agency	01/01/2017	02/03/2017	04/07/2017
US	COAL ASH EPA	Coal Combustion Residues Surface Impoundments List	Environmental Protection Agency	01/12/2017	03/05/2019	11/11/2019
US	PCB TRANSFORMER	PCB Transformer Registration Database	Environmental Protection Agency	09/13/2019	11/06/2019	02/10/2020
US	US HIST CDL	National Clandestine Laboratory Register	Drug Enforcement Administration	06/11/2019	06/13/2019	09/03/2019
US	US FIN ASSUR	Financial Assurance Information	Environmental Protection Agency	12/16/2019	12/19/2019	02/27/2020
US	LEAD SMELTER 2	Lead Smelter Sites	American Journal of Public Health	04/05/2001	10/27/2010	12/02/2010
US	2020 COR ACTION	2020 Corrective Action Program List	Environmental Protection Agency	09/30/2017	05/08/2018	07/20/2018
US	COAL ASH DOE	Steam-Electric Plant Operation Data	Department of Energy	12/31/2018	12/04/2019	01/15/2020
US	Delisted NPL	National Priority List Deletions	EPA	01/30/2020	02/05/2020	02/14/2020
US	SEMS-ARCHIVE	Superfund Enterprise Management System Archive	EPA	01/30/2020	02/05/2020	02/14/2020
US	RCRA NonGen / NLR	RCRA - Non Generators / No Longer Regulated	Environmental Protection Agency	12/16/2019	12/16/2019	12/20/2019
US	HMIRS	Hazardous Materials Information Reporting System	U.S. Department of Transportation	12/05/2019	12/06/2019	02/14/2020
US	DOT OPS	Incident and Accident Data	Department of Transporation, Office of Pipeli	01/02/2020	01/28/2020	04/17/2020
US	US CDL	Clandestine Drug Labs	Drug Enforcement Administration	06/11/2019	06/13/2019	09/03/2019
US	US BROWNFIELDS	A Listing of Brownfields Sites	Environmental Protection Agency	12/02/2019	12/16/2019	03/06/2020
US	DOD	Department of Defense Sites	USGS	12/31/2005	11/10/2006	01/11/2007
US	FEDLAND	Federal and Indian Lands	U.S. Geological Survey	04/02/2018	04/11/2018	11/06/2019
US	FUDS	Formerly Used Defense Sites	U.S. Army Corps of Engineers	11/12/2019	11/19/2019	01/28/2020
US	UMTRA	Uranium Mill Tailings Sites	Department of Energy	08/30/2019	11/15/2019	01/28/2020
US	ODI	Open Dump Inventory	Environmental Protection Agency	06/30/1985	08/09/2004	09/17/2004
US	US MINES	Mines Master Index File	Department of Labor, Mine Safety and Health A	11/06/2019	11/25/2019	01/28/2020
US	MINES VIOLATIONS	MSHA Violation Assessment Data	DOL, Mine Safety & Health Admi	12/03/2019	12/03/2019	01/28/2020

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

St	Acronym	Full Name	Government Agency	Gov Date	Arvl. Date	Active Date
US	US MINES 2	Ferrous and Nonferrous Metal Mines Database Listing	USGS	12/05/2005	02/29/2008	04/18/2008
US	US MINES 3	Active Mines & Mineral Plants Database Listing	USGS	04/14/2011	06/08/2011	09/13/2011
US	PRP	Potentially Responsible Parties	EPA	01/30/2020	02/06/2020	02/14/2020
US	TRIS	Toxic Chemical Release Inventory System	EPA	12/31/2018	02/05/2020	04/24/2020
US	TSCA	Toxic Substances Control Act	EPA	12/31/2016	06/21/2017	01/05/2018
US	FTTS	FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fu	EPA/Office of Prevention, Pesticides and Toxi	04/09/2009	04/16/2009	05/11/2009
US	FTTS INSP	FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fu	EPA	04/09/2009	04/16/2009	05/11/2009
US	HIST FTTS	FIFRA/TSCA Tracking System Administrative Case Listing	Environmental Protection Agency	10/19/2006	03/01/2007	04/10/2007
US	HIST FTTS INSP	FIFRA/TSCA Tracking System Inspection & Enforcement Case Lis	Environmental Protection Agency	10/19/2006	03/01/2007	04/10/2007
US	SSTS	Section 7 Tracking Systems	EPA	05/01/2019	10/23/2019	01/15/2020
US	ICIS	Integrated Compliance Information System	Environmental Protection Agency	11/18/2016	11/23/2016	02/10/2017
US	PADS	PCB Activity Database System	EPA	10/09/2019	10/11/2019	12/20/2019
US	MLTS	Material Licensing Tracking System	Nuclear Regulatory Commission	10/25/2019	10/25/2019	01/15/2020
US	RADINFO	Radiation Information Database	Environmental Protection Agency	07/01/2019	07/01/2019	09/23/2019
US	FINDS	Facility Index System/Facility Registry System	EPA	11/22/2019	12/04/2019	03/02/2020
US	RAATS	RCRA Administrative Action Tracking System	EPA	04/17/1995	07/03/1995	08/07/1995
US	RMP	Risk Management Plans	Environmental Protection Agency	11/05/2019	11/20/2019	04/17/2020
US	BRS	Biennial Reporting System	EPA/NTIS	12/31/2015	02/22/2017	09/28/2017
US	PWS	Public Water System Data	EPA	12/17/2013	01/09/2014	10/15/2014
US	INDIAN RESERV	Indian Reservations	USGS	12/31/2014	07/14/2015	01/10/2017
US	INDIAN ODI	Report on the Status of Open Dumps on Indian Lands	Environmental Protection Agency	12/31/1998	12/03/2007	01/24/2008
US	IHS OPEN DUMPS	Open Dumps on Indian Land	Department of Health & Human Serivces, Indian	04/01/2014	08/06/2014	01/29/2015
US	ABANDONED MINES	Abandoned Mines	Department of Interior	12/09/2019	12/11/2019	02/27/2020
CA	CA BOND EXP. PLAN	Bond Expenditure Plan	Department of Health Services	01/01/1989	07/27/1994	08/02/1994
CA	CDL	Clandestine Drug Labs	Department of Toxic Substances Control	12/31/2018	02/05/2020	04/15/2020
CA	CHMIRS	California Hazardous Material Incident Report System	Office of Emergency Services	12/24/2019	01/22/2020	03/30/2020
CA	CORTESE	"Cortese" Hazardous Waste & Substances Sites List	CAL EPA/Office of Emergency Information	12/18/2019	12/20/2019	02/20/2020
CA	CUPA SAN FRANCISCO CO	CUPA Facility Listing	San Francisco County Department of Environmen	02/03/2020	02/04/2020	04/09/2020
CA	CUPA LIVERMORE-PLEASANTON	CUPA Facility Listing	Livermore-Pleasanton Fire Department	05/01/2019	05/14/2019	07/17/2019
CA	DEED	Deed Restriction Listing	DTSC and SWRCB	12/03/2019	12/04/2019	02/04/2020
CA	DRYCLEAN AVAQMD	Antelope Valley Air Quality Management District Drycleaner L	Antelope Valley Air Quality Management Distri	12/02/2019	12/03/2019	02/04/2020
CA	DRYCLEAN SOUTH COAST	South Coast Air Quality Management District Drycleaner Listi	South Coast Air Quality Management District	01/31/2020	01/31/2020	04/09/2020
CA	DRYCLEANERS	Cleaner Facilities	Department of Toxic Substance Control	12/04/2019	01/29/2020	04/09/2020
CA	EMI	Emissions Inventory Data	California Air Resources Board	12/31/2017	06/24/2019	08/22/2019
CA	ENF	Enforcement Action Listing	State Water Resoruces Control Board	04/03/2020	04/07/2020	04/15/2020
CA	Financial Assurance 1	Financial Assurance Information Listing	Department of Toxic Substances Control	01/21/2020	01/23/2020	04/01/2020
CA	Financial Assurance 2	Financial Assurance Information Listing	California Integrated Waste Management Board	02/19/2020	02/20/2020	04/24/2020
CA	HAULERS	Registered Waste Tire Haulers Listing	Integrated Waste Management Board	11/15/2019	11/15/2019	01/23/2020
CA	HAZNET	Facility and Manifest Data	California Environmental Protection Agency	12/31/2017	05/29/2019	07/22/2019
CA	HIST CORTESE	Hazardous Waste & Substance Site List	Department of Toxic Substances Control	04/01/2001	01/22/2009	04/08/2009
CA	HWP	EnviroStor Permitted Facilities Listing	Department of Toxic Substances Control	02/18/2020	02/19/2020	04/24/2020
CA	HWT	Registered Hazardous Waste Transporter Database	Department of Toxic Substances Control	01/06/2020	01/07/2020	03/05/2020
CA	ICE	ICE	Department of Toxic Subsances Control	02/18/2020	02/19/2020	04/24/2020
CA	LDS	Land Disposal Sites Listing (GEOTRACKER)	State Water Qualilty Control Board	12/09/2019	12/10/2019	02/14/2020
CA	LIENS	Environmental Liens Listing	Department of Toxic Substances Control	12/02/2019	12/04/2019	02/04/2020
CA	MCS	Military Cleanup Sites Listing (GEOTRACKER)	State Water Resources Control Board	12/09/2019	12/10/2019	02/18/2020
CA	MINES	Mines Site Location Listing	Department of Conservation	12/09/2019	12/10/2019	02/24/2020

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

St	Acronym	Full Name	Government Agency	Gov Date	Arvl. Date	Active Date
CA	MWMP	Medical Waste Management Program Listing	Department of Public Health	11/22/2019	12/04/2019	02/04/2020
CA	NPDES	NPDES Permits Listing	State Water Resources Control Board	02/10/2020	02/11/2020	04/20/2020
CA	PEST LIC	Pesticide Regulation Licenses Listing	Department of Pesticide Regulation	12/03/2019	12/04/2019	02/04/2020
CA	PROC	Certified Processors Database	Department of Conservation	12/09/2019	12/10/2019	02/19/2020
CA	NOTIFY 65	Proposition 65 Records	State Water Resources Control Board	12/11/2019	12/12/2019	02/21/2020
CA	SCH	School Property Evaluation Program	Department of Toxic Substances Control	01/27/2020	01/28/2020	04/09/2020
CA	SPILLS 90	SPILLS90 data from FirstSearch	FirstSearch	06/06/2012	01/03/2013	02/22/2013
CA	TOXIC PITS	Toxic Pits Cleanup Act Sites	State Water Resources Control Board	07/01/1995	08/30/1995	09/26/1995
CA	UIC	UIC Listing	Deaprtment of Conservation	12/06/2019	12/10/2019	02/19/2020
CA	WASTEWATER PITS	Oil Wastewater Pits Listing	RWQCB, Central Valley Region	11/19/2019	01/07/2020	03/09/2020
CA	WDS	Waste Discharge System	State Water Resources Control Board	06/19/2007	06/20/2007	06/29/2007
CA	WIP	Well Investigation Program Case List	Los Angeles Water Quality Control Board	07/03/2009	07/21/2009	08/03/2009
CA	WMUDS/SWAT	Waste Management Unit Database	State Water Resources Control Board	04/01/2000	04/10/2000	05/10/2000
CA	CERS HAZ WASTE	CERS HAZ WASTE	CalEPA	01/21/2020	01/22/2020	04/01/2020
CA	HWTS	Hazardous Waste Tracking System	Department of Toxic Substances Control	10/15/2019	11/14/2019	02/07/2020
US	MINES MRDS	Mineral Resources Data System	USGS	04/06/2018	10/21/2019	10/24/2019
CA	PFAS	PFAS Contamination Site Location Listing	State Water Resources Control Board	12/09/2019	12/10/2019	02/19/2020
US	FUELS PROGRAM	EPA Fuels Program Registered Listing	EPA	11/18/2019	11/19/2019	01/28/2020
CA	WDR	Waste Discharge Requirements Listing	State Water Resources Control Board	12/09/2019	12/10/2019	02/19/2020
CA	NON-CASE INFO	Non-Case Information Sites (GEOTRACKER)	State Water Resources Control Board	12/09/2019	12/10/2019	02/18/2020
CA	MILITARY PRIV SITES	Military Privatized Sites (GEOTRACKER)	State Water Resources Control Board	12/09/2019	12/10/2019	02/18/2020
CA	OTHER OIL GAS	Other Oil & Gas Projects Sites (GEOTRACKER)	State Water Resources Control Board	12/09/2019	12/10/2019	02/18/2020
CA	PROD WATER PONDS	Produced Water Ponds Sites (GEOTRACKER)	State Water Resources Control Board	12/09/2019	12/10/2019	02/18/2020
CA	WELL STIM PROJ	Well Stimulation Project (GEOTRACKER)	State Water Resources Control Board	12/09/2019	12/10/2019	02/18/2020
US	UXO	Unexploded Ordnance Sites	Department of Defense	12/31/2017	01/17/2019	04/01/2019
CA	CERS TANKS	California Environmental Reporting System (CERS) Tanks	California Environmental Protection Agency	01/21/2020	01/22/2020	04/01/2020
US	DOCKET HWC	Hazardous Waste Compliance Docket Listing	Environmental Protection Agency	05/31/2018	07/26/2018	10/05/2018
CA	CERS	CalEPA Regulated Site Portal Data	California Environmental Protection Agency	01/21/2020	01/22/2020	04/01/2020
CA	PROJECT	Project Sites (GEOTRACKER)	State Water Resources Control Board	12/09/2019	12/10/2019	02/18/2020
CA	SAMPLING POINT	Sampling Point ? Public Sites (GEOTRACKER)	State Water Resources Control Board	12/09/2019	12/10/2019	02/18/2020
US	ECHO	Enforcement & Compliance History Information	Environmental Protection Agency	01/05/2020	01/07/2020	03/06/2020
CA	CIWQS	California Integrated Water Quality System	State Water Resources Control Board	12/03/2019	12/04/2019	02/04/2020
CA	UIC GEO	Underground Injection Control Sites (GEOTRACKER)	State Water Resource Control Board	12/09/2019	12/10/2019	02/18/2020

HISTORICAL USE RECORDS

US	EDR MGP	EDR Proprietary Manufactured Gas Plants	EDR, Inc.			
US	EDR Hist Auto	EDR Exclusive Historical Auto Stations	EDR, Inc.			
US	EDR Hist Cleaner	EDR Exclusive Historical Cleaners	EDR, Inc.			
CA	RGA LF	Recovered Government Archive Solid Waste Facilities List	Department of Resources Recycling and Recover		07/01/2013	01/13/2014
CA	RGA LUST	Recovered Government Archive Leaking Underground Storage Tan	State Water Resources Control Board		07/01/2013	12/30/2013

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

St	Acronym	Full Name	Government Agency	Gov Date	Arvl. Date	Active Date
COUNTY RECORDS						
CA	CS ALAMEDA	Contaminated Sites	Alameda County Environmental Health Services	01/09/2019	01/11/2019	03/05/2019
CA	UST ALAMEDA	Underground Tanks	Alameda County Environmental Health Services	01/06/2020	01/07/2020	03/06/2020
CA	CUPA AMADOR	CUPA Facility List	Amador County Environmental Health	09/06/2019	09/10/2019	10/31/2019
CA	CUPA BUTTE	CUPA Facility Listing	Public Health Department	04/21/2017	04/25/2017	08/09/2017
CA	CUPA CALVERAS	CUPA Facility Listing	Calveras County Environmental Health	12/02/2019	12/03/2019	02/04/2020
CA	CUPA COLUSA	CUPA Facility List	Health & Human Services	08/14/2019	08/20/2019	10/18/2019
CA	SL CONTRA COSTA	Site List	Contra Costa Health Services Department	02/14/2020	02/18/2020	04/24/2020
CA	CUPA DEL NORTE	CUPA Facility List	Del Norte County Environmental Health Divisio	12/27/2019	01/28/2020	04/09/2020
CA	CUPA EL DORADO	CUPA Facility List	El Dorado County Environmental Management Dep	12/31/2019	01/03/2020	03/05/2020
CA	CUPA FRESNO	CUPA Resources List	Dept. of Community Health	10/08/2019	10/10/2019	12/11/2019
CA	CUPA GLENN	CUPA Facility List	Glenn County Air Pollution Control District	01/22/2018	01/24/2018	03/14/2018
CA	CUPA HUMBOLDT	CUPA Facility List	Humboldt County Environmental Health	11/13/2019	11/14/2019	01/23/2020
CA	CUPA IMPERIAL	CUPA Facility List	San Diego Border Field Office	01/21/2020	01/23/2020	03/30/2020
CA	CUPA INYO	CUPA Facility List	Inyo County Environmental Health Services	04/02/2018	04/03/2018	06/14/2018
CA	UST KERN	Underground Storage Tank Sites & Tank Listing	Kern County Environment Health Services Depar	01/31/2020	02/05/2020	04/15/2020
CA	CUPA KINGS	CUPA Facility List	Kings County Department of Public Health	02/13/2020	02/14/2020	04/24/2020
CA	CUPA LAKE	CUPA Facility List	Lake County Environmental Health	01/15/2020	01/16/2020	04/01/2020
CA	CUPA LASSEN	CUPA Facility List	Lassen County Environmental Health	01/30/2020	01/31/2020	04/09/2020
CA	AOCONCERN	Key Areas of Concerns in Los Angeles County		03/30/2009	03/31/2009	10/23/2009
CA	HMS LOS ANGELES	HMS: Street Number List	Department of Public Works	01/15/2020	01/16/2020	02/07/2020
CA	LF LOS ANGELES	List of Solid Waste Facilities	La County Department of Public Works	01/13/2020	01/14/2020	03/24/2020
CA	LF LOS ANGELES CITY	City of Los Angeles Landfills	Engineering & Construction Division	01/01/2019	01/15/2019	03/07/2019
CA	LOS ANGELES AST	Active & Inactive AST Inventory	Los Angeles Fire Department	06/01/2019	06/25/2019	08/22/2019
CA	LOS ANGELES CO LF METHANE	Methane Producing Landfills	Los Angeles County Department of Public Works	04/30/2012	04/17/2019	05/29/2019
CA	LOS ANGELES HM	Active & Inactive Hazardous Materials Inventory	Los Angeles Fire Department	06/01/2019	06/25/2019	08/22/2019
CA	LOS ANGELES UST	Active & Inactive UST Inventory	Los Angeles Fire Department	06/01/2019	06/25/2019	08/22/2019
CA	SITE MIT LOS ANGELES	Site Mitigation List	Community Health Services	12/31/2019	01/14/2020	03/24/2020
CA	UST EL SEGUNDO	City of El Segundo Underground Storage Tank	City of El Segundo Fire Department	01/21/2017	04/19/2017	05/10/2017
CA	UST LONG BEACH	City of Long Beach Underground Storage Tank	City of Long Beach Fire Department	04/22/2019	04/23/2019	06/27/2019
CA	UST TORRANCE	City of Torrance Underground Storage Tank	City of Torrance Fire Department	06/27/2019	07/30/2019	10/02/2019
CA	CUPA MADERA	CUPA Facility List	Madera County Environmental Health	11/18/2019	11/20/2019	01/27/2020
CA	UST MARIN	Underground Storage Tank Sites	Public Works Department Waste Management	09/26/2018	10/04/2018	11/02/2018
CA	CUPA MERCED	CUPA Facility List	Merced County Environmental Health	11/18/2019	11/20/2019	01/03/2020
CA	CUPA MONO	CUPA Facility List	Mono County Health Department	11/20/2019	12/02/2019	02/07/2020
CA	CUPA MONTEREY	CUPA Facility Listing	Monterey County Health Department	11/06/2019	11/07/2019	01/08/2020
CA	LUST NAPA	Sites With Reported Contamination	Napa County Department of Environmental Manag	01/09/2017	01/11/2017	03/02/2017
CA	UST NAPA	Closed and Operating Underground Storage Tank Sites	Napa County Department of Environmental Manag	09/05/2019	09/09/2019	10/31/2019
CA	CUPA NEVADA	CUPA Facility List	Community Development Agency	02/05/2020	02/06/2020	04/15/2020
CA	IND_SITE ORANGE	List of Industrial Site Cleanups	Health Care Agency	01/02/2020	02/05/2020	04/15/2020
CA	LUST ORANGE	List of Underground Storage Tank Cleanups	Health Care Agency	01/02/2020	02/05/2020	04/15/2020
CA	UST ORANGE	List of Underground Storage Tank Facilities	Health Care Agency	01/02/2020	02/04/2020	04/10/2020
CA	MS PLACER	Master List of Facilities	Placer County Health and Human Services	12/02/2019	12/03/2019	02/07/2020
CA	CUPA PLUMAS	CUPA Facility List	Plumas County Environmental Health	03/31/2019	04/23/2019	06/26/2019
CA	LUST RIVERSIDE	Listing of Underground Tank Cleanup Sites	Department of Environmental Health	10/17/2019	10/22/2019	12/13/2019
CA	UST RIVERSIDE	Underground Storage Tank Tank List	Department of Environmental Health	10/17/2019	10/22/2019	01/03/2020

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

St	Acronym	Full Name	Government Agency	Gov Date	Arvl. Date	Active Date
CA	CS SACRAMENTO	Toxic Site Clean-Up List	Sacramento County Environmental Management	11/14/2019	12/23/2019	02/20/2020
CA	ML SACRAMENTO	Master Hazardous Materials Facility List	Sacramento County Environmental Management	11/14/2019	12/23/2019	02/21/2020
CA	CUPA SAN BENITO	CUPA Facility List	San Benito County Environmental Health	02/12/2020	02/13/2020	04/23/2020
CA	PERMITS SAN BERNARDINO	Hazardous Material Permits	San Bernardino County Fire Department Hazardo	11/26/2019	11/27/2019	02/04/2020
CA	HMMD SAN DIEGO	Hazardous Materials Management Division Database	Hazardous Materials Management Division	12/03/2019	12/04/2019	02/04/2020
CA	LF SAN DIEGO	Solid Waste Facilities	Department of Health Services	04/18/2018	04/24/2018	06/19/2018
CA	SAN DIEGO CO LOP	Local Oversight Program Listing	Department of Environmental Health	12/26/2019	01/22/2020	04/01/2020
CA	SAN DIEGO CO SAM	Environmental Case Listing	San Diego County Department of Environmental	03/23/2010	06/15/2010	07/09/2010
CA	LUST SAN FRANCISCO	Local Oversite Facilities	Department Of Public Health San Francisco Cou	09/19/2008	09/19/2008	09/29/2008
CA	UST SAN FRANCISCO	Underground Storage Tank Information	Department of Public Health	01/08/2020	01/09/2020	03/06/2020
CA	UST SAN JOAQUIN	San Joaquin Co. UST	Environmental Health Department	06/22/2018	06/26/2018	07/11/2018
CA	CUPA SAN LUIS OBISPO	CUPA Facility List	San Luis Obispo County Public Health Departme	02/18/2020	02/20/2020	04/24/2020
CA	BI SAN MATEO	Business Inventory	San Mateo County Environmental Health Service	02/20/2020	02/20/2020	04/24/2020
CA	LUST SAN MATEO	Fuel Leak List	San Mateo County Environmental Health Service	03/29/2019	03/29/2019	05/29/2019
CA	CUPA SANTA BARBARA	CUPA Facility Listing	Santa Barbara County Public Health Department	09/08/2011	09/09/2011	10/07/2011
CA	CUPA SANTA CLARA	Cupa Facility List	Department of Environmental Health	02/14/2020	02/19/2020	04/24/2020
CA	HIST LUST SANTA CLARA	HIST LUST - Fuel Leak Site Activity Report	Santa Clara Valley Water District	03/29/2005	03/30/2005	04/21/2005
CA	LUST SANTA CLARA	LOP Listing	Department of Environmental Health	03/03/2014	03/05/2014	03/18/2014
CA	SAN JOSE HAZMAT	Hazardous Material Facilities	City of San Jose Fire Department	10/30/2019	11/01/2019	01/08/2020
CA	CUPA SANTA CRUZ	CUPA Facility List	Santa Cruz County Environmental Health	01/21/2017	02/22/2017	05/23/2017
CA	CUPA SHASTA	CUPA Facility List	Shasta County Department of Resource Manageme	06/15/2017	06/19/2017	08/09/2017
CA	LUST SOLANO	Leaking Underground Storage Tanks	Solano County Department of Environmental Man	06/04/2019	06/06/2019	08/13/2019
CA	UST SOLANO	Underground Storage Tanks	Solano County Department of Environmental Man	12/09/2019	12/11/2019	02/21/2020
CA	CUPA SONOMA	Cupa Facility List	County of Sonoma Fire & Emergency Services De	02/25/2020	02/26/2020	03/11/2020
CA	LUST SONOMA	Leaking Underground Storage Tank Sites	Department of Health Services	01/02/2020	01/03/2020	03/05/2020
CA	CUPA STANISLAUS	CUPA Facility List	Stanislaus County Department of Ennvironmenta	02/04/2020	02/05/2020	04/15/2020
CA	UST SUTTER	Underground Storage Tanks	Sutter County Environmental Health Services	12/02/2019	12/03/2019	02/07/2020
CA	CUPA TEHAMA	CUPA Facility List	Tehama County Department of Environmental Hea	05/20/2019	05/21/2019	07/18/2019
CA	CUPA TRINITY	CUPA Facility List	Department of Toxic Substances Control	01/21/2020	01/23/2020	03/30/2020
CA	CUPA TULARE	CUPA Facility List	Tulare County Environmental Health Services D	02/10/2020	02/11/2020	04/20/2020
CA	CUPA TUOLUMNE	CUPA Facility List	Divison of Environmental Health	04/23/2018	04/25/2018	06/25/2018
CA	BWT VENTURA	Business Plan, Hazardous Waste Producers, and Operating Unde	Ventura County Environmental Health Division	12/26/2019	01/24/2020	04/01/2020
CA	LF VENTURA	Inventory of Illegal Abandoned and Inactive Sites	Environmental Health Division	12/01/2011	12/01/2011	01/19/2012
CA	LUST VENTURA	Listing of Underground Tank Cleanup Sites	Environmental Health Division	05/29/2008	06/24/2008	07/31/2008
CA	MED WASTE VENTURA	Medical Waste Program List	Ventura County Resource Management Agency	12/26/2019	01/24/2020	04/01/2020
CA	UST VENTURA	Underground Tank Closed Sites List	Environmental Health Division	11/26/2019	12/10/2019	02/21/2020
CA	UST YOLO	Underground Storage Tank Comprehensive Facility Report	Yolo County Department of Health	12/12/2019	01/15/2020	03/25/2020
CA	CUPA YUBA	CUPA Facility List	Yuba County Environmental Health Department	01/27/2020	02/12/2020	04/23/2020

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

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STREET AND ADDRESS INFORMATION

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Initial Study Appendix H

Preliminary Drainage Study

The following section contains content that was obtained from a third party and may not achieve the same level of Americans with Disabilities Act (ADA) and Section 508 accessibility as other parts of this document.

PRELIMINARY DRAINAGE STUDY
(HYDROLOGY AND HYDRAULICS)
FOR
McKAY-RAMONA
(PRELIMINARY ENGINEERING)

City Case #: DPR21-00011

Job Number 2010

January 12, 2022

PRELIMINARY DRAINAGE STUDY
(HYDROLOGY AND HYDARULICS)
FOR
McKAY-RAMONA
(PRELIMINARY ENGINEERING)

City Case #: DPR21-00011

Job Number 2010

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January 12, 2022

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1.0 INTRODUCTION

1.1 Project Description

This drainage study presents preliminary engineering hydrologic and hydraulic analyses for the proposed McKay-Ramona project (herein referred to as "the project"). The City Case No. is DPR 21-00011. The project is located in the City of Perris, bounded by Ramona Expressway to the south, Indian Avenue to the west, Perris Boulevard to the east, existing business (gas station) to the southeast, and existing parcels to the north. Refer to Figure 1.0 for a Vicinity Map of the project. The project APN is 302-060-041.

1.2 Project Features

The overall project parcel consists of approximately 17.7 acres, with approximately 14.8 acres of drainage area to be analyzed in the post-project condition. The proposed improvements will consist of a tilt-up warehouse building, associated parking areas, sidewalks, and landscape areas. The proposed warehouse building footprint is approximately 247,884 square feet and there will be a total of 415 parking spaces to be provided. The proposed impervious and pervious footprints are approximately 524,480 square feet and 120,708 square feet, respectively. Below are descriptions about the exiting drainage features surrounding the project as well as the proposed project's drainage related improvements.

Currently, there is an existing offsite flood control facility in Indian Avenue [i.e. – a reinforced concrete box culvert with the dimension of 14' (wide) by 7' (high)] that terminates at the southwesterly corner of the project, based on the storm drain plans titled, "Perris Valley MDP Line E Stage 4: PM 37457; Drawing No. 4-1145". With the invert elevation of the existing box culvert at approximately ~1452 (Inv.) and the existing ground elevation of ~1457 near the southwesterly corner of the project, the majority of the existing box culvert height (approximately 5') is below ground and an opening from the remaining top portion of the existing box (approximately 2') allows the offsite flows to outlet to the project. During a storm event, most of the offsite storm water flow appears to be held back (stored) temporarily within the bottom ~5' of the box. Based on Sheet 2 of the above referenced storm drain plans, there appears to be a low-flow sump pump on the upstream side of the box culvert that is designed to drain the standing storm water in the

existing box culvert to an existing concrete channel located along the southerly edge of the project (located within the City of Perris right-of-way, north of Ramona Expressway), based on Sheet 6 of the plans titled, "Perris Valley Logistics Center Street Improvement Plan; Parcel Map 36010; City File No. P8-1073". Based on this condition, the outlet of the existing offsite box culvert is essentially acting like a "bubbler" system during a larger storm event (i.e. – 100-year storm), allowing restricted flows from the top ~2' of the box opening onto the project site.

Prior to the start of this project, it was agreed and understood between the City of Perris and the project owner/applicant that the City of Perris would design and construct the flood control facility extension (i.e. – a portion of the Perris Valley MDP Line E), extending along the southerly edge of the project and around the existing business (gas station and car wash) located to the southeast of the project. This flood control facility extension would serve to fully convey the upstream offsite flows as well as the proposed project on-site flows. Ultimately, the City's plan is to have this flood control facility extended further downstream all the way to the existing Perris Valley Storm Drain Channel. However, the City of Perris is now directing the project to construct a portion of the MDP Line E flood control facility (i.e. – 14'(wide) x 7'(high) box culvert) along the southerly edge of the project to the easterly project property edge/boundary. With this being the situation, the project is proposing to provide an on-site permanent best management practice (BMP) near the easterly edge of the project, prior to discharging the on-site flows to the proposed MDP Line E flood control facility. During the interim condition, the runoff from the terminus of the MDP Line E flood control facility (by downstream end of the project) will connect an existing Perris Valley MDP Lateral Line E-11 in Perris Blvd, based on the plans titled, "Storm Drain Improvement Plans Perris Logistic Center DPR-05-0192 Lateral MDP E-11 (File Number P8-821)," via a proposed temporary low-flow pump and a lateral 30-inch diameter pipe from the flood control facility to the existing Line E-11 in Perris Blvd. Ultimately, it is our understanding that the City of Perris (and/or other responsible parties) will construct the downstream flood control facility all the way to the existing Perris Valley Storm Drain Channel. Once the immediately downstream portion of the Line E is constructed, it is anticipated that the proposed low-flow pump will be removed as there would be positive gravity flow at the point.

As indicated above, there is an existing concrete channel/swale along the southerly edge of the project (within the City right-of-way, north of Ramona Expressway) that conveys the offsite flows

in an easterly direction; however, it does not appear to have adequate capacity to convey the offsite flow draining in from the restricted culvert opening at the southwest corner of the site. Excess flows from the existing channel overtop onto the project site and/or outlet towards Ramona Expressway, as the downstream existing storm drain system in front of the adjacent business (gas station) does not appear to have adequate capacity to convey the offsite flows (restricted due to the headwater pipe entrance opening size). With most of the on-site flows to be routed to a proposed BMP near the easterly edge of the site and directly discharge into the proposed flood control facility in the post-project condition, it is anticipated that the on-site flows to the existing channel will be reduced or even eliminated, helping improve the existing channel capacity situation. As such, the project is planning to keep the configuration of the existing channel and maintain the offsite drainage flow characteristics. In order to accommodate the frontage proposed curb alignment along Ramona Expressway within the City right-of-way, the existing channel is expected to be re-aligned accordingly while maintaining similar existing channel capacity and a few sidewalk underdrain will be incorporated to allow excess flow from the channel to Ramona Expressway. Lastly, while the estimated timing of the flood control facility extension downstream of the project is unknown at this time, it is prudent that the City of Perris (and/or other responsible parties) construct the flood control facility extension all the way to the Perris Valley Storm Drain Channel before long, in order to help minimize the existing flooding concern that may already exist in this area and its vicinity. Refer to additional discussion in Section 1.3 below regarding pre-project and post-project drainage characteristics.

1.3 Drainage Characteristics

Pre-project Condition

In the pre-project (existing) condition, the site consists of open, undeveloped space, draining generally from northwest to southeast. Runoff from the majority of the project generally drains in a southeasterly direction in a sheet flow manner to a low point (localized sump) located near the southeast corner of the project. When the capacity of the local sump is exceeded, the excess flows generally spills into an existing channel/swale located along the southerly edge of the project (within the City of Perris right-of-way) and this existing concrete channel drains into an existing downstream storm drain system located at the frontage of the business (gas station) at the northwest corner of Ramona Expressway and Perris Blvd. Runoff from this storm drain system discharge into an existing earthen channel located downstream (northeast) of the intersection of Ramona

Expressway and Perris Blvd. Runoff from the remaining portion of the project (near the northeasterly area) drains towards Perris Blvd. via surface flow to an existing catch basin near the intersection of Ramona Expressway and Perris Blvd. The runoff gets conveyed via an existing storm drain system and outlets into the same downstream earthen channel located northeast of the intersection of Ramona Expressway and Perris Blvd. This earthen channel also receives flows from an existing Perris Valley MDP Lateral Line E-11 in Perris Blvd. From this point, runoff is conveyed via the existing channel in an easterly direction for approximately 0.74 mile until discharging into the existing Riverside County Flood Control District's Perris Valley Storm Drain Channel. The existing Perris Valley Storm Drain Channel eventually drains into San Jacinto River, Canyon Lake, and ultimately Lake Elsinore. As a note, there appears to be existing flooding issues near the intersection of Ramona Expressway and Perris Blvd. and its vicinity.

Aside from the existing offsite (upstream) culvert that was discussed in Section 1.2, there is an existing 18-inch storm drain pipe and headwall at the northwesterly corner of the project. Based on the survey information, this structure serves as inlet and connects into an existing 18-inch corrugated metal pipe that discharges westerly into an existing 96-inch MDP facility in Indian Avenue. Based on the existing topography and site visit, very minor drainage is getting to this existing pipe. There is a set of catch basins (sump inlets) near this location along Indian Avenue that collects street flows and connects into an existing 96-inch mainline pipe, which conveys the flows to the existing box culvert at the intersection of Ramona Express way and Indian Avenue. The existing 96-inch pipe and catch basin are based on the storm drain plans titled, "Perris Valley MDP Line E-3 Stage 1 (File No. P8-1164)".

Post-project Condition

In the post-project condition, the drainage characteristics will remain similar as compared to the pre-project condition. Runoff from the project will be collected via on-site private catch basins and conveyed via on-site private storm drain pipes to a proposed best management practice (BMP) / basin near the easterly edge of the project. As directed by the City, the project plans to construct a portion of the MDP Line E flood control facility as part of this project and also construct a 30-inch diameter lateral pipe that can connect into the existing Perris Valley MDP Lateral Line E-11 in Perris Blvd. The outlet pipe from the proposed on-site BMP will connect into the flood control facility and a proposed temporary low-flow pump will be used to direct the flows towards the

existing Perris Valley MDP Lateral Line E-11 via the 30-inch diameter lateral pipe. As indicated above, the runoff in the Perris Valley MDP Lateral Line E-11 will discharge into the same existing earthen channel located downstream at the northeast of the intersection of Ramona Expressway and Perris Blvd. Since majority of the on-site runoff that used to drain to the southeasterly corner of the project in the existing condition will now be directed northeasterly (around the existing business) to a proposed basin (BMP) and directly discharge into the proposed flood control facility, the project will reduce (or possibly eliminate) the on-site flows that is getting to the existing concrete channel (within the City right-of-way, north of Ramona Expressway) and help improve the existing channel capacity situation. Ultimately (as indicated above), once the immediately downstream portion of the MDP Line E were constructed by the City and/or other responsible parties, then the temporary low-flow pump will be removed as there would be positive gravity flow at the point.

Excerpts of the relevant storm drain plans (plan sheets) mentioned in Sections 1.2 and 1.3 above are included in Appendix E of this report for reference purpose. At the end of the reference plans, just to have a better understanding about the existing drainage condition for the project, take-off calculations were prepared to determine the allowable (restricted flow) through the existing headwall "bubbler" outlet opening at the terminus of the existing flood control box culvert at the southwest corner of the site, as well as the estimated capacity of the existing concrete trapezoidal channel along the southerly edge of the project (within the City right-of-way, north of Ramona Expressway). As can be seen from the take-off calculations, the existing trapezoidal channel appears to be undersized for the offsite flows contributing to it today. As mentioned above, with the incorporation of the proposed MDP Line E facility within the project limit, the project will reduce (or possibly eliminate) the on-site flows to the existing concrete channel, resulting in an improvement over the pre-project condition related to the southerly concrete channel capacity situation.

1.4 FEMA Flood Hazard Zone Information

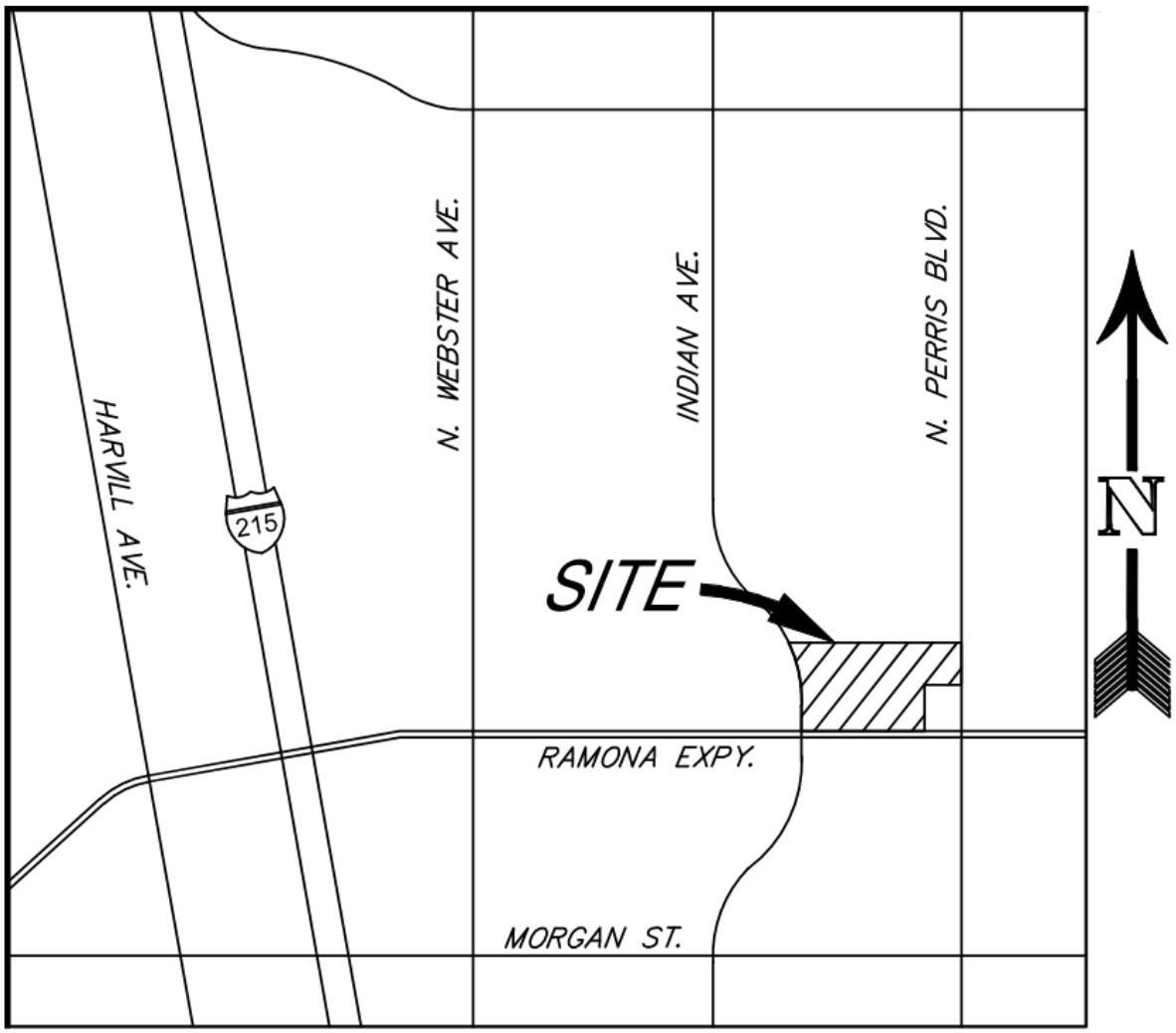
The water courses around the project have been identified by the Federal Emergency Management Agency (FEMA) as Zone X. The project is shown on the FEMA Flood Insurance Rate Map (FIRM) number 06065C1430H, effective August 18, 2014 and labeled as Zone X. No FEMA submittals are

anticipated to be required for this project. For reference purpose, a copy of the FIRMette (reduced size) is included at the end of Appendix A.

1.6 Water Quality Management

In order to comply with the City of Perris' ordinance and Riverside County Santa Ana Region storm water quality management requirements, the project includes construction of permanent storm water BMP near the easterly edge of the project. In support of the preliminary site plan, a preliminary Water Quality Management Plan (WQMP) has been prepared for the project. The report is titled, "Preliminary Water Quality Management Plan for McKay – Ramona," dated January 12, 2022, prepared by SDH & Associates, Inc. (Job Number 2010). The preliminary WQMP documents how the project addresses the requirements regarding permanent stormwater quality management, in accordance with the stormwater guidance document titled, "2010 Water Quality Management Plan for the Santa Ana Region of Riverside County."

Figure 1: Vicinity Map



2.0 HYDROLOGY

Preliminary hydrologic calculations were prepared in accordance with the Riverside County Flood Control and Water Conservation District - Hydrology Manual, dated April 1978 (manual) for preliminary on-site storm drain sizing purpose. The Hydrowin Advanced Engineering Software (AES) 2016 Rational Method Analysis (Version 23.0) program was used to perform the hydrologic analysis in this study.

The AES hydrologic model is developed by creating independent node-link models of each interior drainage basin and linking these sub-models together at confluence points. The program has the capability to perform calculations for 15 hydrologic processes. These processes are assigned code numbers that appear in the results. The code numbers and their significances are as follows:

Subarea Hydrologic Processes (Codes)

Code 1: Confluence analysis at a node
Code 2: Initial subarea analysis
Code 3: Pipe flow travel time (computer-estimated pipe sizes)
Code 4: Pipe flow travel time (user-specified pipe size)
Code 5: Trapezoidal channel travel time
Code 6: Street flow analysis through a subarea
Code 7: User-specified information at a node
Code 8: Addition of the subarea runoff to mainline
Code 9: V-Gutter flow through a subarea
Code 10: Copy main-stream data onto a memory bank
Code 11: Confluence a memory bank with the main-stream memory
Code 12: Clear a memory bank
Code 13: Clear the main-stream memory
Code 14: Copy a memory bank onto the main-stream memory
Code 15: Hydrologic data bank storage functions

In order to perform the hydrologic analysis; base information for the study area is required. This information includes the drainage facility locations and sizes, land uses, flow patterns, drainage basin boundaries, and topographic elevations. Compiled Hydrologic backup is included as Appendix A to this report.

Drainage Area

Drainage boundaries were delineated to distinguish areas with similar flow characteristics and hydrologic properties as well as to determine peak flows at confluence points, existing and proposed storm drain facilities, and to facilitate hydraulic analyses. Drainage basin boundaries, flow patterns, and topographic elevations are shown on the hydrologic workmap for the site, included in Appendix B.

Time of Concentration/Intensity

The time of concentration was calculated using the AES to determine the intensity for the 10-year and 100-year storm events. The rainfall intensity was calculated in AES using the 10 and 60-minute intensity values for the project area using NOAA Atlas 14 Point Precipitation Frequency Estimates. A supporting annotated chart has been included in Appendix A.

Runoff Coefficient

The runoff coefficients used for each minor basin were calculated by the AES software based on the user-entered information of the hydrologic soil group and the land use for each basin. The percentage of impervious area (i.e. land use) in each sub basin area was used to determine the land use entered within AES per Plate D-5.6 of the Hydrology Manual. Supporting information for parameters assigned to AES calculations is included with Appendix A of this report.

Hydrologic soil group data is available for the site through the Natural Resource Conservation Service (NRCS) Web Soil Survey, showing the site consisting primarily of types “B” and “C” soils along with a small pocket of type “A” soil at the northeast corner of the site. For the purpose of hydrologic calculations and on-site storm drain sizing for the proposed condition, a more conservative soil type C has been applied.

Topography

The onsite project specific topography consists of 1-foot contours on the NAVD-88 vertical datum, provided by Arrowhead Mapping Corp.

2.1 Hydrologic Results

The hydrologic results at key points of interest for the project can be found in Table 2.1. The summary shows the hydrologic results at the proposed on-site catch basin locations (major catch basin locations) and overall on-site peak flow at the project discharge (outlet) locations. The detailed hydrologic calculation results are located in Appendix B of this report.

Table 2.1 – On-site Hydrologic Data Summary at Key Locations (10-year & 100-year)

Key Drainage Node ID[3]	Post-project[1]		
	Total Area (Acres)	Peak Flow Rate, Q_{10} (cfs)[2]	Peak Flow Rate, Q_{100} (cfs)[2]
102 (On-site Catch Basin - Surface)	0.6	1.3	2.3
110 (On-site Catch Basin - Surface)	2.4	5.0	8.6
120 (On-site Catch Basin - Surface)	1.0	1.8	3.1
140 (On-site Catch Basin - Surface)	1.0	1.7	2.9
170 (On-site Catch Basin - Surface)	0.6	1.0	1.8
180 (On-site – Discharge into Proposed BMP)	8.0	14.1	24.2
190 (On-site – Basin 100 Outlet)	**8.0**	**14.1**	**24.2**
205 (On-site Catch Basin - Surface)	0.6	1.3	2.2
210 (On-site Catch Basin - Surface)	0.3	0.6	1.0
220 (On-site Catch Basin - Surface)	1.8	3.2	5.4
240 (On-site Catch Basin - Surface)	0.4	0.7	1.1
250 (On-site – Basin 200 Outlet)	**4.4**	**8.6**	**14.6**
305 (On-site Catch Basin - Surface)	0.5	0.9	1.6
350 (On-site – Basin 300 Outlet)	**2.2**	**4.1**	**7.1**

Note:

1: Refer to Appendix A for supporting information.

2: "cfs"= cubic feet per second.

3: Refer to Appendix B for Drainage Study Map

3.0 HYDRAULICS

3.1 Hydraulic Methodology and Criteria

The 10-year and 100-year, 1-hour post-project peak flow rates were calculated. For the on-site private storm drain systems, the 10-year peak flow rates based on the Modified Rational Method (AES Rational Method) outputs are used to determine preliminary sizes.

3.2 Inlet Sizing

Inlet design calculation specific to the proposed surface catch basin and BMP overflow catch basin will be conducted during final engineering and calculation output will be incorporated in Appendix C. In the post-project condition, the on-site proposed private storm drain catch basins (inlets) will be designed to intercept, at a minimum, the 10-year, 1-hour peak flow rates.

3.3 Storm Drain Sizing

Preliminary storm drain sizing calculations were conducted in order to size the proposed on-site private storm drain pipes. The calculations were prepared using the 10-year, 1-hour peak flow rate output from the AES Rational Method and the Manning's equation along with a sizing bump-up factor (typically in the range of 15 to 30%) in an effort to account for potential hydraulic losses. Typically, this calculation approach is adequate for on-site private storm drain sizing. If necessary, a more detailed hydraulic calculation may be provided on a case-by-case basis during final engineering to validate the required storm drain sizes. A summary of relevant on-site storm drain sizing calculations is provided in Appendix D.

As indicated in the introduction of this report, it was originally understood that the City of Perris was going to design and construct a flood control facility (box culvert) along the southerly edge of the project and around the southeasterly existing business (gas station). However, the City is now directing the project to construct the flood control facility within the project limit. Hence, in support of the storm drain improvement plans, a hydraulic calculation using the WSPGW software was prepared to determine the hydraulic grade line (HGL) and velocity for the proposed segment. A copy of the WSPGW output result is included in Appendix D, following the on-site preliminary storm drain sizing summary. For the WSPGW calculation, the 100-year peak flow rate of ~1,110

cfs was utilized as the hydrologic data. Based on Sheet 2 of the previously approved storm drain improvement plan (prepared by others) titled, "Perris Valley MDP Line E Stage 4" (Project No. 4-0-00488 / Drawing No. 4-1145 / PM 37457), the 100-year peak flow rate entering into the proposed project appears to be 1,064 cfs. The proposed project on-site 100-year peak flow rates at three discharge/outlet locations (Basin 100, Basin 200, and Basin 300) are approximately 24 cfs, 15 cfs, and 7 cfs, respectively. To keep this straight-forward (however it's a bit more conservative), the three on-site proposed flow rates were added to the upstream 100-year peak flow rates to obtain the resultant ~1,110 cfs. For the starting HGL, the previously estimated HGL based on Sheet 2 of the storm drain improvement plans titled, "Perris Valley Commercial Center Specific Plan – Preliminary Profile Perris Valley Master Plan Line E," was utilized, specifically near the easterly edge of the project boundary (at approximate Station 52+30 on the improvement plans).

Based on the WSPGW hydraulic calculations, HGL is near the top of the facility but it appears to be open channel flow, showing that the proposed 1-14'(w)x7'(h) box culvert should have adequate capacity to convey the peak flow rates. Due to relatively high HGLs, flap valves may be required for the proposed on-site storm drain pipes at the discharge/outlet points into the proposed MDP Line E flood control facility (i.e. – at Drainage Nodes 190, 250, and 350).

As a note, the project will have onsite best management practices (BMPs) to treat runoff from the proposed improvements and comply with the permanent storm water requirements of the Riverside County Santa Ana Region, prior to discharging into the proposed flood control facility. The project is proposing an aboveground bioretention facility, serving as the permanent BMP to treat the on-site runoff from Basin 100. At this time, the subsurface subdrain pipe (conveying storm water quality low-flows) is expected to be lower the flowline of the proposed MDP Line E flood control facility, which is expected to discharge into the downstream existing Perris Valley MDP Lateral Line E-11 in Perris Blvd. via a temporary outlet lateral pipe. Therefore, a low-flow mechanical pump will likely be needed to discharge the low-flows into the downstream storm drain system. The overflow outlet elevation of the bioretention facility is expected to be set at a higher elevation for the higher peak flows (i.e. – larger than the storm water quality low-flows) and it could gravity-flow to the proposed lateral pipe mentioned above. For Drainage Basins 200 and 300, due to the proposed MDP Line E flood control facility along the southerly edge of the project, it would be difficult to provide separate storm drain and convey flows from these two drainage areas to the same

aforementioned basin. Therefore, Basin 200 and Basin 300 each will have a proprietary Modular Wetland System (MWS) to treat on-site runoff and directly discharge into the proposed MDP Line E flood control facility.

4.0 CONCLUSION

This drainage study presents preliminary hydrologic and hydraulic analyses for the proposed McKay-Ramona project. Hydrologic calculations were computed in accordance with the Riverside County Flood Control and Water Conservation District - Hydrology Manual, dated April 1978 (manual). The Advanced Engineering Software (AES) 2016 Rational Method Analysis (Version 23.0) program was used for the rational method modeling in this study. The peak discharge rates for the 10-year and 100-year, 1-hour storm events have been determined for the project. The relevant 10-year peak flow rates were used to determine the preliminary onsite private storm drain sizes. The proposed on-site private catch basin sizing will be provided at the time of the final drainage study (final engineering). Based on direction from the City of Perris, the project is proposing to construct a portion of the MDP Line E flood control facility along the southerly edge of the project within the project limit. A hydraulic calculation using the WSPGW software was conducted to determine the hydraulic grade line (HGL) and velocity through the proposed segment of the MDP Line E and the result has been incorporated in Appendix D. The project also proposes to construct a temporary lateral pipe connection from the flood control facility to the existing Perris Valley MDP Lateral Line E-11 in Perris Blvd., in order to drain the flows from the system. The project will have three (3) discharge/outlet locations into the proposed MDP Line E facility. The proposed basin (BMP) in the northeasterly area will have subsurface layers with a subdrain that may be lower than the proposed MDP Line E invert elevation. Therefore, a low-flow mechanical pump may be required to drain low-flows from the proposed basin. Since the proposed MDP Line E flood control facility will be design to accommodate the post-project un-detained peak flows from the proposed project, a flood control detention analysis (including increased runoff mitigation analysis) should not be required for this project. In summary, with incorporation of the proposed improvements, no adverse impacts are anticipated to the downstream drainage facilities as a result of this project.

Appendix A

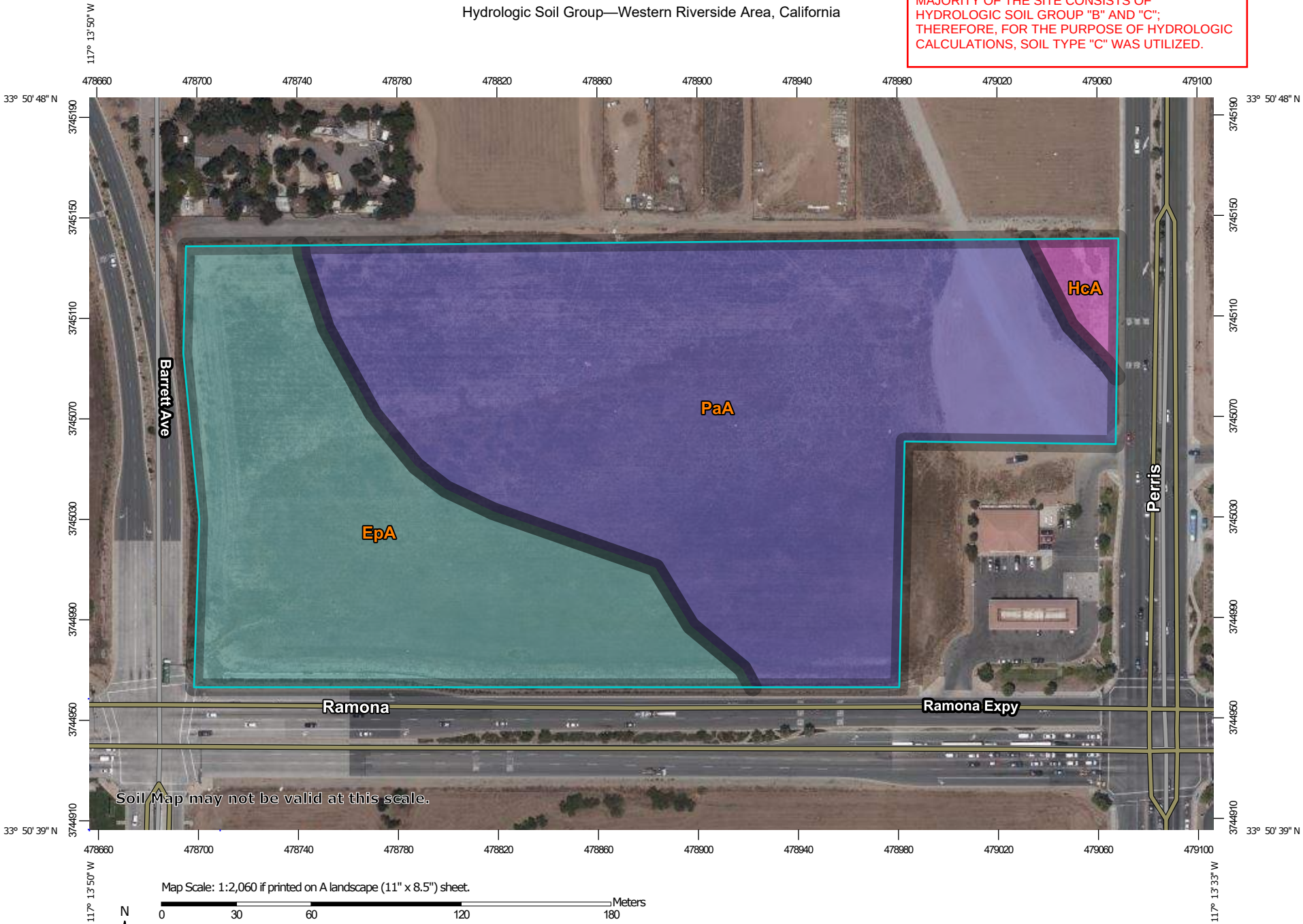
Hydrologic Backup Information

Includes:

1. Web Soil Survey Hydrologic Soil Group
2. NOAA Atlas 14 Annotated Rainfall Intensity Chart
3. FEMA FIRMette

SUPPORTING MATERIALS - HYDROLOGIC SOILS GROUP
MAJORITY OF THE SITE CONSISTS OF HYDROLOGIC SOIL GROUP "B" AND "C"; THEREFORE, FOR THE PURPOSE OF HYDROLOGIC CALCULATIONS, SOIL TYPE "C" WAS UTILIZED.

Hydrologic Soil Group—Western Riverside Area, California



Map Scale: 1:2,060 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 30 60 120 180

Feet: 0 100 200 400 600

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 1:15,800.

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: Western Riverside Area, California
Survey Area Data: Version 13, May 27, 2020

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: May 25, 2019—Jun 25, 2019

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
EpA	Exeter sandy loam, deep, 0 to 2 percent slopes	C	5.1	35.7%
HcA	Hanford coarse sandy loam, 0 to 2 percent slopes	A	0.3	2.0%
PaA	Pachappa fine sandy loam, 0 to 2 percent slopes	B	8.8	62.3%
Totals for Area of Interest			**14.2**	**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

SUPPORTING MATERIALS - NOAA ATALAS 14 - INTENSITY 10-YEAR AND 100-YEAR (10-MIN. & 60-MIN.)

NOAA Atlas 14, Volume 6, Version 2
Location name: Perris, California, USA*
Latitude: 33.8449°, Longitude: -117.2277°
Elevation: 1458.54 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/hour)[1]

Duration	Average recurrence interval (years)									
	1	2	5	10	25	50	100	200	500	1000
5-min	1.07 (0.888-1.30)	1.49 (1.24-1.80)	2.05 (1.70-2.48)	2.53 (2.09-3.10)	3.20 (2.56-4.06)	3.74 (2.92-4.85)	4.31 (3.28-5.72)	4.92 (3.62-6.73)	5.78 (4.08-8.26)	6.48 (4.42-9.60)
10-min	0.768 (0.642-0.924)	1.06 (0.888-1.29)	1.47 (1.22-1.78)	1.81 (1.49-2.21)	2.29 (1.83-2.91)	2.68 (2.09-3.47)	3.09 (2.35-4.10)	3.52 (2.60-4.82)	4.14 (2.93-5.92)	4.64 (3.17-6.88)
15-min	0.616 (0.516-0.748)	0.856 (0.716-1.04)	1.18 (0.984-1.44)	1.46 (1.20-1.79)	1.85 (1.48-2.34)	2.16 (1.68-2.80)	2.49 (1.89-3.31)	2.84 (2.10-3.89)	3.34 (2.36-4.77)	3.74 (2.55-5.54)
30-min	0.504 (0.420-0.608)	0.700 (0.584-0.846)	0.966 (0.804-1.17)	1.19 (0.982-1.46)	1.51 (1.20-1.91)	1.76 (1.37-2.28)	2.03 (1.54-2.70)	2.32 (1.71-3.17)	2.72 (1.92-3.89)	3.05 (2.08-4.52)
60-min	0.336 (0.281-0.406)	0.466 (0.389-0.564)	0.644 (0.536-0.781)	0.794 (0.655-0.971)	1.00 (0.801-1.27)	1.18 (0.916-1.52)	1.35 (1.03-1.80)	1.55 (1.14-2.11)	1.82 (1.28-2.59)	2.04 (1.39-3.01)
2-hr	0.252 (0.210-0.304)	0.335 (0.280-0.406)	0.446 (0.372-0.542)	0.538 (0.444-0.659)	0.666 (0.531-0.844)	0.766 (0.598-0.993)	0.870 (0.661-1.16)	0.978 (0.722-1.34)	1.13 (0.798-1.61)	1.25 (0.851-1.85)
3-hr	0.208 (0.174-0.251)	0.273 (0.228-0.330)	0.359 (0.298-0.435)	0.429 (0.354-0.525)	0.526 (0.420-0.667)	0.602 (0.470-0.780)	0.680 (0.516-0.903)	0.761 (0.561-1.04)	0.871 (0.616-1.25)	0.958 (0.653-1.42)
6-hr	0.147 (0.123-0.178)	0.191 (0.159-0.231)	0.249 (0.207-0.302)	0.296 (0.244-0.363)	0.360 (0.287-0.457)	0.410 (0.319-0.531)	0.460 (0.350-0.611)	0.512 (0.378-0.700)	0.582 (0.411-0.831)	0.636 (0.434-0.942)
12-hr	0.095 (0.079-0.114)	0.125 (0.104-0.151)	0.165 (0.137-0.200)	0.197 (0.162-0.241)	0.240 (0.191-0.304)	0.273 (0.213-0.353)	0.306 (0.232-0.407)	0.340 (0.251-0.465)	0.386 (0.273-0.551)	0.421 (0.287-0.624)
24-hr	0.060 (0.053-0.070)	0.082 (0.072-0.095)	0.110 (0.097-0.127)	0.132 (0.116-0.154)	0.163 (0.138-0.196)	0.186 (0.154-0.229)	0.209 (0.170-0.263)	0.233 (0.184-0.302)	0.265 (0.201-0.357)	0.290 (0.212-0.404)
2-day	0.035 (0.031-0.040)	0.048 (0.042-0.055)	0.065 (0.057-0.075)	0.079 (0.069-0.092)	0.098 (0.083-0.118)	0.113 (0.094-0.139)	0.128 (0.103-0.161)	0.143 (0.113-0.185)	0.163 (0.124-0.220)	0.179 (0.131-0.250)
3-day	0.025 (0.022-0.028)	0.034 (0.030-0.040)	0.047 (0.041-0.054)	0.057 (0.050-0.067)	0.072 (0.061-0.086)	0.083 (0.068-0.102)	0.094 (0.076-0.118)	0.105 (0.083-0.136)	0.121 (0.092-0.163)	0.134 (0.098-0.186)
4-day	0.020 (0.018-0.023)	0.028 (0.025-0.032)	0.038 (0.034-0.044)	0.047 (0.041-0.055)	0.059 (0.050-0.071)	0.068 (0.057-0.084)	0.078 (0.063-0.098)	0.088 (0.069-0.114)	0.101 (0.077-0.136)	0.112 (0.082-0.156)
7-day	0.012 (0.011-0.014)	0.017 (0.015-0.020)	0.024 (0.021-0.028)	0.030 (0.026-0.035)	0.038 (0.032-0.045)	0.044 (0.036-0.054)	0.050 (0.041-0.063)	0.057 (0.045-0.073)	0.066 (0.050-0.089)	0.073 (0.054-0.102)
10-day	0.009 (0.008-0.010)	0.012 (0.011-0.014)	0.018 (0.015-0.020)	0.022 (0.019-0.025)	0.028 (0.023-0.033)	0.032 (0.027-0.040)	0.037 (0.030-0.047)	0.042 (0.033-0.054)	0.049 (0.037-0.066)	0.055 (0.040-0.076)
20-day	0.005 (0.004-0.006)	0.007 (0.006-0.008)	0.010 (0.009-0.012)	0.013 (0.011-0.015)	0.017 (0.014-0.020)	0.019 (0.016-0.024)	0.023 (0.018-0.028)	0.026 (0.020-0.034)	0.031 (0.023-0.041)	0.034 (0.025-0.048)
30-day	0.004 (0.003-0.004)	0.005 (0.005-0.006)	0.008 (0.007-0.009)	0.010 (0.008-0.011)	0.013 (0.011-0.015)	0.015 (0.012-0.018)	0.017 (0.014-0.022)	0.020 (0.016-0.026)	0.024 (0.018-0.032)	0.027 (0.020-0.038)
45-day	0.003 (0.002-0.003)	0.004 (0.004-0.005)	0.006 (0.005-0.007)	0.007 (0.006-0.009)	0.010 (0.008-0.012)	0.012 (0.010-0.014)	0.014 (0.011-0.017)	0.016 (0.012-0.020)	0.019 (0.014-0.026)	0.022 (0.016-0.030)
60-day	0.002 (0.002-0.003)	0.003 (0.003-0.004)	0.005 (0.004-0.006)	0.006 (0.005-0.007)	0.008 (0.007-0.010)	0.010 (0.008-0.012)	0.011 (0.009-0.014)	0.013 (0.011-0.017)	0.016 (0.012-0.022)	0.019 (0.014-0.026)

[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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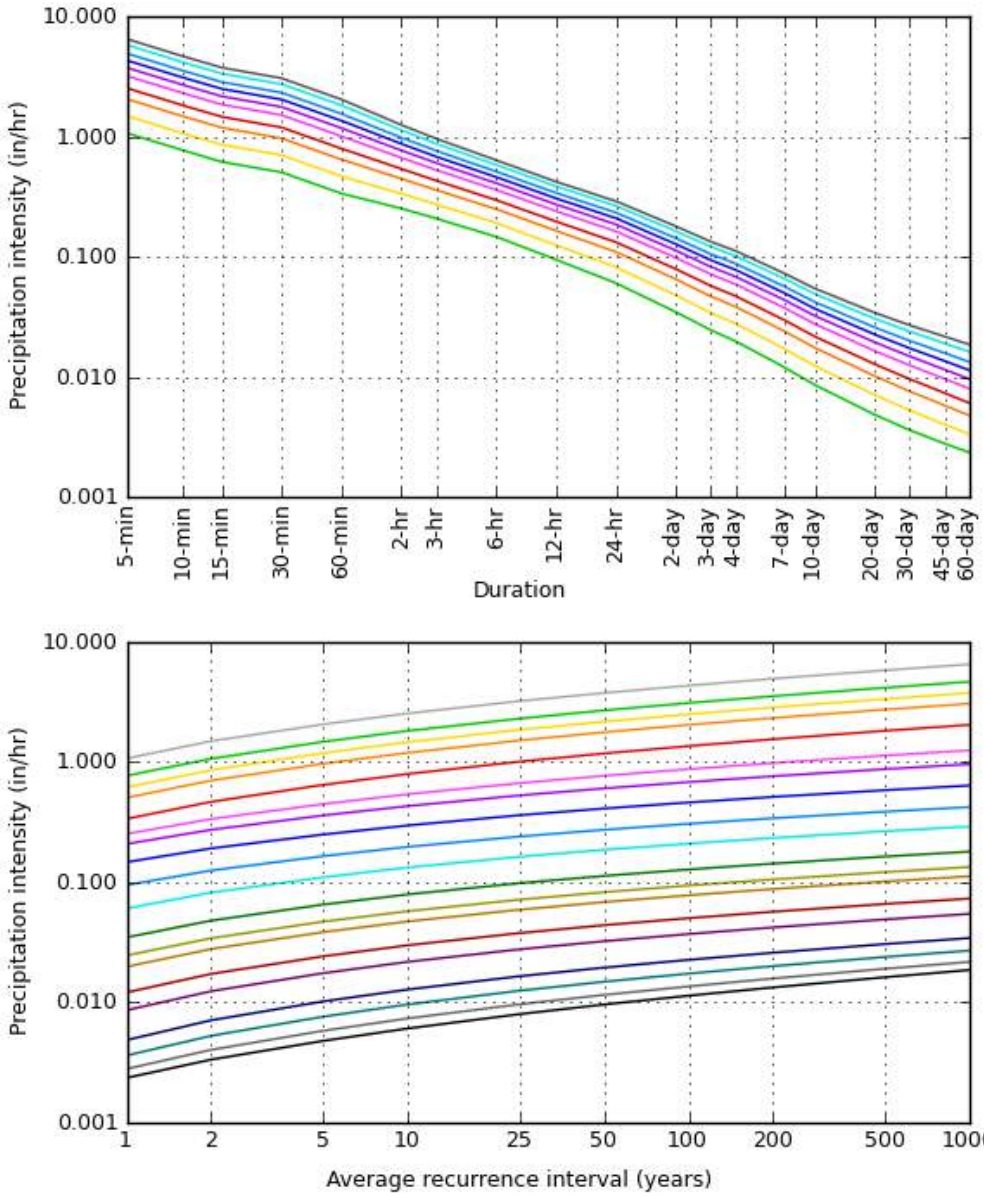
PF graphical

PDS-based intensity-duration-frequency (IDF) curves
Latitude: 33.8449°, Longitude: -117.2277°



NOAA Atlas 14, Volume 6, Version 2

Created (GMT): Thu Jul 22 22:43:59 2021

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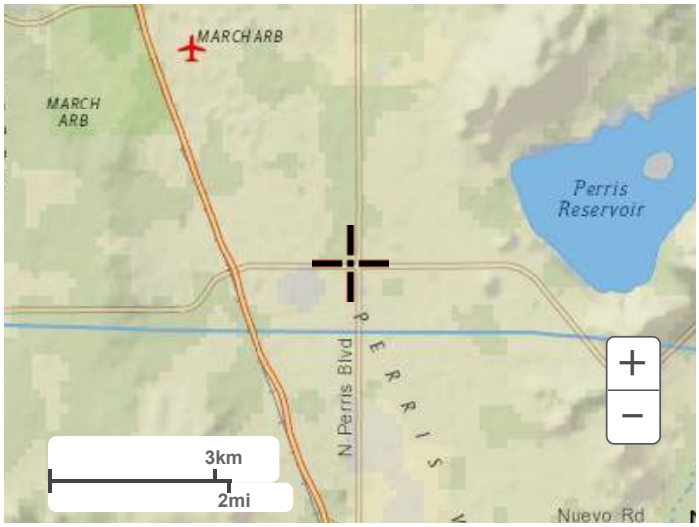
Maps & aerials

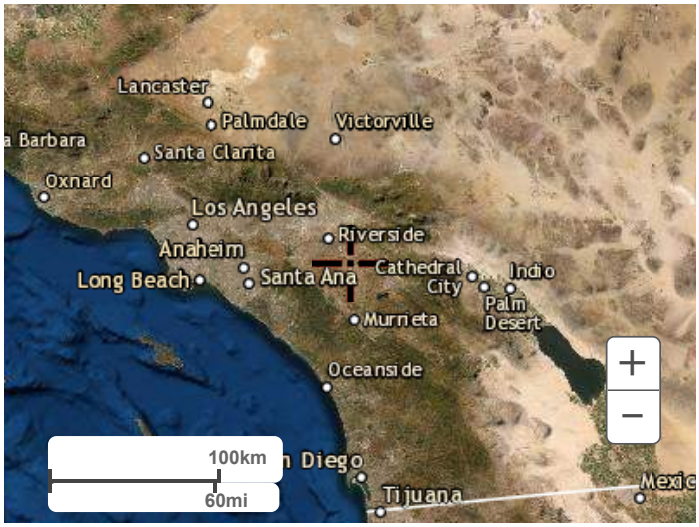
Small scale terrain



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

NOTES TO USERS

This map is for use in administering the National Flood Insurance Program. It does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size. The **community map repository** should be consulted for possible updated or additional flood hazard information.

To obtain more detailed information in areas where **Base Flood Elevations** (BFEs) and/or **floodways** have been determined, users are encouraged to consult the Flood Profiles and Floodway Data and/or Summary of Stillwater Elevations tables contained within the Flood Insurance Study (FIS) report that accompanies this FIRM. Users should be aware that BFEs shown on the FIRM represent rounded whole-foot elevations. These BFEs are intended for flood insurance rating purposes only and should not be used as the sole source of flood elevation information. Accordingly, flood elevation data presented in the FIS report should be utilized in conjunction with the FIRM for purposes of construction and/or floodplain management.

Coastal Base Flood Elevations (BFEs) shown on this map apply only landward of 0.0' North American Vertical Datum of 1988 (NAVD 88). Users of this FIRM should be aware that coastal flood elevations are also provided in the Summary of Stillwater Elevations table in the Flood Insurance Study report for this jurisdiction. Elevations shown in the Summary of Stillwater Elevations table should be used for construction and/or floodplain management purposes when they are higher than the elevations shown on this FIRM.

Boundaries of the **floodways** were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the Flood Insurance Study report for this jurisdiction.

Certain areas not in Special Flood Hazard Areas may be protected by **flood control structures**. Refer to Section 2.4 "Flood Protection Measures" of the Flood Insurance Study report for information on flood control structures for this jurisdiction.

The **projection** used in the preparation of this map was Universal Transverse Mercator (UTM) zone 11. The **horizontal datum** was NAD83, GRS1980 spheroid. Differences in datum, spheroid, projection or State Plane zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of this FIRM.

Flood elevations on this map are referenced to the North American Vertical Datum of 1988. These flood elevations must be compared to structure and ground elevations referenced to the same **vertical datum**. For information regarding conversion between the National Geodetic Vertical Datum of 1929 and the North American Vertical Datum of 1988, visit the National Geodetic Survey website at http://www.ngs.noaa.gov/ or contact the National Geodetic Survey at the following address:

NGS Information Services
NOAA, N/NGS12
National Geodetic Survey
SSMC-3, #9202
1315 East-West Highway
Silver Spring, Maryland 20910-3282
(301) 713-3242

To obtain current elevation, description, and/or location information for **bench marks** shown on this map, please contact the Information Services Branch of the National Geodetic Survey at **(301) 713-3242** or visit its website at http://www.ngs.noaa.gov/.

Base map information shown on this FIRM was derived from multiple sources including the Riverside County, CA effective database, and the National Geodetic Survey. Base map imagery for Riverside County, CA is a mosaic of the NAIP 2009 images, 1 meter resolution.

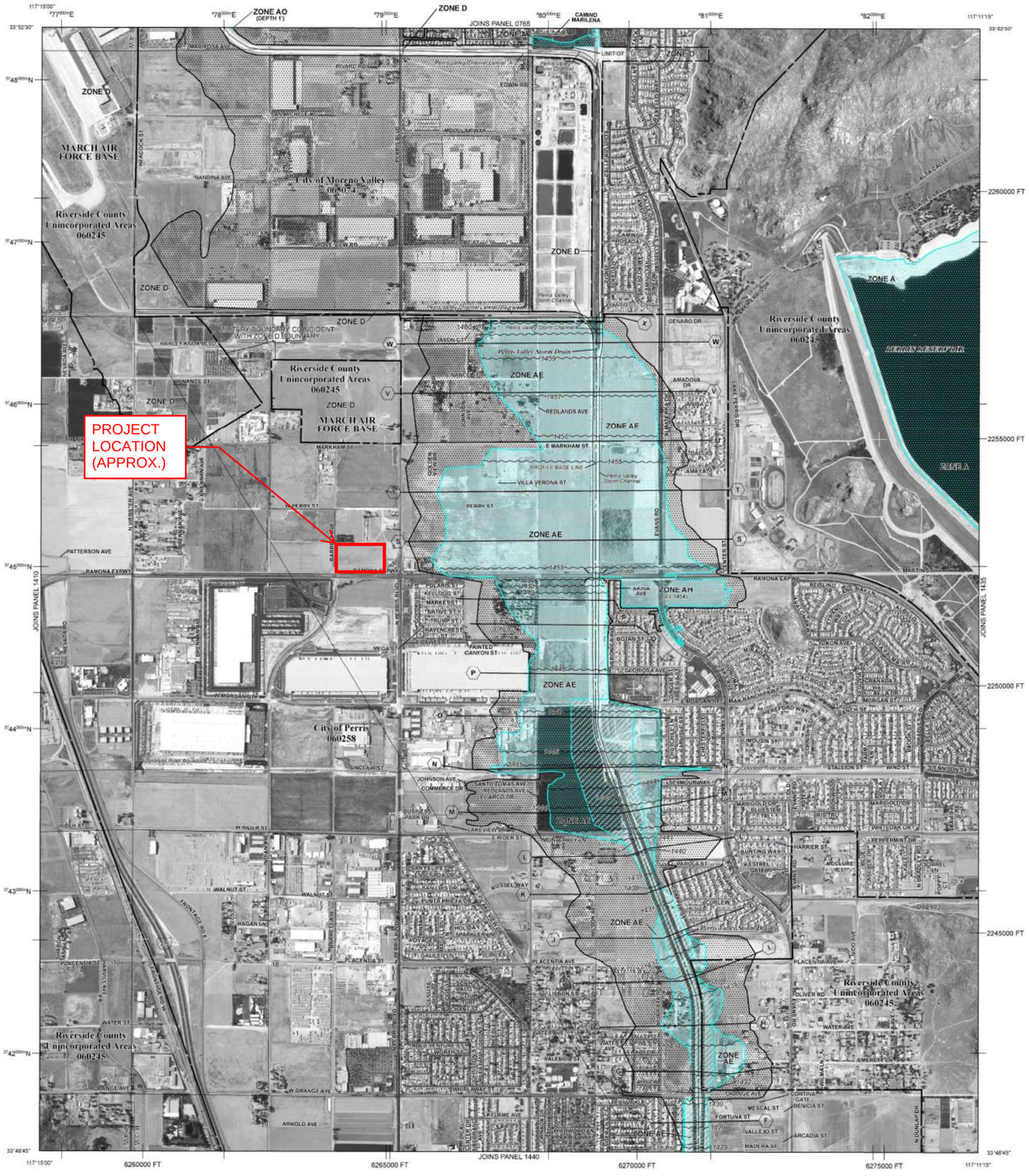
The **"profile base lines"** depicted on this map represent the hydraulic modeling baselines that match the flood profiles in the FIS report. As a result of improved topographic data, the "profile base line", in some cases, may deviate significantly from the channel centerline or appear outside the SFHA.

Corporate limits shown on this map are based on the best data available at the time of publication. Because changes due to annexations or de-annexations may have occurred after this map was published, map users should contact appropriate community officials to verify current corporate limit locations.

Please refer to the separately printed **Map Index** for an overview map of the county showing the layout of map panels; community map repository addresses; and a Listing of Communities table containing National Flood Insurance Program dates for each community as well as a listing of the panels on which each community is located.

For information and questions about this map, available products associated with this FIRM including historic versions of this FIRM, how to order products or the National Flood Insurance Program in general, please call the FEMA Map Information eXchange at 1-877-FEMA-MAP (1-877-336-2627) or visit the FEMA Map Service Center website at http://msc.fema.gov. Available products may include previously issued Letters of Map Change, a Flood Insurance Study report, and/or digital versions of this map. Many of these products can be ordered or obtained directly from the website. Users may determine the current map date for each FIRM panel by visiting the FEMA Map Service Center website or by calling the FEMA Map Information eXchange.

THE PROJECT IS SITUATED IN FEMA ZONE X AREA. THEREFORE, ANY PROCESSING THROUGH FEMA AND RCFC&WCD SHOULD NOT BE REQUIRED.



LEGEND

SPECIAL FLOOD HAZARD AREAS SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V, and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.

ZONE A	No Base Flood Elevations determined.
ZONE AE	Base Flood Elevations determined.
ZONE AH	Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.
ZONE AO	Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
ZONE AR	Special Flood Hazard Area formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.
ZONE A99	Areas to be protected from 1% annual chance flood event by a Federal flood protection system under construction; no Base Flood Elevations determined.
ZONE V	Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.
ZONE VE	Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

OTHER FLOOD AREAS

ZONE X	Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

OTHER AREAS

ZONE X	Areas determined to be outside the 0.2% annual chance floodplain.
ZONE D	Areas in which flood hazards are undetermined, but possible.

COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS

OTHERWISE PROTECTED AREAS (OPAs)

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.

1% annual chance floodplain boundary
0.2% annual chance floodplain boundary
Floodway boundary
Zone D boundary
CBRS and OPA boundary
Boundary dividing Special Flood Hazard Area Zones and boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths, or flood velocities
513 — Base Flood Elevation line and value; elevation in feet*
(EL 987) — Base Flood Elevation value where uniform within zone; elevation in feet*
* Referenced to the North American Vertical Datum of 1988
A — A — Cross section line
23 — 23 — Transect line
97°07'30", 32°22'30" — Geographic coordinates referenced to the North American Datum of 1983 (NAD 83), Western Hemisphere
4675000mE — 1000-meter Universal Transverse Mercator grid ticks, zone 11
6000000 FT — 5000-foot grid values: California State Plane coordinate system, Zone VI (FIPSZONE = 406), Lambert projection
DX5510 — Bench mark (see explanation in Notes to Users section of this FIRM panel)
M1.5 — River Mile

MAP REPOSITORIES
Refer to Map Repositories List on Map Index

EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP
August 28, 2008

EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL
August 18, 2014; for a description of revisions, see Notice to Users page in the Flood Insurance Study report.

For community map revision history prior to countywide mapping, refer to the Community Map History table located in the Flood Insurance Study report for this jurisdiction.

To determine if flood insurance is available in this community, contact your insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

MAP SCALE 1" = 1000'

500 0 500 1,000 1,500 2,000 FEET
300 0 300 600 METERS

NFIP NATIONAL FLOOD INSURANCE PROGRAM

PANEL 1430H

FIRM

FLOOD INSURANCE RATE MAP
RIVERSIDE COUNTY, CALIFORNIA
AND INCORPORATED AREAS

PANEL 1430 OF 3805

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
MORENO VALLEY, CITY OF	060074	1430	H
PERRIS, CITY OF	060258	1430	H
RIVERSIDE COUNTY UNINCORPORATED AREAS	060245	1430	H

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
06065C1430H

MAP REVISED
AUGUST 18, 2014

Federal Emergency Management Agency

Appendix B

Modified Rational Method Results

Includes:

1. Post-project Drainage Study Map
2. Post-project AES Rational Method Output (10-year & 100-year)

NOTE:
THERE IS AN EXISTING 18-INCH PIPE AND HEADWALL; HOWEVER, VERY MINIMAL FLOW IS CONTRIBUTING PER FIELD SURVEY INFORMATION AND TOPOGRAPHY.

NOTE:
THE EXISTING CATCH BASIN TO BE RE-LOCATED (OR MODIFIED) DUE TO THE PROPOSED DRIVEWAY ENTRY AT THIS LOCATION.

NOTE:
THE EXISTING OFF-SITE FLOOD CONTROL FACILITY (14'(W)X7'(H) BOX CULVERT) CURRENTLY TERMINATES HERE. REFER TO THE NOTE ON THIS EXHIBIT AS WELL AS DISCUSSION IN THE DRAINAGE STUDY.

NOTE:
THE EXISTING CONCRETE CHANNEL CONFIGURATION TO REMAIN WITH RE-ALIGNMENT DUE TO THE PROPOSED SIDEWALK/CURB IMPROVEMENT ALONG RAMONA EXPRESSWAY.

BASIN 100
(ON-SITE)
A=8.0 ACRES
Q10=14.1 CFS
Q100=24.2 CFS

BASIN 1000
(OFF-SITE)
A=0.2 ACRES
Q10=0.1 CFS
Q100=0.2 CFS

BASIN 200
(ON-SITE)
A=4.4 ACRES
Q10=8.6 CFS
Q100=14.6 CFS

BASIN 300
(ON-SITE)
A=4.4 ACRES
Q10=4.1 CFS
Q100=7.1 CFS

BASIN 100
ON-SITE
DETENTION BASIN

52.30 F.F.
58.7 PAD

NOT A PART

NOTES:

1. THIS DRAINAGE STUDY MAP SUPPORTS THE HYDROLOGIC CALCULATION PERFORMED FOR THE PROJECT FOR THE PURPOSE OF PRELIMINARY ON-SITE STORM DRAIN SIZING.
2. BASED ON THE WEB SOIL SURVEY, THE EXISTING SITE CONSISTS OF MOSTLY NRCS HYDROLOGIC SOIL GROUP "B" AND "C" ALONG WITH A POCKET OF SOIL GROUP "A" AT THE NORTHEAST CORNER OF THE SITE. FOR THE PURPOSE OF ON-SITE HYDROLOGIC CALCULATION AND STORM DRAIN SIZING, SOIL GROUP "C" WAS UTILIZED (MORE CONSERVATIVE).
3. THE EXISTING SITE CONSISTS OF OPEN, UNDEVELOPED SPACE, DRAINING GENERALLY FROM NORTHWEST TO SOUTHEAST. IN THE POST-PROJECT CONDITION, RUNOFF FROM THE MAJORITY OF THE SITE (DRAINAGE BASIN 100) WILL BE CONVEYED TOWARDS A PROPOSED BMP/BASIN AT THE EASTERLY EDGE OF THE SITE, PRIOR TO CONNECTING INTO THE PROPOSED MDP LINE E AND EXISTING PERRIS VALLEY MDP LATERAL LINE E-11 IN PERRIS BLVD. VIA A PROPOSED TEMPORARY LATERAL CONNECTING PIPE. RUNOFF FROM THE REMAINING PORTION OF THE PROJECT (BASIN 200 AND BASIN 300) WILL BE DIRECTLY DISCHARGED INTO THE PROPOSED MDP LINE E FACILITY AT DIFFERENT OUTLET LOCATIONS.
4. IT WAS ORIGINALLY UNDERSTOOD AND AGREED (BETWEEN THE CITY OF PERRIS AND THE PROJECT OWNER/APPLICANT) THAT THE CITY OF PERRIS WOULD DESIGN AND CONSTRUCT A FLOOD CONTROL FACILITY (BOX CULVERT) EXTENSION ALONG THE SOUTHERLY EDGE OF THE PROJECT AND AROUND THE EXISTING BUSINESS (GAS STATION) THAT IS LOCATED TO THE SOUTHEAST OF THE PROJECT. HOWEVER, THE CITY IS NOW DIRECTING THE PROJECT TO CONSTRUCT THE FRONTAGE FLOOD CONTROL FACILITY ALONG THE SOUTHERLY EDGE OF THE SITE WITHIN THE PROJECT LIMIT. THEREFORE, THE PROJECT WILL CONSISTS OF THREE DRAINAGE BASINS (BASIN 100, BASIN 200, AND BASIN 300) AND RUNOFF FROM EACH DRAINAGE BASIN WILL DIRECTLY DISCHARGE INTO THE PROPOSED MDP LINE E AT THREE DIFFERENT OUTLET LOCATIONS. DURING THE INTERIM CONDITION, A TEMPORARY LATERAL PIPE WILL BE PROVIDED TO CONNECT THE FLOWS FROM THE MDP LINE E INTO THE EXISTING PERRIS VALLEY MDP LATERAL LINE E-11 IN PERRIS BLVD. WITH THE ON-SITE FLOWS TO BE ROUTED TO THE PROPOSED MDP FACILITY. IT IS ANTICIPATED THAT THE ON-SITE FLOWS TO THE EXISTING CHANNEL (ALONG THE SOUTHERLY EDGE OF THE SITE) WILL BE REDUCED OR EVEN ELIMINATED, HELPING IMPROVE THE EXISTING CHANNEL CAPACITY SITUATION. AS SUCH, THE PROJECT IS PLANNING TO KEEP THE CONFIGURATION OF THE EXISTING CHANNEL ALONG THE SOUTHERLY EDGE OF THE SITE (WITHIN THE CITY RIGHT-OF-WAY, NORTH OF RAMONA EXPRESSWAY). ULTIMATELY, IT IS UNDERSTOOD THAT THE CITY OF PERRIS (AND/OR OTHER RESPONSIBLE ENTITIES) WILL CONSTRUCT THE DOWNSTREAM MDP LINE E FLOOD CONTROL FACILITY EXTENSION ALL THE WAY TO THE PERRIS VALLEY STORM DRAIN CHANNEL. AS SOON AS THE IMMEDIATELY DOWNSTREAM EXTENSION SEGMENT IS CONSTRUCTED BY THE CITY OR OTHERS, THE TEMPORARY LATERAL PIPE TO THE MDP LATERAL LINE E-11 COULD BE REMOVED.
5. THE PROJECT IS SHOWN ON THE FEMA FIRM NUMBER 06065C1430H, EFFECTIVE AUGUST 18, 2014, AND SITUATED WITH THE FEMA "ZONE X" AREA. NO FEMA SUBMITTALS ARE ANTICIPATED TO BE REQUIRED FOR THIS PROJECT.

LEGEND

- TRACT BOUNDARY
- MAJOR DRAINAGE BOUNDARY
- SUB BASIN BOUNDARY
- FLOW PATH
- DRAINAGE ACREAGE — X.X AC.
- BASIN NODE ID — XXX
- DISCHARGE LOCATION

N

0 25 50 100 150 200
SCALE 1"=50'

DRAINAGE STUDY MAP FOR McKAY-RAMONA (POST-PROJECT)

JN 2010 DATE: 1/12/2022

NOT FOR CONSTRUCTION – EXHIBIT FOR PRELIMINARY DRAINAGE STUDY ONLY

```
**************************************************************************
          RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM BASED ON
        RIVERSIDE COUNTY FLOOD CONTROL & WATER CONSERVATION DISTRICT
                    (RCFC&WCD)  1978 HYDROLOGY MANUAL
         (c) Copyright 1982-2016 Advanced Engineering Software (aes)
                    (Rational Tabling Version 23.0)
                Release Date: 07/01/2016  License ID 1717

                          Analysis prepared by:

                          SDH & ASSOCIATES, INC.
                           27363 VIA INDUSTRIA
                            TEMECULA, CA 92590
                              (951) 683-3691

 ************************* DESCRIPTION OF STUDY *************************
* MCKAY - RAMONA (JN 2010)                                               *
* POST-PROJECT CONDITION - 10-YEAR, 1-HOUR STORM EVENT                   *
* BASIN 100                                                              *
 **************************************************************************

  FILE NAME: MR1HP10.RAT
  TIME/DATE OF STUDY: 15:57 01/10/2022
--------------------------------------------------------------------------
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
--------------------------------------------------------------------------
  USER SPECIFIED STORM EVENT(YEAR) =   10.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  12.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  10-YEAR STORM 10-MINUTE INTENSITY(INCH/HOUR) =  1.810
  10-YEAR STORM 60-MINUTE INTENSITY(INCH/HOUR) =  0.794
  100-YEAR STORM 10-MINUTE INTENSITY(INCH/HOUR) =  3.090
  100-YEAR STORM 60-MINUTE INTENSITY(INCH/HOUR) =  1.350
  SLOPE OF 10-YEAR INTENSITY-DURATION CURVE =  0.4598822
  SLOPE OF 100-YEAR INTENSITY-DURATION CURVE =  0.4621526
  COMPUTED RAINFALL INTENSITY DATA:
  STORM EVENT =   10.00   1-HOUR INTENSITY(INCH/HOUR) =   0.802
  SLOPE OF INTENSITY DURATION CURVE = 0.4599
  RCFC&WCD HYDROLOGY MANUAL "C"-VALUES USED FOR RATIONAL METHOD
  NOTE: COMPUTE CONFLUENCE VALUES ACCORDING TO RCFC&WCD HYDROLOGY MANUAL
        AND IGNORE OTHER CONFLUENCE COMBINATIONS FOR DOWNSTREAM ANALYSES
  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  ================  ======  ===== ====== ===== =======
  1   20.0     15.0    0.020/0.020/0.020   0.50    1.50 0.0313 0.125 0.0160

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
```

```
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*

****************************************************************************
  FLOW PROCESS FROM NODE    101.00 TO NODE    102.00 IS CODE =  21
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
         ASSUMED INITIAL SUBAREA UNIFORM
         DEVELOPMENT IS COMMERCIAL
  TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   130.00
  UPSTREAM ELEVATION(FEET) =     60.70
  DOWNSTREAM ELEVATION(FEET) =     54.52
  ELEVATION DIFFERENCE(FEET) =      6.18
  TC = 0.303*[(  130.00**3)/(     6.18)]**.2 =    3.906
  COMPUTED TIME OF CONCENTRATION INCREASED TO 5 MIN.
    10 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.514
  COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8827
  SOIL CLASSIFICATION IS "C"
  SUBAREA RUNOFF(CFS) =      1.33
  TOTAL AREA(ACRES) =      0.60   TOTAL RUNOFF(CFS) =      1.33

****************************************************************************
  FLOW PROCESS FROM NODE    102.00 TO NODE    110.00 IS CODE =  41
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING USER-SPECIFIED PIPESIZE (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    52.52  DOWNSTREAM(FEET) =    51.60
  FLOW LENGTH(FEET) =   175.00   MANNING'S N =  0.012
  DEPTH OF FLOW IN  12.0 INCH PIPE IS   6.0 INCHES
  PIPE-FLOW VELOCITY(FEET/SEC.) =   3.38
  GIVEN PIPE DIAMETER(INCH) =  12.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =       1.33
  PIPE TRAVEL TIME(MIN.) =   0.86    Tc(MIN.) =    5.86
  LONGEST FLOWPATH FROM NODE    101.00 TO NODE    110.00 =     305.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    110.00 TO NODE    110.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
    10 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.337
  COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8816
  SOIL CLASSIFICATION IS "C"
  SUBAREA AREA(ACRES) =    1.80   SUBAREA RUNOFF(CFS) =    3.71
```

```
  TOTAL AREA(ACRES) =        2.4   TOTAL RUNOFF(CFS) =       5.04
  TC(MIN.) =    5.86

****************************************************************************
  FLOW PROCESS FROM NODE    110.00 TO NODE    120.00 IS CODE =  41
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING USER-SPECIFIED PIPESIZE (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    51.60  DOWNSTREAM(FEET) =    51.10
  FLOW LENGTH(FEET) =   255.00   MANNING'S N =  0.012
  ASSUME FULL-FLOWING PIPELINE
  PIPE-FLOW VELOCITY(FEET/SEC.) =   2.35
  (PIPE FLOW VELOCITY CORRESPONDING TO NORMAL-DEPTH FLOW
   AT DEPTH = 0.82 * DIAMETER)
  GIVEN PIPE DIAMETER(INCH) =  12.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =       5.04
  PIPE TRAVEL TIME(MIN.) =   1.81    Tc(MIN.) =    7.67
  LONGEST FLOWPATH FROM NODE    101.00 TO NODE    120.00 =     560.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    120.00 TO NODE    120.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
    10 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.065
  COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8798
  SOIL CLASSIFICATION IS "C"
  SUBAREA AREA(ACRES) =    1.00   SUBAREA RUNOFF(CFS) =    1.82
  TOTAL AREA(ACRES) =        3.4   TOTAL RUNOFF(CFS) =       6.86
  TC(MIN.) =    7.67

****************************************************************************
  FLOW PROCESS FROM NODE    120.00 TO NODE    150.00 IS CODE =  41
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING USER-SPECIFIED PIPESIZE (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    51.10  DOWNSTREAM(FEET) =    50.72
  FLOW LENGTH(FEET) =   189.00   MANNING'S N =  0.012
  ASSUME FULL-FLOWING PIPELINE
  PIPE-FLOW VELOCITY(FEET/SEC.) =   2.38
  (PIPE FLOW VELOCITY CORRESPONDING TO NORMAL-DEPTH FLOW
   AT DEPTH = 0.82 * DIAMETER)
  GIVEN PIPE DIAMETER(INCH) =  12.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =       6.86
  PIPE TRAVEL TIME(MIN.) =   1.32    Tc(MIN.) =    9.00
  LONGEST FLOWPATH FROM NODE    101.00 TO NODE    150.00 =     749.00 FEET.

****************************************************************************
```

```
 FLOW PROCESS FROM NODE    140.00 TO NODE    150.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
   10 YEAR RAINFALL INTENSITY(INCH/HOUR) =  1.919
 COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8786
 SOIL CLASSIFICATION IS "C"
 SUBAREA AREA(ACRES) =    1.00   SUBAREA RUNOFF(CFS) =    1.69
 TOTAL AREA(ACRES) =        4.4   TOTAL RUNOFF(CFS) =       8.54
 TC(MIN.) =    9.00

****************************************************************************
 FLOW PROCESS FROM NODE    150.00 TO NODE    160.00 IS CODE =  41
----------------------------------------------------------------------------
 >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
 >>>>>USING USER-SPECIFIED PIPESIZE (EXISTING ELEMENT)<<<<<
============================================================================
 ELEVATION DATA: UPSTREAM(FEET) =    50.72  DOWNSTREAM(FEET) =    50.43
 FLOW LENGTH(FEET) =   143.00   MANNING'S N =  0.012
 ASSUME FULL-FLOWING PIPELINE
 PIPE-FLOW VELOCITY(FEET/SEC.) =   2.39
 (PIPE FLOW VELOCITY CORRESPONDING TO NORMAL-DEPTH FLOW
  AT DEPTH = 0.82 * DIAMETER)
 GIVEN PIPE DIAMETER(INCH) =  12.00    NUMBER OF PIPES =   1
 PIPE-FLOW(CFS) =       8.54
 PIPE TRAVEL TIME(MIN.) =   1.00    Tc(MIN.) =    9.99
 LONGEST FLOWPATH FROM NODE    101.00 TO NODE    160.00 =     892.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE    160.00 TO NODE    175.00 IS CODE =  41
----------------------------------------------------------------------------
 >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
 >>>>>USING USER-SPECIFIED PIPESIZE (EXISTING ELEMENT)<<<<<
============================================================================
 ELEVATION DATA: UPSTREAM(FEET) =    50.43  DOWNSTREAM(FEET) =    50.31
 FLOW LENGTH(FEET) =    60.00   MANNING'S N =  0.012
 ASSUME FULL-FLOWING PIPELINE
 PIPE-FLOW VELOCITY(FEET/SEC.) =   2.37
 (PIPE FLOW VELOCITY CORRESPONDING TO NORMAL-DEPTH FLOW
  AT DEPTH = 0.82 * DIAMETER)
 GIVEN PIPE DIAMETER(INCH) =  12.00    NUMBER OF PIPES =   1
 PIPE-FLOW(CFS) =       8.54
 PIPE TRAVEL TIME(MIN.) =   0.42    Tc(MIN.) =   10.41
 LONGEST FLOWPATH FROM NODE    101.00 TO NODE    175.00 =     952.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE    175.00 TO NODE    175.00 IS CODE =  10
----------------------------------------------------------------------------
 >>>>>MAIN-STREAM MEMORY COPIED ONTO MEMORY BANK # 1 <<<<<
============================================================================
```

```
****************************************************************************
  FLOW PROCESS FROM NODE    167.00 TO NODE    170.00 IS CODE =  21
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
         ASSUMED INITIAL SUBAREA UNIFORM
         DEVELOPMENT IS COMMERCIAL
  TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   400.00
  UPSTREAM ELEVATION(FEET) =     59.10
  DOWNSTREAM ELEVATION(FEET) =     55.90
  ELEVATION DIFFERENCE(FEET) =      3.20
  TC = 0.303*[(  400.00**3)/(     3.20)]**.2 =    8.746
    10 YEAR RAINFALL INTENSITY(INCH/HOUR) =  1.944
  COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8788
  SOIL CLASSIFICATION IS "C"
  SUBAREA RUNOFF(CFS) =      1.03
  TOTAL AREA(ACRES) =      0.60   TOTAL RUNOFF(CFS) =      1.03

****************************************************************************
  FLOW PROCESS FROM NODE    170.00 TO NODE    170.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
    10 YEAR RAINFALL INTENSITY(INCH/HOUR) =  1.944
  COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8788
  SOIL CLASSIFICATION IS "C"
  SUBAREA AREA(ACRES) =    1.40   SUBAREA RUNOFF(CFS) =    2.39
  TOTAL AREA(ACRES) =        2.0   TOTAL RUNOFF(CFS) =       3.42
  TC(MIN.) =    8.75

****************************************************************************
  FLOW PROCESS FROM NODE    170.00 TO NODE    175.00 IS CODE =  41
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING USER-SPECIFIED PIPESIZE (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    53.90  DOWNSTREAM(FEET) =    50.31
  FLOW LENGTH(FEET) =    22.00   MANNING'S N =  0.012
  DEPTH OF FLOW IN  12.0 INCH PIPE IS   3.9 INCHES
  PIPE-FLOW VELOCITY(FEET/SEC.) =  15.31
  GIVEN PIPE DIAMETER(INCH) =  12.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =       3.42
  PIPE TRAVEL TIME(MIN.) =   0.02    Tc(MIN.) =    8.77
  LONGEST FLOWPATH FROM NODE    167.00 TO NODE    175.00 =     422.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    175.00 TO NODE    175.00 IS CODE =  11
----------------------------------------------------------------------------
```

```
  >>>>>CONFLUENCE MEMORY BANK # 1 WITH THE MAIN-STREAM MEMORY<<<<<
================================================================================

  ** MAIN STREAM CONFLUENCE DATA **
  STREAM     RUNOFF      Tc      INTENSITY     AREA
  NUMBER      (CFS)    (MIN.)   (INCH/HOUR)   (ACRE)
      1        3.42     8.77       1.942        2.00
  LONGEST FLOWPATH FROM NODE    167.00 TO NODE    175.00 =     422.00 FEET.

  ** MEMORY BANK #  1 CONFLUENCE DATA **
  STREAM     RUNOFF      Tc      INTENSITY     AREA
  NUMBER      (CFS)    (MIN.)   (INCH/HOUR)   (ACRE)
      1        8.54    10.41       1.794        4.40
  LONGEST FLOWPATH FROM NODE    101.00 TO NODE    175.00 =     952.00 FEET.

 ****************************************WARNING*************************************
  IN THIS COMPUTER PROGRAM, THE CONFLUENCE VALUE USED IS BASED
  ON THE RCFC&WCD FORMULA OF PLATE D-1 AS DEFAULT VALUE. THIS FORMULA
  WILL NOT NECESSARILY RESULT IN THE MAXIMUM VALUE OF PEAK FLOW.
 ************************************************************************************

  ** PEAK FLOW RATE TABLE **
  STREAM    RUNOFF       Tc      INTENSITY
  NUMBER     (CFS)     (MIN.)   (INCH/HOUR)
      1      10.61       8.77        1.942
      2      11.70      10.41        1.794

  COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
  PEAK FLOW RATE(CFS) =      11.70   Tc(MIN.) =   10.41
  TOTAL AREA(ACRES) =        6.4

********************************************************************************
  FLOW PROCESS FROM NODE    175.00 TO NODE    175.00 IS CODE =  12
--------------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
================================================================================

********************************************************************************
  FLOW PROCESS FROM NODE    175.00 TO NODE    180.00 IS CODE =  41
--------------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING USER-SPECIFIED PIPESIZE (EXISTING ELEMENT)<<<<<
================================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    50.31  DOWNSTREAM(FEET) =    50.00
  FLOW LENGTH(FEET) =    45.00   MANNING'S N =  0.012
  DEPTH OF FLOW IN  24.0 INCH PIPE IS  13.5 INCHES
  PIPE-FLOW VELOCITY(FEET/SEC.) =   6.43
  GIVEN PIPE DIAMETER(INCH) =  24.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =      11.70
  PIPE TRAVEL TIME(MIN.) =   0.12    Tc(MIN.) =   10.53
```

```
 LONGEST FLOWPATH FROM NODE    101.00 TO NODE    180.00 =     997.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE    180.00 TO NODE    185.00 IS CODE =  51
----------------------------------------------------------------------------
 >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
 ELEVATION DATA: UPSTREAM(FEET) =     50.00  DOWNSTREAM(FEET) =     49.90
 CHANNEL LENGTH THRU SUBAREA(FEET) =    50.00   CHANNEL SLOPE =  0.0020
 CHANNEL BASE(FEET) =   40.00   "Z" FACTOR =   3.000
 MANNING'S FACTOR = 0.030   MAXIMUM DEPTH(FEET) =   5.00
   10 YEAR RAINFALL INTENSITY(INCH/HOUR) =  1.724
 COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8768
 SOIL CLASSIFICATION IS "C"
 TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =      12.91
 TRAVEL TIME THRU SUBAREA BASED ON VELOCITY(FEET/SEC.) =   1.00
 AVERAGE FLOW DEPTH(FEET) =   0.32   TRAVEL TIME(MIN.) =   0.83
 Tc(MIN.) =   11.36
 SUBAREA AREA(ACRES) =     1.60       SUBAREA RUNOFF(CFS) =    2.42
 TOTAL AREA(ACRES) =        8.0         PEAK FLOW RATE(CFS) =      14.12

 END OF SUBAREA CHANNEL FLOW HYDRAULICS:
 DEPTH(FEET) =  0.33   FLOW VELOCITY(FEET/SEC.) =   1.04
 LONGEST FLOWPATH FROM NODE    101.00 TO NODE    185.00 =    1047.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE    185.00 TO NODE    190.00 IS CODE =  41
----------------------------------------------------------------------------
 >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
 >>>>>USING USER-SPECIFIED PIPESIZE (EXISTING ELEMENT)<<<<<
============================================================================
 ELEVATION DATA: UPSTREAM(FEET) =    48.75  DOWNSTREAM(FEET) =    48.50
 FLOW LENGTH(FEET) =    50.00   MANNING'S N =  0.012
 DEPTH OF FLOW IN  30.0 INCH PIPE IS  14.5 INCHES
 PIPE-FLOW VELOCITY(FEET/SEC.) =   5.99
 GIVEN PIPE DIAMETER(INCH) =  30.00    NUMBER OF PIPES =   1
 PIPE-FLOW(CFS) =      14.12
 PIPE TRAVEL TIME(MIN.) =   0.14    Tc(MIN.) =   11.50
 LONGEST FLOWPATH FROM NODE    101.00 TO NODE    190.00 =    1097.00 FEET.

+--------------------------------------------------------------------------+
| NODE 1001 TO 1005                                                        |
| NOTE: THIS SUBAREA REPRESENTS THE OFFSITE PERIMETER RUN-ON FLOW          |
| A PROPOSED SWALE/DITCH IS PROPOSED TO CONVEY THE FLOW EASTERLY           |
+--------------------------------------------------------------------------+

****************************************************************************
 FLOW PROCESS FROM NODE   1001.00 TO NODE   1005.00 IS CODE =  21
----------------------------------------------------------------------------
```

```
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
================================================================================
         ASSUMED INITIAL SUBAREA UNIFORM
         DEVELOPMENT IS COMMERCIAL
  TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   670.00
  UPSTREAM ELEVATION(FEET) =     58.00
  DOWNSTREAM ELEVATION(FEET) =     57.20
  ELEVATION DIFFERENCE(FEET) =      0.80
  TC = 0.303*[(  670.00**3)/(     0.80)]**.2 =   15.726
    10 YEAR RAINFALL INTENSITY(INCH/HOUR) =  1.485
  COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8741
  SOIL CLASSIFICATION IS "C"
  SUBAREA RUNOFF(CFS) =      0.26
  TOTAL AREA(ACRES) =      0.20   TOTAL RUNOFF(CFS) =      0.26
================================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =        0.2  TC(MIN.) =     15.73
  PEAK FLOW RATE(CFS)   =       0.26
================================================================================
================================================================================
  END OF RATIONAL METHOD ANALYSIS
```

```
**************************************************************************
          RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM BASED ON
       RIVERSIDE COUNTY FLOOD CONTROL & WATER CONSERVATION DISTRICT
                    (RCFC&WCD)  1978 HYDROLOGY MANUAL
        (c) Copyright 1982-2016 Advanced Engineering Software (aes)
                    (Rational Tabling Version 23.0)
                Release Date: 07/01/2016  License ID 1717

                          Analysis prepared by:

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 ************************* DESCRIPTION OF STUDY *************************
* MCKAY - RAMONA (JN 2010)                                               *
* POST-PROJECT CONDITION - 10-YEAR, 1-HOUR STORM EVENT                   *
* BASIN 200                                                              *
 **************************************************************************

  FILE NAME: MR2HP10.RAT
  TIME/DATE OF STUDY: 15:58 01/10/2022
--------------------------------------------------------------------------
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
--------------------------------------------------------------------------
  USER SPECIFIED STORM EVENT(YEAR) =   10.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  12.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  10-YEAR STORM 10-MINUTE INTENSITY(INCH/HOUR) =  1.810
  10-YEAR STORM 60-MINUTE INTENSITY(INCH/HOUR) =  0.794
  100-YEAR STORM 10-MINUTE INTENSITY(INCH/HOUR) =  3.090
  100-YEAR STORM 60-MINUTE INTENSITY(INCH/HOUR) =  1.350
  SLOPE OF 10-YEAR INTENSITY-DURATION CURVE =  0.4598822
  SLOPE OF 100-YEAR INTENSITY-DURATION CURVE =  0.4621526
  COMPUTED RAINFALL INTENSITY DATA:
  STORM EVENT =   10.00   1-HOUR INTENSITY(INCH/HOUR) =   0.802
  SLOPE OF INTENSITY DURATION CURVE = 0.4599
  RCFC&WCD HYDROLOGY MANUAL "C"-VALUES USED FOR RATIONAL METHOD
  NOTE: COMPUTE CONFLUENCE VALUES ACCORDING TO RCFC&WCD HYDROLOGY MANUAL
        AND IGNORE OTHER CONFLUENCE COMBINATIONS FOR DOWNSTREAM ANALYSES
  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  ================  ======  ===== ====== ===== =======
  1   20.0     15.0    0.020/0.020/0.020   0.50    1.50 0.0313 0.125 0.0160

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
```

```
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*

****************************************************************************
  FLOW PROCESS FROM NODE    201.00 TO NODE    205.00 IS CODE =  21
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
         ASSUMED INITIAL SUBAREA UNIFORM
         DEVELOPMENT IS COMMERCIAL
  TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   145.00
  UPSTREAM ELEVATION(FEET) =     60.30
  DOWNSTREAM ELEVATION(FEET) =     58.20
  ELEVATION DIFFERENCE(FEET) =      2.10
  TC = 0.303*[(  145.00**3)/(     2.10)]**.2 =    5.176
    10 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.475
  COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8825
  SOIL CLASSIFICATION IS "C"
  SUBAREA RUNOFF(CFS) =      1.31
  TOTAL AREA(ACRES) =      0.60   TOTAL RUNOFF(CFS) =      1.31

****************************************************************************
  FLOW PROCESS FROM NODE    203.00 TO NODE    205.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
    10 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.475
  COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8825
  SOIL CLASSIFICATION IS "C"
  SUBAREA AREA(ACRES) =    1.30   SUBAREA RUNOFF(CFS) =    2.84
  TOTAL AREA(ACRES) =        1.9   TOTAL RUNOFF(CFS) =       4.15
  TC(MIN.) =    5.18

****************************************************************************
  FLOW PROCESS FROM NODE    205.00 TO NODE    210.00 IS CODE =  41
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING USER-SPECIFIED PIPESIZE (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    56.02  DOWNSTREAM(FEET) =    55.70
  FLOW LENGTH(FEET) =   159.00   MANNING'S N =  0.012
  ASSUME FULL-FLOWING PIPELINE
  PIPE-FLOW VELOCITY(FEET/SEC.) =   2.38
  (PIPE FLOW VELOCITY CORRESPONDING TO NORMAL-DEPTH FLOW
   AT DEPTH = 0.82 * DIAMETER)
  GIVEN PIPE DIAMETER(INCH) =  12.00    NUMBER OF PIPES =   1
```

```
  PIPE-FLOW(CFS) =       4.15
  PIPE TRAVEL TIME(MIN.) =   1.11    Tc(MIN.) =    6.29
  LONGEST FLOWPATH FROM NODE    201.00 TO NODE    210.00 =     304.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    208.00 TO NODE    210.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
    10 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.263
  COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8812
  SOIL CLASSIFICATION IS "C"
  SUBAREA AREA(ACRES) =    0.30   SUBAREA RUNOFF(CFS) =    0.60
  TOTAL AREA(ACRES) =        2.2   TOTAL RUNOFF(CFS) =       4.75
  TC(MIN.) =    6.29

****************************************************************************
  FLOW PROCESS FROM NODE    210.00 TO NODE    220.00 IS CODE =  41
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING USER-SPECIFIED PIPESIZE (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    55.70  DOWNSTREAM(FEET) =    55.14
  FLOW LENGTH(FEET) =   281.00   MANNING'S N =  0.012
  ASSUME FULL-FLOWING PIPELINE
  PIPE-FLOW VELOCITY(FEET/SEC.) =   2.37
  (PIPE FLOW VELOCITY CORRESPONDING TO NORMAL-DEPTH FLOW
   AT DEPTH = 0.82 * DIAMETER)
  GIVEN PIPE DIAMETER(INCH) =  12.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =       4.75
  PIPE TRAVEL TIME(MIN.) =   1.97    Tc(MIN.) =    8.26
  LONGEST FLOWPATH FROM NODE    201.00 TO NODE    220.00 =     585.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    215.00 TO NODE    220.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
    10 YEAR RAINFALL INTENSITY(INCH/HOUR) =  1.996
  COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8792
  SOIL CLASSIFICATION IS "C"
  SUBAREA AREA(ACRES) =    1.80   SUBAREA RUNOFF(CFS) =    3.16
  TOTAL AREA(ACRES) =        4.0   TOTAL RUNOFF(CFS) =       7.91
  TC(MIN.) =    8.26

****************************************************************************
  FLOW PROCESS FROM NODE    220.00 TO NODE    240.00 IS CODE =  41
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING USER-SPECIFIED PIPESIZE (EXISTING ELEMENT)<<<<<
```

```
==========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    55.14  DOWNSTREAM(FEET) =    54.75
  FLOW LENGTH(FEET) =   197.00   MANNING'S N =  0.012
  ASSUME FULL-FLOWING PIPELINE
  PIPE-FLOW VELOCITY(FEET/SEC.) =   2.36
  (PIPE FLOW VELOCITY CORRESPONDING TO NORMAL-DEPTH FLOW
   AT DEPTH = 0.82 * DIAMETER)
  GIVEN PIPE DIAMETER(INCH) =  12.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =       7.91
  PIPE TRAVEL TIME(MIN.) =   1.39    Tc(MIN.) =    9.65
  LONGEST FLOWPATH FROM NODE    201.00 TO NODE    240.00 =     782.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    235.00 TO NODE    240.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
    10 YEAR RAINFALL INTENSITY(INCH/HOUR) =  1.858
  COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8781
  SOIL CLASSIFICATION IS "C"
  SUBAREA AREA(ACRES) =    0.40   SUBAREA RUNOFF(CFS) =    0.65
  TOTAL AREA(ACRES) =        4.4   TOTAL RUNOFF(CFS) =       8.56
  TC(MIN.) =    9.65

****************************************************************************
  FLOW PROCESS FROM NODE    240.00 TO NODE    250.00 IS CODE =  41
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING USER-SPECIFIED PIPESIZE (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    54.75  DOWNSTREAM(FEET) =    50.30
  FLOW LENGTH(FEET) =    54.00   MANNING'S N =  0.012
  DEPTH OF FLOW IN  18.0 INCH PIPE IS   6.5 INCHES
  PIPE-FLOW VELOCITY(FEET/SEC.) =  14.97
  GIVEN PIPE DIAMETER(INCH) =  18.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =       8.56
  PIPE TRAVEL TIME(MIN.) =   0.06    Tc(MIN.) =    9.71
  LONGEST FLOWPATH FROM NODE    201.00 TO NODE    250.00 =     836.00 FEET.
============================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =        4.4  TC(MIN.) =      9.71
  PEAK FLOW RATE(CFS)   =       8.56
============================================================================
============================================================================
  END OF RATIONAL METHOD ANALYSIS
```

```
**************************************************************************
          RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM BASED ON
       RIVERSIDE COUNTY FLOOD CONTROL & WATER CONSERVATION DISTRICT
                   (RCFC&WCD)  1978 HYDROLOGY MANUAL
        (c) Copyright 1982-2016 Advanced Engineering Software (aes)
                   (Rational Tabling Version 23.0)
               Release Date: 07/01/2016  License ID 1717

                         Analysis prepared by:

                         SDH & ASSOCIATES, INC.
                          27363 VIA INDUSTRIA
                           TEMECULA, CA 92590
                             (951) 683-3691

 ************************* DESCRIPTION OF STUDY *************************
* MCKAY - RAMONA (JN 2010)                                               *
* POST-PROJECT CONDITION - 10-YEAR, 1-HOUR STORM EVENT                   *
* BASIN 300                                                              *
 **************************************************************************

  FILE NAME: MR3HP10.RAT
  TIME/DATE OF STUDY: 16:00 01/10/2022
--------------------------------------------------------------------------
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
--------------------------------------------------------------------------
  USER SPECIFIED STORM EVENT(YEAR) =   10.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  12.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  10-YEAR STORM 10-MINUTE INTENSITY(INCH/HOUR) =  1.810
  10-YEAR STORM 60-MINUTE INTENSITY(INCH/HOUR) =  0.794
  100-YEAR STORM 10-MINUTE INTENSITY(INCH/HOUR) =  3.090
  100-YEAR STORM 60-MINUTE INTENSITY(INCH/HOUR) =  1.350
  SLOPE OF 10-YEAR INTENSITY-DURATION CURVE =  0.4598822
  SLOPE OF 100-YEAR INTENSITY-DURATION CURVE =  0.4621526
  COMPUTED RAINFALL INTENSITY DATA:
  STORM EVENT =   10.00   1-HOUR INTENSITY(INCH/HOUR) =   0.802
  SLOPE OF INTENSITY DURATION CURVE = 0.4599
  RCFC&WCD HYDROLOGY MANUAL "C"-VALUES USED FOR RATIONAL METHOD
  NOTE: COMPUTE CONFLUENCE VALUES ACCORDING TO RCFC&WCD HYDROLOGY MANUAL
        AND IGNORE OTHER CONFLUENCE COMBINATIONS FOR DOWNSTREAM ANALYSES
  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  ================  ======  ===== ====== ===== =======
  1   20.0     15.0    0.020/0.020/0.020   0.50    1.50 0.0313 0.125 0.0160

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
```

```
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*

****************************************************************************
  FLOW PROCESS FROM NODE    301.00 TO NODE    305.00 IS CODE =  21
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
         ASSUMED INITIAL SUBAREA UNIFORM
         DEVELOPMENT IS COMMERCIAL
  TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   190.00
  UPSTREAM ELEVATION(FEET) =     58.50
  DOWNSTREAM ELEVATION(FEET) =     57.55
  ELEVATION DIFFERENCE(FEET) =      0.95
  TC = 0.303*[(  190.00**3)/(     0.95)]**.2 =    7.133
    10 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.135
  COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8803
  SOIL CLASSIFICATION IS "C"
  SUBAREA RUNOFF(CFS) =      0.94
  TOTAL AREA(ACRES) =      0.50   TOTAL RUNOFF(CFS) =      0.94

****************************************************************************
  FLOW PROCESS FROM NODE    302.00 TO NODE    305.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
    10 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.135
  COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8803
  SOIL CLASSIFICATION IS "C"
  SUBAREA AREA(ACRES) =    1.70   SUBAREA RUNOFF(CFS) =    3.20
  TOTAL AREA(ACRES) =        2.2   TOTAL RUNOFF(CFS) =       4.14
  TC(MIN.) =    7.13

****************************************************************************
  FLOW PROCESS FROM NODE    305.00 TO NODE    350.00 IS CODE =  41
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING USER-SPECIFIED PIPESIZE (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    55.55  DOWNSTREAM(FEET) =    50.20
  FLOW LENGTH(FEET) =   235.00   MANNING'S N =  0.012
  DEPTH OF FLOW IN  18.0 INCH PIPE IS   6.2 INCHES
  PIPE-FLOW VELOCITY(FEET/SEC.) =   7.69
  GIVEN PIPE DIAMETER(INCH) =  18.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =       4.14
  PIPE TRAVEL TIME(MIN.) =   0.51    Tc(MIN.) =    7.64
```

```
  LONGEST FLOWPATH FROM NODE    301.00 TO NODE    350.00 =     425.00 FEET.
============================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =         2.2  TC(MIN.) =      7.64
  PEAK FLOW RATE(CFS)   =       4.14
============================================================================
============================================================================
  END OF RATIONAL METHOD ANALYSIS
```

```
**************************************************************************
          RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM BASED ON
       RIVERSIDE COUNTY FLOOD CONTROL & WATER CONSERVATION DISTRICT
                  (RCFC&WCD)  1978 HYDROLOGY MANUAL
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              Release Date: 07/01/2016  License ID 1717

                        Analysis prepared by:

                        SDH & ASSOCIATES, INC.
                         27363 VIA INDUSTRIA
                          TEMECULA, CA 92590
                            (951) 683-3691

 ************************* DESCRIPTION OF STUDY *************************
* MCKAY - RAMONA (JN 2010)                                               *
* POST-PROJECT CONDITION - 100-YEAR, 1-HOUR STORM EVENT                  *
* BASIN 100                                                              *
 **************************************************************************

  FILE NAME: MR1HP00.RAT
  TIME/DATE OF STUDY: 15:55 01/10/2022
--------------------------------------------------------------------------
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
--------------------------------------------------------------------------
  USER SPECIFIED STORM EVENT(YEAR) =  100.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  12.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  10-YEAR STORM 10-MINUTE INTENSITY(INCH/HOUR) =  1.810
  10-YEAR STORM 60-MINUTE INTENSITY(INCH/HOUR) =  0.794
  100-YEAR STORM 10-MINUTE INTENSITY(INCH/HOUR) =  3.090
  100-YEAR STORM 60-MINUTE INTENSITY(INCH/HOUR) =  1.350
  SLOPE OF 10-YEAR INTENSITY-DURATION CURVE =  0.4598822
  SLOPE OF 100-YEAR INTENSITY-DURATION CURVE =  0.4621526
  COMPUTED RAINFALL INTENSITY DATA:
  STORM EVENT =  100.00   1-HOUR INTENSITY(INCH/HOUR) =   1.350
  SLOPE OF INTENSITY DURATION CURVE = 0.4622
  RCFC&WCD HYDROLOGY MANUAL "C"-VALUES USED FOR RATIONAL METHOD
  NOTE: COMPUTE CONFLUENCE VALUES ACCORDING TO RCFC&WCD HYDROLOGY MANUAL
        AND IGNORE OTHER CONFLUENCE COMBINATIONS FOR DOWNSTREAM ANALYSES
  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  ================  ======  ===== ====== ===== =======
  1   20.0     15.0    0.020/0.020/0.020   0.50    1.50 0.0313 0.125 0.0160

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
```

```
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*

****************************************************************************
  FLOW PROCESS FROM NODE    101.00 TO NODE    102.00 IS CODE =  21
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
         ASSUMED INITIAL SUBAREA UNIFORM
         DEVELOPMENT IS COMMERCIAL
  TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   130.00
  UPSTREAM ELEVATION(FEET) =     60.70
  DOWNSTREAM ELEVATION(FEET) =     54.52
  ELEVATION DIFFERENCE(FEET) =      6.18
  TC = 0.303*[(  130.00**3)/(     6.18)]**.2 =    3.906
  COMPUTED TIME OF CONCENTRATION INCREASED TO 5 MIN.
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  4.257
  COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8889
  SOIL CLASSIFICATION IS "C"
  SUBAREA RUNOFF(CFS) =      2.27
  TOTAL AREA(ACRES) =      0.60   TOTAL RUNOFF(CFS) =      2.27

****************************************************************************
  FLOW PROCESS FROM NODE    102.00 TO NODE    110.00 IS CODE =  41
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING USER-SPECIFIED PIPESIZE (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    52.52  DOWNSTREAM(FEET) =    51.60
  FLOW LENGTH(FEET) =   175.00   MANNING'S N =  0.012
  DEPTH OF FLOW IN  12.0 INCH PIPE IS   8.5 INCHES
  PIPE-FLOW VELOCITY(FEET/SEC.) =   3.80
  GIVEN PIPE DIAMETER(INCH) =  12.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =       2.27
  PIPE TRAVEL TIME(MIN.) =   0.77    Tc(MIN.) =    5.77
  LONGEST FLOWPATH FROM NODE    101.00 TO NODE    110.00 =     305.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    110.00 TO NODE    110.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  3.985
  COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8882
  SOIL CLASSIFICATION IS "C"
  SUBAREA AREA(ACRES) =    1.80   SUBAREA RUNOFF(CFS) =    6.37
```

```
  TOTAL AREA(ACRES) =        2.4   TOTAL RUNOFF(CFS) =       8.64
  TC(MIN.) =    5.77

****************************************************************************
  FLOW PROCESS FROM NODE    110.00 TO NODE    120.00 IS CODE =  41
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING USER-SPECIFIED PIPESIZE (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    51.60  DOWNSTREAM(FEET) =    51.10
  FLOW LENGTH(FEET) =   255.00   MANNING'S N =  0.012
  ASSUME FULL-FLOWING PIPELINE
  PIPE-FLOW VELOCITY(FEET/SEC.) =   2.35
  (PIPE FLOW VELOCITY CORRESPONDING TO NORMAL-DEPTH FLOW
   AT DEPTH = 0.82 * DIAMETER)
  GIVEN PIPE DIAMETER(INCH) =  12.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =       8.64
  PIPE TRAVEL TIME(MIN.) =   1.81    Tc(MIN.) =    7.58
  LONGEST FLOWPATH FROM NODE    101.00 TO NODE    120.00 =     560.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    120.00 TO NODE    120.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  3.513
  COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8869
  SOIL CLASSIFICATION IS "C"
  SUBAREA AREA(ACRES) =    1.00   SUBAREA RUNOFF(CFS) =    3.12
  TOTAL AREA(ACRES) =        3.4   TOTAL RUNOFF(CFS) =      11.76
  TC(MIN.) =    7.58

****************************************************************************
  FLOW PROCESS FROM NODE    120.00 TO NODE    150.00 IS CODE =  41
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING USER-SPECIFIED PIPESIZE (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    51.10  DOWNSTREAM(FEET) =    50.72
  FLOW LENGTH(FEET) =   189.00   MANNING'S N =  0.012
  ASSUME FULL-FLOWING PIPELINE
  PIPE-FLOW VELOCITY(FEET/SEC.) =   2.38
  (PIPE FLOW VELOCITY CORRESPONDING TO NORMAL-DEPTH FLOW
   AT DEPTH = 0.82 * DIAMETER)
  GIVEN PIPE DIAMETER(INCH) =  12.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =      11.76
  PIPE TRAVEL TIME(MIN.) =   1.32    Tc(MIN.) =    8.90
  LONGEST FLOWPATH FROM NODE    101.00 TO NODE    150.00 =     749.00 FEET.

****************************************************************************
```

```
  FLOW PROCESS FROM NODE    140.00 TO NODE    150.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  3.261
  COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8860
  SOIL CLASSIFICATION IS "C"
  SUBAREA AREA(ACRES) =    1.00   SUBAREA RUNOFF(CFS) =    2.89
  TOTAL AREA(ACRES) =        4.4   TOTAL RUNOFF(CFS) =      14.65
  TC(MIN.) =    8.90

****************************************************************************
  FLOW PROCESS FROM NODE    150.00 TO NODE    160.00 IS CODE =  41
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING USER-SPECIFIED PIPESIZE (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    50.72  DOWNSTREAM(FEET) =    50.43
  FLOW LENGTH(FEET) =   143.00   MANNING'S N =  0.012
  ASSUME FULL-FLOWING PIPELINE
  PIPE-FLOW VELOCITY(FEET/SEC.) =   2.39
  (PIPE FLOW VELOCITY CORRESPONDING TO NORMAL-DEPTH FLOW
   AT DEPTH = 0.82 * DIAMETER)
  GIVEN PIPE DIAMETER(INCH) =  12.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =      14.65
  PIPE TRAVEL TIME(MIN.) =   1.00    Tc(MIN.) =    9.90
  LONGEST FLOWPATH FROM NODE    101.00 TO NODE    160.00 =     892.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    160.00 TO NODE    175.00 IS CODE =  41
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING USER-SPECIFIED PIPESIZE (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    50.43  DOWNSTREAM(FEET) =    50.31
  FLOW LENGTH(FEET) =    60.00   MANNING'S N =  0.012
  ASSUME FULL-FLOWING PIPELINE
  PIPE-FLOW VELOCITY(FEET/SEC.) =   2.37
  (PIPE FLOW VELOCITY CORRESPONDING TO NORMAL-DEPTH FLOW
   AT DEPTH = 0.82 * DIAMETER)
  GIVEN PIPE DIAMETER(INCH) =  12.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =      14.65
  PIPE TRAVEL TIME(MIN.) =   0.42    Tc(MIN.) =   10.32
  LONGEST FLOWPATH FROM NODE    101.00 TO NODE    175.00 =     952.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    175.00 TO NODE    175.00 IS CODE =  10
----------------------------------------------------------------------------
  >>>>>MAIN-STREAM MEMORY COPIED ONTO MEMORY BANK # 1 <<<<<
============================================================================
```

```
****************************************************************************
  FLOW PROCESS FROM NODE    167.00 TO NODE    170.00 IS CODE =  21
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
         ASSUMED INITIAL SUBAREA UNIFORM
         DEVELOPMENT IS COMMERCIAL
  TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   400.00
  UPSTREAM ELEVATION(FEET) =     59.10
  DOWNSTREAM ELEVATION(FEET) =     55.90
  ELEVATION DIFFERENCE(FEET) =      3.20
  TC = 0.303*[(  400.00**3)/(     3.20)]**.2 =    8.746
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  3.287
  COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8861
  SOIL CLASSIFICATION IS "C"
  SUBAREA RUNOFF(CFS) =      1.75
  TOTAL AREA(ACRES) =      0.60   TOTAL RUNOFF(CFS) =      1.75

****************************************************************************
  FLOW PROCESS FROM NODE    170.00 TO NODE    170.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  3.287
  COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8861
  SOIL CLASSIFICATION IS "C"
  SUBAREA AREA(ACRES) =    1.40   SUBAREA RUNOFF(CFS) =    4.08
  TOTAL AREA(ACRES) =        2.0   TOTAL RUNOFF(CFS) =       5.83
  TC(MIN.) =    8.75

****************************************************************************
  FLOW PROCESS FROM NODE    170.00 TO NODE    175.00 IS CODE =  41
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING USER-SPECIFIED PIPESIZE (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    53.90  DOWNSTREAM(FEET) =    50.31
  FLOW LENGTH(FEET) =    22.00   MANNING'S N =  0.012
  DEPTH OF FLOW IN  12.0 INCH PIPE IS   5.2 INCHES
  PIPE-FLOW VELOCITY(FEET/SEC.) =  17.70
  GIVEN PIPE DIAMETER(INCH) =  12.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =       5.83
  PIPE TRAVEL TIME(MIN.) =   0.02    Tc(MIN.) =    8.77
  LONGEST FLOWPATH FROM NODE    167.00 TO NODE    175.00 =     422.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    175.00 TO NODE    175.00 IS CODE =  11
----------------------------------------------------------------------------
```

```
  >>>>>CONFLUENCE MEMORY BANK # 1 WITH THE MAIN-STREAM MEMORY<<<<<
================================================================================

  ** MAIN STREAM CONFLUENCE DATA **
  STREAM     RUNOFF       Tc       INTENSITY     AREA
  NUMBER      (CFS)    (MIN.)   (INCH/HOUR)   (ACRE)
      1        5.83     8.77       3.284        2.00
  LONGEST FLOWPATH FROM NODE    167.00 TO NODE    175.00 =     422.00 FEET.

  ** MEMORY BANK #  1 CONFLUENCE DATA **
  STREAM     RUNOFF       Tc       INTENSITY     AREA
  NUMBER      (CFS)    (MIN.)   (INCH/HOUR)   (ACRE)
      1       14.65    10.32       3.046        4.40
  LONGEST FLOWPATH FROM NODE    101.00 TO NODE    175.00 =     952.00 FEET.

 ****************************************WARNING*************************************
  IN THIS COMPUTER PROGRAM, THE CONFLUENCE VALUE USED IS BASED
  ON THE RCFC&WCD FORMULA OF PLATE D-1 AS DEFAULT VALUE. THIS FORMULA
  WILL NOT NECESSARILY RESULT IN THE MAXIMUM VALUE OF PEAK FLOW.
 ************************************************************************************

  ** PEAK FLOW RATE TABLE **
  STREAM    RUNOFF       Tc       INTENSITY
  NUMBER     (CFS)     (MIN.)   (INCH/HOUR)
      1      18.27       8.77        3.284
      2      20.05      10.32        3.046

  COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
  PEAK FLOW RATE(CFS) =      20.05   Tc(MIN.) =   10.32
  TOTAL AREA(ACRES) =        6.4

********************************************************************************
  FLOW PROCESS FROM NODE    175.00 TO NODE    175.00 IS CODE =  12
--------------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
================================================================================

********************************************************************************
  FLOW PROCESS FROM NODE    175.00 TO NODE    180.00 IS CODE =  41
--------------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING USER-SPECIFIED PIPESIZE (EXISTING ELEMENT)<<<<<
================================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    50.31  DOWNSTREAM(FEET) =    50.00
  FLOW LENGTH(FEET) =    45.00   MANNING'S N =  0.012
  ASSUME FULL-FLOWING PIPELINE
  PIPE-FLOW VELOCITY(FEET/SEC.) =   7.00
  (PIPE FLOW VELOCITY CORRESPONDING TO NORMAL-DEPTH FLOW
   AT DEPTH = 0.82 * DIAMETER)
  GIVEN PIPE DIAMETER(INCH) =  24.00    NUMBER OF PIPES =   1
```

```
  PIPE-FLOW(CFS) =      20.05
  PIPE TRAVEL TIME(MIN.) =   0.11    Tc(MIN.) =   10.42
  LONGEST FLOWPATH FROM NODE    101.00 TO NODE    180.00 =     997.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    180.00 TO NODE    185.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =     50.00  DOWNSTREAM(FEET) =     49.90
  CHANNEL LENGTH THRU SUBAREA(FEET) =    50.00   CHANNEL SLOPE =  0.0020
  CHANNEL BASE(FEET) =   40.00   "Z" FACTOR =   3.000
  MANNING'S FACTOR = 0.030   MAXIMUM DEPTH(FEET) =   5.00
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.945
  COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8848
  SOIL CLASSIFICATION IS "C"
  TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =      22.13
  TRAVEL TIME THRU SUBAREA BASED ON VELOCITY(FEET/SEC.) =   1.24
  AVERAGE FLOW DEPTH(FEET) =   0.43   TRAVEL TIME(MIN.) =   0.67
  Tc(MIN.) =   11.10
  SUBAREA AREA(ACRES) =     1.60       SUBAREA RUNOFF(CFS) =    4.17
  TOTAL AREA(ACRES) =        8.0         PEAK FLOW RATE(CFS) =      24.22

  END OF SUBAREA CHANNEL FLOW HYDRAULICS:
  DEPTH(FEET) =  0.45   FLOW VELOCITY(FEET/SEC.) =   1.29
  LONGEST FLOWPATH FROM NODE    101.00 TO NODE    185.00 =    1047.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    185.00 TO NODE    190.00 IS CODE =  41
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING USER-SPECIFIED PIPESIZE (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    48.75  DOWNSTREAM(FEET) =    48.50
  FLOW LENGTH(FEET) =    50.00   MANNING'S N =  0.012
  DEPTH OF FLOW IN  30.0 INCH PIPE IS  20.5 INCHES
  PIPE-FLOW VELOCITY(FEET/SEC.) =   6.76
  GIVEN PIPE DIAMETER(INCH) =  30.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =      24.22
  PIPE TRAVEL TIME(MIN.) =   0.12    Tc(MIN.) =   11.22
  LONGEST FLOWPATH FROM NODE    101.00 TO NODE    190.00 =    1097.00 FEET.

+--------------------------------------------------------------------------+
| NODE 1001 TO 1005                                                        |
| NOTE: THIS SUBAREA REPRESENTS THE OFFSITE PERIMETER RUN-ON FLOW           |
| A PROPOSED SWALE/DITCH IS PROPOSED TO CONVEY THE FLOW EASTERLY           |
+--------------------------------------------------------------------------+

****************************************************************************
```

```
  FLOW PROCESS FROM NODE   1001.00 TO NODE   1005.00 IS CODE =  21
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
         ASSUMED INITIAL SUBAREA UNIFORM
         DEVELOPMENT IS COMMERCIAL
  TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   670.00
  UPSTREAM ELEVATION(FEET) =     58.00
  DOWNSTREAM ELEVATION(FEET) =     57.20
  ELEVATION DIFFERENCE(FEET) =      0.80
  TC = 0.303*[(  670.00**3)/(     0.80)]**.2 =   15.726
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.507
  COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8826
  SOIL CLASSIFICATION IS "C"
  SUBAREA RUNOFF(CFS) =      0.44
  TOTAL AREA(ACRES) =      0.20   TOTAL RUNOFF(CFS) =      0.44
============================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =        0.2  TC(MIN.) =     15.73
  PEAK FLOW RATE(CFS)   =       0.44
============================================================================
============================================================================
  END OF RATIONAL METHOD ANALYSIS
```

```
**************************************************************************
          RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM BASED ON
       RIVERSIDE COUNTY FLOOD CONTROL & WATER CONSERVATION DISTRICT
                  (RCFC&WCD)  1978 HYDROLOGY MANUAL
        (c) Copyright 1982-2016 Advanced Engineering Software (aes)
                  (Rational Tabling Version 23.0)
              Release Date: 07/01/2016  License ID 1717

                        Analysis prepared by:

                        SDH & ASSOCIATES, INC.
                         27363 VIA INDUSTRIA
                          TEMECULA, CA 92590
                            (951) 683-3691

 ************************* DESCRIPTION OF STUDY *************************
* MCKAY - RAMONA (JN 2010)                                               *
* POST-PROJECT CONDITION - 100-YEAR, 1-HOUR STORM EVENT                  *
* BASIN 200                                                              *
 **************************************************************************

  FILE NAME: MR2HP00.RAT
  TIME/DATE OF STUDY: 15:41 01/10/2022
--------------------------------------------------------------------------
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
--------------------------------------------------------------------------
  USER SPECIFIED STORM EVENT(YEAR) =  100.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  12.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  10-YEAR STORM 10-MINUTE INTENSITY(INCH/HOUR) =  1.810
  10-YEAR STORM 60-MINUTE INTENSITY(INCH/HOUR) =  0.794
  100-YEAR STORM 10-MINUTE INTENSITY(INCH/HOUR) =  3.090
  100-YEAR STORM 60-MINUTE INTENSITY(INCH/HOUR) =  1.350
  SLOPE OF 10-YEAR INTENSITY-DURATION CURVE =  0.4598822
  SLOPE OF 100-YEAR INTENSITY-DURATION CURVE =  0.4621526
  COMPUTED RAINFALL INTENSITY DATA:
  STORM EVENT =  100.00   1-HOUR INTENSITY(INCH/HOUR) =   1.350
  SLOPE OF INTENSITY DURATION CURVE = 0.4622
  RCFC&WCD HYDROLOGY MANUAL "C"-VALUES USED FOR RATIONAL METHOD
  NOTE: COMPUTE CONFLUENCE VALUES ACCORDING TO RCFC&WCD HYDROLOGY MANUAL
        AND IGNORE OTHER CONFLUENCE COMBINATIONS FOR DOWNSTREAM ANALYSES
  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  ================  ======  ===== ====== ===== =======
  1   20.0     15.0    0.020/0.020/0.020   0.50    1.50 0.0313 0.125 0.0160

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
```

```
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*

****************************************************************************
  FLOW PROCESS FROM NODE    201.00 TO NODE    205.00 IS CODE =  21
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
         ASSUMED INITIAL SUBAREA UNIFORM
         DEVELOPMENT IS COMMERCIAL
  TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   145.00
  UPSTREAM ELEVATION(FEET) =     60.30
  DOWNSTREAM ELEVATION(FEET) =     58.20
  ELEVATION DIFFERENCE(FEET) =      2.10
  TC = 0.303*[(  145.00**3)/(     2.10)]**.2 =    5.176
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  4.189
  COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8887
  SOIL CLASSIFICATION IS "C"
  SUBAREA RUNOFF(CFS) =      2.23
  TOTAL AREA(ACRES) =      0.60   TOTAL RUNOFF(CFS) =      2.23

****************************************************************************
  FLOW PROCESS FROM NODE    203.00 TO NODE    205.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  4.189
  COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8887
  SOIL CLASSIFICATION IS "C"
  SUBAREA AREA(ACRES) =    1.30   SUBAREA RUNOFF(CFS) =    4.84
  TOTAL AREA(ACRES) =        1.9   TOTAL RUNOFF(CFS) =       7.07
  TC(MIN.) =    5.18

****************************************************************************
  FLOW PROCESS FROM NODE    205.00 TO NODE    210.00 IS CODE =  41
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING USER-SPECIFIED PIPESIZE (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    56.02  DOWNSTREAM(FEET) =    55.70
  FLOW LENGTH(FEET) =   159.00   MANNING'S N =  0.012
  ASSUME FULL-FLOWING PIPELINE
  PIPE-FLOW VELOCITY(FEET/SEC.) =   2.38
  (PIPE FLOW VELOCITY CORRESPONDING TO NORMAL-DEPTH FLOW
   AT DEPTH = 0.82 * DIAMETER)
  GIVEN PIPE DIAMETER(INCH) =  12.00    NUMBER OF PIPES =   1
```

```
  PIPE-FLOW(CFS) =       7.07
  PIPE TRAVEL TIME(MIN.) =   1.11    Tc(MIN.) =    6.29
  LONGEST FLOWPATH FROM NODE    201.00 TO NODE    210.00 =     304.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    208.00 TO NODE    210.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  3.829
  COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8878
  SOIL CLASSIFICATION IS "C"
  SUBAREA AREA(ACRES) =    0.30   SUBAREA RUNOFF(CFS) =    1.02
  TOTAL AREA(ACRES) =        2.2   TOTAL RUNOFF(CFS) =       8.09
  TC(MIN.) =    6.29

****************************************************************************
  FLOW PROCESS FROM NODE    210.00 TO NODE    220.00 IS CODE =  41
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING USER-SPECIFIED PIPESIZE (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    55.70  DOWNSTREAM(FEET) =    55.14
  FLOW LENGTH(FEET) =   281.00   MANNING'S N =  0.012
  ASSUME FULL-FLOWING PIPELINE
  PIPE-FLOW VELOCITY(FEET/SEC.) =   2.37
  (PIPE FLOW VELOCITY CORRESPONDING TO NORMAL-DEPTH FLOW
   AT DEPTH = 0.82 * DIAMETER)
  GIVEN PIPE DIAMETER(INCH) =  12.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =       8.09
  PIPE TRAVEL TIME(MIN.) =   1.97    Tc(MIN.) =    8.26
  LONGEST FLOWPATH FROM NODE    201.00 TO NODE    220.00 =     585.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    215.00 TO NODE    220.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  3.375
  COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8864
  SOIL CLASSIFICATION IS "C"
  SUBAREA AREA(ACRES) =    1.80   SUBAREA RUNOFF(CFS) =    5.39
  TOTAL AREA(ACRES) =        4.0   TOTAL RUNOFF(CFS) =      13.48
  TC(MIN.) =    8.26

****************************************************************************
  FLOW PROCESS FROM NODE    220.00 TO NODE    240.00 IS CODE =  41
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING USER-SPECIFIED PIPESIZE (EXISTING ELEMENT)<<<<<
```

```
==========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    55.14  DOWNSTREAM(FEET) =    54.75
  FLOW LENGTH(FEET) =   197.00   MANNING'S N =  0.012
  ASSUME FULL-FLOWING PIPELINE
  PIPE-FLOW VELOCITY(FEET/SEC.) =   2.36
  (PIPE FLOW VELOCITY CORRESPONDING TO NORMAL-DEPTH FLOW
   AT DEPTH = 0.82 * DIAMETER)
  GIVEN PIPE DIAMETER(INCH) =  12.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =      13.48
  PIPE TRAVEL TIME(MIN.) =   1.39    Tc(MIN.) =    9.65
  LONGEST FLOWPATH FROM NODE    201.00 TO NODE    240.00 =     782.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    235.00 TO NODE    240.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==========================================================================
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  3.141
  COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8856
  SOIL CLASSIFICATION IS "C"
  SUBAREA AREA(ACRES) =    0.40   SUBAREA RUNOFF(CFS) =    1.11
  TOTAL AREA(ACRES) =        4.4   TOTAL RUNOFF(CFS) =      14.59
  TC(MIN.) =    9.65

****************************************************************************
  FLOW PROCESS FROM NODE    240.00 TO NODE    250.00 IS CODE =  41
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING USER-SPECIFIED PIPESIZE (EXISTING ELEMENT)<<<<<
==========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    54.75  DOWNSTREAM(FEET) =    50.30
  FLOW LENGTH(FEET) =    54.00   MANNING'S N =  0.012
  DEPTH OF FLOW IN  18.0 INCH PIPE IS   8.7 INCHES
  PIPE-FLOW VELOCITY(FEET/SEC.) =  17.26
  GIVEN PIPE DIAMETER(INCH) =  18.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =      14.59
  PIPE TRAVEL TIME(MIN.) =   0.05    Tc(MIN.) =    9.70
  LONGEST FLOWPATH FROM NODE    201.00 TO NODE    250.00 =     836.00 FEET.
==========================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =        4.4  TC(MIN.) =      9.70
  PEAK FLOW RATE(CFS)   =      14.59
==========================================================================
==========================================================================
  END OF RATIONAL METHOD ANALYSIS
```

```
**************************************************************************
          RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM BASED ON
       RIVERSIDE COUNTY FLOOD CONTROL & WATER CONSERVATION DISTRICT
                  (RCFC&WCD)  1978 HYDROLOGY MANUAL
        (c) Copyright 1982-2016 Advanced Engineering Software (aes)
                  (Rational Tabling Version 23.0)
              Release Date: 07/01/2016  License ID 1717

                        Analysis prepared by:

                        SDH & ASSOCIATES, INC.
                         27363 VIA INDUSTRIA
                          TEMECULA, CA 92590
                            (951) 683-3691

 ************************* DESCRIPTION OF STUDY *************************
* MCKAY - RAMONA (JN 2010)                                               *
* POST-PROJECT CONDITION - 100-YEAR, 1-HOUR STORM EVENT                  *
* BASIN 300                                                              *
 **************************************************************************

  FILE NAME: MR3HP00.RAT
  TIME/DATE OF STUDY: 15:52 01/10/2022
--------------------------------------------------------------------------
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
--------------------------------------------------------------------------
  USER SPECIFIED STORM EVENT(YEAR) =  100.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  12.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  10-YEAR STORM 10-MINUTE INTENSITY(INCH/HOUR) =  1.810
  10-YEAR STORM 60-MINUTE INTENSITY(INCH/HOUR) =  0.794
  100-YEAR STORM 10-MINUTE INTENSITY(INCH/HOUR) =  3.090
  100-YEAR STORM 60-MINUTE INTENSITY(INCH/HOUR) =  1.350
  SLOPE OF 10-YEAR INTENSITY-DURATION CURVE =  0.4598822
  SLOPE OF 100-YEAR INTENSITY-DURATION CURVE =  0.4621526
  COMPUTED RAINFALL INTENSITY DATA:
  STORM EVENT =  100.00   1-HOUR INTENSITY(INCH/HOUR) =   1.350
  SLOPE OF INTENSITY DURATION CURVE = 0.4622
  RCFC&WCD HYDROLOGY MANUAL "C"-VALUES USED FOR RATIONAL METHOD
  NOTE: COMPUTE CONFLUENCE VALUES ACCORDING TO RCFC&WCD HYDROLOGY MANUAL
        AND IGNORE OTHER CONFLUENCE COMBINATIONS FOR DOWNSTREAM ANALYSES
  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  ================  ======  ===== ====== ===== =======
  1   20.0     15.0    0.020/0.020/0.020   0.50    1.50 0.0313 0.125 0.0160

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
```

```
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*

****************************************************************************
  FLOW PROCESS FROM NODE    301.00 TO NODE    305.00 IS CODE =  21
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
         ASSUMED INITIAL SUBAREA UNIFORM
         DEVELOPMENT IS COMMERCIAL
  TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   190.00
  UPSTREAM ELEVATION(FEET) =     58.50
  DOWNSTREAM ELEVATION(FEET) =     57.55
  ELEVATION DIFFERENCE(FEET) =      0.95
  TC = 0.303*[(  190.00**3)/(     0.95)]**.2 =    7.133
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  3.612
  COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8872
  SOIL CLASSIFICATION IS "C"
  SUBAREA RUNOFF(CFS) =      1.60
  TOTAL AREA(ACRES) =      0.50   TOTAL RUNOFF(CFS) =      1.60

****************************************************************************
  FLOW PROCESS FROM NODE    302.00 TO NODE    305.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  3.612
  COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8872
  SOIL CLASSIFICATION IS "C"
  SUBAREA AREA(ACRES) =    1.70   SUBAREA RUNOFF(CFS) =    5.45
  TOTAL AREA(ACRES) =        2.2   TOTAL RUNOFF(CFS) =       7.05
  TC(MIN.) =    7.13

****************************************************************************
  FLOW PROCESS FROM NODE    305.00 TO NODE    350.00 IS CODE =  41
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING USER-SPECIFIED PIPESIZE (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    55.55  DOWNSTREAM(FEET) =    50.20
  FLOW LENGTH(FEET) =   235.00   MANNING'S N =  0.012
  DEPTH OF FLOW IN  18.0 INCH PIPE IS   8.3 INCHES
  PIPE-FLOW VELOCITY(FEET/SEC.) =   8.88
  GIVEN PIPE DIAMETER(INCH) =  18.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =       7.05
  PIPE TRAVEL TIME(MIN.) =   0.44    Tc(MIN.) =    7.57
```

```
  LONGEST FLOWPATH FROM NODE    301.00 TO NODE    350.00 =     425.00 FEET.
============================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =         2.2  TC(MIN.) =      7.57
  PEAK FLOW RATE(CFS)   =       7.05
============================================================================
============================================================================
  END OF RATIONAL METHOD ANALYSIS
```

Appendix C

Inlet Sizing

Note: Detailed onsite inlet calculations will be conducted during final engineering at the time of the final drainage study and will be incorporated in this Appendix.

Appendix D

Preliminary Storm Drain Sizing

Includes:

1. On-site preliminary storm drain sizing
2. WSPG calculation in support of the proposed MDP Line E flood control facility

McKay-Ramona
Job # 2010
January 2022

Preliminary Storm Drain Size

The purpose of this table is to provide an estimated preliminary pipe sizes to convey the anticipated 10-year peak flow rates with a preliminary sizing bump-up factor to account for potential head losses through the pipe.

Manning's n: 0.012 HDPE or equivalent

Preliminary Sizing Bump-up (%): 30

			Preliminary Sizes per Varying Slopes						
		Slope at:	0.2%		0.5%		1.0%		
Node ID's:	**Q_{10} (cfs[1])**	**Q_{100} with Sizing Factor (cfs[1])**	**Minimum Pipe Size[2] (feet)**	**Suggested Pipe Size (inches)**	**Minimum Pipe Size[2] (feet)**	**Suggested Pipe Size (inches)**	**Minimum Pipe Size [2] (feet)**	**Suggested Pipe Size (inches)**	**PRELIMINARY RECOMMENDATIONS[3]**
102 - 110	1.3	1.7	0.99	12"	0.83	10"	0.73	10"	**Use 12" HDPE @ 0.2% MIN.**
110 - 150	6.9	9.0	1.85	24"	1.56	24"	1.37	18"	**Use 2-12" HDPEs @ 0.2% MIN.**
150 - 175	8.5	11.1	2.00	24"	1.69	24"	1.48	18"	**Use 24" HDPE @ 0.2% MIN.**
170 - 175	3.4	4.4	1.42	18"	1.20	18"	1.05	18"	**Use 18" HDPE @ 0.2% MIN.**
175 - 180	11.7	15.2	2.26	30"	1.90	24"	1.67	24"	**Use 30" HDPE @ 0.2% MIN.**
185 - 190	14.1	18.3	2.42	30"	2.04	30"	1.79	24"	**Use 30" HDPE @ 0.2% MIN.**
205 - 210	4.2	5.5	1.54	24"	1.30	18"	1.14	18"	**Use 2-12" HDPEs @ 0.2% MIN.**
210 - 220	4.8	6.2	1.62	24"	1.36	18"	1.20	18"	**Use 2-12" HDPEs @ 0.2% MIN.**
220 - 240	7.9	10.3	1.95	24"	1.64	24"	1.44	18"	**Use 2-12" HDPEs @ 0.2% MIN.**
240 - 250	8.6	11.2	2.01	24"	1.70	24"	1.49	18"	**Use 24" HDPE @ 0.2% MIN.**
305 - 350	4.1	5.3	1.52	24"	1.28	18"	1.13	18"	**Use 24" HDPE @ 0.2% MIN.**

Note:

1. "cfs" = cubic feet per second.
2. Minimum pipe sizes are calculated using the Manning's equation and are based on the flow rates with "bump up factor" to account for potential head losses through the storm drain pipes.
3. The on-site storm drain systems are private and the normal depth calculations should suffice for pipe sizing purpose.
   The preliminary recommendations may differ slightly from the pipe sizing summary table above. Detailed calculations may be performed on an as-needed basis during final engineering to validate the required sizes.

```
T1 MCKAY-RAMONA (JN 2010)                                                    0
T2 PERRIS VALLEY MDP LINE E - PROJECT FRONTAGE FLOOD CONTROL FACILITY
T3 Q100=1,110 CFS; A PROPOSED BOX CULVERT DIMENSION 1-14'(W)X7'(H)
SO   1000.0001447.780  1                          1454.340
R    1267.0001448.330  1      .013                                  .000    .000 0
R    1346.0001448.490  1      .013                                -90.000       -50.000
R    1597.0001449.000  1      .013                                  .000    .000 0
R    1676.0001449.160  1      .013                                 90.000        50.000
R    2438.0001450.660  1      .013                                  .000    .000 0
R    2477.0001450.730  1      .013                                 45.000        50.000
R    2478.0001450.740  1      .013                                  .000    .000 0
R    2517.0001450.820  1      .013                                -45.000       -50.000
R    2538.0001450.830  1      .013                                  .000    .000 0
SH   2538.0001450.830  1                          1450.830
CD   1  3   0    .000   7.000   14.000  .000  .000   .00
Q          1110.000   .0
```

PROPOSED MDP LINE E SEGMENT
HYDRAULIC ANALYSIS VIA WSPGW

Program Package Serial Number: 7353

WATER SURFACE PROFILE LISTING Date: 1-12-2022 Time: 2:25:20

MCKAY-RAMONA (JN 2010)
PERRIS VALLEY MDP LINE E - PROJECT FRONTAGE FLOOD CONTROL FACILITY
Q100=1,110 CFS; A PROPOSED BOX CULVERT DIMENSION 1-14'(W)X7'(H)

Station / L/Elem	Invert Elev / Ch Slope	Depth (FT)	Water Elev	Q (CFS)	Vel (FPS) / SF Ave	Vel Head / HF	Energy Grd.El. / SE Dpth	Super Elev / Froude N	Critical Depth / Norm Dp	Flow Top Width	Height/Dia.-FT / "N"	Base Wt or I.D. / X-Fall	ZL / ZR	No Wth Prs/Pip / Type Ch
1000.000	1447.780	6.560	1454.340	1110.00	12.09	2.27	1456.61	.00	5.80	14.00	7.000	14.000	.00	0 .0
267.000	.0021				.0021	.57	6.56	.83	6.72	.013		.00	.00	BOX
		---------- WARNING - Flow depth near top of box conduit ----------												
1267.000	1448.330	6.644	1454.974	1110.00	11.93	2.21	1457.19	7.00	5.80	14.00	7.000	14.000	.00	0 .0
79.000	.0020				.0021	.17	7.00	.82	6.76	.013		.00	.00	BOX
		---------- WARNING - Flow depth near top of box conduit ----------												
1346.000	1448.490	6.665	1455.155	1110.00	11.90	2.20	1457.35	.00	5.80	14.00	7.000	14.000	.00	0 .0
251.000	.0020				.0021	.52	6.67	.81	6.76	.013		.00	.00	BOX
		---------- WARNING - Flow depth near top of box conduit ----------												
1597.000	1449.000	6.707	1455.707	1110.00	11.82	2.17	1457.88	7.00	5.80	14.00	7.000	14.000	.00	0 .0
79.000	.0020				.0021	.16	7.00	.80	6.76	.013		.00	.00	BOX
		---------- WARNING - Flow depth near top of box conduit ----------												
1676.000	1449.160	6.716	1455.876	1110.00	11.80	2.16	1458.04	.00	5.80	14.00	7.000	14.000	.00	0 .0
762.000	.0020				.0020	1.51	6.72	.80	6.84	.013		.00	.00	BOX
		---------- WARNING - Flow depth near top of box conduit ----------												

Program Package Serial Number: 7353

WATER SURFACE PROFILE LISTING Date: 1-12-2022 Time: 2:25:20

MCKAY-RAMONA (JN 2010)
PERRIS VALLEY MDP LINE E - PROJECT FRONTAGE FLOOD CONTROL FACILITY
Q100=1,110 CFS; A PROPOSED BOX CULVERT DIMENSION 1-14'(W)X7'(H)

Station / L/Elem	Invert Elev / Ch Slope	Depth (FT)	Water Elev	Q (CFS)	Vel (FPS) / SF Ave	Vel Head / HF	Energy Grd.El. / SE Dpth	Super Elev / Froude N	Critical Depth / Norm Dp	Flow Top Width	Height/Dia.-FT / "N"	Base Wt or I.D. / X-Fall	ZL / ZR	No Wth Prs/Pip / Type Ch

```
        |         |       |         |         |               |         |       |       |       |       |       |      |
 2438.000  1450.660    6.824  1457.484   1110.00   11.62    2.10  1459.58    7.00    5.80    14.00    7.000   14.000   .00   0   .0
       -|-       -|-      -|-       -|-       -|-     -|-     -|-       -|-     -|-      -|-      -|-     -|-     -|-     -|-
   39.000    .0018                                  .0020      .08     7.00     .78    7.00    .013       .00   .00  BOX
                    -------------------- WARNING - Flow depth near top of box conduit --------------------
        |         |       |         |         |               |         |       |       |       |       |       |      |
 2477.000  1450.730    6.842  1457.572   1110.00   11.59    2.09  1459.66     .00    5.80    14.00    7.000   14.000   .00   0   .0
       -|-       -|-      -|-       -|-       -|-     -|-     -|-       -|-     -|-      -|-      -|-     -|-     -|-     -|-
    1.000    .0100                                  .0020      .00     6.84     .78    3.80    .013       .00   .00  BOX
                    -------------------- WARNING - Flow depth near top of box conduit --------------------
        |         |       |         |         |               |         |       |       |       |       |       |      |
 2478.000  1450.740    6.821  1457.561   1110.00   11.62    2.10  1459.66    7.00    5.80    14.00    7.000   14.000   .00   0   .0
       -|-       -|-      -|-       -|-       -|-     -|-     -|-       -|-     -|-      -|-      -|-     -|-     -|-     -|-
   39.000    .0021                                  .0020      .08     7.00     .78    6.73    .013       .00   .00  BOX
                    -------------------- WARNING - Flow depth near top of box conduit --------------------
        |         |       |         |         |               |         |       |       |       |       |       |      |
 2517.000  1450.820    6.815  1457.635   1110.00   11.63    2.10  1459.74     .00    5.80    14.00    7.000   14.000   .00   0   .0
       -|-       -|-      -|-       -|-       -|-     -|-     -|-       -|-     -|-      -|-      -|-     -|-     -|-     -|-
   21.000    .0005                                  .0019      .04     6.81     .79    7.00    .013       .00   .00  BOX
                    -------------------- WARNING - Flow depth near top of box conduit --------------------
```


MCKAY-RAMONA (JN 2010)

PERRIS VALLEY MDP LINE E - PROJECT FRONTAGE FLOOD CONTROL FACILITY

Q100=1,110 CFS; A PROPOSED BOX CULVERT DIMENSION 1-14'(W)X7'(H)

```
**********************************************************************************************************************
        | Invert  |  Depth |  Water  |    Q    |  Vel     Vel  |  Energy | Super |Critical|Flow Top|Height/|Base Wt|      |No Wth
 Station |  Elev   |  (FT)  |  Elev   |  (CFS)  | (FPS)    Head |  Grd.El.|  Elev | Depth  | Width  |Dia.-FT|or I.D.|  ZL  |Prs/Pip
       -|-       -|-      -|-       -|-       -|-     -|-     -|-       -|-     -|-      -|-      -|-     -|-     -|-     -|-
 L/Elem  |Ch Slope |        |         |         |         SF Ave|    HF   |SE Dpth|Froude N|Norm Dp |  "N"  | X-Fall|  ZR  |Type Ch
*********|*********|********|*********|*********|*******|*******|*********|*******|********|********|*******|*******|***** |*******
        |         |        |         |         |               |         |       |       |       |       |       |      |
 2538.000  1450.830    6.894  1457.724   1110.00   11.50    2.05  1459.78     .00    5.80    14.00    7.000   14.000   .00   0   .0
       -|-       -|-      -|-       -|-       -|-     -|-     -|-       -|-     -|-      -|-      -|-     -|-     -|-     -|-
```

Appendix E

Reference Materials – Relevant Plans (Excerpts)

Includes:

1. Excerpt – Perris Valley MDP Line E Stage 4; PM 37457; Drawing No. 4-1145 (Sheet 2 of 9)
2. Excerpt – City of Perris Storm Drain Improvement Plans Perris Logistic Center DPR-05-0192 Lateral MDP E-11; City File No. P8-821 (Sheet 2A of 6)
3. Excerpt – Perris Valley MDP Line E-3 Stage 1; City File No. P8-1164 (Sheet 3 of 20)
4. Excerpt – City of Perris, California Perris Valley Logistics Center Street Improvement Plan; Parcel Map 36010; City File No. P8-1073 (Sheet 6 of 13)
5. Excerpt – Perris Valley Commercial Center Specific Plan – Preliminary Profile Perris Valley Master Drainage Plan Line E (Sheet 2 of 5)
6. Supporting Capacity Calculations for Existing Headwall "Bubbler" at the southwest corner and Existing Trapezoidal Channel along southerly edge (Informational Purpose Only)

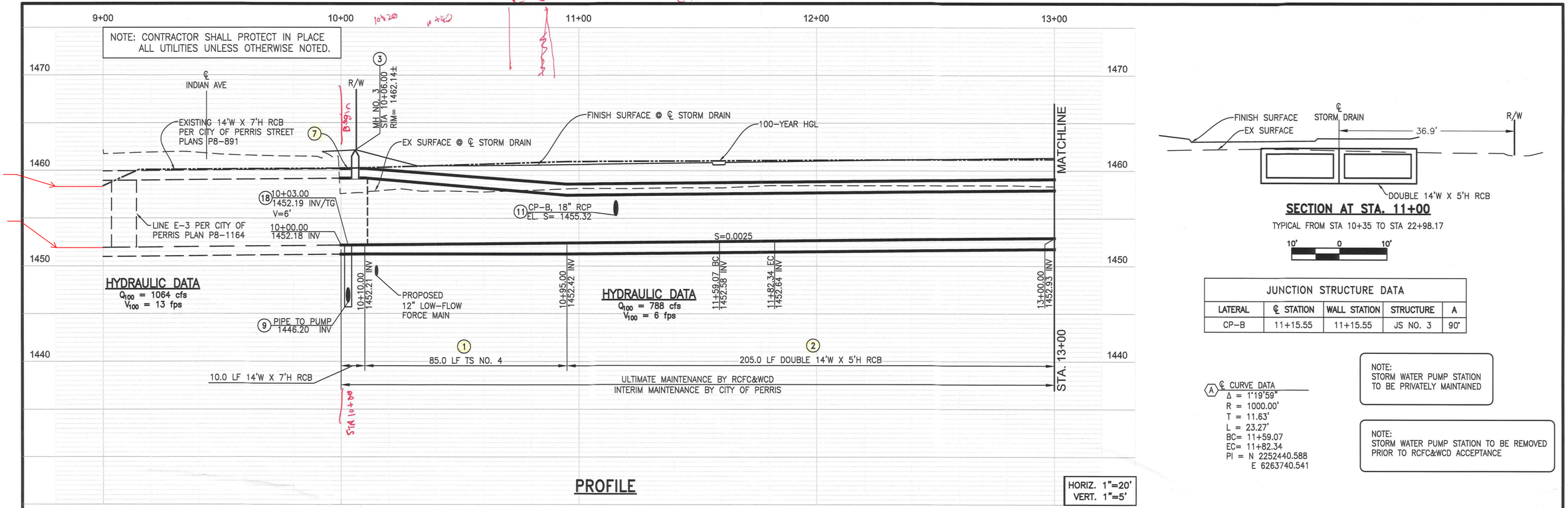
EXCERPT 1

need more vertical line for horizontal x-axis to be clear

NOTE: CONTRACTOR SHALL PROTECT IN PLACE ALL UTILITIES UNLESS OTHERWISE NOTED.

HGL ~1458.3 IMMEDIANTELY DOWNSTREAM OF INDIAN AVE.

INV. ~1452 IMMEDIANTELY DOWNSTREAM OF INDIAN AVE.



PROFILE

HORIZ. 1"=20'
VERT. 1"=5'

SECTION AT STA. 11+00

TYPICAL FROM STA 10+35 TO STA 22+98.17

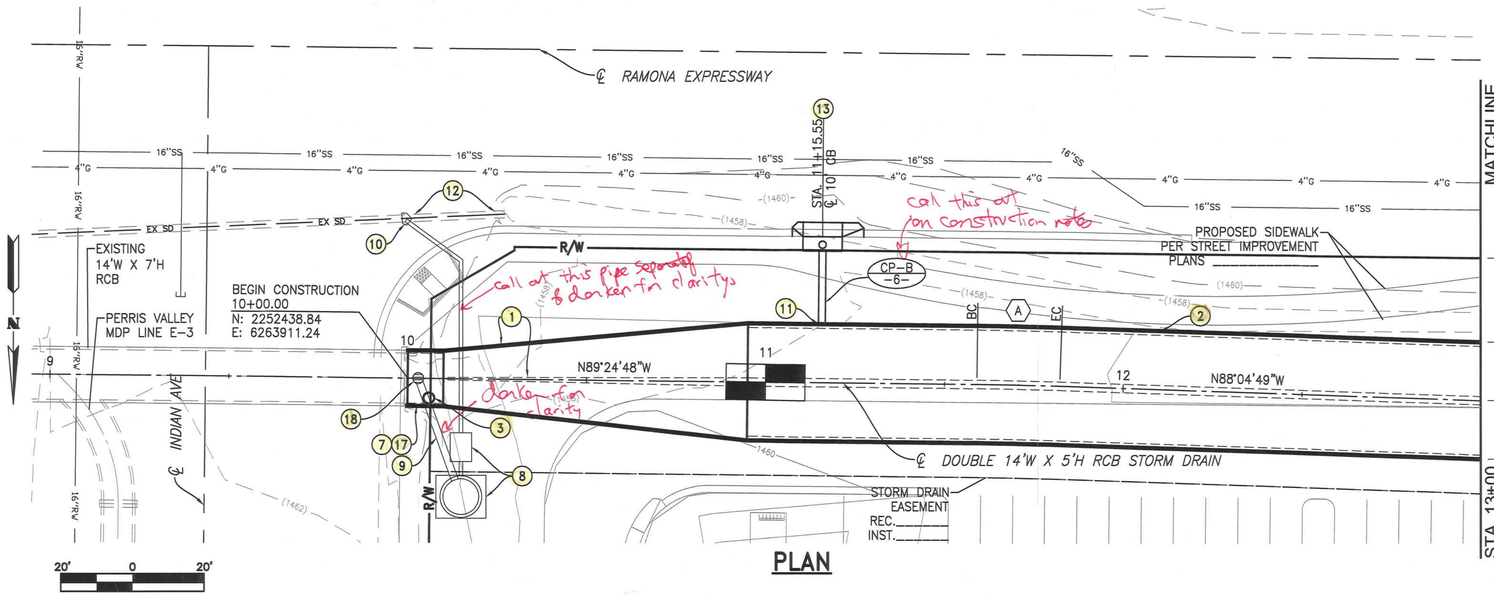
10' 0 10'

JUNCTION STRUCTURE DATA				
LATERAL	℄ STATION	WALL STATION	STRUCTURE	A
CP-B	11+15.55	11+15.55	JS NO. 3	90°

Ⓐ ℄ CURVE DATA
Δ = 1°19'59"
R = 1000.00'
T = 11.63'
L = 23.27'
BC= 11+59.07
EC= 11+82.34
PI = N 2252440.588
E 6263740.541

NOTE:
STORM WATER PUMP STATION TO BE PRIVATELY MAINTAINED

NOTE:
STORM WATER PUMP STATION TO BE REMOVED PRIOR TO RCFC&WCD ACCEPTANCE



PLAN

CONSTRUCTION NOTES

ok ① CONSTRUCT TRANSITION STRUCTURE NO. 4 PER RCFCWCD STD. DWG. NO. TS304, LINEARLY TAPER PIER WIDTH FROM 8" TO 28"

ok ② INSTALL DOUBLE 14'W X 5'H PRECAST RCB PER APWA STD. NO. 390-0 AND DETAILS ON SHEET 9

ok ③ CONSTRUCT MANHOLE NO. 3 PER RCFCWCD STD. DWG. NO. MH253

ok ⑦ CONSTRUCT SINGLE 14'W X 7'H RCB PER CALTRANS STD. PLAN D80, CONNECT TO EXISTING 14'W X 7'H RCB PER TRANSVERSE EXPANSION JOINT DETAIL B ON SHEET 7

ok ⑧ INSTALL LOW FLOW PUMP LIFT STATION PER DETAILS ON SHEET 8

ok ⑨ INSTALL 18" RCP, ELEVATIONS PER PLAN

ok ⑩ CONNECT 12" DUCTILE IRON PIPE FROM PUMP TO EXISTING CULVERT WITH CONCRETE COLLAR PER RCFCWCD STD. DWG. NO. M803

ok ⑪ CONSTRUCT JUNCTION STRUCTURE NO. 3 PER RCFCWCD STD. DWG. NO. JS228 ← show detail diagram

ok ⑫ REMOVE EXISTING HEADWALL AND CULVERT UPSTREAM OF CONCRETE COLLAR CONSTRUCTED THIS PLAN

ok ⑬ CONSTRUCT LOCAL DEPRESSION AND CATCH BASIN PER RCTD STD. DWG. NO. 300 & 311 AND DETAILS ON SHEET 6

ok ⑰ REMOVE INTERFEREING EXISTING INLET STRUCTURE UPSTREAM OF EXISTING 7'H X 14'W RCB

ok ⑱ CONSTRUCT INLET TYPE X PER RCFCWCD STD. DWG. NO. CB108, OMIT OPENINGS AND MATCH GRADE OF PROPOSED RCB

show detail diagram

PM 37457

FOR REVIEW ONLY

H:\2019\19-0008\DRAWINGS\PLAN SHEETS\19-0008-SD SHEETS.DWG 3/25/2020 1:17:25 PM

Don't Dig...Until You Call:
U.S.A. Toll Free: 1-800-422-4133 for the location of buried utility lines. Don't disrupt vital services.
TWO WORKING DAYS BEFORE YOU DIG

REGISTERED PROFESSIONAL ENGINEER JOSEPH C. CALDWELL NO. C67239 CIVIL STATE OF CALIFORNIA

APPROVED BY: ALBERT A. WEBB ASSOCIATES
ENGINEERING CONSULTANTS
3788 McCRAY STREET
RIVERSIDE CA. 92506
PH. (951) 686-1070
FAX (951) 788-1256
ENGINEER, RCE C67239 DATE:

DESIGNED BY:	JCC
DRAWN BY:	CCS
DATE:	11/2019
CHECKED BY:	JCC

CITY OF PERRIS
APPROVED BY:
CITY ENGINEER DATE

PERMANENT BENCH MARK
#40Y
SEE TITLE SHEET
EL.= 1496.35 (NAVD88)

REVISIONS			
REF.	DESCRIPTION	APPR.	DATE

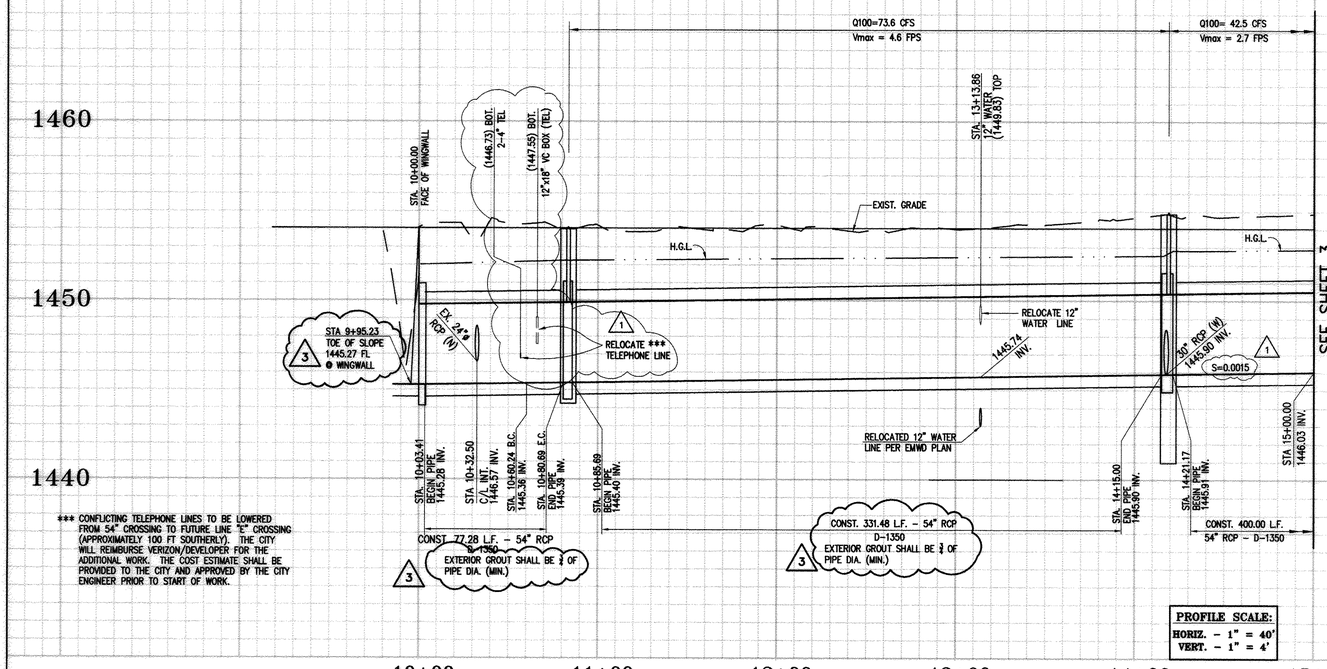
RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT
RECOMMENDED FOR APPROVAL: DATE:
APPROVED BY: DATE:

PERRIS VALLEY MDP LINE E STAGE 4

PLAN & PROFILE
STA. 10+00 TO 13+00

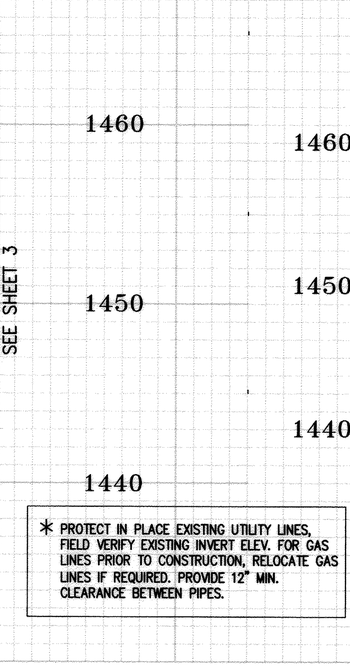
PROJECT NO.	4-0-00488
DRAWING NO.	4-1145
SHEET NO.	2 OF 9

EXCERPT 2

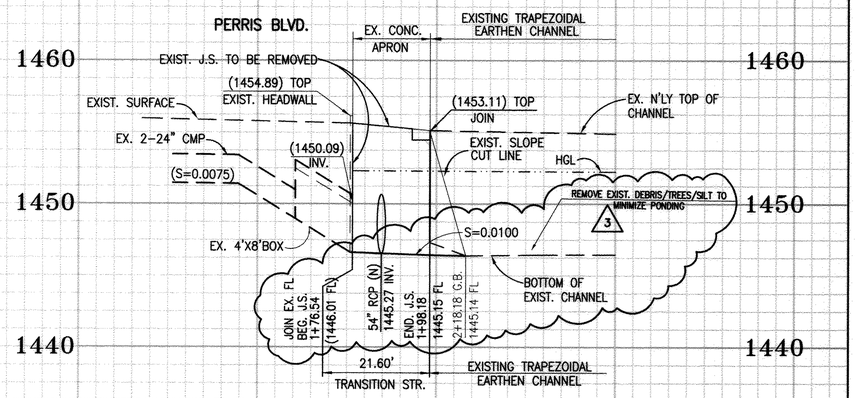


*** CONFLICTING TELEPHONE LINES TO BE LOWERED FROM 54" CROSSING TO FUTURE LINE "E" CROSSING (APPROXIMATELY 100 FT SOUTHERLY). THE CITY WILL REIMBURSE VERIZON/DEVELOPER FOR THE ADDITIONAL WORK. THE COST ESTIMATE SHALL BE PROVIDED TO THE CITY AND APPROVED BY THE CITY ENGINEER PRIOR TO START OF WORK.

PROFILE SCALE:
HORIZ. - 1" = 40'
VERT. - 1" = 4'



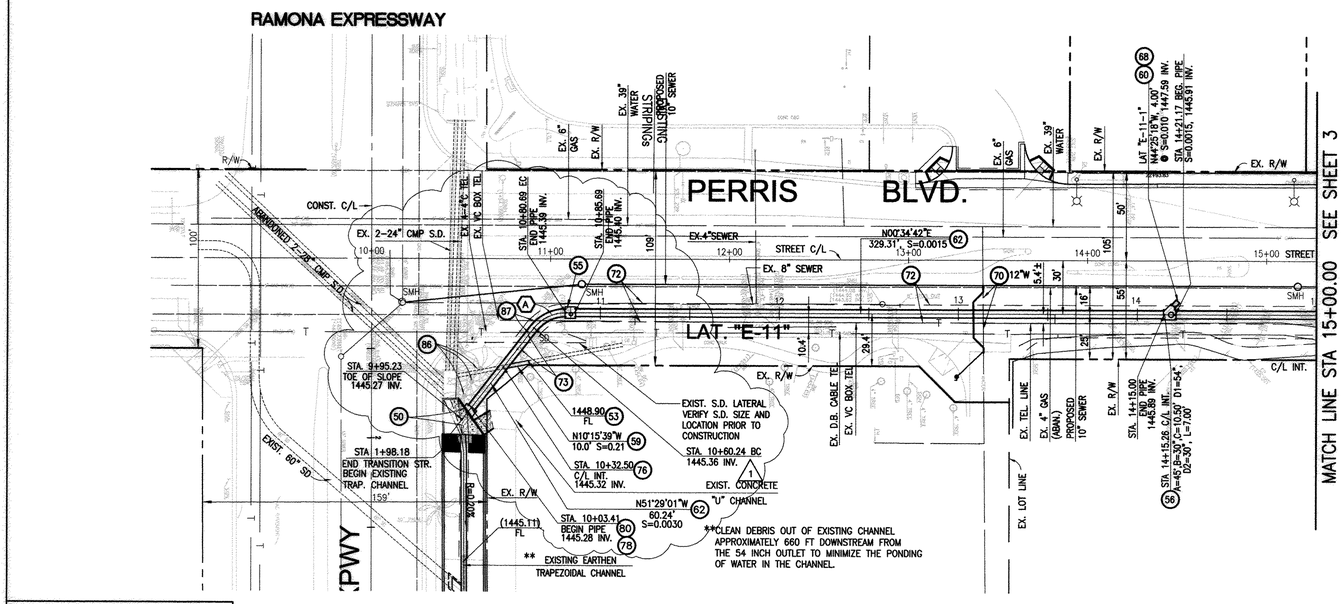
* PROTECT IN PLACE EXISTING UTILITY LINES, FIELD VERIFY EXISTING INVERT ELEV. FOR GAS LINES PRIOR TO CONSTRUCTION, RELOCATE GAS LINES IF REQUIRED. PROVIDE 12" MIN. CLEARANCE BETWEEN PIPES.



TRANSITION STRUCTURE PROFILE

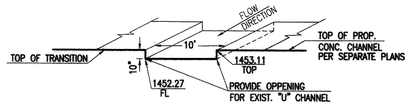
PROFILE SCALE:
HORIZ. - 1" = 20'
VERT. - 1" = 5'

NOTE:
CONTRACTOR SHALL PROTECT IN PLACE ALL UTILITIES CROSSING OR PARALLELING THE CHANNEL UNLESS OTHERWISE NOTED.

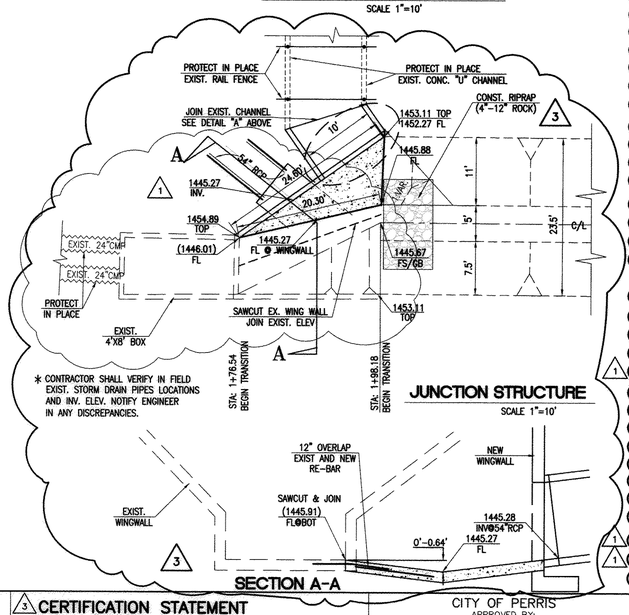


CURVE DATA				
⬡	Δ	R	T	L
A	52°03'43"	22.50'	10.99	20.44

NOTE:
CONTRACTOR TO PROVIDE FULLTIME ACCESS TO ALL INTERSECTIONS AND DRIVEWAYS AND SUBMIT TRAFFIC CONTROL PLANS.



DETAIL "A"
EXIST. "U" CHANNEL SECTION
SCALE 1"=10'



JUNCTION STRUCTURE
SCALE 1"=10'

SECTION A-A

STORM DRAIN CONSTRUCTION NOTES

50 REMOVE EXISTING TRANSITION AND JUNCTION STRUCTURE
51 CONSTRUCT CATCH BASIN NO. 1 PER R.C.F.C. & W.C.D. STD. DRAWING CB100, W=7.00'.
52 CONSTRUCT LOCAL DEPRESSION PER R.C.T.D. STD. DRAWING 311, CASE PER PLAN.
53 CONSTRUCT CONCRETE COLLAR PER R.C.F.C. & W.C.D. STD DWG. MB03.
54 CONSTRUCT MANHOLE NO.1 PER R.C.F.C. & W.C.D. STD. DWG. MH251.
55 CONSTRUCT MANHOLE NO.2 PER R.C.F.C. & W.C.D. STD. DWG. MH252.
56 CONSTRUCT MANHOLE NO.4 PER R.C.F.C. & W.C.D. STD. DWG. MH254.
57 INSTALL 48" R.C.P. 1350D.
58 INSTALL 18" R.C.P. CLASS IV.
59 INSTALL 24" R.C.P. CLASS IV.
60 INSTALL 30" R.C.P. 2000D.
61 INSTALL 42" R.C.P. 1350D.
62 INSTALL 54" R.C.P. 1350D.
63 CONSTRUCT SPECIAL CONNECTION TO CATCH BASIN PER R.C.F.C. & W.C.D. STD. DWG. CB109.
64 INSTALL 3 X 10" DUCTILE IRON PIPE.
65 CONSTRUCT TRANSITION STRUCTURE NO.3 PER R.C.F.C. & W.C.D. STD. DWG. TS303.
67 CONSTRUCT FALSE BOTTOM IN CATCH BASIN PER DETAIL ON SHT. NO. 5.
68 CONSTRUCT CONCRETE BULKHEAD AT END OF PIPE PER R.C.F.C. & W.C.D. STD. DWG. MB16.
69 CONSTRUCT HEADWALL PER DETAIL ON SHT. NO. 1.
70 RELOCATED WATER MAIN PER E.M.W.D. PLANS, PIPE SIZE PER PLAN.
71 FIELD VERIFY INVERT ELEV. OF EXISTING 2" GAS LINE, RELOCATE IF REQUIRED.
72 SAWCUT, REMOVE AND REPLACE EXISTING A.C. PAVEMENT WITH 4"MIN. A.C. OVER 12"MIN. A.B. (PER STREET PLANS) CASE 3 PIPE BEDDING PER L.A. COUNTY DPW STD. 3080-2 AND TRENCH BACKFILL CASE 2 PER RIVERSIDE COUNTY ROAD STD. 818.
73 REMOVE AND REPLACE EXISTING CONCRETE GUTTER AND SIDEWALK.
74 CONSTRUCT RIPRAP PER DETAIL ON SHT. NO. 1.
75 INSTALL 18" HDPE PIPE.
76 CONSTRUCT JUNCTION STRUCTURE NO.4 PER R.C.F.C. & W.C.D. STD. DWG. JS229.
1 77 REMOVE EXIST. 24" RCP AND CONSTRUCT CONCRETE SEAL PER SPPWC STD. NO. 381-2.
78 CONSTRUCT TRANSITION STRUCTURE PER R.C.F.C. & W.C.D. STD. DWG. CH329
79 CONSTRUCT 24" CMP
80 CONSTRUCT JUNCTION STRUCTURE No.6 PER R.C.F.C. & W.C.D. STD. DWG. JS 231
81 INSTALL 12" R.C.P. CLASS IV.
82 INSTALL 12" HDPE PIPE.
83 INSTALL 36" R.C.P. 1350D.
84 FILL PIPE OR CATCH BASIN WITH CLEAN SAND
85 CONSTRUCT MANHOLE NO. 2 PER R.C.F.C. & W.C.D. STD. DWG. MH252, MODIFIED PER DETAIL ON SHT. NO. 4.
1 86 REMOVE AND RE-PLANT EXISTING PALM TREE
1 87 RELOCATE EXISTING TELEPHONE CONDUIT/BOX PER TELEPHONE COMPANY
88 CONSTRUCT MODIFIED CATCH BASIN NO. 1 PER R.C.F.C. & W.C.D. STD. DRAWING CB100, "W" PER PLAN.

Don't Dig...Until You Call U.S.A. Toll Free
1-800-227-2600
for the location of buried utility lines.
Don't disrupt vital services.
TWO WORKING DAYS BEFORE YOU DIG

0 20 40 80 120
SCALE:1"=40'

BENCH MARK
COUNTY OF RIVERSIDE BENCHMARK NO. "M-31"
COUNTY OF RIVERSIDE BENCHMARK - 3 1/4" ALUMINUM DISK MARKED M-31, LOCATED FLUSH AT THE SOUTH WEST CORNER OF BRIDGE ON TOP OF SIDEWALK NEAR FACE OF CURB LOCATED AT THE CROSSING OF PERRIS BLVD. AND RIV. CO. FLOOD CONTROL CHANNEL (PERRIS LATERAL 'E-7') 43FT. WEST OF CENTERLINE OF PERRIS BLVD. AND 4.5 FT. EAST OF CONCRETE BRIDGE BARRIER. (EDGE OF BRIDGE)
ELEVATION = 1474.674' (NGVD '29 / 1996 ADJ.)

REF.	REVISIONS	ENGINEER APPR.	ENGINEER DATE	RCFC/ APPR.	RCFC/ DATE
1	REVISED CONNECTION AT THE CHANNEL, REVISED SLOPE, SUPERSEDED APPROVED S.D. PLANS DATED 8/19/11				
2	MOVED 12" RCP LATERAL MOVED CB AND LAT "E-11-3",SHT 4A 1/27/12				
3	AS-BUILT PLAN 11/29/12 SUPERSEDED APPROVED SD PLANS DATED 10/19/11				

DESIGNED BY: B.W.
DRAWN BY: B.W./E.T.
DATE DRAWN: 03-17-2011

APPROVED BY:
Thienes Engineering, Inc.
CIVIL ENGINEERING • LAND SURVEYING
14349 FIRESTONE BOULEVARD
LA MIRADA, CALIFORNIA 90638
PH.(714)521-4811 FAX(714)521-4173
HAIDOOK AGHAIAN RCE NO. 43293 Date: 2/11/13

REGISTERED PROFESSIONAL ENGINEER HAIDOOK I. AGHAIAN R.C.E. NO. 43293 Exp. 3-31-14 CIVIL STATE OF CALIFORNIA

3 CERTIFICATION STATEMENT
AS-BUILT: THE UNDERSIGNED STATES THAT ALL IMPROVEMENTS SHOWN HEREON HAVE BEEN CONSTRUCTED IN SUBSTANTIAL CONFORMANCE WITH THE DIMENSIONS, LINES, AND ELEVATIONS INDICATED.
HAIDOOK AGHAIAN RCE NO. 43293 DATE: 2/11/13

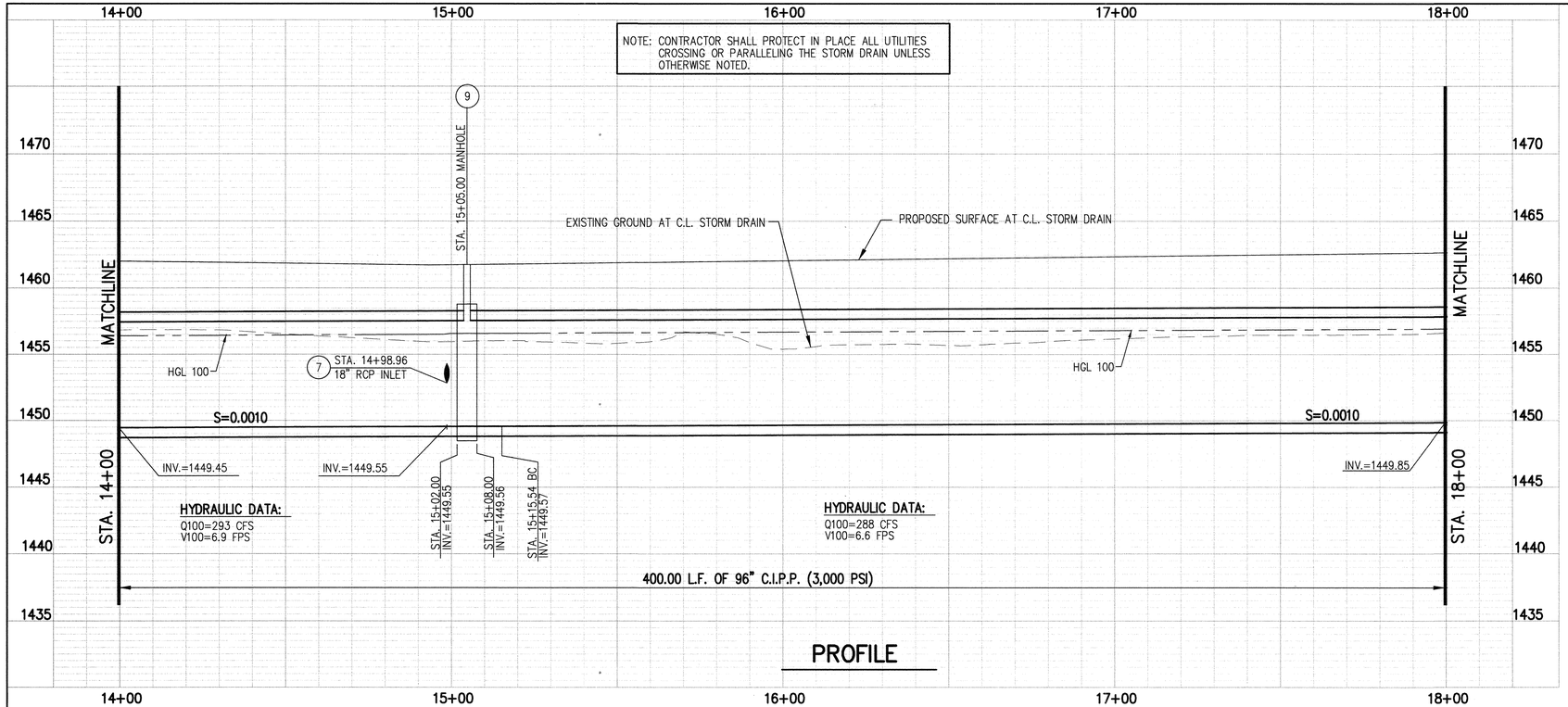
CITY OF PERRIS APPROVED BY:
CITY ENGINEER DATE:
RECOMMENDED DATE:

CITY OF PERRIS
STORM DRAIN IMPROVEMENT PLANS
PERRIS LOGISTIC CENTER DPR-05-0192
LATERAL MDP E-11
STA. 10+00.00 TO STA. 15+00.00

FILE NO. P8-821
PROJECT NO. 0-0-0000
DRAWING NO. W-XYZ
SHEET NO. 2A OF 6

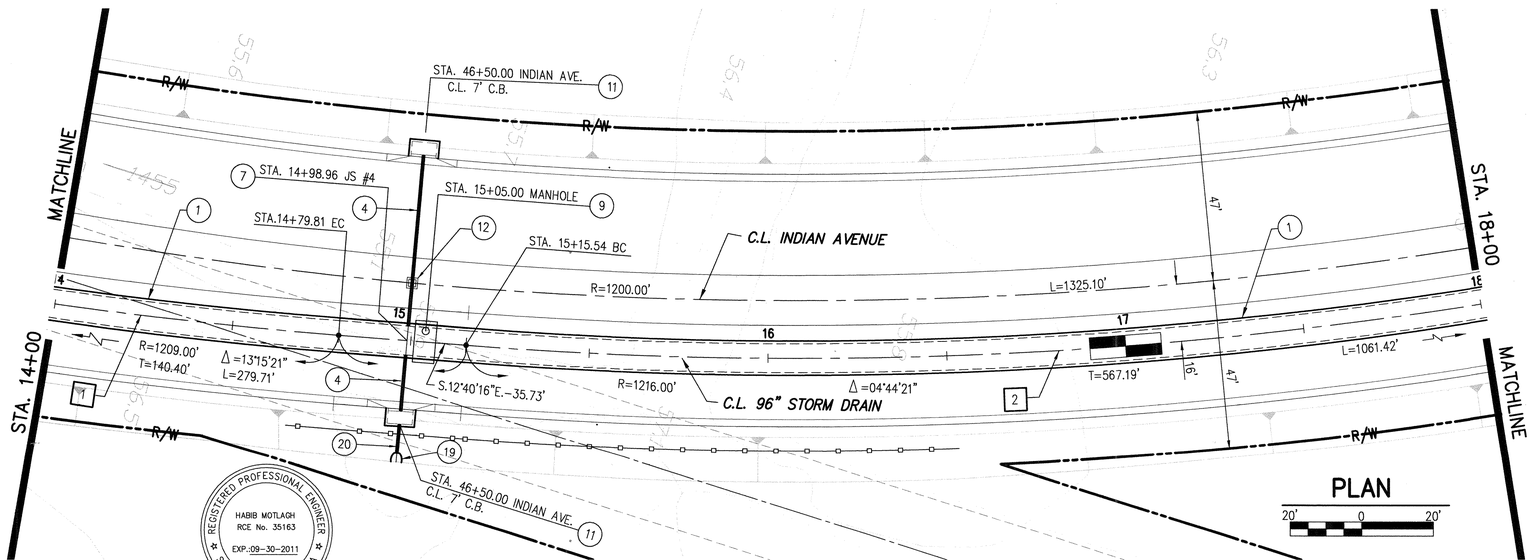
Last Update: 11/28/12
L:\2430\2430o\2430C-SD-02-EX-CH.dwg

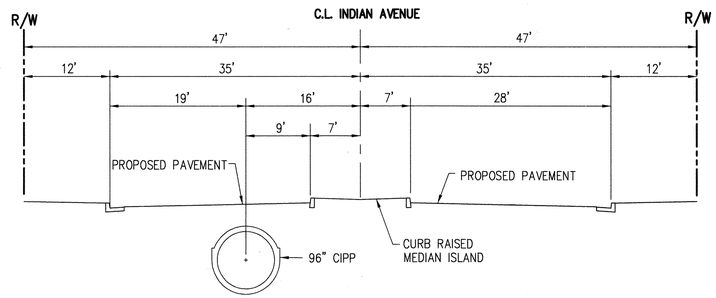
EXCERPT 3



CONSTRUCTION NOTES:

1. CONSTRUCT 96" CONCRETE CAST-IN-PLACE PIPE (PIPE STRENGTH SHOWN ON PROFILE).
2. CONSTRUCT 84" CONCRETE CAST-IN-PLACE PIPE (PIPE STRENGTH SHOWN ON PROFILE).
3. CONSTRUCT 72" CONCRETE CAST-IN-PLACE PIPE (PIPE STRENGTH SHOWN ON PROFILE).
4. CONSTRUCT 18" R.C.P. (D-LOAD SHOWN ON PROFILE).
5. CONSTRUCT 36" R.C.P. (D-LOAD SHOWN ON PROFILE).
6. CONSTRUCT TRANSITION STRUCTURE NO. 1 PER RCFC STD. DWG. TS301.
7. CONSTRUCT JUNCTION STRUCTURE NO. 4 PER RCFC STD. DWG. JS229.
8. CONSTRUCT MANHOLE NO. 4 PER RCFC STD. DWG. MH254 (SEE PLAN FOR VALUES).
9. CONSTRUCT MANHOLE FOR C.I.P.P. PER DETAIL "D" ON SHEET 20.
10. CONSTRUCT JUNCTION STRUCTURE PER DETAIL "A" ON SHEET 20.
11. CONSTRUCT CATCH BASIN NO. 1 PER RCFC STD. DWG. CB100.
12. CONSTRUCT 24"X24"X24" DEEP GRATED INLET WITH 12" VERTICAL PVC PIPE (SDR35).
13. CONSTRUCT CONCRETE BULKHEAD PER RCFC STD. DWG. M816.
14. EXISTING WATERLINE (SIZE NOTED ON PLAN) TO BE RELOCATED TO MISS STORM DRAIN.
15. EXISTING WATERLINE ELEVATION AT STORM DRAIN CROSSING TO BE FIELD VERIFIED PRIOR TO START OF STORM DRAIN CONSTRUCTION. RELOCATE WATERLINE IF THERE IS A CONFLICT WITH THE EXISTING WATERLINE AND THE NEW STORM DRAIN.
16. CONSTRUCT CATCH BASIN OPENING AT BACK OF CATCH BASIN (12"WIDE X 6"HIGH). SEE PROFILE FOR CATCH BASIN OPENING ELEVATION
17. CONSTRUCT INLET TYPE X PER RCFC STD. DWG CB108 (MODIFIED W/ ONE OPENING ONLY).
18. CONSTRUCT M.H. NO. 2 PER RCFC STD. DWG. MH252.
19. CONSTRUCT METAL FLARED END SECTION PER CALTRANS STD. DWG. D94A (TYPE III).
20. CONSTRUCT 18" C.M.P. (14 GA. MINIMUM).
21. CAP END OF EXISTING 8" PVC RAW WATER LINE (PVC CAP).
22. REMOVE EXISTING 8" PVC RAW WATER LINE (SEE PLAN FOR LIMITS). VERIFY LOCATION OF WATER LINE NOTIFY ENGINEER IF THERE IS A CONFLICT (MANHOLE TO BE CENTERERED AT EXISTING).
23. SLURRY BACKFILL PER DETAIL "B" ON SHEET 19.





SECTION AT STA. 16+00

TYPICAL FROM STA. 14+00 TO STA. 18+00

10' 0 10'

STORM DRAIN C.L. CURVE DATA:

1
- R=1000.00'
- Δ=13°15'21"
- T=140.40'
- L=279.71'
- B.C. STA=12+00.10
- E.C. STA=14+79.81

2
- R=1216.00'
- Δ=04°44'21"
- T=567.19'
- L=1061.42'
- B.C. STA=15+15.54
- P.R.C. STA=25+76.96

Underground Service Alert
811
TWO WORKING DAYS BEFORE YOU DIG

CITY OF PERRIS FILE NO.
P8-1164

SEAL

REGISTERED PROFESSIONAL ENGINEER
TERESITO N. TABIOLO
RCE No. 38826
Exp. 3-31-13
CIVIL
STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER
HABIB MOTLAGH
RCE No. 35163
EXP.:09-30-2011
CIVIL
STATE OF CALIFORNIA

KCT CONSULTANTS, INC.
Civil Engineers - Surveyors - Planners
P.O. Box 5705 Riverside, CA 92517-5705
4344 Latham St., Suite 200, Riverside, CA 92501
Phone: 951-341-6840 Fax: 951-341-6845
e-mail: kctinc@kctconsultants.com

PREPARED UNDER THE SUPERVISION OF:
TERESITO N. TABIOLO, R.C.E. NO. 38826 DATE 6-10-11

CITY OF PERRIS
ENGINEERING DEPARTMENT
APPROVED BY:
CITY ENGINEER
DATE: RCE

BENCH MARK: Z-6843
1 1/2" BRASS DISK AT INT. OF RAMONA EXPWY. AND PERRIS BOULEVARD.
ELEVATION=1454.258

REF.	REVISIONS	APPR	DATE

RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

DESIGNED BY:
DRAWN BY:
DATE DRAWN:

RECOMMENDED FOR APPROVAL BY:
CHIEF, DESIGN & CONSTRUCTION
DATE: RCE NO 30539

APPROVED BY:
CHIEF ENGINEER
DATE: RCE NO 32336

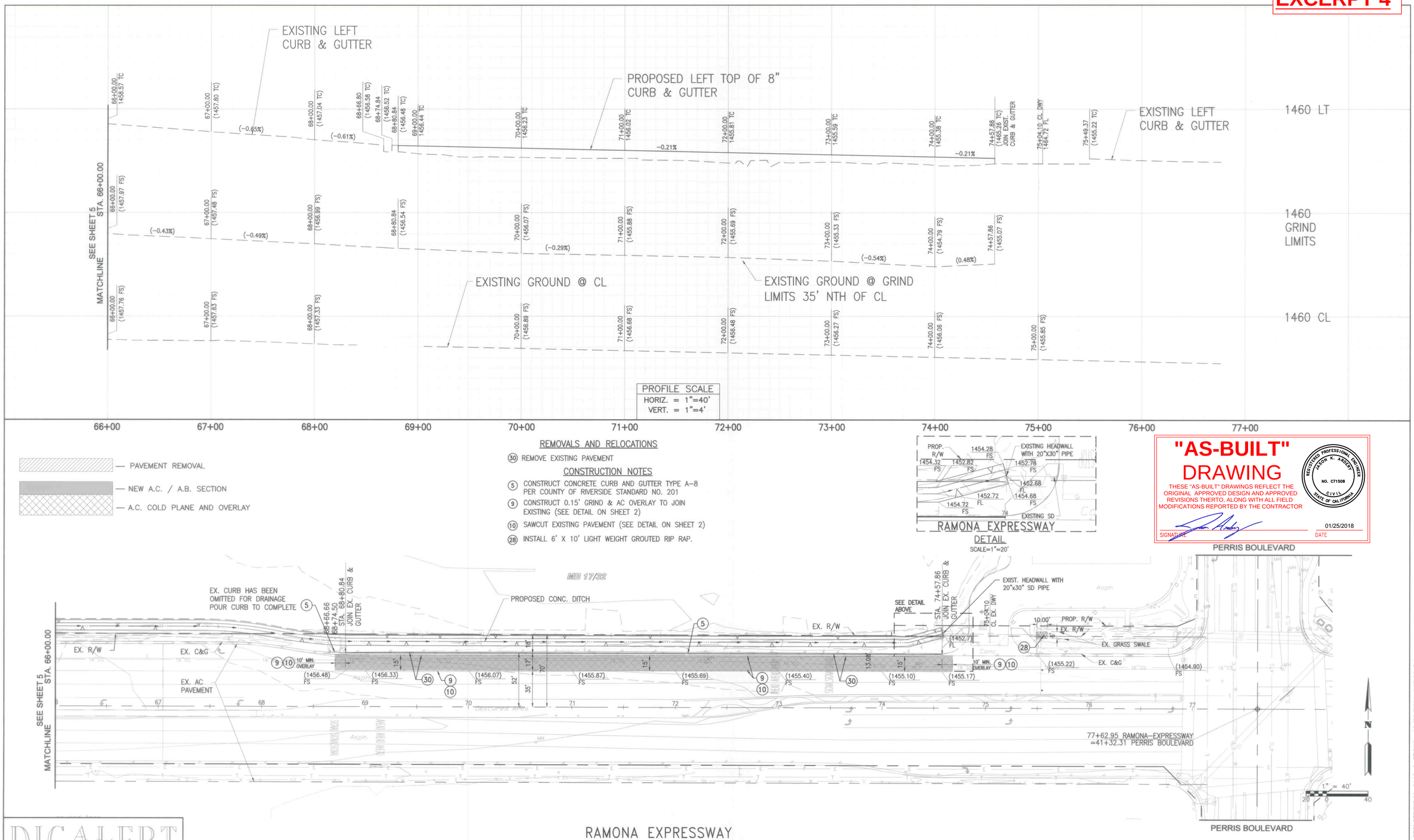
PERRIS VALLEY MDP
LINE E-3
STAGE 1

STA. 14+00 TO STA. 18+00

PROJECT NO.
DRAWING NO.
SHEET NO. 3 OF 20

H:\13861\03 - Indian Avenue\Perris - SD\Engr\Stormdrain\03-sd-indian.dwg
Plot Date: June 10, 2011 - 10:24am | Terry

EXCERPT 4



"AS-BUILT" DRAWING

THESE "AS-BUILT" DRAWINGS REFLECT THE ORIGINAL APPROVED DESIGN AND APPROVED REVISIONS THERTO, ALONG WITH ALL FIELD MODIFICATIONS REPORTED BY THE CONTRACTOR

REGISTERED PROFESSIONAL ENGINEER JASON K. ARDERY NO. C71508 CIVIL STATE OF CALIFORNIA

SIGNATURE — DATE 01/25/2018

DIGALERT — CALL BEFORE YOU DIG — DIAL BEFORE YOU DIG — TWO WORKING DAYS BEFORE YOU DIG — TOLL FREE 1-800-227-2600 — A PUBLIC SERVICE BY UNDERGROUND SERVICE ALERT

SEAL — ENGINEER

REGISTERED PROFESSIONAL ENGINEER JASON K. ARDERY NO. C71508 CIVIL STATE OF CALIFORNIA

ALBERT A. WEBB ASSOCIATES
ENGINEERING CONSULTANTS
3788 McCRAY STREET
RIVERSIDE CA. 92506
PH. (951) 686-1070
FAX (951) 788-1256

PREPARED BY: — R.C.E. NO.: 71508 — DATE: 1/26/15

MARK	BY	DATE	REVISIONS	APPR.	DATE
	ENGINEER			CITY	

CITY OF PERRIS

APPROVED BY: — DATE: 1-28-15

CITY ENGINEER

BASIS OF BEARING:
THE BASIS OF BEARINGS IS THE CENTERLINE OF PERRY STREET, TAKEN AS NORTH 89°53'21" WEST PER PM 213/9-10.

BENCHMARK:
RIV. COUNTY BM #M-31: 3 1/4" ALUM. DISK LOCATED FLUSH AT THE SWC OF BRIDGE ON TOP OF SIDEWALK NEAR FACE OF CURB AT CROSSING OF PERRIS BLVD & RIV. CO. FLOOD CONTROL CHANNEL. ELEV. 1474.674', NGVD 1929 DATUM

PARCEL MAP 36010

CITY OF PERRIS, CALIFORNIA
PERRIS VALLEY LOGISTICS CENTER
STREET IMPROVEMENT PLAN
RAMONA EXPRESSWAY STA. 66+00.00 TO PERRIS BOULEVARD

SHEET NO. 6 — 6 OF 13

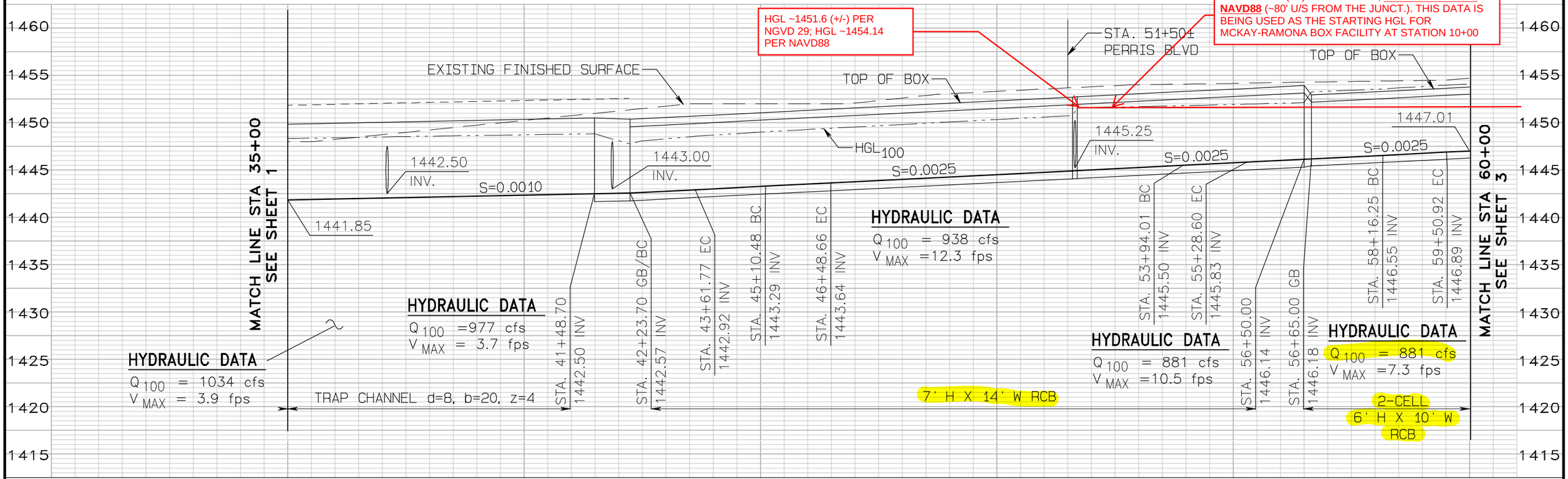
FOR: HOWARD INDUSTRIAL PARTNERS — W.O. 2011-0112 — CITY FILE: P8-1073

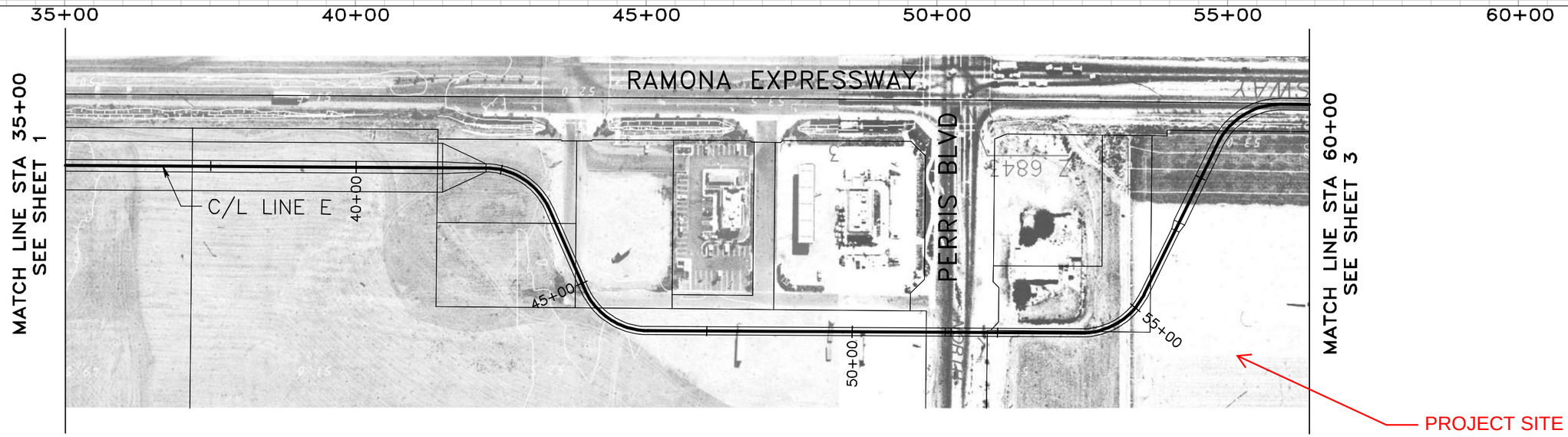
G:\2011\11-0112\DWG & PRO\DESIGN\11-0112-C-ST.DWG 12/22/2014 4:07:26 PM

EXCERPT 5

HGL ~1451.8 (+/-) PER NGVD 29; **HGL ~1454.34 PER NAVD88** (~80' U/S FROM THE JUNCT.). THIS DATA IS BEING USED AS THE STARTING HGL FOR MCKAY-RAMONA BOX FACILITY AT STATION 10+00

HGL ~1451.6 (+/-) PER NGVD 29; HGL ~1454.14 PER NAVD88





PROFILE
HORIZ 1" =200'
VERT 1" = 10'

PLAN 1" = 200'

LEGEND

APN= 300-180-000

GRAPHIC SCALE 1"=200'

0 200 400

VERTICAL DATUM: NGVD 29

UNDERGROUND SERVICE ALERT
CALL: TOLL FREE
1-800
227-2600
TWO WORKING DAYS BEFORE YOU DIG

PERRIS VALLEY COMMERCIAL CENTER SPECIFIC PLAN

SEAL: REGISTERED PROFESSIONAL ENGINEER, SCOTT R. HILDEBRANDT, NO. C44782, CIVIL, STATE OF CALIFORNIA

ALBERT A. WEBB ASSOCIATES
ENGINEERING CONSULTANTS
3788 McCRAY STREET, RIVERSIDE, CA 92506
PH. (951) 686-1070 FAX (951) 788-1256

APPROVED BY: DATE:
R.C.E. NO. C44762 EXP. DATE: 3/31/2010

DESIGNED BY: JCC
DRAWN BY: MLA
CHECKED BY: SRH

REVISIONS			
REF.	DESCRIPTION	APPR.	DATE

PRELIMINARY PROFILE
PERRIS VALLEY
MASTER
DRAINAGE PLAN
LINE E
STA 35+00.00 to STA 60+00.00

PROJECT NO.
DRAWING NO.
SHEET NO. 2 OF 5

CALCULATIONS TO DETERMINE THE ALLOWABLE (RETRICTED) FLOW THROUGH THE EXISTING HEADWALL "BUBBLER" OUTLET OPENING AT THE SOUTHWEST CORNER OF THE PROJECT AT THE TERMINUS OF THE EXISTING BOX CULVERT (FROM INDIAN AVENUE)

1-MR_Exist_SouthwestBubbler_AllowableFlow

Project Description

Friction Method	Manning Formula
Solve For	Discharge

Input Data

Roughness Coefficient	0.013
Channel Slope	0.002 ft/ft
Normal Depth	32.0 in
Left Side Slope	0.750 H:V
Right Side Slope	0.750 H:V
Bottom Width	8.00 ft

THIS IS THE APPROXIMATE DIMENSION OF THE EXISTING HEADWALL "BUBBLER" OUTLET OPENING AT THE TERMINUS OF THE EXISTING FLOOD CONTROL BOX CULVERT AT THE SOUTHWEST CORNER OF THE SITE (COMING IN FROM INDIAN AVENUE).

Results

Discharge	203.06 cfs
Flow Area	26.7 ft²
Wetted Perimeter	14.7 ft
Hydraulic Radius	21.8 in
Top Width	12.00 ft
Critical Depth	30.0 in
Critical Slope	0.002 ft/ft
Velocity	7.61 ft/s
Velocity Head	0.90 ft
Specific Energy	3.57 ft
Froude Number	0.901
Flow Type	Subcritical

APPROXIMATELY UP TO ~203 CFS OF RESTRICTED FLOW COULD BE ALLOWED. THE FLOW IS CURRENTLY BEING DIRECTED TOWARDS AN EXISTING CHANNEL ALONG THE SOUTHERLY EDGE OF THE PROJECT (WITHIN THE CITY OF PERRIS RIGHT-OF-WAY, NORTH OF RAMONA EXPRESSWAY).

GVF Input Data

Downstream Depth	0.0 in
Length	0.0 ft
Number Of Steps	0

GVF Output Data

Upstream Depth	0.0 in
Profile Description	N/A
Profile Headloss	0.00 ft
Downstream Velocity	0.00 ft/s
Upstream Velocity	0.00 ft/s
Normal Depth	32.0 in
Critical Depth	30.0 in
Channel Slope	0.002 ft/ft
Critical Slope	0.002 ft/ft

NORMAL DEPTH CALCULATION FOR THE EXISTING SOUTHERLY CONCRETE TRAPEZOIDAL CHANNEL (WITHIN THE CITY RIGHT-OF-WAY, NORTH OF RAMONA EXPRESSWAY)

2-MR_Exist_SouthTrapChannel_Capacity

Project Description

Friction Method	Manning Formula
Solve For	Normal Depth

Input Data

Roughness Coefficient	0.013
Channel Slope	0.002 ft/ft
Left Side Slope	2.000 H:V
Right Side Slope	2.000 H:V
Bottom Width	3.00 ft
Discharge	43.50 cfs

THIS IS THE APPROXIMATE DIMENSION OF THE EXISTING CONCRETE TRAP CHANNEL ALONG THE SOUTHERLY EDGE OF THE PROJECT (WITHIN THE CITY OF RIGHT-OF-WAY, NORTH OF RAMONA EXPRESSWAY).

Results

Normal Depth	18.0 in
Flow Area	9.0 ft²
Wetted Perimeter	9.7 ft
Hydraulic Radius	11.1 in
Top Width	8.98 ft
Critical Depth	16.6 in
Critical Slope	0.003 ft/ft
Velocity	4.85 ft/s
Velocity Head	0.37 ft
Specific Energy	1.86 ft
Froude Number	0.856
Flow Type	Subcritical

FROM THE EXISTING "BUBBLER" OUTLET OPENING AT THE SOUTHWEST CORNER, APPROXIMATELY ~203 CFS COULD BE ALLOWED. IN THE EXISTING CONDITION, THE SOUTHERLY CONCRETE TRAPH CHANNEL MAY RECEIVE THE OFFSITE FLOW THROUGH THIS OUTLET OPENING, A LOW-FLOW FROM THE UPSTREAM MECHANICAL PUMP SYSTEM, AND RUNOFF FROM THE McKAY-RAMONA PROJECT SITE. AS CAN BE SEEN FROM THE NORMAL DEPTH CALCULATION, THE SOUTHERLY EXISTING TRAP CHANNEL CAN ONLY HANDLE APPROXIMATLY ~43 CFS BEFORE THE FLOW STARTS TO OVERTOP THE CHANNEL ONTO THE PROJECT SITE AND SPILLS OUT TO RAMONA EXPRESSWAY.

IN THE POST-PROJECT CONDITION, THE ON-SITE FLOWS WILL BE ROUTED NORTHEASTERLY TO A PROPOSED FLOOD CONTROL FACILITY FOR MITIGATION PURPOSES AND AS SUCH REDUCING (OR POSSIBLY ELIMINATING) THE ON-SITE FLOWS TO THE EXISTING TRAP CHANNEL, HELPING IMPROVE THE EXISTING CHANNEL CAPACITY SITUATION.

GVF Input Data

Downstream Depth	0.0 in
Length	0.0 ft
Number Of Steps	0

GVF Output Data

Upstream Depth	0.0 in
Profile Description	N/A
Profile Headloss	0.00 ft
Downstream Velocity	Infinity ft/s
Upstream Velocity	Infinity ft/s
Normal Depth	18.0 in
Critical Depth	16.6 in
Channel Slope	0.002 ft/ft
Critical Slope	0.003 ft/ft

Initial Study Appendix I

Acoustical Analysis Report

The following section contains content that was obtained from a third party and may not achieve the same level of Americans with Disabilities Act (ADA) and Section 508 accessibility as other parts of this document.

Ramona-Indian Warehouse Project

Acoustical Analysis Report

July 2022 | 04823.00001.001

Prepared for:

JM Realty Group, Inc.
3535 Inland Empire Boulevard
Ontario, CA 91764

Prepared by:

HELIX Environmental Planning, Inc.
7578 El Cajon Boulevard
La Mesa, CA 91942

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ACRONYMS AND ABBREVIATIONS

ADT	average daily trips
ALUCP	Airport Land Use Compatibility Plan
ANSI	American National Standards Institute
Caltrans	California Department of Transportation
CEQA	California Environmental Quality Act
City	City of Perris
CNEL	Community Noise Equivalent Level
dB	decibel
dBA	A-weighted decibel
EIR	Environmental Impact Report
hp	horsepower
HVAC	heating, ventilation, and air conditioning
Hz	Hertz
kHz	kilohertz
L_{DN}	Day-Night sound level
L_{EQ}	time-averaged noise level
L_{MAX}	maximum noise level
MARB/IPA	March Air Reserve Base/Inland Port Airport
mph	miles per hour
mPa	micro Pascal
NSLU	noise sensitive land use
PPV	peak particle velocity
PVCCSP	Perris Valley Commercial Center Specific Plan
RCNM	Roadway Construction Noise Model
SF	square feet
SPL	sound pressure level
STC	Sound Transmission Class
S_{WL}	Sound Power Level
TNM	Traffic Noise Model
USDOT	U.S. Department of Transportation

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EXECUTIVE SUMMARY

This report assesses potential construction and operational noise impacts associated with the Ramona-Indian Warehouse Project (project) located in the Perris Valley Commerce Center Specific Plan area in the City of Perris, (City) California. The project proposes the development 232,575 square foot (SF) building that would include a warehouse and office space. The project would also provide parking areas and driveways, a pad for future commercial development, storm drains and a water quality management retention basin. The project would be located on an existing, vacant 15-acre site.

Anticipated construction activities would generate temporary elevated noise levels for the nearby nonconforming residential use to the north. The use of construction equipment and construction haul trucks is not anticipated to exceed City noise ordinance limits, and no project-specific mitigation is required. The project would be required to implement the Perris Valley Commercial Center Specific Plan Environmental Impact Report (PVVCSP EIR) mitigation measure MM Noise 1 through 4 to reduce construction-generated noise.

Operational noise would be generated by delivery trucks and ventilation equipment on the project's rooftop but would not exceed noise thresholds. Additionally, noise generated by project traffic would not increase noise levels on nearby roadways by significant amounts. Impacts would therefore be less than significant for the project's warehouse components.

The extent of noise generated by future hotel operations is not known at this time. Mitigation Measure NOI-1 would be required to analyze operational noise when project plans become available and would require the implementation of noise attenuation features.

The exterior southern façades of the proposed building would be used for office space and would be exposed to noise less than 65 dBA Community Noise Equivalent Level (CNEL) and would be compatible with the General Plan. The proposed hotel would be located outside the 60 dBA CNEL contour and would also be compatible with the General Plan requirements.

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1.0 INTRODUCTION

This report assesses the potential noise impacts that would be associated with construction noise, operational noise, and project-generated traffic noise for the Ramona-Indian Project (project). The analysis includes a description of existing conditions in the project vicinity, an assessment of potential impacts associated with project construction, and an evaluation of project operational impacts. Analysis within this report addresses the relevant issues listed in Appendix G of the California Environmental Quality Act (CEQA) Guidelines.

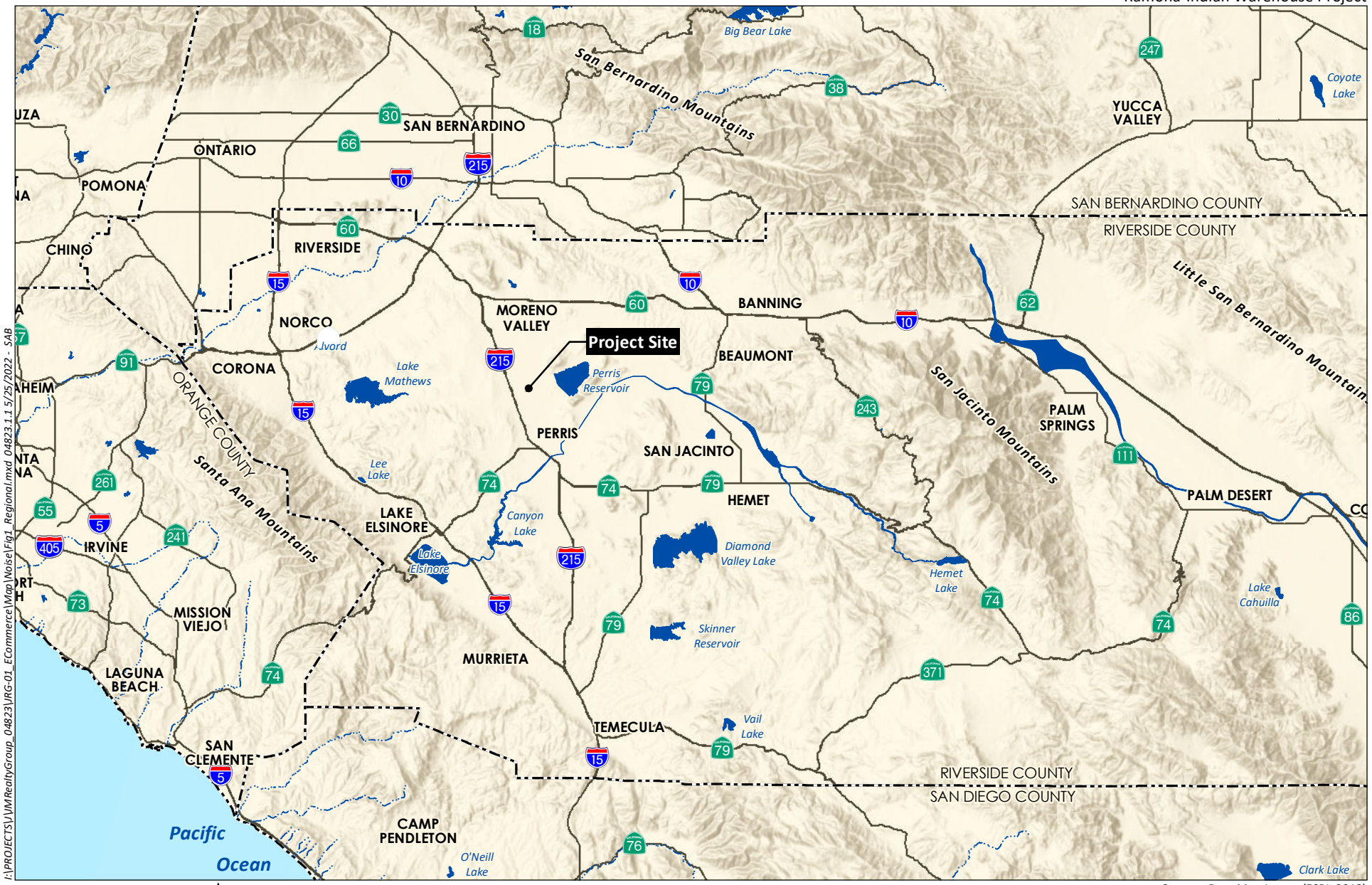
1.1 PROJECT LOCATION

The project is located in the City of Perris (City) in western Riverside County (Figure 1, *Regional Location*). The approximately 15-acre project site is located within Assessor's Parcel Number 302-060-041, northwest of the intersection of Perris Boulevard and the Ramona Expressway (Figure 2, *Aerial Photo)*.

1.2 PROJECT DESCRIPTION

Phase 1 of the project would develop a 232,575 square feet (SF) non-refrigerated, multi-tenant distribution building (warehouse) that includes 10,000 SF of internal office space, parking areas, and driveways, a pad for future commercial development, storm drains and a water quality management retention basin, all on approximately 15 acres at the northeast corner of Indian Avenue and Ramona Expressway. The warehouse would include 39 loading docks. The parking area would include 215 auto/light truck stalls, and 52 truck/trailer stalls. The storm drain system would include construction of the storm drain Line E within the project site. The Project would include roadway improvements for Ramona Expressway, Indian Avenue, and Perris Boulevard. Additional improvements would include landscaping, screen walls and fencing, and lighting. Screen walls include a 12-foot concrete wall along each side of the entrances to the delivery area. Refer to Figure 3, *Site Plan*, for Project components.

Phase 2 would develop a commercial pad on the 1.61 acres in the northeastern portion of the project site. Development of the commercial pad is not proposed as part of the project application; however, development of a 125-room hotel has been assumed as part of this environmental analysis. Until development of the commercial pad occurs, temporary staging activities may occur in this area to support construction of the light industrial uses described above.



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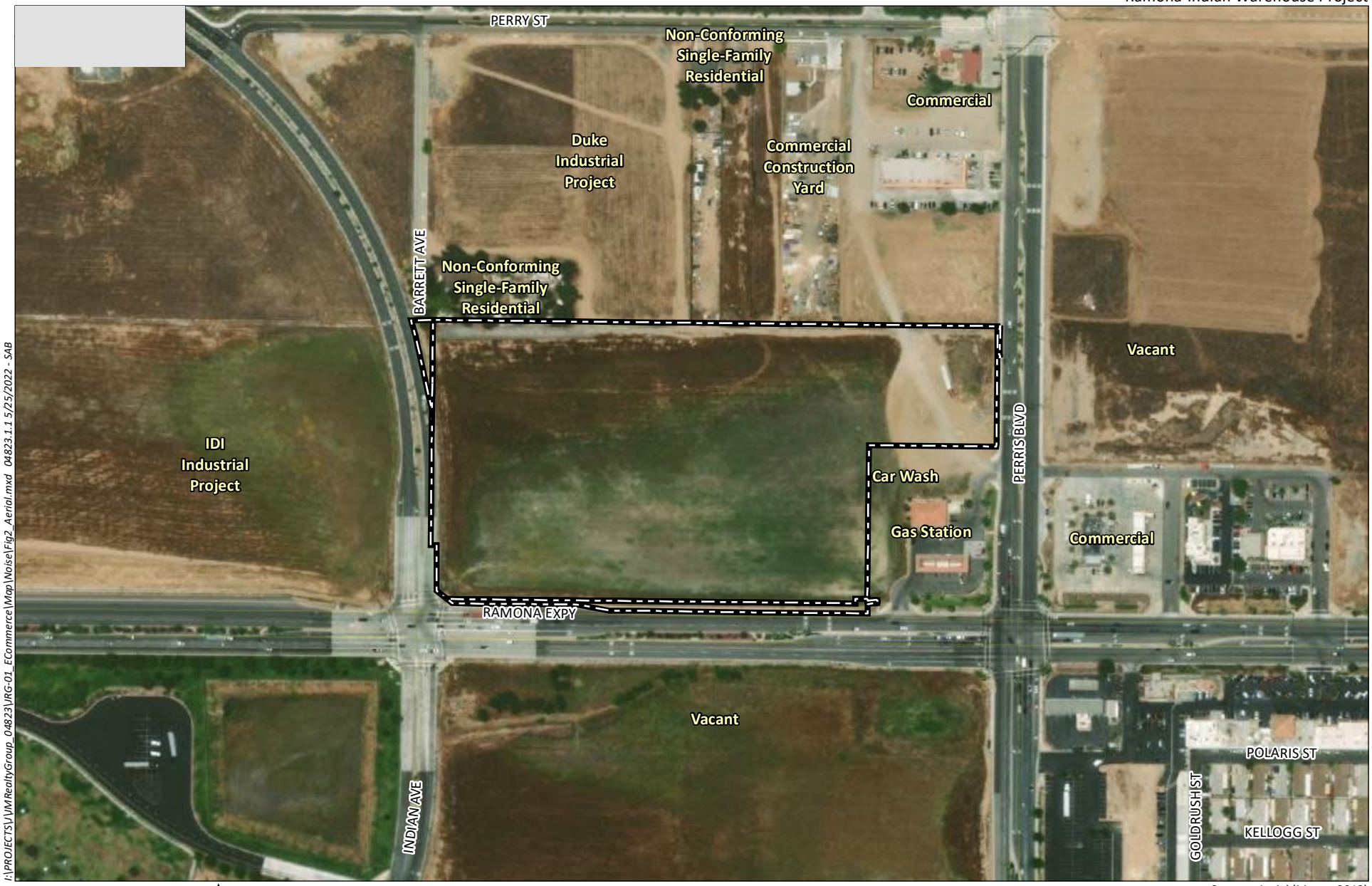
Source: Base Map Layers (ESRI, 2013)

HELIX Environmental Planning

Regional Location

Figure 1



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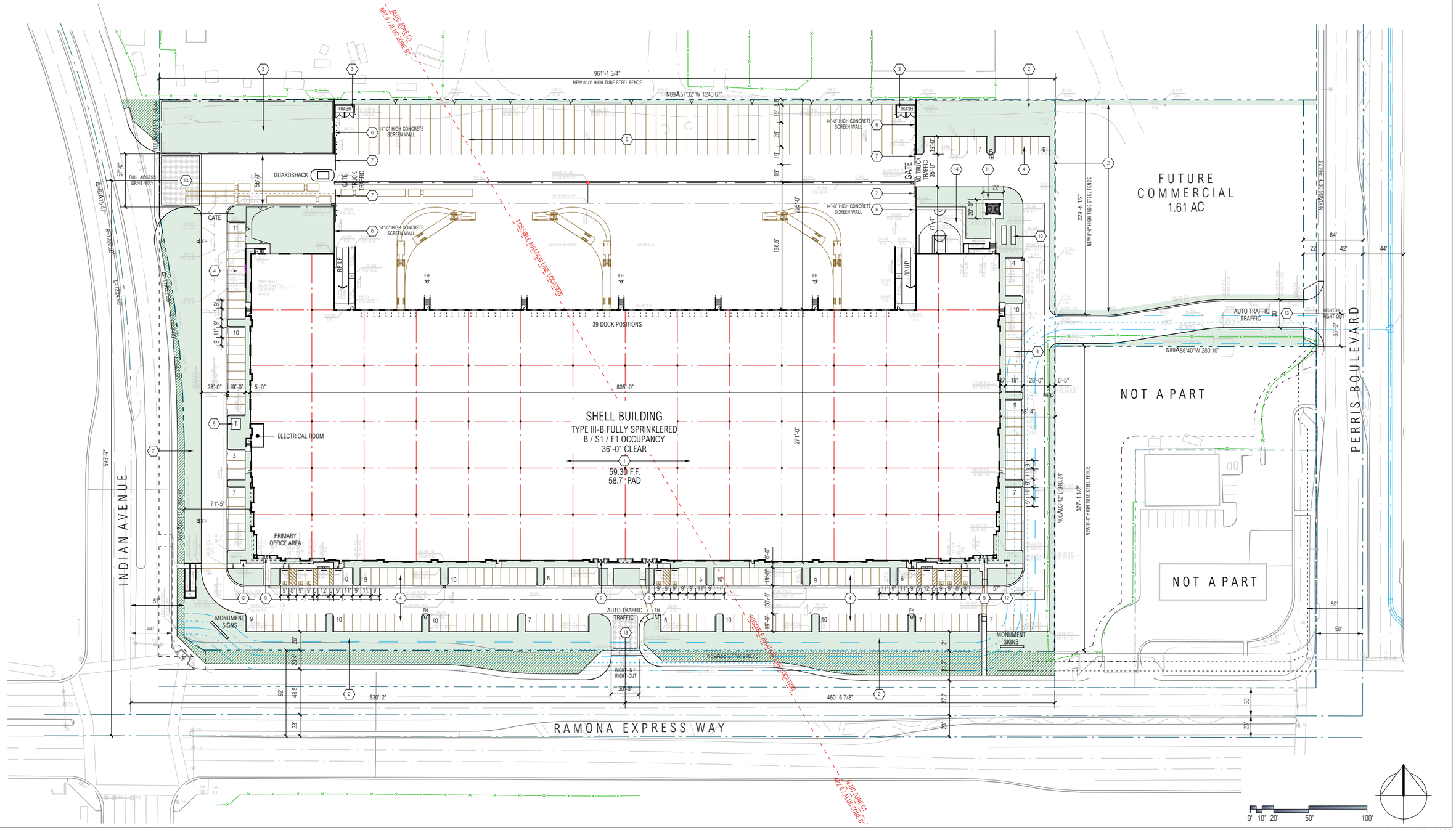
Source: Aerial (Maxar, 2019)

Aerial Photo

Figure 2



Source: RGA 2022

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HELIX Environmental Planning

Site Plan

Figure 3

2.0 ENVIRONMENTAL SETTING

2.1 NOISE AND SOUND LEVEL DESCRIPTORS AND TERMINOLOGY

All noise level or sound level values presented herein are expressed in terms of decibels (dB), with A-weighting (dBA) to approximate the hearing sensitivity of humans. Time-averaged noise levels are expressed by the symbol L_{EQ}, with a specified duration. The Community Noise Equivalent Level (CNEL) is a 24-hour average, where noise levels during the evening hours of 7:00 p.m. to 10:00 p.m. have an added 5 dBA weighting, and sound levels during the nighttime hours of 10:00 p.m. to 7:00 a.m. have an added 10 dBA weighting. This is similar to the Day Night sound level (L_{DN}), which is a 24-hour average with an added 10 dBA weighting on the same nighttime hours but no added weighting on the evening hours. Sound levels expressed in CNEL are always based on dBA. These metrics are used to express noise levels for both measurement and municipal regulations, as well as for land use guidelines and enforcement of noise ordinances.

Sound can be described as the mechanical energy of a vibrating object transmitted by pressure waves through a liquid or gaseous medium (e.g., air) to a hearing organ, such as a human ear. Noise is defined as loud, unexpected, or annoying sound.

In the science of acoustics, the fundamental model consists of a sound (or noise) source, a receiver, and the propagation path between the two. The loudness of the noise source and obstructions or atmospheric factors affecting the propagation path to the receiver contribute to the sound level and characteristics of the noise perceived by the receiver. The field of acoustics deals primarily with the propagation and control of sound.

Continuous sound can be described by frequency (pitch) and amplitude (loudness). A low frequency sound is perceived as low in pitch. Frequency is expressed in terms of cycles per second, or Hertz (Hz) (e.g., a frequency of 250 cycles per second is referred to as 250 Hz). High frequencies are sometimes more conveniently expressed in kilohertz (kHz), or thousands of Hertz. The audible frequency range for humans is generally between 20 Hz and 20,000 Hz.

The amplitude of pressure waves generated by a sound source determines the loudness of that source. A logarithmic scale is used to describe sound pressure level (SPL) in terms of dBA units. The threshold of hearing for the human ear is about 0 dBA, which corresponds to 20 micro Pascals (mPa).

Because decibels are logarithmic units, SPL cannot be added or subtracted through ordinary arithmetic. Under the decibel scale, a doubling of sound energy corresponds to a 3 dBA increase. In other words, when two identical sources are each producing sound of the same loudness, the resulting sound level at a given distance would be 3 dBA higher than one source under the same conditions.

2.2 GROUNDBORNE VIBRATION DESCRIPTORS AND TERMINOLOGY

Groundborne vibration consists of rapidly fluctuating motions or waves transmitted through the ground with an average motion of zero. Sources of groundborne vibrations include natural phenomena and anthropogenic causes (e.g., explosions, machinery, traffic, trains, construction equipment). Vibration sources may be continuous (e.g., factory machinery) or transient (e.g., explosions). Several different methods are typically used to quantify vibration amplitude. One is the peak particle velocity (PPV); another is the RMS velocity. The PPV is defined as the maximum instantaneous positive or negative peak

of the vibration wave. For the purposes of this analysis, a PPV descriptor with units of inches per second (in/sec) is used to evaluate construction-generated vibration for building damage and human complaints. Generally, a PPV of less than 0.08 in/sec does not produce perceptible vibration. At 0.12 PPV in/sec is the level at which there is a risk of architectural damage (e.g., cracking of plaster) to historical buildings and other vibration-sensitive structures and the level at which continuous vibration may become noticeable to building occupants. A level of 0.20 PPV in/sec is commonly used as a threshold for risk of architectural damage to non-engineered timber and masonry buildings (California Department of Transportation [Caltrans] 2013a).

2.3 NOISE AND VIBRATION SENSITIVE LAND USES

Noise-sensitive land uses (NSLUs) are land uses that may be subject to stress and/or interference from excessive noise, such as residential dwellings, schools, transient lodging (hotels), hospitals, educational facilities, and libraries. Industrial and commercial land uses are generally not considered sensitive to noise. Noise receptors are individual locations that may be affected by noise. The nearest NSLU is an existing non-conforming residence located adjacent to the project site to the north. Additional nearby NSLUs include residences along Perry Street, approximately 500 feet to the north, and a mobile home park located approximately 800 feet to the southeast.

Land uses in which ground-borne vibration could potentially interfere with operations or equipment, such as research, hospitals, and university research operations (Caltrans 2013a) are considered "vibration-sensitive." The degree of sensitivity depends on the specific equipment that would be affected by the ground-borne vibration. In addition, excessive levels of ground-borne vibration of either a regular or an intermittent nature can result in annoyance to residential uses, schools or transient lodging. Land uses in the project area that are subject to annoyance from vibration include the residences to the north, described above.

2.4 REGULATORY FRAMEWORK

2.4.1 California Noise Control Act

The California Noise Control Act is a section within the California Health and Safety Code that describes excessive noise as a serious hazard to the public health and welfare and that exposure to certain levels of noise can result in physiological, psychological, and economic damage. It also finds that there is a continuous and increasing bombardment of noise in the urban, suburban, and rural areas. The California Noise Control Act declares that the State of California has a responsibility to protect the health and welfare of its citizens by the control, prevention, and abatement of noise. It is the policy of the State to provide an environment for all Californians free from noise that jeopardizes their health or welfare.

2.4.2 City of Perris Municipal Code

Section 7.34.040 of the Perris Municipal Code limits exterior noise levels at nearby properties to a maximum noise level (L_{MAX}) of 80 dBA L_{MAX} from 7:01 a.m. to 10:00 p.m. and 60 dBA L_{MAX} from 10:01 p.m. to 7:00 a.m.

Section 7.34.060 of the City's Municipal Code Chapter states that is in unlawful for any person between the hours of 7:00 p.m. of any day and 7:00 a.m. of the following day, or on a legal holiday, with the exception of Columbus Day and Washington's birthday, or on Sundays to erect, construct, demolish,

excavate, alter or repair any building or structure in such a manner as to create disturbing, excessive or offensive noise. Construction activity shall not exceed 80 dBA L_{MAX} in residential zones.

2.4.3 City of Perris General Plan Noise Element

The City General Plan Noise Element (City 2016) establishes noise compatibility guidelines for land uses and provides policies for new commercial and industrial facilities. Policy V.A states that new large-scale commercial or industrial facilities located within 160 feet of sensitive land uses shall mitigate noise impacts to attain an acceptable level. This policy is enforced through Implementation Measure V.A.1 states that an acoustical impact analysis is required to ensure that noise levels generated by the commercial or industrial facilities do not exceed 60 CNEL for those residential land uses within 160 feet of the project.

Exhibit N-1 of the City General Plan Noise Element (included in this report as Appendix A) shows that the land uses associated with commercial developments are normally acceptable when exposed to noise levels of 65 dBA CNEL and below. This land use is conditionally acceptable when exposed to noise levels of 75 dBA CNEL and below. Hotel uses are normally acceptable below 60 dBA CNEL and are conditionally acceptable when exposed to noise levels between 60 and 70 dBA CNEL.

2.4.4 Perris Valley Commercial Center Specific Plan

The Perris Valley Commercial Center Specific Plan (PVCCSP) Area covers the project site. An Environmental Impact Report (EIR) analyzed the environmental impacts resulting from implementation of development within the PVCCSP Area. Impacts relating to noise were addressed in the EIR and mitigation measures were implemented to ensure future development would not generate noise impacts. PVCCSP EIR mitigation measures MM Noise 1 through MM Noise 5 are listed below.

MM Noise 1 During all project site excavation and grading on-site, the construction contractors shall equip all construction equipment, fixed or mobile, shall be equipped with properly operating and maintained mufflers consistent with manufacturer's standards. The construction contractor shall place all stationary construction equipment so that emitted noise is directed away from the noise sensitive receptors nearest the project site.

MM Noise 2 During construction, stationary construction equipment, stockpiling and vehicle staging areas will be placed a minimum of 446 feet away from the closet sensitive receptor.

MM Noise 3 No combustion-powered equipment, such as pumps or generators, shall be allowed to operate within 446 feet of any occupied residence unless the equipment is surrounded by a noise protection barrier.

MM Noise 4 Construction contractors of implementing development projects shall limit haul truck deliveries to the same hours specified for construction equipment. To the extent feasible, haul routes shall not pass sensitive land uses or residential dwellings.

MM Noise 5 New sensitive land uses, including residential dwellings, mobile homes, hotels, motels, hospitals, nursing homes, education facilities, and libraries, to be located within the PVCC shall be protected from excessive noise, including existing and projected noise. Attenuation shall be provided to ensure that noise levels do not exceed an exterior

standard of 60 dBA (65 dBA is conditionally acceptable) in outdoor living areas and an interior standard of 45 dBA in all habitable rooms. Specifically, special consideration shall be given to land uses abutting Ramona Expressway from Redlands Avenue to Evans Road and from Evans Road to Bradley Road; Rider Street from Evans Road to Bradley Road; Placentia Avenue from Perris Boulevard to Redlands Avenue, from Redlands Avenue to Wilson Avenue, from Wilson Avenue to Murrieta Road, and from Murrieta Road to Evans Road; Perris Boulevard from Orange Avenue to Placentia Avenue and from San Michele Road to Krameria Avenue; and Redlands Avenue from Nuevo Road to Citrus Avenue, from Citrus Avenue to Orange Avenue and from Orange Avenue to Placentia Avenue.

2.5 EXISTING CONDITIONS

The project site is currently vacant with no existing buildings. The project site's land use designation and zoning is Specific Plan, under the Perris Valley Commerce Center Specific Plan. The Specific Plan land use designation for the Project site is designated Commercial.

2.5.1 Surrounding Land Uses

Surrounding uses include vacant undeveloped land to the south and west, nonconforming residential uses and vacant land uses to the north, and a gas station and convenience store to the east. Nearby land uses include warehouse distribution buildings, and commercial shopping center.

2.5.2 Existing Noise Conditions

2.5.2.1 Existing Noise Sources

Existing on-site noise is dominated by traffic noise due to the project's proximity to SR-52 and SR-163. The nearest airport, March Air Reserve Base/Inland Port Airport (MARB/IPA), is located approximately 1.5 miles to the north. The western portion of the project site is located within Zone B1, which is within the 60 CNEL contours as described by the March ARB Airport Land Use Compatibility Plan (ALUCP; Riverside County Airport Land Use Commission 2014).

2.5.2.2 General Site Survey

Four noise measurements (M1 through M4) were conducted during a site visit on October 15, 2020. Three of the noise measurements (M1, M3, and M4) included a traffic count to estimate the breakdown of heavy trucks (three or more axles), medium trucks (double tires/two axles), and automobiles on nearby roadways. Measurement M1 occurred in the northwest corner of the site and included a traffic count of Indian Avenue. Measurement M2 consisted of an ambient noise measurement located in the northwest portion of the site immediately south of the existing single-family home. Measurement M3 occurred at the southern boundary of the project site and included a traffic count of Ramona Expressway. Measurement M4 is located in the northeastern portion of the project site and included a traffic count of North Perris Boulevard. All measurements were taken at a height of 5 feet above the ground. The measured noise levels are shown in Table 1, *Noise Measurement Results.* Traffic counts for the timed measurement and the one-hour equivalent volume are shown in Table 2, *Recorded Traffic Volume and Vehicle Mix.* The site visit sheets are included in Appendix B, *Site Survey Measurement Sheets.* Measurement locations are shown on Figure 4, *Modeled Noise Receivers*.

Table 1
NOISE MEASUREMENT RESULTS

Measurement	Location	Conditions	Time	dBA L_{EQ}	Notes
M1 – Traffic	Northwest corner of the site, with a traffic count on Indian Avenue.	99°F, 4 mph wind, 11 percent humidity, sunny	1:07 p.m. to 1:22 p.m.	68.1	Ambient nature sounds and traffic noise from Indian Avenue and Ramona Expressway.
M2 – Ambient	Northwest portion of project site, south of adjacent off-site residence.	99°F, 5 mph wind, 9 percent humidity, sunny	1:30 p.m. to 1:40 p.m.	53.8	Ambient nature sounds and traffic noise from Indian Avenue and Ramona Expressway.
M3 – Traffic	Southern boundary of the project site, with a traffic count on Ramona Expressway.	99°F, 7 mph wind, 9 percent humidity, sunny	1:51 p.m. to 2:07 p.m.	69.9	Ambient nature sounds and traffic noise from Ramona Expressway. Measurement paused for less than a minute for jet flyover at 2:02 p.m., resumed at 2:02 p.m.
M4 – Traffic	Northeastern corner of the project site, with a traffic count on North Perris Boulevard.	99°F, 9 mph wind, 10 percent humidity, sunny	2:28 p.m. to 2:43 p.m.	68.6	Ambient nature sounds and traffic noise from North Perris Boulevard and Ramona Expressway. Measurement paused for less than a minute for ambulance with sirens on North Perris Boulevard at 2:42 p.m., resumed 2:42 p.m.

dBA = A-weighted decibel; LEQ = time-averaged noise level

Table 2
RECORDED TRAFFIC VOLUME AND VEHICLE MIX

Measurement	Roadway	Traffic	Autos	MT[1]	HT[2]
M1	Indian Avenue	15-minute count	96	3	8
		One-hour equivalent	384	12	32
		Percent	89.7%	2.8%	7.5%
M3	Ramona Expressway	15-minute count	610	14	16
		One-hour equivalent	2,560	56	64
		Percent	95.5%	2.1%	2.4%
M4	North Perris Boulevard	15-minute count	517	9	12
		One-hour equivalent	2,068	36	48
		Percent	96.1%	1.7%	2.2%

[1] Medium Trucks (double tires/two axles)

[2] Heavy Trucks (three or more axles)

Source: Aerial (Maxar, 2019)

HELIX Environmental Planning

Modeled Noise Receivers

Figure 4

3.0 METHODOLOGY, ASSUMPTIONS, AND THRESHOLDS

3.1 EQUIPMENT AND METHODOLOGY

3.1.1 Ambient Noise Survey

The following equipment was used to measure existing noise levels at the project site:

- Larson Davis 831 Sound Level Meter
- Larson Davis Model CAL250 Calibrator
- Windscreen and tripod for the sound level meter
- Digital camera

The sound-level meters were field-calibrated immediately prior to the noise measurement to ensure accuracy. All measurements were made with meters that conform to the American National Standards Institute (ANSI) specifications for sound level meters (ANSI SI.4-1983 R2006). All instruments were maintained with National Institute of Standards and Technology traceable calibration per the manufacturers' standards.

3.1.2 Noise Modeling Software

Project construction noise was analyzed using the Roadway Construction Noise Model Version 1.1 (RCNM; USDOT 2008), which utilizes estimates of sound levels from standard construction equipment.

Modeling of the exterior noise environment for this report was accomplished using two computer noise models: Computer Aided Noise Abatement (CadnaA) version 4.5 and Traffic Noise Model (TNM) version 2020. CadnaA is a model-based computer program developed by DataKustik for predicting noise impacts in a wide variety of conditions. CadnaA assists in the calculation, presentation, assessment, and mitigation of noise exposure. It allows for the input of project-related information, such as noise source data, barriers, structures, and topography to create a detailed CadnaA model, and uses the most up-to-date calculation standards to predict outdoor noise impacts. CadnaA traffic noise prediction is based on the data and methodology used in the TNM. TNM was released in February 2004 by the U.S. Department of Transportation (USDOT) and calculates the daytime average hourly L_{EQ} from three-dimensional model inputs and traffic data (California Department of Transportation [Caltrans] 2004). Computer Aided Design plans provided by the project applicant were inputted into the models. Input variables included road alignment, elevation, lane configuration, area topography, existing and planned noise control features, projected traffic volumes, estimated truck composition percentages, and vehicle speeds.

The one-hour L_{EQ} noise level is calculated utilizing peak-hour traffic. Peak hour L_{EQ} can be converted to CNEL using the following equation, where $L_{EQ}(h)pk$ is the peak hour L_{EQ}, P is the peak hour volume percentage of the average daily trips (ADT), d and e are divisions of the daytime fraction of ADT to account for daytime and evening hours, and N is the nighttime fraction of ADT:

$$CNEL = L_{EQ}(h)pk + 10\log10\ 4.17/P + 10\log10(d + 4.77e + 10N)$$

The model-calculated one-hour L_{EQ} noise output is therefore approximately equal to the CNEL (Caltrans 2013a).

3.2 ASSUMPTIONS

3.2.1 Construction

Construction activities would include site preparation, grading, installation of underground utilities, building construction, paving, and architectural coating (e.g., painting). The project would not require demolition, as the site is currently vacant and undeveloped. Grading would result in approximately 28,823 cubic yards (CY) of cut and 12,981 CY of fill, resulting in 15,841 CY of total soil import required. Approximately 1,976 haul trips would be required for soil import, or 94 trips for each of the 21 days during the grading phase. (HELIX 2022). Assuming an 8-hour construction day, 11 truck trips, or 22 truck passes would occur each hour.

3.2.2 Operation

Anticipated operational noise sources are assumed to include delivery trucks with backup alarms; a trash compactor; heating, ventilation, and air conditioning (HVAC) systems; and vehicular traffic.

3.2.2.1 Delivery Trucks

Operation of the project would involve diesel-powered heavy trucks for the delivery of goods to the project site and it would be operational for 24 hours a day. According to Table 4-2 of the project's traffic study, 142 truck trips would occur each day, with 7 truck trips during the peak hour entering and exiting the site (Urban Crossroads 2022). Because the exact schedule and docking locations for a given day cannot be determined, it is conservatively assumed that three trucks each hour would be attempting to use the loading docks within the project's northwestern corner closest to the off-site nonconforming residence. Noise sources associated with the delivery trucks would include the truck's diesel engine and backup alarm.

The loading docks would be located on the northern side of the proposed building. The delivery trucks would travel southbound along Indian Avenue, enter the site via the western gate, and reverse towards an individual loading dock. The project would provide a parking area for trucks along the project's northern boundary. Noise from a heavy truck entering the parking lot was determined using the default heavy truck noise in the CadnaA software.

Typical backup alarms generate a noise level of 109.7 dBA at four feet at a single frequency of one kHz. The backup alarm is assumed to be mounted on the back of the truck at a height of 3 feet.

3.2.2.2 Heating, Ventilation, and Air Conditioning (HVAC) Units

The project would use commercial-sized HVAC units located on the rooftop of the building. Specific planning data for the future HVAC systems is not available at this stage of project design. For the purposes of this analysis, the specifications for Carrier 50PG 12-ton HVAC units, which have a sound power level (S_{WL}) of 80.0 dBA, are used to analyze the noise impacts from the proposed project's units. The manufacturer's noise data for the HVAC units is provided below in Table 3, *Condenser Noise Data*; more detailed data can be found in Appendix C, *Carrier 50PG Condenser Data*.

Table 3
CONDENSER NOISE DATA

63 Hz	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz	Overall Noise Level in A-weighted Scale (dBA)[1]
90.4	83.1	80.9	77.8	75.2	70.0	66.1	57.6	80.0

[1] Sound Power Levels (S_{WL})
Noise levels in decibels (dB) measured at octave frequencies
Hz = Hertz; kHz = kilohertz

3.2.2.3 Vehicular Traffic

Existing traffic data for the roadways in the project vicinity are based on volumes provided by the project's traffic study (Urban Crossroads 2022). Trip generation rates and trip distribution are also provided in the study. Speed limits for nearby roadways were used in the modeling to calculate existing and future noise levels. The closest NSLU to roadways affected by project traffic is the existing nonconforming residence north of the project approximately 100 feet from the centerline of Indian Avenue. All the project's truck traffic would pass this location prior to entering the site for loading and unloading. According to Exhibit 4-1 of the project's traffic study, 15 percent of warehouse passenger cars entering the project and 10 percent of cars exiting the project would pass by this nonconforming residence on a given day, and 40 percent of hotel traffic entering the project and 60 percent of hotel traffic leaving the project would use the same route. Table 4, *Existing + Project Traffic Volumes*, shows the ADT for this roadway segment.

Table 4
EXISTING + PROJECT TRAFFIC VOLUMES

Roadway Segment	Existing ADT	Project[1] ADT	Existing + Project ADT
Indian Avenue			
North of Project Driveway	4,850	675	5,525

Source: Urban Crossroads 2022
[1] Project traffic is based on 1,260 daily passenger vehicle trips and 142 daily heavy truck trips. Using the distribution percentages, the project would add 533 passenger vehicles and 142 heavy trucks to this roadway segment.
ADT = Average Daily Trips

3.3 GUIDELINES FOR THE DETERMINATION OF SIGNIFICANCE

Based on Appendix G of the CEQA Guidelines, implementation of the project would result in a significant adverse impact if it would:

Threshold 1: *Generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the City General Plan or noise ordinance.*

Per the City General Plan Noise Element, mitigation would be required if a commercial or industrial project is located within 160 feet of a sensitive land use and the noise levels generated by the project would exceed 60 CNEL at the sensitive land use.

For traffic-related noise, impacts are considered significant in areas where existing traffic noise at NSLUs exceeds 60 CNEL and implementation of the project would result in an increase of the noise level by 3 CNEL or more, or where existing traffic noise is less than 60 CNEL and implementation of the project results in an increase of 5 CNEL or more.

Construction activity would be considered significant for nearby residences if it occurs outside the hours of 7:00 a.m. and 7:00 p.m. or on Sundays or applicable legal holidays as stated in the City Municipal Code. Additionally, construction noise would be significant if it exceeds 80 dBA L_{MAX} outside the project.

Threshold 2: *Generate excessive ground-borne vibration or ground-borne noise levels.*

Excessive ground-borne vibration would occur if construction-related ground-borne vibration exceeds the "strongly perceptible" vibration annoyance potential criteria for human receptors of 0.1 inch per second peak particle velocity (PPV) or the damage potential criteria to relatively old residential structures 0.5 inch per second PPV for continuous/frequent intermittent construction sources (such as impact pile drivers, vibratory pile drivers, and vibratory compaction equipment), as specific by Caltrans (2020).

Threshold 3: *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 use airport or private airstrip, expose people residing or working in the project area to excessive noise.*

Excessive noise exposure is defined as noise levels that exceed the standards in the City General Plan Noise Element for the associated land use.

4.0 IMPACTS

4.1 ISSUE 1: EXCESSIVE NOISE LEVELS

Would the project generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the City General Plan or noise ordinance.

4.1.1 Temporary Construction Noise

Construction of the project would require site clearing, grading, installation of underground utilities/infrastructure, construction of new buildings, paving, and architectural coating. The magnitude of the noise impact would depend on the type of construction activity, equipment, duration of each construction phase, distance between the noise source and receiver, and any intervening structures. Construction would generate elevated noise levels that may disrupt the nearby nonconforming residences to the north and the mobile homes southeast of the project site. Construction equipment would be continuously moving across the site, and equipment is not anticipated to be located at a single location during a typical workday. Therefore, construction equipment is modeled at an average distance of 100 feet from the nearest NSLUs to the north of the project. Table 5, *Construction Equipment Noise Levels*, provides the 100-foot distance noise levels for equipment anticipated to be used for general construction activities.

Table 5
CONSTRUCTION EQUIPMENT NOISE LEVELS

Unit	Percent Operating Time	L_{MAX} at 100 feet	dBA L_{EQ} at 100 feet
Backhoe	40	71.5	67.6
Compactor	20	77.2	70.2
Compressor	40	71.6	67.7
Concrete Mixer Truck	40	72.8	68.8
Concrete Pump Truck	20	75.4	68.4
Crane	16	74.6	66.6
Dozer	40	75.6	71.7
Dump Truck	50	70.4	66.5
Excavator	40	74.7	70.7
Front End Loader	40	73.1	69.1
Paver	50	71.2	68.2
Roller	20	74.0	67.0
Excavator/Loader/Dump Truck	40	74.7	73.9

Source: RCNM; USDOT 2008
L_{MAX} = maximum noise level; dBA = A-weighted decibel; L_{EQ} = equivalent sound level

Construction equipment would not all operate at the same time or location and would not be in constant use during the 8-hour operating day. Further, not all the pieces of equipment included in Table 5 would be used within 100 feet of the off-site residences. A dozer and an excavator may be working on the site simultaneously but would not be working near one another at a given time due to the nature of their respective operations. An excavator, loader, and dump truck were analyzed together for construction noise impacts due to their likelihood of being used in conjunction with one another.

Based on these assumptions, grading operations using an excavator, loader, and dump truck at the nearest NSLU would be 74.7 dBA L_{MAX} at 100 feet (see Appendix D, Construction Noise Modeling Outputs). At 700 feet (the distance to the off-site residences along Perry Street), equipment noise would be 57.8 dBA L_{MAX}. At 1,000 feet (the distance to the off-site mobile home park), noise from this equipment would be 54.7 dBA L_{EQ}. Noise levels due to construction would not exceed the 80 dBA L_{MAX} limits set by the municipal code at any nearby NSLUs. Impacts would be less than significant.

Although impacts from construction noise are anticipated to be less than significant, the project would be required to comply with PVCCSP EIR mitigation measures MM Noise 1 through MM Noise 3, which limit noise generated by construction equipment.

4.1.2 Construction Traffic Noise

As stated in Section 3.2.1, construction traffic would result in 22 hourly haul truck passes during the grading period. The closest NSLU to the project site is a non-conforming residence north of the project site, approximately 100 feet from Indian Avenue. As shown in Table 5, this segment of Indian Avenue carries 4,850 vehicle trips per day. An additional 22 trips per hour would temporarily increase the hourly noise level along that roadway from 58.7 dBA to 59.9 dBA. This would not exceed the 80 dBA L_{MAX} limits set by the municipal code. Although noise levels would increase temporarily during the 21-day grading phase, impacts would be less than significant.

Although impacts from construction traffic are anticipated to be less than significant, the project would be required to comply with PVCCSP EIR mitigation measure MM Noise 4, which routes haul trips away from NSLUs such as residential dwellings.

4.1.3 Warehouse Operational Noise Generation

The proposed loading dock area and HVAC units would generate elevated noise levels compared to existing conditions. The primary noise sources are described in detail in Section 3.2.2.

The nearest noise-sensitive land uses to these operations is the nonconforming residence to the north. Due to its location within 160 feet of the project, noise levels generated by the project's operations would be significant if they exceed 60 dBA CNEL at the residence.

Operation of all noise-generating components was modeled using CadnaA. Four receivers were modeled to represent locations within the nonconforming residence's property to the north (R1 through R4). These receivers are depicted in Figure 4. Modeling of the proposed site plan included the 12-foot concrete wall proposed along each side of the entrance gate and all operational noise sources. The modeled hourly noise levels were converted to CNEL to compare to the General Plan threshold. As a conservative estimate, the modeled hourly noise levels were assumed to occur during each hour of operation. The resulting noise level results are shown in Table 6, *Operational Noise Levels without Mitigation*.

Table 6
OPERATIONAL NOISE LEVELS WITHOUT MITIGATION

Receiver Number	Modeled Noise Levels (dBA L_{EQ})	Modeled Noise Levels in CNEL	Exceed 60 dBA CNEL?
R1	43.6	50.3	No
R2	43.7	50.4	No
R3	45.2	51.9	No
R4	44.7	51.4	No

Note: Modeling includes proposed 12-foot CMU wall along each side of the entrance gates and a 3-foot architectural parapet.

Noise levels from the warehouse's operational sources would not exceed the limits for residences in the vicinity of the project at any of the receivers. Impacts would be less than significant.

4.1.4 Hotel Operational Noise

At this stage in Project design, the exact location and layout of the proposed hotel is not known. A hotel's noise sources are anticipated to include HVAC units for heating and cooling of the hotel's rooms and common spaces. Because the exact location, size, and noise output of the future HVAC system is not known, impacts from noise generated by the hotel component of the Project are conservatively assessed as significant. Mitigation measure NOI-1 would be required to ensure that noise levels from the hotel are reduced to a less than significant level.

NOI-1 **Hotel Acoustic Analysis**. Noise levels from operational noise generated by the project's hotel component shall not exceed 60 dBA CNEL when measured at nearby sensitive land uses

(including residences). When plans for the hotel component become available, an acoustic analysis shall be performed for the hotel's operational noise sources. This includes, but is not limited to, HVAC units and emergency generators. If the analysis determines that noise levels would exceed noise limits, noise reduction measures will be implemented as part of the hotel design. These noise reduction measures may include architectural parapets, or on-site sound barriers (wall).

If a barrier is used to shield noise for nearby NSLUs, it shall be located between the noise source and noise-sensitive receptor. The barrier must be solid. It can be constructed of masonry, wood, plastic, fiberglass, steel, or a combination of those materials, as long as there are no cracks or gaps, through or below the wall. Any seams or cracks must be filled or caulked. If wood is used, it can be tongue and groove and must be at least one-inch total thickness or have a density of at least 3.5 pounds per square foot. The barrier must be an adequate height to break the line-of-sight between the noise source and receptor.

4.1.5 Operational Off-site Transportation Noise Generation

The project would generate vehicular traffic along nearby roadways. Project traffic utilizing Indian Avenue would have the potential to result in increased noise levels at the existing nonconforming residence immediately north of the project. TNM software was used to calculate the noise contour distances for Existing and Existing + Project conditions along Indian Avenue. As noted in the assumptions, Existing and Existing + Project traffic noise levels presented in this analysis are based on traffic volumes provided in the project's traffic study (Urban Crossroads 2022). Refer to Table 6 for the forecasted ADT data for existing and project-added traffic volumes.

The off-site roadway modeling represents a conservative analysis that does not consider topography or attenuation provided by existing structures. The results of this analysis are shown below in Table 7, *Off-site Traffic Noise Levels.*

Table 7
OFF-SITE TRAFFIC NOISE LEVELS

Roadway Segment	Distance to Nearest NSLU	CNEL at Distance to Nearest NSLU (Existing)	CNEL at Distance to Nearest NSLU (Existing + Project)	CNEL at Distance to Nearest NSLU Change from Existing	Direct Impact[1]
Indian Avenue					
North of Project	100 feet	58.7	59.7	+1.0	No

[1] A direct impact to off-site NSLUs would occur when existing noise levels are less than 60 CNEL and the project increases noise levels by 5 CNEL or more.

NSLU = noise sensitive land use; CNEL = Community Noise Equivalent Level

Impacts would be significant when existing noise levels are less than 60 CNEL and the project increases noise levels by 5 CNEL or more. As shown in Table 7, noise levels would increase by 1 CNEL for the nearby residence along Indian Avenue. This increase would not be a perceptible increase and noise impacts from project-generated traffic would be less than significant. Project traffic for other roadways in the project vicinity would be less than those analyzed for this segment of Indian Avenue and would be

on roadways with higher existing volumes. Therefore, noise increases from project traffic on all nearby roadways would be less than significant.

4.2 ISSUE 2: EXCESSIVE VIBRATION

4.2.1 Construction Vibration

Construction activities known to generate excessive ground-borne vibration, such as pile driving, would not be conducted by the project. A possible source of vibration during general project construction activities would be a vibratory roller used for gravel or pavement compaction. A vibratory roller could be used up to 100 feet from the closest off-site structure (gas station to the east). A vibratory roller would create approximately 0.210 inch per second PPV at 25 feet (Caltrans 2013b). A 0.210 inch per second PPV vibration level would equal 0.046 inch per second PPV at a distance of 100 feet.[1] This would be lower than what is considered a "strongly perceptible" level for humans of 0.1 inches per second PPV, and lower than the structural damage threshold of 0.5 inches per second PPV for continuous/frequent intermittent construction sources. Therefore, although a vibratory roller may be perceptible to nearby human receptors, temporary impacts associated with the roller (and other potential equipment) would be less than significant.

4.2.2 Operational Vibration

Land uses that may generate substantial operational vibration include heavy industrial or mining operations that would require the use of vibratory equipment. The proposed warehouse land use does not include equipment that would generate substantial vibration. Therefore, operational vibration impacts are less than significant.

4.3 ISSUE 3: AIRPORT NOISE EXPOSURE

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?

The nearest airports to the proposed Project site are the Perris Valley Airport and the March ARB. According to the ALUCP for Perris Valley Airport, the Project site is not located within the Airport Influence Area Boundary (Riverside County 2010). However, the proposed Project is located within the limits of the March ARB ALUCP. The eastern portions of the Project site fall within the March ARB's CNEL noise contours above 60 dBA CNEL but below 65 dBA CNEL.

The City General Plan states that office uses are normally compatible up to 65 dBA CNEL and conditionally compatible up to 70 dBA CNEL. The Project would provide office areas along the south-facing side of the building. The project's office components would be located outside the 65 dBA CNEL contour and would therefore be compatible with the General Plan. Hotel uses would be normally compatible up to 60 dBA CNEL and conditionally compatible up to 70 dBA CNEL. The hotel portion of the

[1] Equipment PPV = Reference PPV * $(25/D)^n$ (in/sec), where Reference PPV is PPV at 25 feet, D is distance from equipment to the receiver in feet, and n = 1.1 (the value related to the attenuation rate through the ground); formula from Caltrans 2013b.

project would be located outside the 60 dBA CNEL contour and would therefore be compatible with the General Plan as it relates to airport noise exposure.

PVCCSP EIR MM Noise 5 would require new noise-sensitive land uses, such as the hotel, to ensure that exterior noise levels do not exceed 60 dBA and interior noise levels do not exceed 45 dBA. This measure would apply to the hotel use and would account for noise generated by nearby roadways, such as Ramona Expressway and Perris Boulevard.

5.0 LIST OF PREPARERS

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Jason Runyan	Acoustic Analyst
Joanne M. Dramko, AICP	Principal Noise Specialist, QA/QC
Yara Fisher	Project Manager

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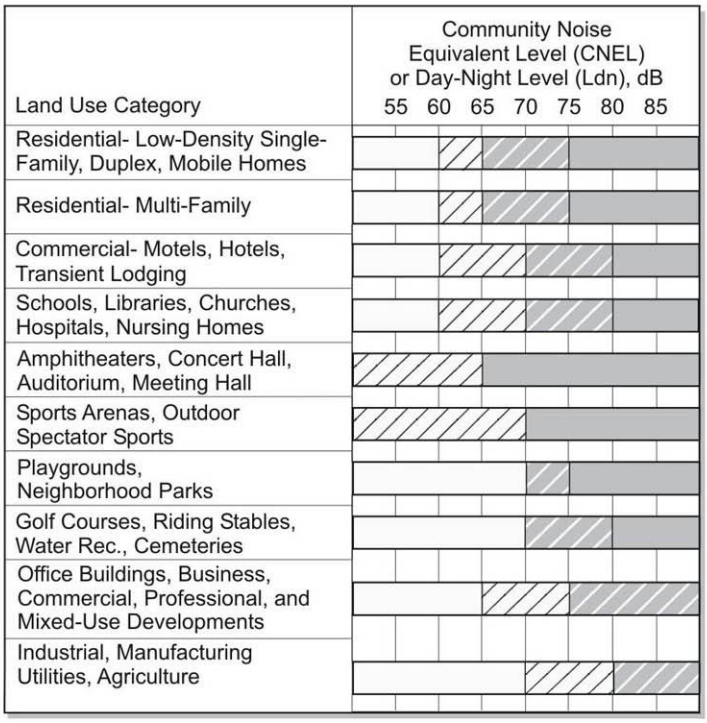
Appendix A

Exhibit N-1 of the City General Plan Noise Element

The following section contains content that was obtained from a third party and may not achieve the same level of Americans with Disabilities Act (ADA) and Section 508 accessibility as other parts of this document.

Exhibit N-1: Land Use/Noise Compatibility Guidelines



Nature of the noise environment where the CNEL or Ldn level is:

Below 55 dB
Relatively quiet suburban or urban areas, no arterial streets within 1 block, no freeways within 1/4 mile.

55-65 dB
Most somewhat noisy urban areas, near but not directly adjacent to high volumes of traffic.

65-75 dB
Very noisy urban areas near arterials, freeways or airports.

75+ dB
Extremely noisy urban areas adjacent to freeways or under airport traffic patterns. Hearing damage with constant exposure outdoors.

Normally Acceptable
Specific land use is satisfactory, based on the assumption that any building is of normal conventional construction, without any special noise insulation requirements

Conditionally Acceptable
New construction or development should be undertaken only after a detailed analysis of noise reduction requirements is made and needed noise insulation features included in design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning, will normally suffice.

Normally Unacceptable
New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of noise reduction requirements must be made and needed noise insulation features included in design.

Clearly Unacceptable
New construction or development should generally not be undertaken.

The Community Noise Equivalent Level (CNEL) and Day-Night Noise Level (Ldn) are measures of the 24-hour noise environment. They represent the constant A-weighted noise level that would be measured if all the sound energy received over the day were averaged. In order to account for the greater sensitivity of people to noise at night, the CNEL weighting includes a 5-decibel penalty on noise between 7:00 p.m. and 10:00 p.m. and a 10-decibel penalty on noise between 10:00 p.m. and 7:00 a.m. of the next day. The Ldn includes only the 10-decibel weighting for late-night noise events. For practical purposes, the two measures are equivalent for typical urban noise environments.

Source: State of California, Department of Health, City of Monterey Park.

Appendix B

Site Survey Measurement Sheets

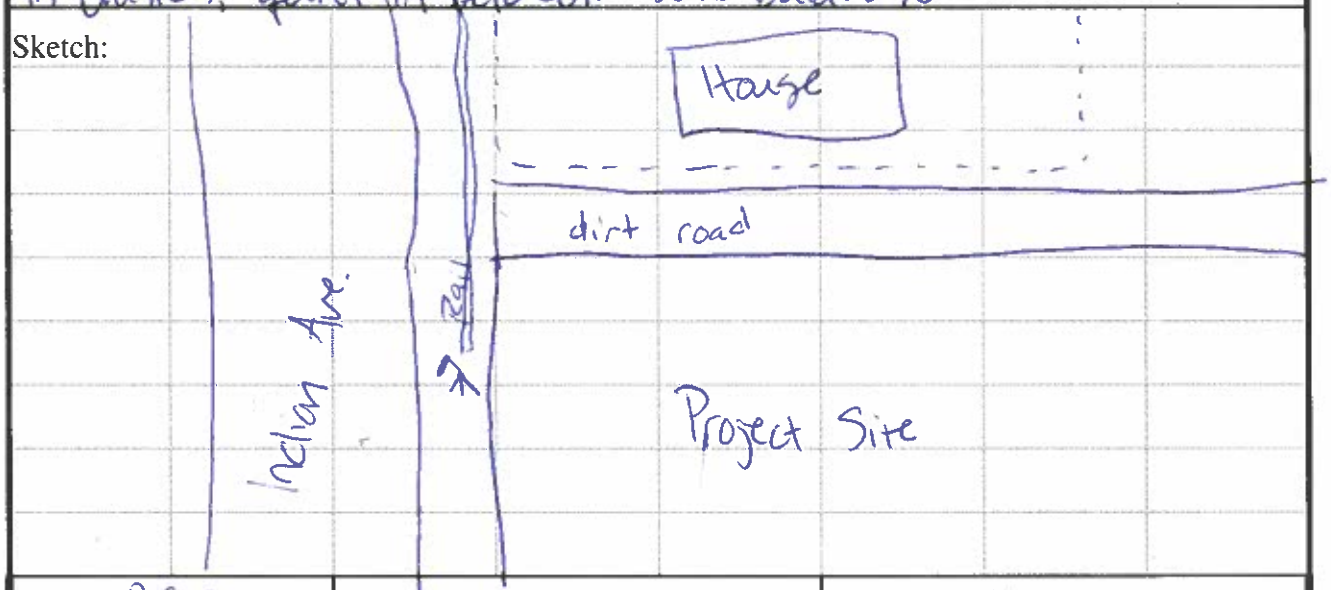
The following section contains content that was obtained from a third party and may not achieve the same level of Americans with Disabilities Act (ADA) and Section 508 accessibility as other parts of this document.

Site Survey

Job # [redacted] SRG 01	Project Name: Ramona Commerce Park		
Date: 10/15/20	Site #: 1 (NW Corner)	Engineer: Kristen Garcia	
Address: Ramona Expressway, Perris, CA 92571			
Meter: LD831	Serial #: 1890	Calibrator: CA250	Serial #: 2621

Notes: Sunny, hot, windy. Ambient nature sounds. Noise primarily from traffic on Indian Ave. & Ramona Expy. Cars come by in clusters, quiet in between. 831_Data.270

Sketch:



Temp: 99 °F	Wind Spd: NW 4	mph	Humidity: 11	%	
Start of Measurement: 1:07 pm	End of Measurement: 1:22 pm		68.1	dBA L_{EQ}	

Cars (tally per 5 cars)	Medium Trucks (MT)	Heavy Trucks (HT)
𝍸 𝍸 𝍸 ||||	|||	𝍸 |||
Total = 96	Total = 3	Total = 8

Noise Measurement for Information Only

No Through Roadways

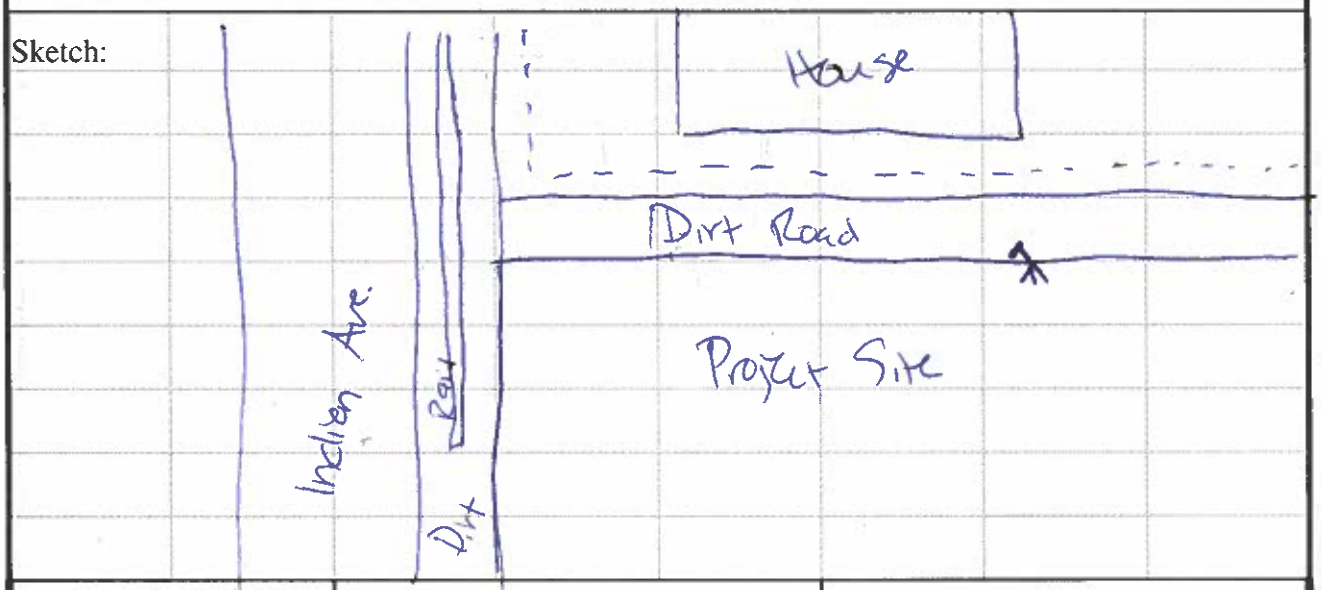
No Calibration Analysis Will Be Provided

Site Survey

Job # JRG-01	Project Name: Ramona Commerce ~~Center~~ Park		
Date: 10/15/20	Site #: 2 (N. by house)	Engineer: Kristen Garcia	
Address: Ramona Expressway, Perris, CA 92571			
Meter: LD 831	Serial #: 1890	Calibrator: CA250	Serial #: 2621

Notes: Sunny, hot. Ambient nature sounds. Noise primarily from traffic on Indian Ave. + Ramona Expwy. 831-Data-271

Sketch:



Temp: 99° F	Wind Spd: NNW 5 mph	Humidity: 9 %
Start of Measurement: 1:30 pm	End of Measurement: 1:40 pm	53.8 dBA L_{EQ}

Cars (tally per 5 cars)	Medium Trucks (MT)	Heavy Trucks (HT)

Noise Measurement for Information Only

No Through Roadways

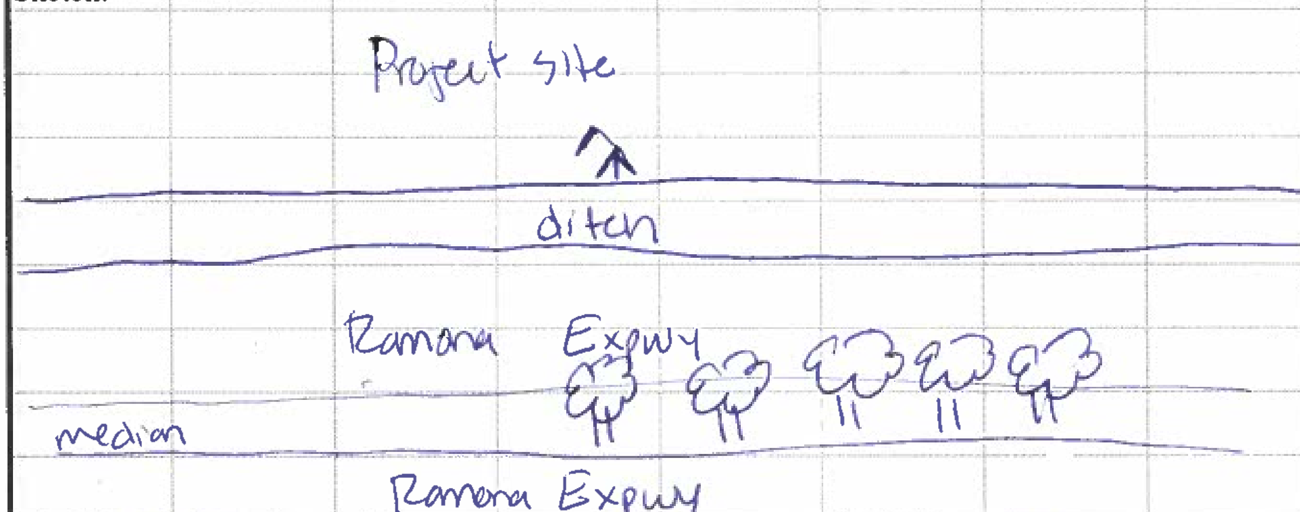
No Calibration Analysis Will Be Provided

Site Survey

Job # JRG-01		Project Name: Ramona Commerce Park	
Date: 10/15/20	Site #: 3 (South border)	Engineer: Kristen Garcia	
Address: Ramona Expressway, Perris, CA 92571			
Meter: LD831	Serial #: 1890	Calibrator: CA250	Serial #: 2621

Notes: Sunny, hot. Slight breeze. Ambient nature sounds. Noise primarily from traffic on Ramona Expwy. Paused for jet at 2:02 pm, resumed 2:02 pm 831- Data. 272

Sketch:



Temp: 99°F	Wind Spd: NW 7 mph	Humidity: 9 %
Start of Measurement: 1:51 pm	End of Measurement: 2:07 pm	69.9 dBA L_{EQ}

Cars (tally per 5 cars)	Medium Trucks (MT)	Heavy Trucks (HT)
Total = 610	Total = 14	Total = 16

Noise Measurement for Information Only

No Through Roadways

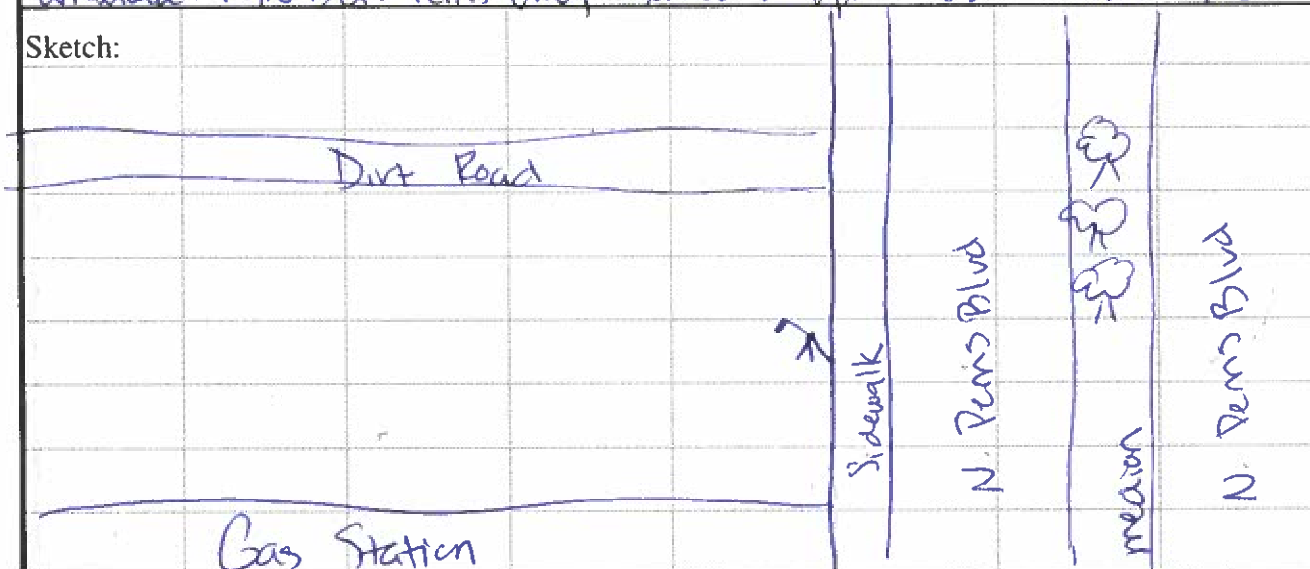
No Calibration Analysis Will Be Provided

Site Survey

Job # JRG-01	Project Name: Ramona Commerce Park		
Date: 10/15/20	Site #: 4 (NE)	Engineer: Kristen Garcia	
Address: Ramona Expressway, Perris, CA 92571			
Meter: LD831	Serial #: 1890	Calibrator: CA250	Serial #: 2621

Notes: Sunny, hot. Ambient nature sounds. Noise primarily from traffic on N. Perris Blvd. & Ramona Expwy. Paused at 2:40pm for ambulance w/ sirens on Perris Blvd, resumed 2:42pm 831_Data.273

Sketch:



Temp: 99°F	Wind Spd: NNW 9 mph	Humidity: 10 %
Start of Measurement: 2:28 pm	End of Measurement: 2:43 pm	68.6 dBA L_{EQ}

Cars (tally per 5 cars)	Medium Trucks (MT)	Heavy Trucks (HT)
Total = 517	Total = 9	Total = 12
Noise Measurement for Information Only		
No Through Roadways		
No Calibration Analysis Will Be Provided		

Appendix C

Carrier 50PG Condenser Data

The following section contains content that was obtained from a third party and may not achieve the same level of Americans with Disabilities Act (ADA) and Section 508 accessibility as other parts of this document.

50PG03–28
Ultra High Efficiency Single Package Electric Cooling with Optional Electric Heat Commercial Rooftop Units with PURON® (R–410A) Refrigerant, Optional EnergyX™ (Energy Recovery Ventilator)

Carrier®
Turn to the Experts.℠

Product Data

CENTURION

EnergyX model shown

DEALER DESIGN AWARDS
theNEWS | GOLD

BUILDINGS magazine
Editors' Choice
TOP 100 PRODUCTS
2005

Puron
the environmentally sound refrigerant

Operation Air Quantity Limits

50PG03-16 Units

UNIT 50PG	COOLING (cfm)		HEATING (cfm) ELECTRIC HEAT	
	Min	Max	Min	Max
03	600	1000	600	1000
04	900	1500	900	1500
05	1200	2000	1200	2000
06	1500	2500	1500	2500
07	1800	3000	1800	3000
08	2250	3750	2250	3750
09	2550	4250	2550	4250
12	3000	5000	3000	5000
14	3750	6250	3750	6250
16	4500	7500	4500	7500

50PG20-28 Units

50PG	COOLING		ELECTRIC HEAT	ELECTRIC HEAT (Vertical)	ELECTRIC HEAT (Horizontal)
	Minimum Cfm	Maximum Cfm		Minimum Cfm	Minimum Cfm
20	5000	9,000	High Heat (75 kW)	4,500	5,400
			Medium Heat (50 kW)	3,750	4,800
			Low Heat (25 kW)	3,750	3,750
24	5500	10,000	High Heat (75 kW)	4,500	5,400
			Medium Heat (50 kW)	3,750	4,800
			Low Heat (25 kW)	3,750	3,750
28	6500	12,000	High Heat (75 kW)	4,500	5,400
			Medium Heat (50 kW)	3,750	4,800
			Low Heat (25 kW)	3,750	3,750

Outdoor Sound Power (Total Unit)

UNIT 50PG	A-WEIGHTED* (dB)	OCTAVE BAND LEVELS dB							
		63	125	250	500	1000	2000	4000	8000
03	75.0	82.6	79.9	75.7	73.3	70.0	64.3	58.4	50.5
04	73.2	79.8	77.2	74.1	70.1	68.0	63.6	58.4	51.9
05	71.9	79.7	79.6	72.6	69.6	66.0	61.4	56.4	48.5
06	78.5	82.2	82.6	79.5	75.7	73.9	68.6	64.0	56.3
07	78.5	87.5	83.0	78.5	76.3	73.8	68.4	63.8	56.5
08	80.0	91.7	83.6	81.0	77.9	75.0	69.9	66.0	59.3
09	79.9	89.1	82.7	80.0	77.7	75.0	70.2	66.3	57.8
12	80.0	90.4	83.1	80.9	77.8	75.2	70.0	66.1	57.6
14	83.3	86.4	85.9	85.3	81.8	78.2	72.2	67.9	59.9
16	84.0	90.3	85.2	83.5	81.1	79.0	73.7	70.5	65.4
20	81.7	90.2	84.8	80.7	79.0	77.6	71.4	66.7	60.7
24	84.9	90.0	86.3	83.6	82.9	80.3	74.9	71.4	66.5
28	84.9	90.0	86.3	83.6	82.9	80.3	74.9	71.4	66.5

LEGEND

db – Decibel

*Sound Rating ARI or Tone Adjusted, A–Weighted Sound Power Level in dB. For sizes 03–12, the sound rating is in accordance with ARI Standard 270–1995. For sizes 14–28, the sound rating is in accordance with ARI 370–2001.

Outdoor Sound Power (Total Unit)
with High CFM EnergyX

UNIT 50PG w/ERV	A–WEIGHTED* (dB)	OCTAVE BAND LEVELS dB							
		63	125	250	500	1000	2000	4000	8000
03	83.0	82.8	81.4	79.7	78.1	77.9	76.5	72.5	70.1
04	82.7	80.2	79.6	79.1	77.3	77.6	76.5	72.5	70.1
05	82.6	80.1	81.1	78.8	77.2	77.4	76.4	72.4	70.0
06	83.8	82.4	83.4	81.6	79.1	78.8	76.9	72.9	70.2
07	83.8	87.6	83.8	81.1	79.3	78.8	76.9	72.9	70.2
08	87.3	92.0	86.8	84.5	82.4	81.8	80.5	78.0	74.2
09	87.2	89.6	86.4	84.1	82.4	81.8	80.5	78.1	74.2
12	87.3	90.8	86.5	84.5	82.4	81.8	80.5	78.0	74.2
14	88.2	87.2	88.0	87.0	84.2	82.7	80.8	78.2	74.3
16	91.4	93.2	92.8	88.2	86.3	85.5	84.4	83.4	78.4
20	91.2	93.1	92.7	87.4	85.8	85.2	84.2	83.3	78.3
24	91.7	93.0	93.0	88.2	86.9	85.8	84.5	83.5	78.5
28	91.7	93.0	93.0	88.2	86.9	85.8	84.5	83.5	78.5

LEGEND
dB – Decibel
***** Sound Rating ARI or tone Adjusted, A–Weighted Sound Power Level in dB. For sizes 03–12, the sound rating is in accordance with ARI Standard 270–1995. For sizes 14–28, the sound rating is in accordance with ARI 370–2001.

PHYSICAL DATA

50PG03-07

BASE UNIT 50PG		03	04	05	06	07
NOMINAL CAPACITY (Tons)		2	3	4	5	6
OPERATING WEIGHT (lb)						
Unit*		704	704	775	829	874
Economizer						
Vertical		40	40	40	40	40
Horizontal		50	50	50	50	50
Humidi-MiZer™ Adaptive Dehumidification System		22	22	31	27	26
Roof Curb						
14-in.		122	122	122	122	122
24-in.		184	184	184	184	184
COMPRESSOR		Fully Hermetic Scroll				
Quantity		1	1	1	1	1
Oil Type		Copeland 3MA				
Number of Refrigerant Circuits		1	1	1	1	1
Oil (oz)		38	42	42	66	56
REFRIGERANT TYPE		R-410A (Puron® Refrigerant)				
Expansion Device		TXV	TXV	TXV	TXV	TXV
Operating Charge (lb) — Standard Unit		7.3	9.0	15.7	16.6	19.0
Operating Charge (lb) — Unit with Humidi-MiZer System		11.75	13.50	25.00	22.00	22.70
CONDENSER COIL		Enhanced Copper Tubes, Aluminum Lanced Fins				
Condenser A (Outer)						
Rows...Fins/in.		1…17	1…17	2…17	2…17	2…17
Face Area (sq ft)		12.6	12.6	12.6	12.6	12.6
Condenser B (Inner)						
Rows...Fins/in.		—	1…17	2…17	2…17	2…17
Face Area (sq ft)		—	12.6	12.6	12.6	12.6
HUMIDI–MIZER COIL		Enhanced Copper Tubes, Aluminum Lanced Fins				
Rows...Fins/in.		1...17	1...17	1...17	1...17	1...17
Face Area (sq ft)		6.4	6.4	9.3	9.3	9.3
CONDENSER FAN		Propeller				
Quantity…Diameter (in.)		1…24	1…24	1…24	1…24	1…24
Nominal Cfm (Total, all fans)		3500	3500	3500	4500	4500
Motor Hp		1/8	1/8	1/8	1/4	1/4
Nominal Rpm — High Speed		825	825	825	1100	1100
Nominal Rpm — Low Speed		300	300	300	300	300
EVAPORATOR COIL		Enhanced Copper Tubes, Aluminum Double-Wavy Fins, Face Split				
Rows…Fins/in.		2…15	2…15	2…15	3…15	4…15
Face Area (sq ft)		9.3	9.3	9.3	9.3	9.3
EVAPORATOR FAN		Centrifugal Type, Belt Drive				
Quantity…Size (in.)	Low	1...12 x 9	1...12 x 9	1...12 x 9	1...12 x 9	1...12 x 9
	High	1...12 x 9	1...12 x 9	1...12 x 9	1...12 x 9	1...12 x 9
Type Drive	Low	Belt	Belt	Belt	Belt	Belt
	High	Belt	Belt	Belt	Belt	Belt
Nominal Cfm		800	1200	1600	2000	2400
Maximum Continuous Bhp	Low	0.85	0.85	0.85	0.85/2.40†	2.40
	High	0.85	0.85	1.60/2.40†	1.60/2.40†	3.10
Motor Nominal Rpm		1620	1620	1620	1725	1725
Motor Frame Size	Low	48Y	48Y	48Y	56Y	56Y
	High	48Y	48Y	56Y	56Y	56Y
Fan Rpm Range	Low	482-736	482-736	596-910	690-978	796-1128
	High	656-1001	796-1128	828-1173	929-1261	1150-1438
Motor Bearing Type		Ball	Ball	Ball	Ball	Ball
Maximum Fan Rpm		2000	2000	2000	2000	2000
Motor Pulley Pitch Diameter Range (in.)	Low	1.9-2.9	1.9-2.9	1.9-2.9	2.4-3.4	2.4-3.4
	High	1.9-2.9	2.4-3.4	2.4-3.4	2.8-3.8	4.0-5.0
Fan Pulley Pitch Diameter (in.)	Low	6.8	6.8	5.5	6.0	5.2
	High	5.0	5.2	5.0	5.2	6.0
Nominal Motor Shaft Diameter (in.)	Low	1/2	1/2	1/2	5/8	5/8
	High	1/2	1/2	5/8	5/8	7/8
Belt…Pitch Length (in.)	Low	49.3	49.3	49.3	49.3	49.3
	High	49.3	49.3	49.3	49.3	52.3
Belt…Type	Low	AX	AX	AX	AX	AX
	High	AX	AX	AX	AX	AX
Pulley Center Line Distance Min. (in.)	Low	16.2	16.2	16.2	16.2	16.2
	High	16.2	16.2	16.2	16.2	16.2
Pulley Center Line Distance Max. (in.)	Low	20.2	20.2	20.2	20.2	20.2
	High	20.2	20.2	20.2	20.2	20.2
Speed Change per Full Turn of Movable Pulley Flange (rpm)	Low	48	48	59	58	66
	High	65	62	69	66	58
Movable Pulley Maximum Full Turns from Closed Position	Low	5	5	5	5	5
	High	5	5	5	5	5
Factory Pulley Setting (rpm)	Low	482	482	596	690	796
	High	656	796	828	929	1150
Fan Shaft Diameter at Pulley (in.)		3/4	3/4	3/4	3/4	3/4
HIGH-PRESSURE SWITCH (psig)						
Cutout		660 ± 10	660 ± 10	660 ± 10	660 ± 10	660 ± 10
Reset (Auto.)		505 ± 20	505 ± 20	505 ± 20	505 ± 20	505 ± 20
RETURN-AIR FILTERS		Throwaway				
Quantity…Size (in.)		4…16 x 20 x 2	4…16 x 20 x 2	4…16 x 20 x 2	4…16 x 20 x 2	4…16 x 20 x 2

LEGEND

TXV – Thermostatic Expansion Valve

*Aluminum evaporator coil/aluminum condenser coil.

† Single phase/three phase

Appendix D

Construction Noise Modeling Outputs

The following section contains content that was obtained from a third party and may not achieve the same level of Americans with Disabilities Act (ADA) and Section 508 accessibility as other parts of this document.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 12/7/2021
Case Description:

		Baselines (dBA)			---- Receptor #1 ----
Description	Land Use	Daytime	Evening	Night	
Residential	Residential	70	70	70	

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Backhoe	No	40		77.6	100	0
Compactor (ground)	No	20		83.2	100	0
Compressor (air)	No	40		77.7	100	0
Concrete Mixer Truck	No	40		78.8	100	0
Concrete Pump Truck	No	20		81.4	100	0
Dozer	No	40		81.7	100	0
Dump Truck	No	40		76.5	100	0
Excavator	No	40		80.7	100	0
Front End Loader	No	40		79.1	100	0
Paver	No	50		77.2	100	0
Roller	No	20		80	100	0

		Calculated (dBA)		Results	Noise Limits (dBA)		
				Day		Evening	
Equipment		*Lmax	Leq	Lmax	Leq	Lmax	Leq
Backhoe		71.5	67.6	N/A	N/A	N/A	N/A
Compactor (ground)		77.2	70.2	N/A	N/A	N/A	N/A
Compressor (air)		71.6	67.7	N/A	N/A	N/A	N/A
Concrete Mixer Truck		72.8	68.8	N/A	N/A	N/A	N/A
Concrete Pump Truck		75.4	68.4	N/A	N/A	N/A	N/A
Dozer		75.6	71.7	N/A	N/A	N/A	N/A
Dump Truck		70.4	66.5	N/A	N/A	N/A	N/A
Excavator		74.7	70.7	N/A	N/A	N/A	N/A
Front End Loader		73.1	69.1	N/A	N/A	N/A	N/A
Paver		71.2	68.2	N/A	N/A	N/A	N/A
Roller		74	67	N/A	N/A	N/A	N/A
	Total	77.2	79.4	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Initial Study Appendix J

Traffic Study

The following section contains content that was obtained from a third party and may not achieve the same level of Americans with Disabilities Act (ADA) and Section 508 accessibility as other parts of this document.

Ramona – Indian Warehouse Project
(PR 20-05212)

TRAFFIC ANALYSIS

CITY OF PERRIS

PREPARED BY:

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Robert Vu, PE
rvu@urbanxroads.com

MAY 23, 2022 (REVISED JULY 12, 2022)

TABLE OF CONTENTS

APPENDICES

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LIST OF EXHIBITS

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LIST OF TABLES

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LIST OF ABBREVIATED TERMS

(1)	Reference
ADT	Average Daily Traffic
CA MUTCD	California Manual on Uniform Traffic Control Devices
Caltrans	California Department of Transportation
CEQA	California Environmental Quality Act
CMP	Congestion Management Program
DIF	Development Impact Fee
E+P	Existing Plus Project
EAC	Existing plus Ambient Growth plus Cumulative
EAPC	Existing plus Ambient Growth plus Project plus Cumulative
HCM	Highway Capacity Manual
ITE	Institute of Transportation Engineers
LOS	Level of Service
N/A	Not Applicable
NP	No Project (or Without Project)
NPRBBD	North Perris Road and Bridge Benefit District
PCE	Passenger Car Equivalents
PHF	Peak Hour Factor
Project	Ramona – Indian Warehouse Project
PVCC SP	Perris Valley Commerce Center Specific Plan
RTA	Riverside Transit Authority
RTP/SCS	Regional Transportation Plan/Sustainable Communities Strategy
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
sf	Square Feet
TA	Traffic Analysis
TSF	Thousand Square Feet
TUMF	Transportation Uniform Mitigation Fee
WP	With Project
WRCOG	Western Riverside Council of Governments
V/C	Volume to Capacity

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1 INTRODUCTION

This report presents the results of the focused traffic analysis (TA) for the proposed Ramona – Indian Warehouse Project ("Project"), which is located west of Perris Boulevard, north of Ramona Expressway, east of Indian Avenue, within the City of Perris' *Perris Valley Commerce Center Specific Plan* (PVCC SP) as shown on Exhibit 1-1.

The purpose of this traffic analysis is to evaluate the potential deficiencies related to traffic and circulation system operations that may result from the development of the proposed Project, and to recommend improvements to mitigate potential deficiencies in order to achieve acceptable circulation system operational conditions. This report has been prepared in accordance with the approved Project Traffic Study Scoping agreement through consultation with City of Perris staff, which is provided in Appendix 1.1 of this report. The scoping agreement provides an outline of the Project study area, trip generation, trip distribution, and analysis methodology.

The PVCC SP Environmental Impact Report (EIR) concluded that the potential deficiencies related to level of service on study area roadways were less than significant. The PVCC SP EIR did not evaluate peak hour operations of any key study area intersections. (1)

1.1 SUMMARY OF FINDINGS

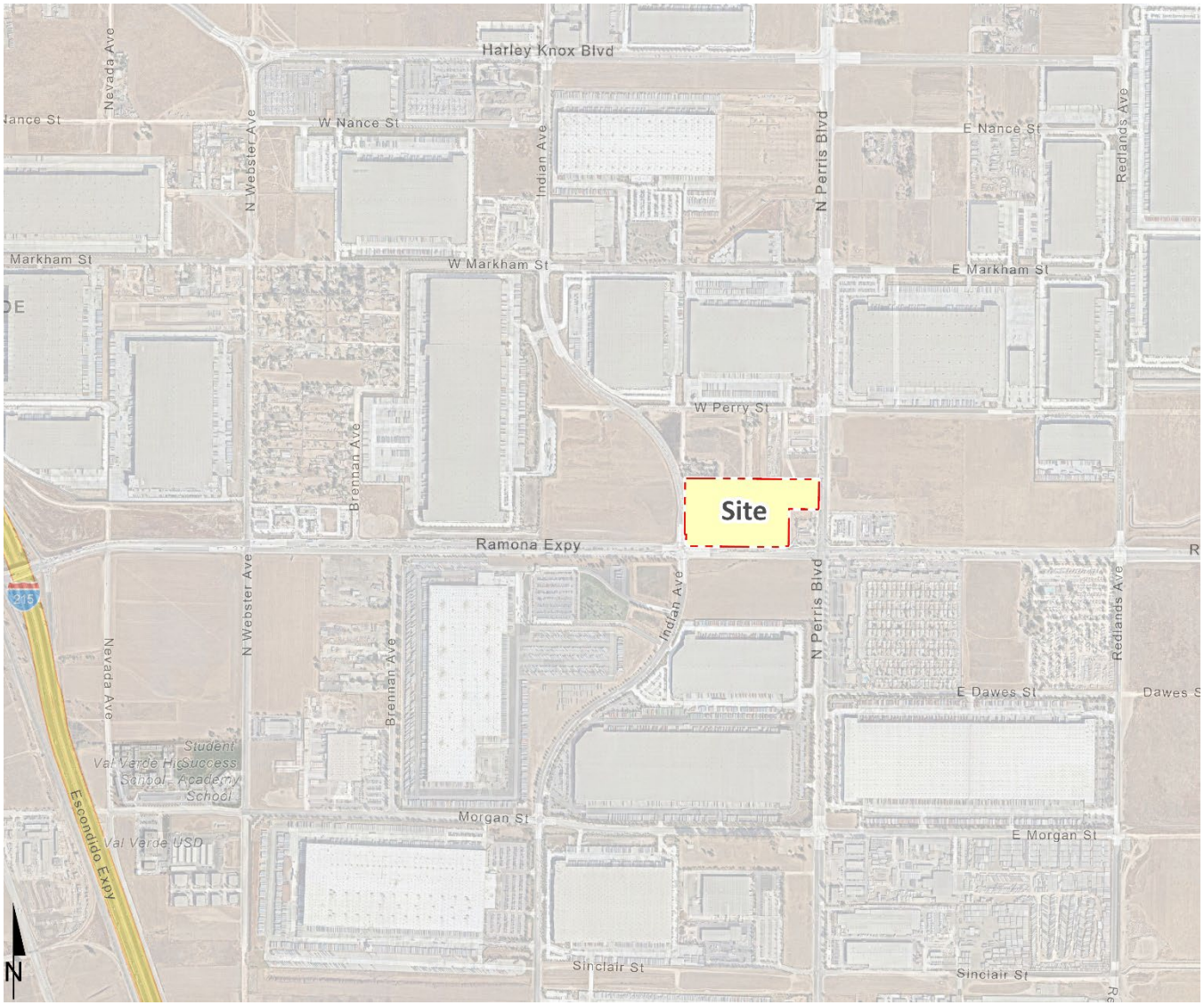
The Project is proposing to construct the following improvements as design features in conjunction with development of the site:

- Project to construct Driveway 1 on Indian Avenue for the westbound traffic, Driveway 2 on Ramona Expressway with stop controls for the southbound traffic, and Driveway 3 on Perris Boulevard with stop controls for the eastbound traffic in order to facilitate site access.

Additional details and intersection lane geometrics are provided in Section 1.7 *On-Site Roadway Improvements* and Section 1.8 *Site Access Improvements* of this report.

As provided in the City of Perris's VMT Scoping Form for Land Use Projects, the Project meets Local-Serving Land Use for the hotel component and Net Daily Trips less than 500 ADT for the warehousing component screening criteria. As such, the Project's VMT impact is less than significant; no additional VMT analysis is required as described in Section 1.11 *VMT Analysis* of this report.

EXHIBIT 1-1: LOCATION MAP



1.2 PROJECT OVERVIEW

The Project is proposed to consist of a 232,575 square foot (sf) multi-tenant warehouse building and a 125-room hotel. The warehouse building is anticipated to be constructed by the year 2023 and the hotel is anticipated to be constructed by the year 2025. The proposed Project land use is consistent with the PVCC SP, which is Light Industrial and Commercial. Vehicular and truck traffic access will be provided via the following driveways (see Exhibit 1-2):

- Indian Avenue & Driveway 1 – right-in/right-out/left-in access for both passenger cars and trucks
- Driveway 2 & Ramona Expressway – right-in/right-out access for passenger cars only
- Perris Boulevard & Driveway 3 – right-in/right-out access for passenger cars only

Regional access to the Project site is provided via the I-215 Freeway and Harley Knox Boulevard/Ramona Expressway/future Placentia Interchange (anticipated completion of the interchange per the Riverside County Transportation Commission or RCTC is 2022). Note there is no truck traffic permitted on Ramona Expressway within the City of Perris. As such, all project-related trucks are anticipated to utilize the Harley Knox Boulevard interchange to access the I-215 Freeway.

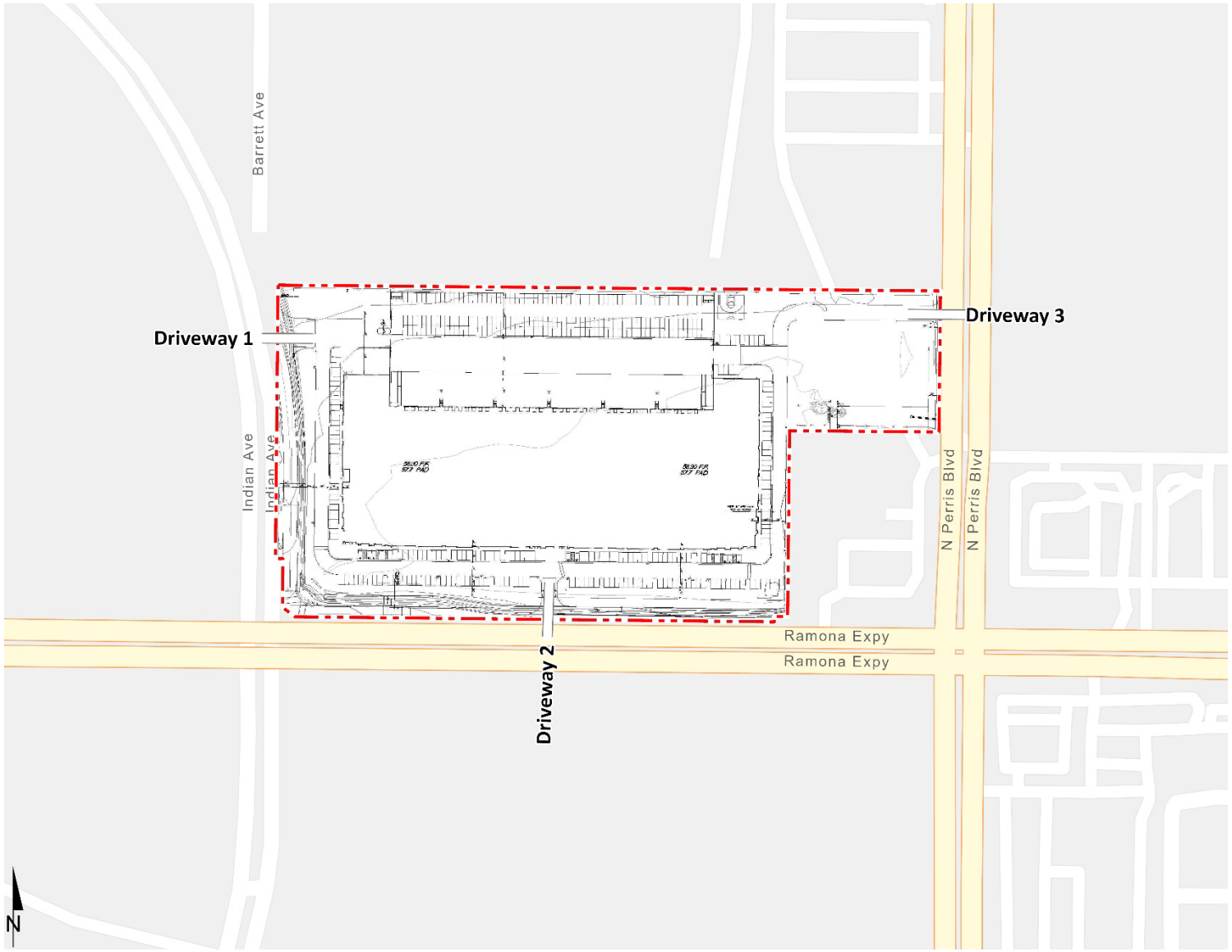
Trips generated by the Project's proposed land uses have been estimated based on trip generation rates collected by the Institute of Transportation Engineers (ITE) Trip Generation Manual, 10th Edition, 2017. (2) The Project is estimated to generate 1,402 two-way trip-ends per day on a typical weekday with approximately 96 AM peak hour trips and 116 PM peak hour trips (actual vehicles). The assumptions and methods used to estimate the Project's trip generation characteristics are discussed in greater detail in Section 4.1 *Project Trip Generation* of this report.

1.3 ANALYSIS SCENARIOS

For the purposes of this traffic study, potential deficiencies to traffic and circulation have been assessed for each of the following conditions:

- Existing (2021)
- Existing Plus Project (E+P)
- Existing Plus Ambient Growth Plus Cumulative Projects (EAC) (2023)
- Existing Plus Ambient Growth Plus Project Plus Cumulative Projects (EAPC) (2023)
- Existing Plus Ambient Growth Plus Cumulative Projects (EAC) (2025)
- Existing Plus Ambient Growth Plus Project Plus Cumulative Projects (EAPC) (2025)
- Horizon Year (2040) Without Project
- Horizon Year (2040) With Project

EXHIBIT 1-2: PRELIMINARY SITE PLAN



1.3.1 EXISTING (2021) CONDITIONS

Information for Existing (2021) conditions is disclosed to represent the baseline traffic conditions as they existed at the time this report was prepared. Traffic counts were conducted in March 2020, when local schools were in session and operating on a typical bell schedule (prior to closures related to the COVID-19 pandemic). Based on vehicle classification, vehicles converted to passenger-car-equivalent (PCE) due to the presence of heavy trucks within the study area.

1.3.2 EXISTING PLUS PROJECT CONDITIONS

The Existing Plus Project (E+P) analysis determines any significant traffic operation and circulation system deficiencies that would occur on the existing roadway system in the scenario of the Project being placed upon Existing conditions.

1.3.3 EXISTING PLUS AMBIENT GROWTH PLUS PROJECT PLUS CUMULATIVE (2023) CONDITIONS

To account for growth in traffic between Existing (2021) conditions and the Project Opening Year (2023), a traffic growth rate of 6.09% was assumed. The 3.0 percent annual growth rate (compounded annually) is intended to capture non-specific ambient traffic growth. Conservatively, the TA estimates of area traffic growth then add traffic generated by other known or probable related projects. These related projects are at least in part already accounted for in the assumed 6.09% total ambient growth in traffic noted above; and in some instances, these related projects would likely not be implemented and operational within the 2023 Opening Year time frame assumed for the Project. The resulting traffic growth rate utilized in the TA (6.09% ambient growth + traffic generated by related projects) would therefore tend to overstate rather than understate background cumulative traffic deficiencies under 2023 conditions.

1.3.4 EXISTING PLUS AMBIENT GROWTH PLUS PROJECT PLUS CUMULATIVE (2025) CONDITIONS

To account for growth in traffic between Existing (2021) conditions and the Project Opening Year (2025), a traffic growth rate of 12.55% was assumed. The 3.0 percent annual growth rate (compounded annually) is intended to capture non-specific ambient traffic growth. Conservatively, the TA estimates of area traffic growth then add traffic generated by other known or probable related projects. These related projects are at least in part already accounted for in the assumed 12.55% total ambient growth in traffic noted above; and in some instances, these related projects would likely not be implemented and operational within the 2025 Opening Year time frame assumed for the Project. The resulting traffic growth rate utilized in the TA (12.55% ambient growth + traffic generated by related projects) would therefore tend to overstate rather than understate background cumulative traffic deficiencies under 2025 conditions.

1.3.4 HORIZON YEAR (2040) CONDITIONS

Traffic projections for Horizon Year (2040) conditions were derived from the City of Perris Transportation Analysis Model (RivTAM) using accepted procedures for model forecast refinement and smoothing.

The Horizon Year conditions analyses will be utilized to determine if improvements funded through regional transportation mitigation fee programs, such as the Western Riverside Council of Governments (WRCOG) Transportation Uniform Mitigation Fee (TUMF) and Development Impact Fee (DIF) programs, can accommodate the long-range cumulative traffic at the target level of service (LOS) identified in the City of Perris (lead agency) General Plan. (3) Each of these regional transportation fee programs are discussed in more detail in Section 9 *Local and Regional Funding Mechanisms*.

1.4 STUDY AREA

To ensure that this TA satisfies the City of Perris' traffic study requirements, Urban Crossroads, Inc. prepared a Project traffic study scoping package for review by City of Perris staff prior to the preparation of this report.

1.4.1 INTERSECTIONS

The 6 study area intersections shown on Exhibit 1-3 and listed in Table 1-1 were selected for this TA based on the City's Traffic Study Guidelines and in consultation with City of Perris staff. The City requires analysis of intersections where the Project would contribute 50 or more peak hour trips. Based on the location of the Project site and the trip distribution patterns, the Project is anticipated to contribute more than 50 peak hour trips to all study area intersections and to the State Highway System. The Project trip generation, distribution, and volumes are further explained in Chapter 4 *Project Future Traffic* of this TA.

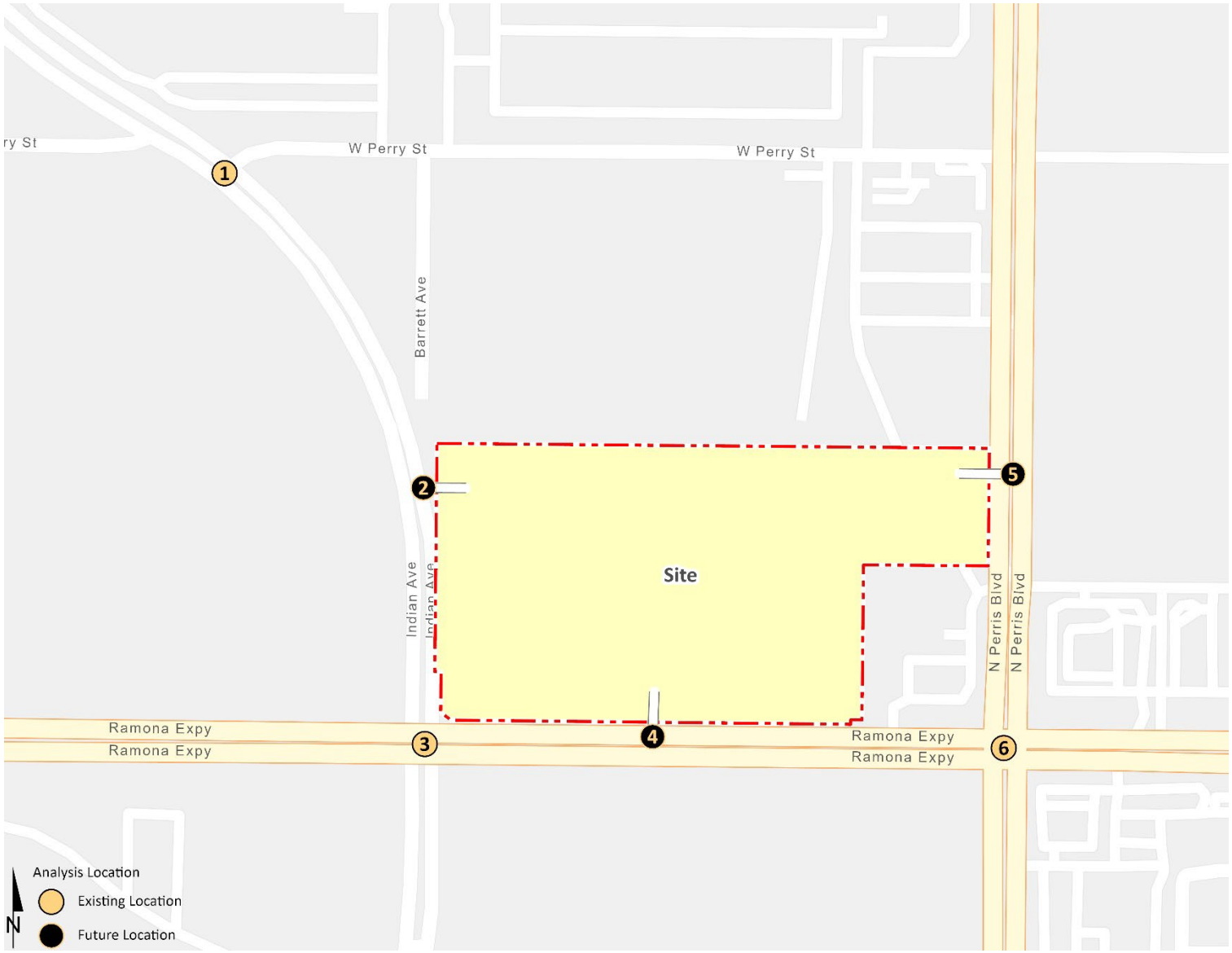
TABLE 1-1: INTERSECTION ANALYSIS LOCATIONS

ID	Intersection Location	Jurisdiction	CMP?
1	Indian Av. & Perry St.	City of Perris	No
2	Indian Av. & Driveway 1 – Future Intersection	City of Perris	No
3	Indian Av. & Ramona Exwy.	City of Perris	No
4	Driveway 2 & Ramona Exwy. – Future Intersection	City of Perris	No
5	Perris Bl. & Driveway 3 – Future Intersection	City of Perris	No
6	Perris Bl. & Ramona Exwy.	City of Perris	No

* Note: CMP = Congestion Management Program

The intent of a Congestion Management Program (CMP) is to more directly link land use, transportation, and air quality, thereby prompting reasonable growth management programs that will effectively utilize new transportation funds, alleviate traffic congestion and related deficiencies, and improve air quality. Counties within California have developed CMPs with varying methods and strategies to meet the intent of the CMP legislation. None of the study area intersections are identified as CMP facilities in the County of Riverside CMP. (4)

EXHIBIT 1-3: STUDY AREA



1.5 DEFICIENCIES

This section provides a summary of deficiencies by analysis scenario. Section 2 *Methodologies* provides information on the methodologies used in the analysis and Section 6 *EAPC (2023) Traffic Conditions* includes the detailed analysis. A summary of LOS results for all analysis scenarios is presented on Table 1-2.

1.5.1 E+P CONDITIONS

Consistent with Existing (2021) traffic conditions, no study area intersections are anticipated to operate at a deficient LOS (i.e., LOS E or worse) for E+P traffic conditions.

1.5.2 EAPC (2023) CONDITIONS

Consistent with Background (2023) traffic conditions, the following study area intersection is anticipated to operate at a deficient LOS (i.e., LOS E or worse) for Background (2023) traffic conditions:

- Indian Av. & Ramona Exwy. (#3) – LOS F PM peak hour only
- Perris Bl. & Ramona Exwy. (#6) – LOS F AM and PM peak hours

The Project contributes to these cumulative deficiencies and the deficiencies are considered indirect.

1.5.3 EAPC (2025) CONDITIONS

Consistent with Background (2025) traffic conditions, the following study area intersection is anticipated to operate at a deficient LOS (i.e., LOS E or worse) for Background (2025) traffic conditions:

- Indian Av. & Ramona Exwy. (#3) – LOS F AM and PM peak hours
- Perris Bl. & Ramona Exwy. (#6) – LOS F AM and PM peak hours

The Project contributes to these cumulative deficiencies and the deficiencies are considered indirect.

1.5.4 HORIZON YEAR (2040) CONDITIONS

Consistent with Long-Range (2040) traffic conditions, the following study area intersection is anticipated to operate at a deficient LOS (i.e., LOS E or worse) for Long-Range (2040) traffic conditions:

- Indian Av. & Perry St. (#1) – LOS E PM peak hour only

The Project contributes to this cumulative deficiency and the deficiency is considered indirect.

During Long-Range (2040) traffic conditions, vehicles will utilize Mid-County Parkway which will reduce the traffic volumes along Ramona Expressway. As such, the peak hour intersection operations at various locations along Ramona Expressway may improve in comparison to EAPC (2023 or 2025) traffic conditions.

1.6 RECOMMENDATIONS

This section provides a summary of deficiencies and recommended improvements. Section 2 *Methodologies* provides information on the methodologies used in the analyses and Section 5 *E+P Traffic Analysis*, Section 6 *EAC and EAPC (2023) Traffic Analysis*, Section 7 *EAC and EAPC (2023) Traffic Analysis,* and Section 8 *Horizon Year (2040) Traffic Analysis* include the detailed analyses. The same study area intersection deficiencies occur without and with Project traffic for all analysis scenarios (see Table 1-2). As such, there are no direct project-related deficiencies, however, the Project would cumulatively contribute to each of the deficiencies identified on Table 1-2. Each project implementing the PVCC SP is required to incorporate applicable mitigation from the PVCC Specific Plan EIR. The relevant traffic mitigation measures from the PVCC Specific Plan EIR are identified in Section 1.5.1.

TABLE 1-2: SUMMARY OF LOS BY ANALYSIS SCENARIO

		Existing		E+P		EAC 2023		EAPC 2023		EAC 2025		EAPC 2025		2040 Without Project		2040 With Project	
#	Intersection	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
1	Indian Av. & Perry St.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
2	Indian Av. & Driveway 1	N/A	N/A	●	●	N/A	N/A	●	●	N/A	N/A	●	●	N/A	N/A	●	●
3	Indian Av. & Ramona Exwy.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
4	Driveway 2 & Ramona Exwy.	N/A	N/A	●	●	N/A	N/A	●	●	N/A	N/A	●	●	N/A	N/A	●	●
5	Perris Bl. & Driveway 3	N/A	N/A	●	●	N/A	N/A	●	●	N/A	N/A	●	●	N/A	N/A	●	●
6	Perris Bl. & Ramona Exwy.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●

● = A - D ● = E ● = F

1.6.1 PVCC SPECIFIC PLAN EIR TRAFFIC MITIGATION MEASURES

MM Trans 1 Future implementing development projects shall construct on-site roadway improvements pursuant to the general alignments and right-of-way sections set forth in the PVCC Circulation Plan, except where said improvements have previously been constructed.

MM Trans 2 Sight distance at the project entrance roadway of each implementing development project shall be reviewed with respect to standard City of Perris sight distance standards at the time of preparation of final grading, landscape and street improvement plans.

MM Trans 3 Each implementing development project shall participate in the phased construction of off-site traffic signals through payment of that project's fair share of traffic signal mitigation fees and the cost of other off-site improvements through payment of fair share mitigation fees which include TUMF (Transportation Uniform Mitigation Fee), DIF (Development Impact Fee), and the NPRBBD (North Perris Road and Bridge Benefit District). The fees shall be collected and utilized as needed by the City of Perris to construct the improvements necessary to maintain the required level of service and build or improve roads to their build-out level.

MM Trans 4 Prior to the approval of individual implementing development projects, the Riverside Transit Agency (RTA) shall be contacted to determine if the RTA has plans for the future provision of bus routing in the project area that would require bus stops at the project access points. If the RTA has future plans for the establishment of a bus route that will serve the project area, road improvements adjacent to the project site shall be designed to accommodate future bus turnouts at locations established through consultation with the RTA. RTA shall be responsible for the construction and maintenance of the bus stop facilities. The area set aside for bus turnouts shall conform to RTA design standards, including the design of the contact between sidewalk and curb and gutter at bus stops and the use of ADA-compliant paths to the major building entrances in the project.

MM Trans 5 Bike racks shall be installed in all parking lots in compliance with City of Perris standards.

MM Trans 6 Each implementing development project that is located adjacent to the MWD Trail shall coordinate with the City of Perris Parks and Recreation Department to determine the development plan for the trail.

MM Trans 7 Implementing project-level traffic studies shall be required for all subsequent implementing development proposals within the boundaries of the PVCC as approved by the City of Perris Engineering Department. These subsequent traffic studies shall identify specific project deficiencies and needed roadway improvements to be constructed in conjunction with each implementing development project. All intersection spacing for individual tracts or maps shall conform to the minimum City intersection spacing standards. All turn pocket lengths shall conform at least to the minimum City turn pocket length standards. If any of the proposed improvements are found to be infeasible, the implementing development project applicant would be required to provide alternative feasible improvements to achieve levels of service satisfactory to the City.

MM Trans 8 Proposed mitigation measures resulting from project-level traffic studies shall be coordinated with the North Perris Road and Bridge Benefit District (NPRBBD) to ensure that they are in conformance with the ultimate improvements planned by the NPRBBD. The applicant shall be eligible to receive proportional credits against the NPRBBD for construction of project level mitigation that is included in the NPRBBD.

1.6.2 CIRCULATION SYSTEM DEFICIENCIES AND RECOMMENDED IMPROVEMENTS

A summary of the operationally deficient study area intersections and recommended improvements required to achieve acceptable circulation system performance are described in detail within Section 3 *Area Conditions*, Section 5 *E+P Traffic Conditions*, Section 6 *EAC and EAPC (2023) Traffic Conditions*, Section 7 *EAC and EAPC (2025) Traffic Analysis*, and Section 8 *Horizon Year (2040) Traffic Conditions* of this report.

A summary of off-site improvements needed to address intersection operational deficiencies for each analysis scenario is included in Table 1-3. These recommended improvements are consistent with or less than the geometrics assumed in the City of Perris and County of Riverside General Plan Circulation Elements. Improvements found to be included in the Western Riverside Council of Governments (WRCOG) Transportation Uniform Mitigation Fee (TUMF) program, City of Perris's (lead agency) Development Impact Fee (DIF) program, or North Perris Road and Bridge Benefit District (NPRBBD) have been identified as such. The NPRBBD includes additional improvements to supplement the TUMF and DIF network. NPRBBD fees are inclusive of TUMF and DIF.

TABLE 1-3: SUMMARY OF IMPROVEMENTS BY ANALYSIS SCENARIO

#	Intersection Location	Jurisdiction	Recommended Improvements				Improvements in DIF, TUMF, NPRBBD, etc.[1,2]	Project Responsibility	Project Fair Share[3]
			E+P	EAPC (2023)	EAPC (2025)	Horizon Year (2040) With Project			
1	Indian Av. & Perry St.	City of Perris	- None	- None	- None	- Install a traffic signal	No	Fair Share	11.6%
3	Indian Av. & Ramona Exwy.	City of Perris	- None	- Add a 2nd EB left turn lane	- Same	- Same	No	Fair Share	5.1%
6	Perris Bl. & Ramona Exwy.	City of Perris	- None	- Restripe the NB right turn lane as a shared through-right turn lane - Restripe the SB right turn lane as a shared through-right turn lane	- Same - Same	- Same - Same	No No	Fair Share Fair Share	3.0%

[1] Improvements included in TUMF Nexus, NPRBBD, or City of Perris DIF programs have been identified as such.

[2] Program improvements constructed by Project may be eligible for fee credit. In lieu fee payment is at discretion of City. Represents the fair share percentage for the Project during the most impacted peak hour.

[3] Total project fair share contribution consists of the improvements which are not already included in the City-wide DIF/NPRBBD/County TUMF for those intersections wholly or partially within the City of Perris.

1.7 ON-SITE ROADWAY IMPROVEMENTS

The recommended site-adjacent roadway improvements for the Project are described below. Exhibit 1-4 illustrates the site access recommendations.

Ramona Expressway – Ramona Expressway is an east-west oriented roadway located along the Project's northern boundary. Ramona Expressway is currently constructed at its ultimate half-section pavement width as an Expressway (184-foot right-of-way) between the western and eastern boundaries consistent with the PVCC SP and the City of Perris General Plan Circulation Element.

Indian Avenue – Indian Avenue is a north-south oriented roadway located along the Project's western boundary. Indian Avenue is currently constructed at its ultimate half-section pavement width as a Secondary (94-foot right-of-way) between the Project's northern and southern boundaries consistent with the PVCC SP and the City of Perris General Plan Circulation Element. At the City's request, a conceptual striping plan for Indian Avenue is shown on Exhibit 1-5.

Perris Boulevard – Perris Boulevard is a north-south oriented roadway located along the Project's eastern boundary. Perris Boulevard is currently constructed at its ultimate half-section pavement width as an Arterial (128-foot right-of-way) between the northern and southern boundaries consistent with the PVCC SP and the City of Perris General Plan Circulation Element.

Wherever necessary, roadways adjacent to the Project, site access points and site-adjacent intersections will be constructed to be consistent with the identified roadway classifications and respective cross-sections in the PVCC Specific Plan or City of Perris General Plan Circulation Element.

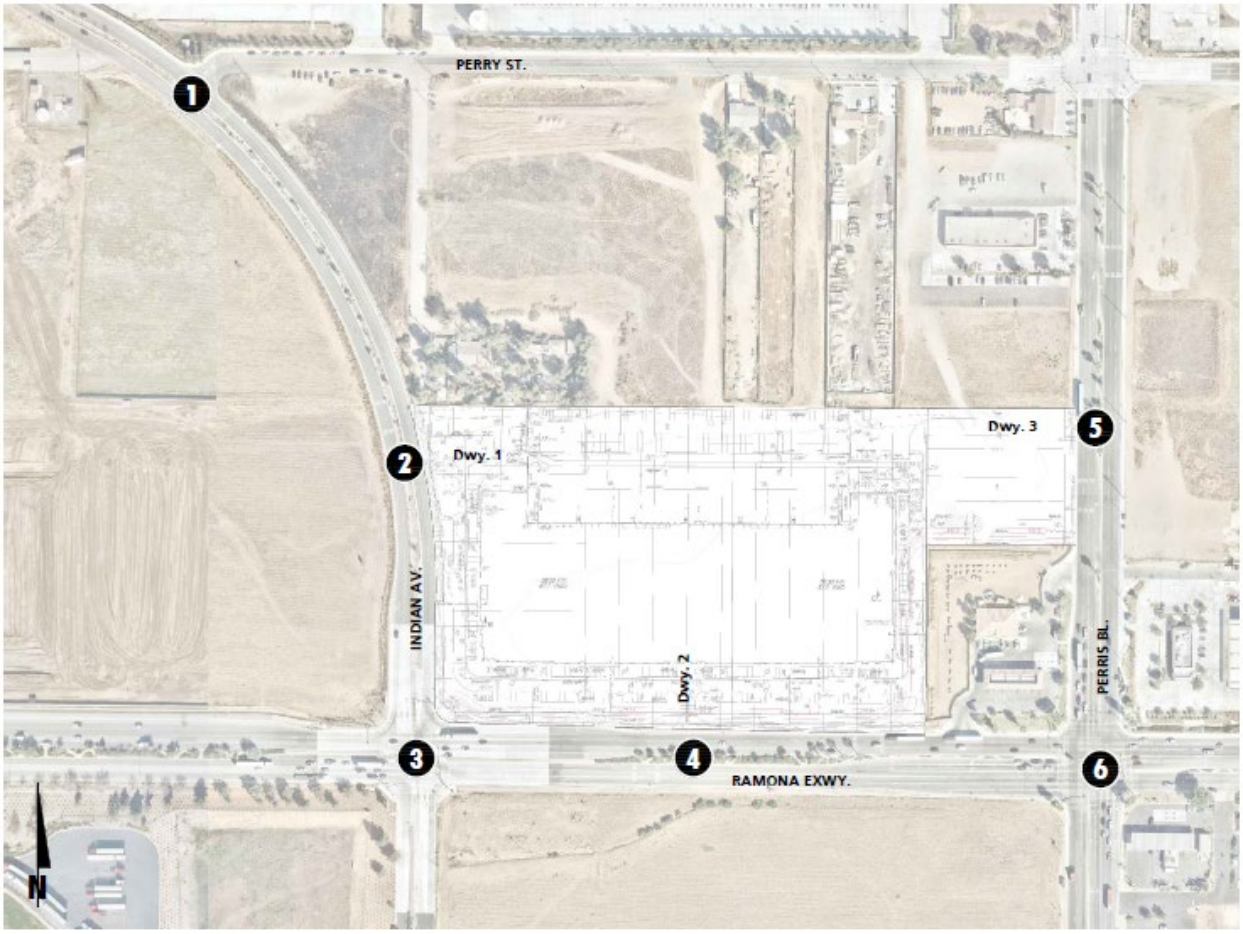
1.8 SITE ACCESS IMPROVEMENTS

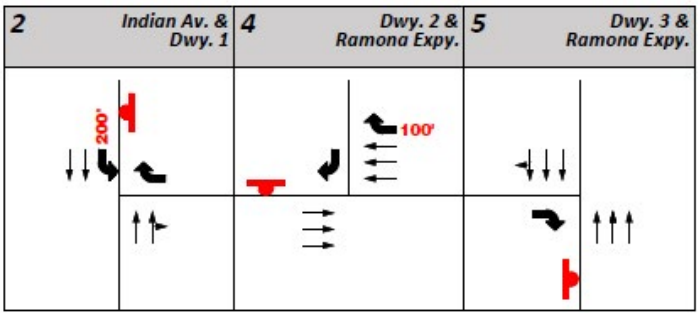
The recommended site access driveway improvements for the Project are described below. Exhibit 1-4 also illustrates the site access improvements. Construction of on-site and site adjacent improvements shall occur in conjunction with adjacent Project development activity or as needed for Project access purposes.

Indian Avenue & Driveway 1 – Install a stop control on the westbound approach and construct the intersection with the following geometrics:

- Northbound Approach: One through lane and one shared through-right turn lane.
- Southbound Approach: One left turn lane with a minimum of 200-feet of storage and two through lanes.
- Eastbound Approach: Not Applicable (N/A)
- Westbound Approach (Project Driveway 1): One right turn only lane.
- Due to the low traffic volumes making right turns into the driveway, a right turn deceleration lane is not required for traffic operations.

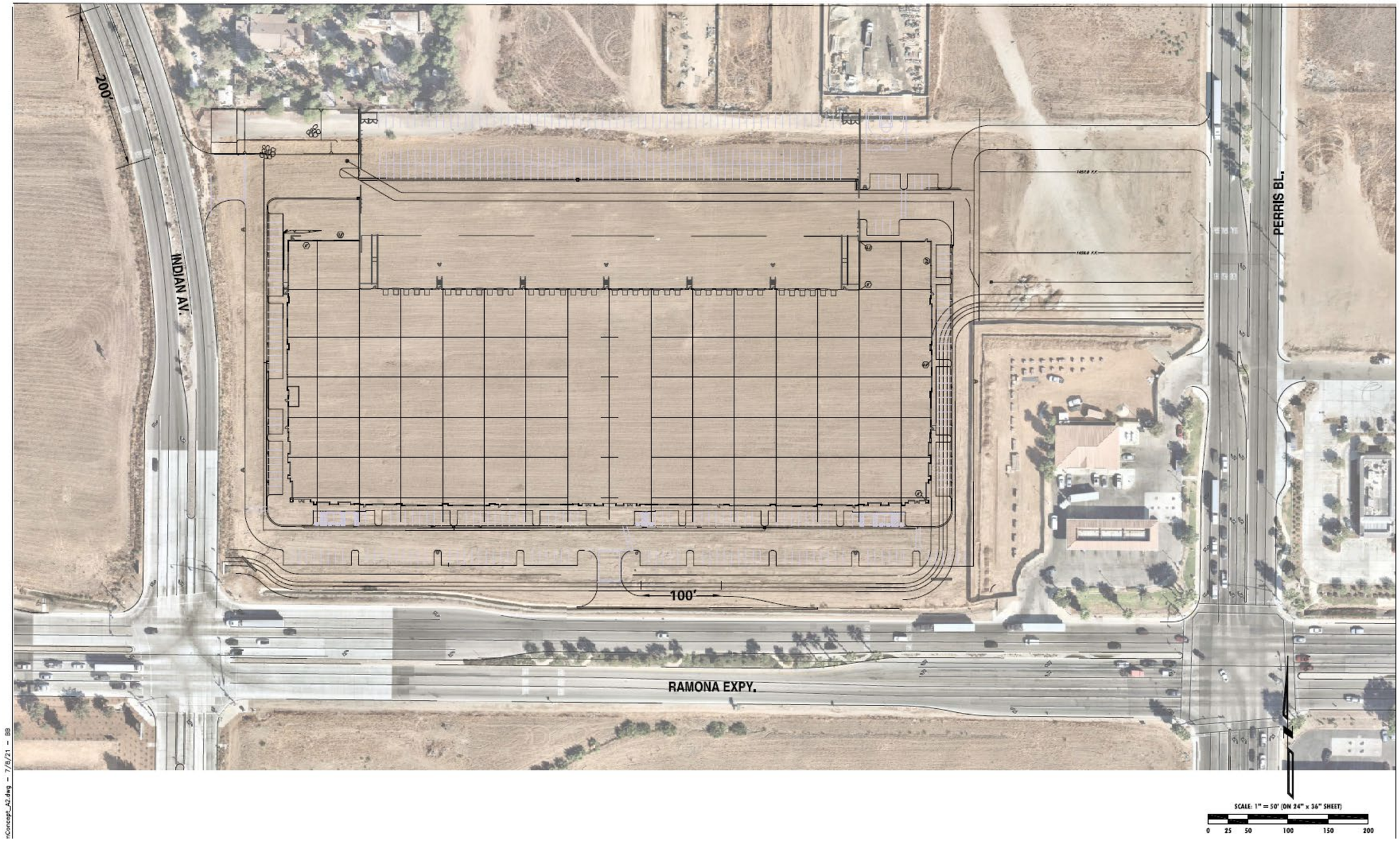
EXHIBIT 1-4: SITE ACCESS RECOMMENDATIONS





= Stop Sign Improvement
= Existing Lane
= Lane Improvement
100' = Recommended Turn Pocket Length

EXHIBIT 1-5: CONCEPT STRIPING WITH TRUCK TEMPLATES



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Driveway 2 & Ramona Expressway – Install a stop control on the southbound approach and construct the intersection with the following geometrics:

- Northbound Approach: N/A
- Southbound Approach (Project Driveway 2): One right turn only lane.
- Eastbound Approach: Three through lanes.
- Westbound Approach: Three through lanes and one right turn only lane with a minimum of 100-feet of storage.

Perris Boulevard & Driveway 3 – Install a stop control on the eastbound approach and construct the intersection with the following geometrics:

- Northbound Approach: Three through lanes.
- Southbound Approach: Two through lanes and one shared through-right turn lane.
- Eastbound Approach (Project Driveway 3): One right turn only lane.
- Westbound Approach: N/A
- Due to the low traffic volumes making right turns into the driveway, a right turn deceleration lane is not required for traffic operations.

Wherever necessary, roadways adjacent to the Project, site access points and site-adjacent intersections will be constructed to be consistent with the identified roadway classifications and respective cross-sections in the PVCC Specific Plan or City of Perris General Plan Circulation Element.

On-site traffic signing and striping should be implemented agreeable with the provisions of the California Manual on Uniform Traffic Control Devices (CA MUTCD) and in conjunction with detailed construction plans for the Project site.

Sight distance at each project access point should be reviewed with respect to standard City of Perris/County of Riverside sight distance standards at the time of preparation of final grading, landscape and street improvement plans.

1.9 QUEUING ANALYSIS AT THE PROJECT DRIVEWAYS

A queuing analysis was conducted along the site adjacent roadways of Indian Avenue, Ramona Expressway, and Perris Boulevard for Horizon Year (2040) With Project traffic conditions to determine the 95th percentile queues. The analysis was conducted for the weekday AM and weekday PM peak hours. The traffic modeling and signal timing optimization software package Synchro/SimTraffic (Version 11) has been utilized to assess queues at the Project access points. Synchro is a macroscopic traffic software program that is based on the signalized and unsignalized intersection capacity analyses as specified in the HCM. SimTraffic is designed to model networks of signalized and unsignalized intersections, with the primary purpose of checking and fine-tuning signal operations. SimTraffic uses the input parameters from Synchro to generate random simulations. The 95th percentile queue is not necessarily ever observed; it is simply based on statistical calculations (or Average Queue plus 1.65 standard deviations). Many

jurisdictions utilize the 95th percentile queues for design purposes. SimTraffic simulations have been recorded 5 times, during the weekday AM and weekday PM peak hours, and has been seeded for 30-minute periods with 60-minute recording intervals. Queuing results are provided in Appendix 1.2. Based on the 95th percentile queues under Horizon Year (2040) With Project traffic conditions, no driveway blockages are anticipated along Indian Avenue, Ramona Expressway, and Perris Boulevard during the peak hours. The queuing analysis results were utilized to determine the minimum left turn pocket storage at Driveway 1 on Indian Avenue and the right turn pocket storage at Driveway 2 in Ramona Expressway.

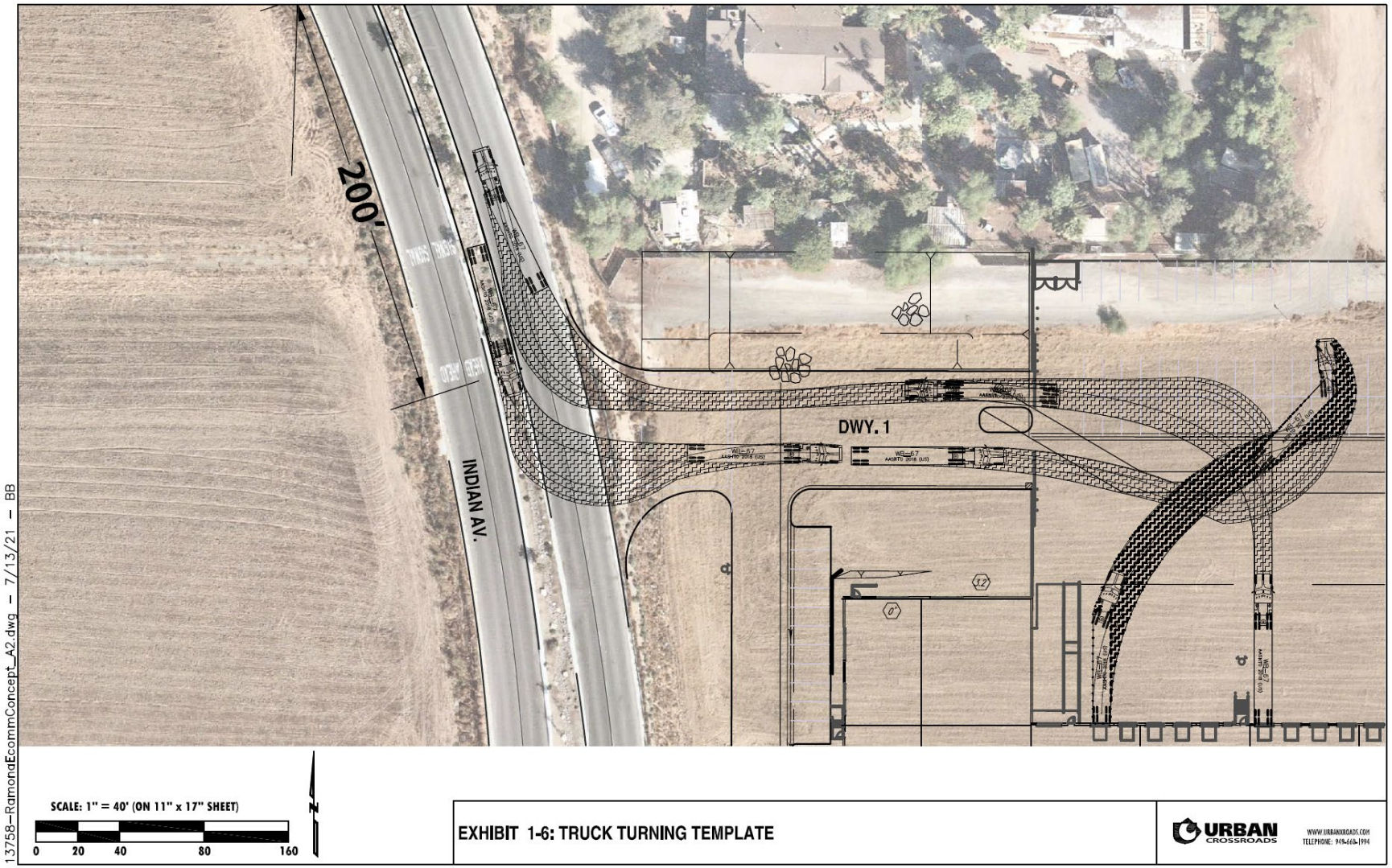
1.10 TRUCK ACCESS

Due to the typical wide turning radius of large trucks, a truck turning template has been overlaid on the site plan at the Project driveways in order to determine appropriate curb radii and to verify that trucks will have sufficient space to execute turning maneuvers (see Exhibit 1-6). Only driveways that are to be utilized by heavy trucks have been evaluated. As shown on Exhibit 1-6, the Project driveways will be able to accommodate the wide turning radius of heavy trucks (WB-67, which has a 53-foot trailer).

1.11 VMT ANALYSIS

The City of Perris adopted Transportation Impact Analysis Guidelines for CEQA (City Guidelines). (5) The City Guidelines include VMT thresholds that were recently reviewed and adopted by City Council on May 12, 2020. The VMT Scoping Form for Land Use Projects, provided by the City of Perris, has been completed and reviewed for accuracy. As shown in Appendix 1.1, the Project meets Local-Serving Land Use for the hotel component and Net Daily Trips less than 500 ADT for the warehousing component screening criteria. As such, the Project's VMT impact is less than significant; no additional VMT analysis is required.

EXHIBIT 1-6: TRUCK TURNING TEMPLATES



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2 METHODOLOGIES

This section of the report presents the methodologies used to perform the traffic analyses summarized in this report. The methodologies described are generally consistent with City of Perris traffic study guidelines.

2.1 LEVEL OF SERVICE

Traffic operations of roadway facilities are described using the term "Level of Service" (LOS). LOS is a qualitative description of traffic flow based on several factors such as speed, travel time, delay, and freedom to maneuver. Six levels are typically defined ranging from LOS A, representing completely free-flow conditions, to LOS F, representing breakdown in flow resulting in stop-and-go conditions. LOS E represents operations at or near capacity, an unstable level where vehicles are operating with the minimum spacing for maintaining uniform flow.

2.2 INTERSECTION CAPACITY ANALYSIS

The definitions of LOS for interrupted traffic flow (flow restrained by the existence of traffic signals and other traffic control devices) differ slightly depending on the type of traffic control. The LOS is typically dependent on the quality of traffic flow at the intersections along a roadway. The Highway Capacity Manual (HCM) methodology expresses the LOS at an intersection in terms of delay time for the various intersection approaches. (6) The HCM uses different procedures depending on the type of intersection control.

2.2.1 SIGNALIZED INTERSECTIONS

The City of Perris requires signalized intersection operations analysis based on the methodology described in the HCM. (6) Intersection LOS operations are based on an intersection's average control delay. Control delay includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. For signalized intersections, LOS is directly related to the average control delay per vehicle and is correlated to a LOS designation as described in Table 2-1. Study area intersections have been evaluated using the Synchro (Version 11) analysis software package.

Synchro is a macroscopic traffic software program that is based on the signalized intersection capacity analysis as specified in the HCM. Macroscopic level models represent traffic in terms of aggregate measures for each movement at the study intersections. Equations are used to determine measures of effectiveness such as delay and queue length. The level of service and capacity analysis performed by Synchro takes into consideration optimization and coordination of signalized intersections within a network.

TABLE 2-1: SIGNALIZED INTERSECTION LOS THRESHOLDS

Description	Average Control Delay (Seconds), V/C ≤ 1.0	Level of Service, V/C ≤ 1.0	Level of Service, V/C > 1.0
Operations with very low delay occurring with favorable progression and/or short cycle length.	0 to 10.00	A	F
Operations with low delay occurring with good progression and/or short cycle lengths.	10.01 to 20.00	B	F
Operations with average delays resulting from fair progression and/or longer cycle lengths. Individual cycle failures begin to appear.	20.01 to 35.00	C	F
Operations with longer delays due to a combination of unfavorable progression, long cycle lengths, or high V/C ratios. Many vehicles stop and individual cycle failures are noticeable.	35.01 to 55.00	D	F
Operations with high delay values indicating poor progression, long cycle lengths, and high V/C ratios. Individual cycle failures are frequent occurrences. This is considered to be the limit of acceptable delay.	55.01 to 80.00	E	F
Operation with delays unacceptable to most drivers occurring due to over saturation, poor progression, or very long cycle lengths	80.01 and up	F	F

Source: HCM, 6th Edition

The peak hour traffic volumes have been adjusted using a peak hour factor (PHF) to reflect peak 15-minute volumes. Common practice for LOS analysis is to use a peak 15-minute rate of flow. However, flow rates are typically expressed in vehicles per hour. The PHF is the relationship between the peak 15-minute flow rate and the full hourly volume (e.g. PHF = [Hourly Volume] / [4 x Peak 15-minute Flow Rate]). The use of a 15-minute PHF produces a more detailed analysis as compared to analyzing vehicles per hour. Existing PHFs have been used for Existing (2021) baseline, E+P, EAC (2023), EAPC (2023), EAPC (2025), and Horizon Year (2040) traffic conditions.

2.2.2 UNSIGNALIZED INTERSECTIONS

The City of Perris requires the operations of unsignalized intersections be evaluated using the methodology described the HCM. (6) The LOS rating is based on the weighted average control delay expressed in seconds per vehicle (see Table 2-2).

TABLE 2-2: UNSIGNALIZED INTERSECTION LOS THRESHOLDS

Description	Average Control Delay Per Vehicle (Seconds)	Level of Service, V/C ≤ 1.0	Level of Service, V/C > 1.0
Little or no delays.	0 to 10.00	A	F
Short traffic delays.	10.01 to 15.00	B	F
Average traffic delays.	15.01 to 25.00	C	F
Long traffic delays.	25.01 to 35.00	D	F
Very long traffic delays.	35.01 to 50.00	E	F
Extreme traffic delays with intersection capacity exceeded.	> 50.00	F	F

Source: HCM, 6th Edition

At two-way or side-street stop-controlled intersections, LOS is calculated for each controlled movement and for the left turn movement from the major street, as well as for the intersection as a whole. For approaches composed of a single lane, the delay is computed as the average of all movements in that lane. The "worst case" movement delay and LOS is reported for the intersection. For all-way stop controlled intersections, LOS is computed for the intersection as a whole.

2.3 TRAFFIC SIGNAL WARRANT ANALYSIS METHODOLOGY

The term "signal warrants" refers to the list of established criteria used by the Caltrans and other public agencies to quantitatively justify or ascertain the potential need for installation of a traffic signal at an otherwise unsignalized intersection. This TA uses the signal warrant criteria presented in the latest edition of the California Department of Transportation (Caltrans) California Manual on Uniform Traffic Control Devices *(CA MUTCD)* for all study area intersections. (7)

The signal warrant criteria for Existing conditions are based upon several factors, including volume of vehicular and pedestrian traffic, frequency of accidents, and location of school areas. The Caltrans CA MUTCD indicates that the installation of a traffic signal should be considered if one or more of the signal warrants are met. (7) Specifically, this TA utilizes the Peak Hour Volume-based Warrant 3 as the appropriate representative traffic signal warrant analysis for existing study area intersections for all analysis scenarios. Warrant 3 is appropriate to use for this TA because it provides specialized warrant criteria for intersections with rural characteristics (e.g. located in communities with populations of less than 10,000 persons or with adjacent major streets operating above 40 miles per hour). For the purposes of this study, the speed limit was the basis for determining whether Urban or Rural warrants were used for a given intersection.

Future intersections that do not currently exist have been assessed regarding the potential need for new traffic signals based on future average daily traffic (ADT) volumes, using the Caltrans planning level ADT-based signal warrant analysis worksheets. Traffic signal warrant analyses were performed for the following study area intersection shown in Table 2-3:

TABLE 2-3: TRAFFIC SIGNAL WARRANT ANALYSIS LOCATIONS

ID	Intersection Location	Jurisdiction
1	Indian Av. & Perry St. – Cumulative Conditions Only	City of Perris

Traffic signal warrant analyses were performed for all of the full access unsignalized study area intersections. The traffic signal warrant analyses for future conditions are presented in Section 6 *EAC and EAPC (2023) Traffic Analysis, Section 7 EAC and EAPC (2025) Traffic Analysis, and* Section 8 *Horizon Year (2040) Traffic Analysis* of this report.

It is important to note that a signal warrant defines the minimum condition under which the installation of a traffic signal might be warranted. Meeting this threshold condition does not require that a traffic control signal be installed at a particular location, but rather, that other traffic factors and conditions be evaluated in order to determine whether the signal is truly justified. It should also be noted that signal warrants do not necessarily correlate with LOS. An intersection may satisfy a signal warrant condition and operate at or above acceptable LOS or operate below acceptable LOS and not meet a signal warrant.

2.4 MINIMUM LEVEL OF SERVICE (LOS)

The definition of an intersection deficiency has been obtained from the City of Perris' General Plan. LOS D along all City maintained roads (including intersections) and LOS D along I-215 and SR-74 (including intersections with local streets and roads). An exception to the local road standard is LOS E, at intersections of any Arterials and Expressways with SR-74, the Ramona-Cajalco Expressway, or at I-215 Freeway ramps. (8)

LOS E may be allowed within the boundaries of the Downtown Specific Plan Area to the extent that it would support transit-oriented development and walkable communities. Increased congestion in this area will facilitate an increase in transit ridership and encourage development of a complementary mix of land uses within a comfortable walking distance from light rail stations.

2.5 DEFICIENCY CRITERIA

This section outlines the methodology used in this analysis related to identifying circulation system deficiencies. The following deficiency criteria has been utilized for the City of Perris. To determine whether the addition of project-related traffic at a study intersection would result in a deficiency, the following will be utilized:

- A project-related deficiency is considered direct and significant when a study intersection operates at an acceptable LOS for existing conditions (without the project) and the addition of 50 or more AM or PM peak hour project trips causes the intersection to operate at an unacceptable LOS for existing plus project (E+P) traffic conditions.
- A project-related deficiency is considered direct and significant when a study intersection operates at an unacceptable LOS for existing conditions (without the project) and the addition of 50 or more AM or PM peak hour project trips causes the intersection delay to increase by 2 seconds or more.

- A cumulative deficiency is considered significant when a study intersection is forecast to operate at an unacceptable LOS with the addition of cumulative/background traffic and 50 or more AM or PM peak hour project trips.

2.6 PROJECT FAIR SHARE CALCULATION METHODOLOGY

Improvements found to be included in the NPRBBD (which are inclusive of TUMF and DIF), will be identified as such. For improvements that do not appear to be in either of the pre-existing fee programs, a fair share financial contribution based on the Project's proportional share may be imposed in order to mitigate the Project's share of deficiencies in lieu of construction. It should be noted that fair share calculations are for informational purposes only and the City Engineer will determine the appropriate improvements to be implemented by a project (to be identified in the conditions of approval).

If the intersection is currently operating at acceptable LOS under Existing traffic conditions, the Project's fair share cost of improvements would be determined based on the following equation, which is the ratio of Project traffic to new traffic, where new traffic is total future traffic less existing baseline traffic:

Project Fair Share % = Project Traffic / (Total Traffic – Existing Traffic)

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3 AREA CONDITIONS

This section provides a summary of the existing circulation network, the City of Perris General Plan Circulation Network, and a review of existing peak hour intersection operations and traffic signal warrant analyses.

3.1 EXISTING CIRCULATION NETWORK

Pursuant to the scoping agreement with City of Perris staff (Appendix 1.1), the study area includes a total of 6 existing and future intersections as shown previously on Exhibit 1-2. Exhibit 3-1 illustrates the study area intersections located near the proposed Project and identifies the number of through traffic lanes for existing roadways and intersection traffic controls.

3.2 GENERAL PLAN CIRCULATION ELEMENTS

As noted previously, the Project site is located within PVCC SP in the City of Perris. Exhibit 3-2 shows the City of Perris General Plan Circulation Element, and Exhibit 3-3 illustrates the City of Perris General Plan roadway cross-sections. Exhibit 3-4 illustrates the PVCC SP Circulation Plan and Exhibit 3-5 shows the corresponding PVCC SP roadway cross-sections.

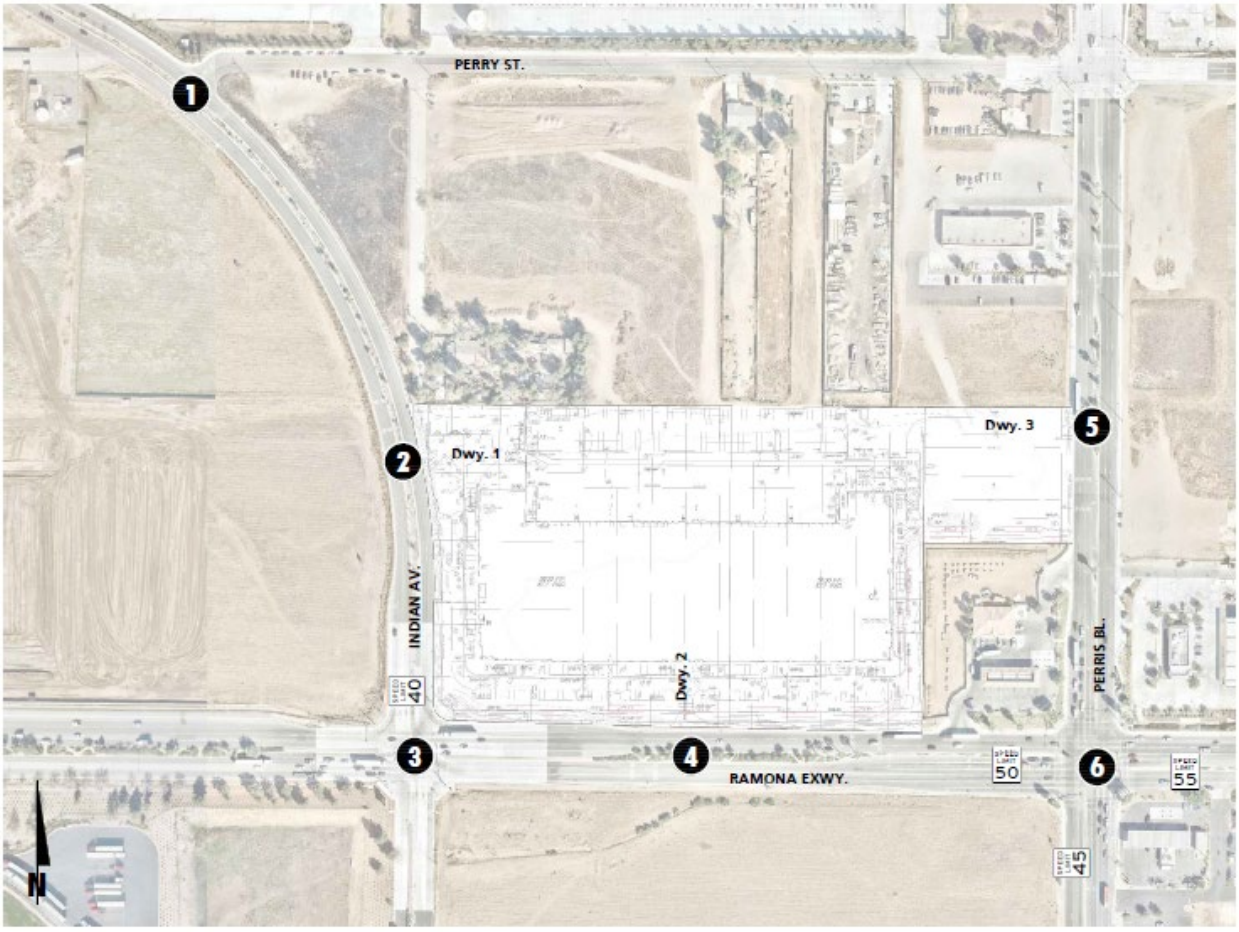
3.3 TRUCK ROUTES

The City of Perris designated truck route map is shown on Exhibit 3-6. Indian Avenue is identified as a designated truck route. The PVCC SP truck route plan is shown on Exhibit 3-7. The truck routes identified within the study area on Exhibit 3-7 are consistent with those identified on Exhibit 3-6. These designated truck route maps have been utilized to route truck traffic from the Project and future cumulative development projects throughout the study area.

3.4 TRANSIT SERVICE

Mass transit routes within the PVCC SP are shown on Exhibit 3-8. Exhibit 3-8 also shows existing routes along Indian Avenue and Ramona Expressway. The study area is currently served by the Riverside Transit Authority (RTA), a public transit agency serving the Riverside County region. RTA currently serves the study area via Route 19 and 41, which could potentially serve the proposed Project. Transit service is reviewed and updated by RTA periodically to address ridership, budget and community demand needs. Changes in land use can affect these periodic adjustments which may lead to either enhanced or reduced service where appropriate.

EXHIBIT 3-1: EXISTING NUMBER OF THROUGH LANES AND INTERSECTION CONTROLS



1 Indian Av. & Perry St.	2 Indian Av. & Dwy. 1	3 Indian Av. & Ramona Expy.
4D / 2U / 4D	Future Intersection	4D / 6D / 6D / 4D
4 Dwy. 2 & Ramona Expy.	**5 Dwy. 3 & Ramona Expy.**	**6 Perris Bl. & Ramona Expy.**
Future Intersection	Future Intersection	5D / 6D / 6D / 5D

= *Traffic Signal*
= *Stop Sign*
4 = *Number of Lanes*
D = *Divided*
U = *Undivided*
25 = *Speed Limit (MPH)*

EXHIBIT 3-2: CITY OF PERRIS GENERAL PLAN CIRCULATION ELEMENT

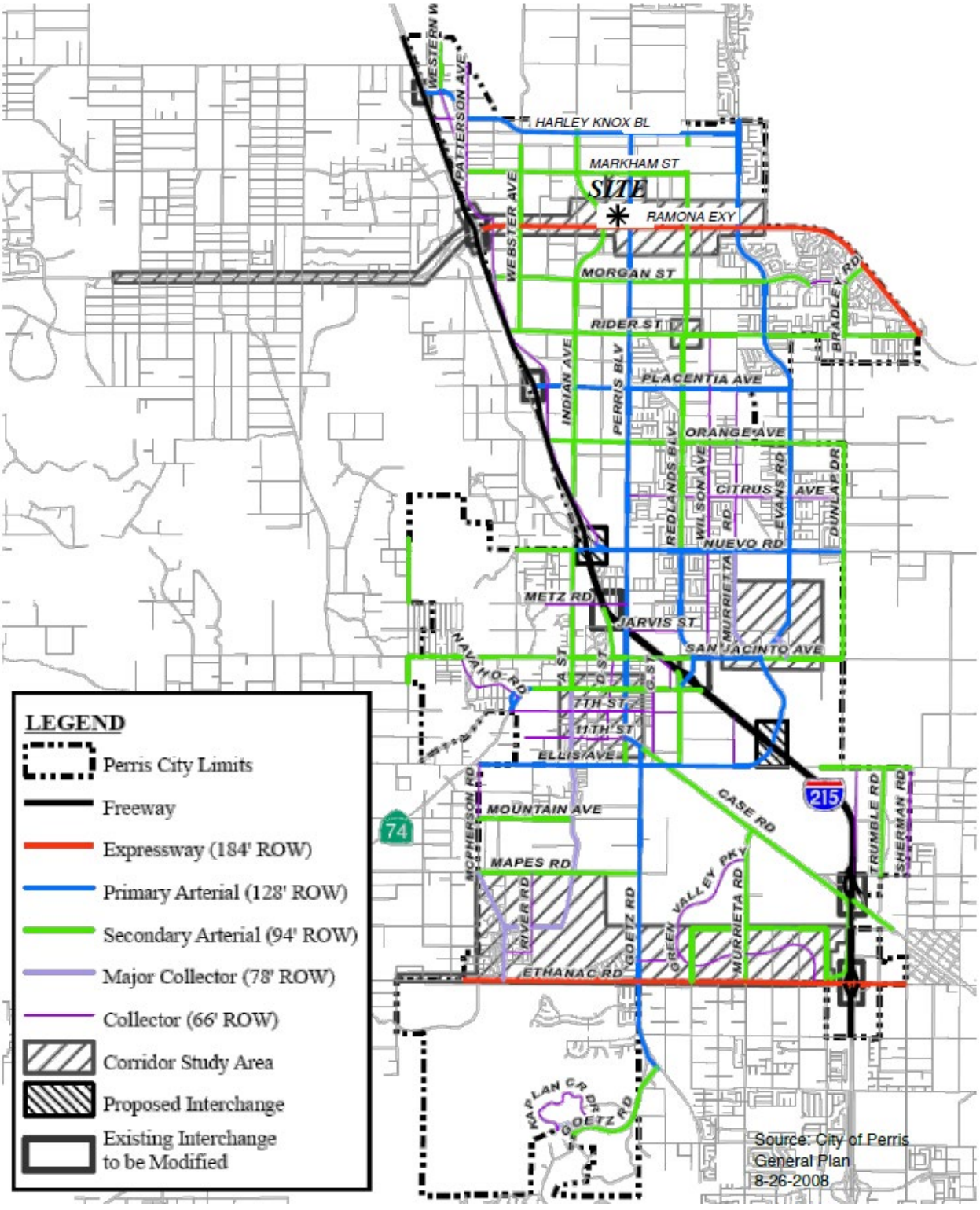
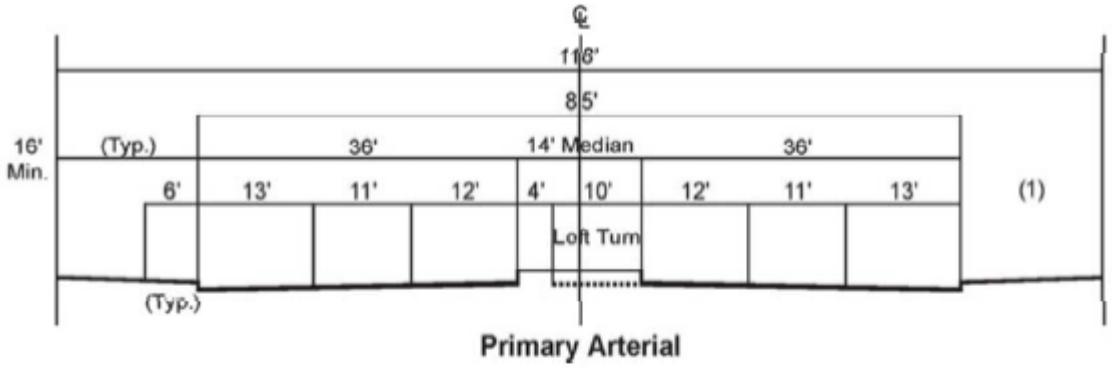
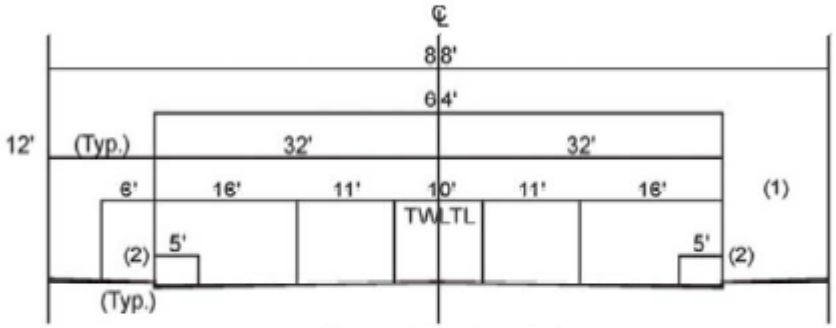


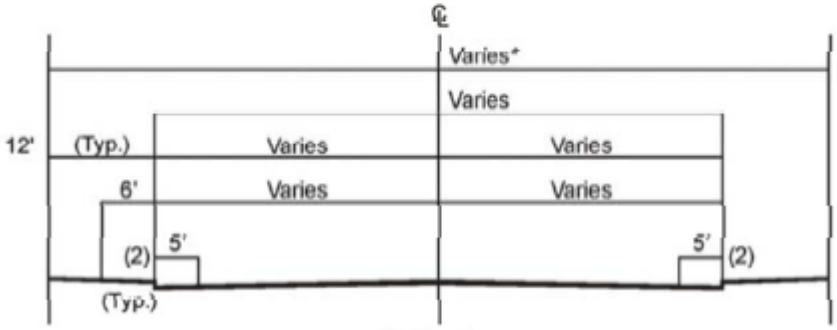
EXHIBIT 3-3: CITY OF PERRIS GENERAL PLAN ROADWAY CROSS-SECTIONS



Primary Arterial



Secondary Arterial



Collector

Legend

(1) No stopping any time both sides.
(2) Bike lane where designated.

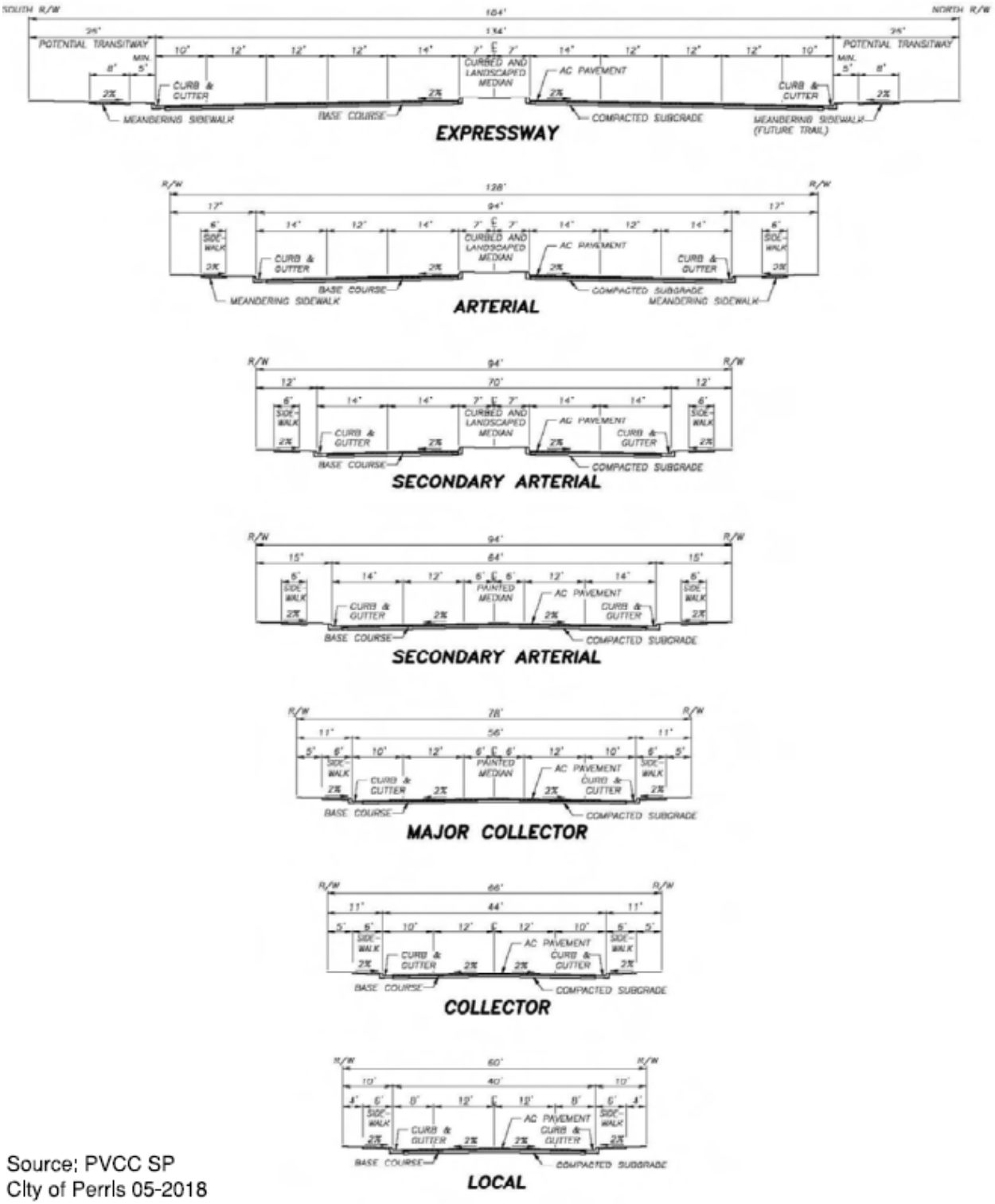
* The width of the collector street can range from 40 feet to 64 feet curb-to-curb.

TWLTL = Two Way Left Turn Lane

Source: City of Perris General Plan 8-2008

EXHIBIT 3-4: PERRIS VALLEY COMMERCE CENTER SPECIFIC PLAN CIRCULATION PLAN

EXHIBIT 3-5: PERRIS VALLEY COMMERCE CENTER SPECIFIC PLAN CROSS-SECTIONS



Source: PVCC SP
Clty of Perrls 05-2018

EXHIBIT 3-6: CITY OF PERRIS TRUCK ROUTES

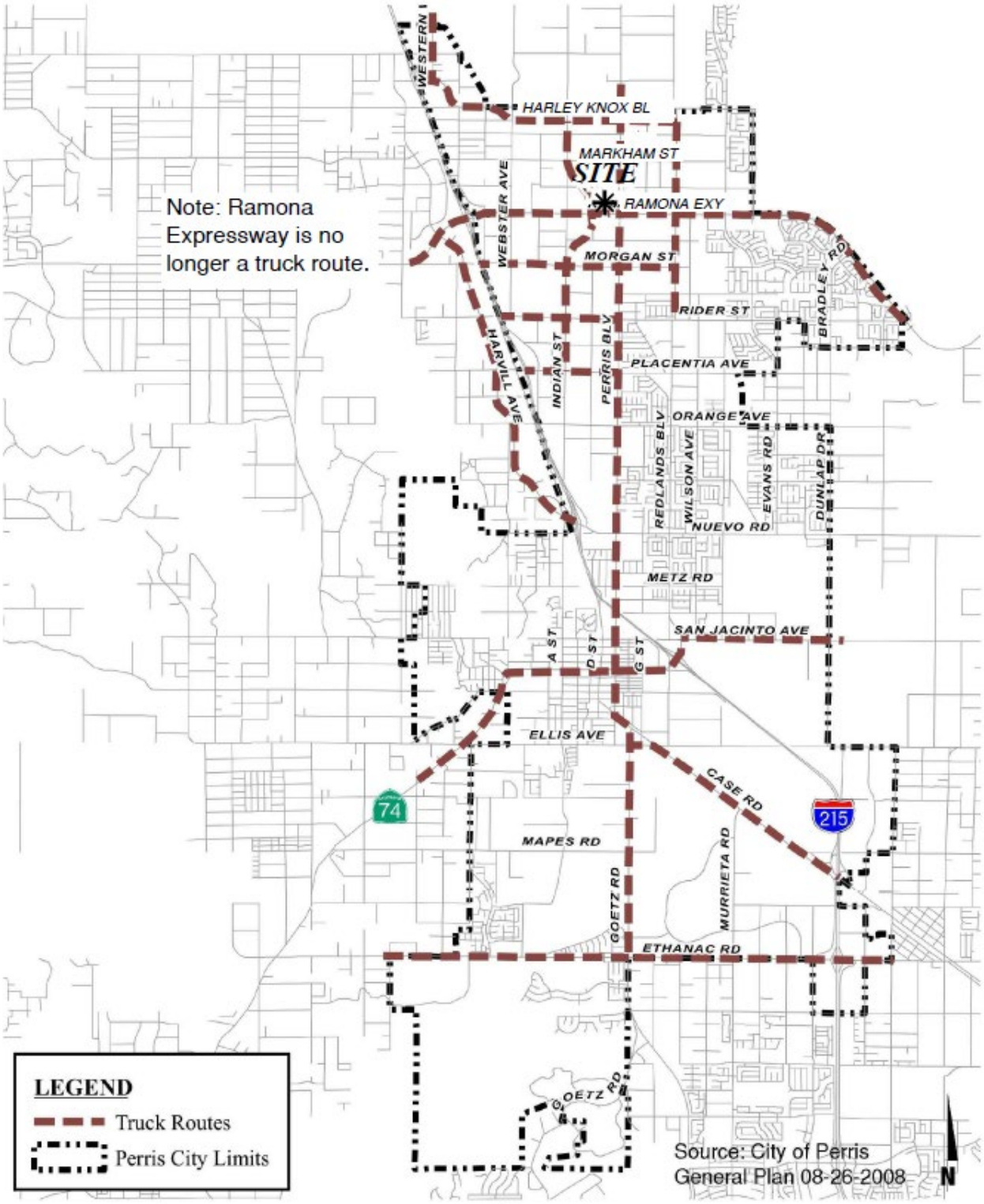


EXHIBIT 3-7: PERRIS VALLEY COMMERCE CENTER SPECIFIC PLAN TRUCK ROUTE PLAN

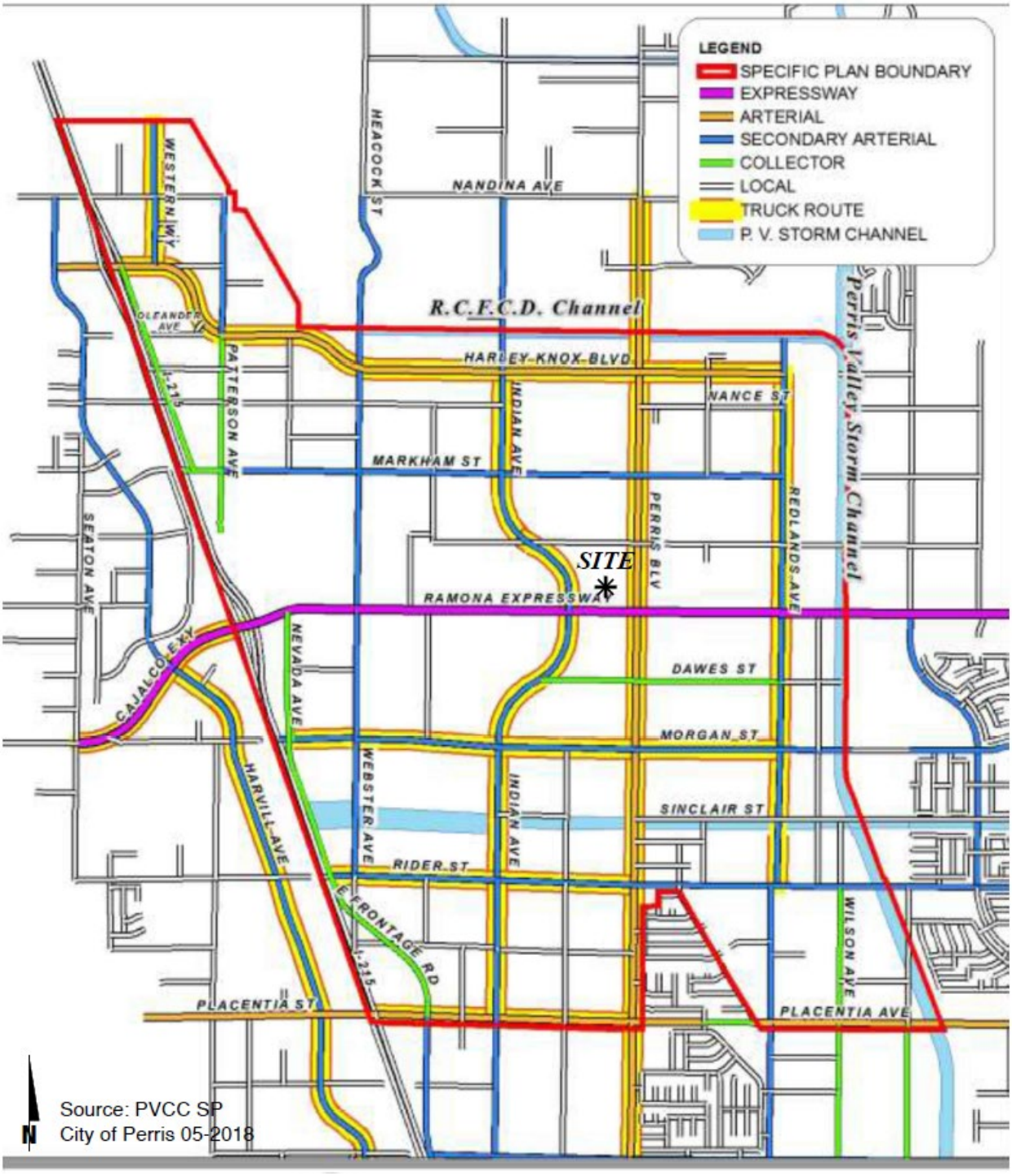


EXHIBIT 3-8: PERRIS VALLEY COMMERCE CENTER SPECIFIC PLAN MASS TRANSIT ROUTES

3.5 BICYCLE & PEDESTRIAN FACILITIES

In an effort to promote alternative modes of transportation, the City of Perris also includes a proposed bikeways and trail system. The City of Perris proposed bikeways and trail system is shown on Exhibit 3-9. Ramona Expressway, Indian Avenue, and Perris Boulevard are proposed to have Class II bike lanes. PVCC SP Trail System is shown on Exhibit 3-10. Field observations conducted in March 2020 indicate nominal pedestrian and bicycle activity within the study area. Exhibit 3-11 illustrates the existing bicycle and pedestrian facilities, including bike lanes, sidewalks and crosswalk locations.

3.6 EXISTING TRAFFIC COUNTS

The intersection LOS analysis is based on the traffic volumes observed during the peak hour conditions using traffic count data collected in March 2020, when local schools were in session and operating on a typical bell schedule (prior to closures related to the COVID-19 pandemic). The following peak hours were selected for analysis:

- Weekday AM Peak Hour (peak hour between 7:00 AM and 9:00 AM)
- Weekday PM Peak Hour (peak hour between 4:00 PM and 6:00 PM)

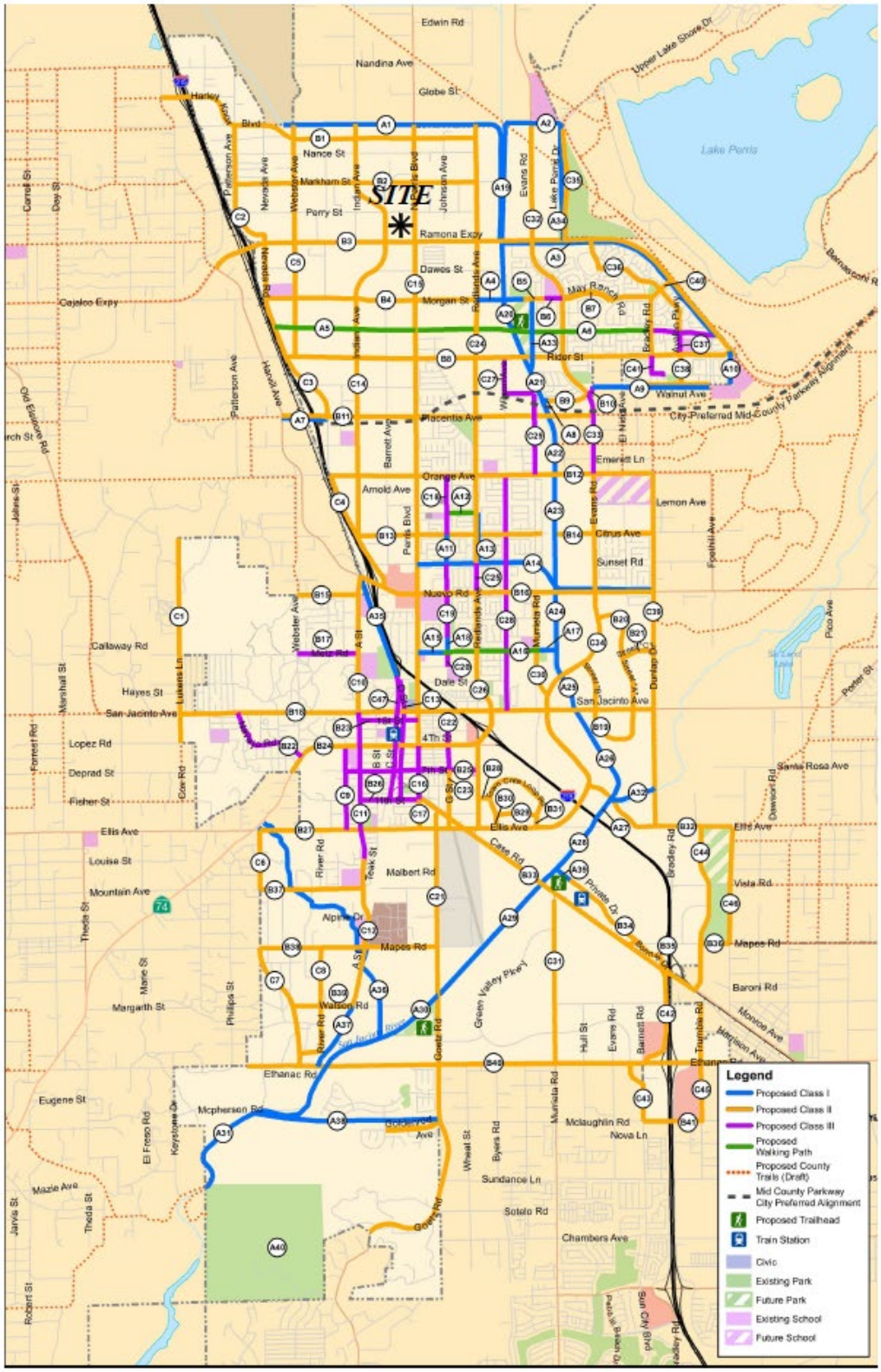
The weekday AM and weekday PM peak hour count data are representative of typical weekday peak hour traffic conditions in the study area. There were no observations made in the field that would indicate atypical traffic conditions on the count dates, such as construction activity or detour routes and near-by schools were in session and operating on normal schedules. March 2020 traffic counts were increased by 3% to reflect 2021 baseline traffic conditions for the purposes of this analysis.

The raw manual peak hour turning movement traffic count data sheets are included in Appendix 3.1. These raw turning volumes have been flow conserved between intersections with limited access, no access, and where there are currently no uses generating traffic. The traffic counts collected in March 2020 include the vehicle classifications as shown below:

- Passenger Cars
- 2-Axle Trucks
- 3-Axle Trucks
- 4 or More Axle Trucks

To represent the impact large trucks, buses, and recreational vehicles have on traffic flow, all trucks were converted into PCEs. By their size alone, these vehicles occupy the same space as two or more passenger cars. In addition, the time it takes for them to accelerate and slow-down is also much longer than for passenger cars and varies depending on the type of vehicle and number of axles. For this analysis, a PCE factor of 1.5 has been applied to 2-axle trucks, 2.0 for 3-axle trucks, and 3.0 for 4+-axle trucks to estimate each turning movement. These factors are consistent with the values recommended for use in the County of Riverside's traffic study guidelines. (9)

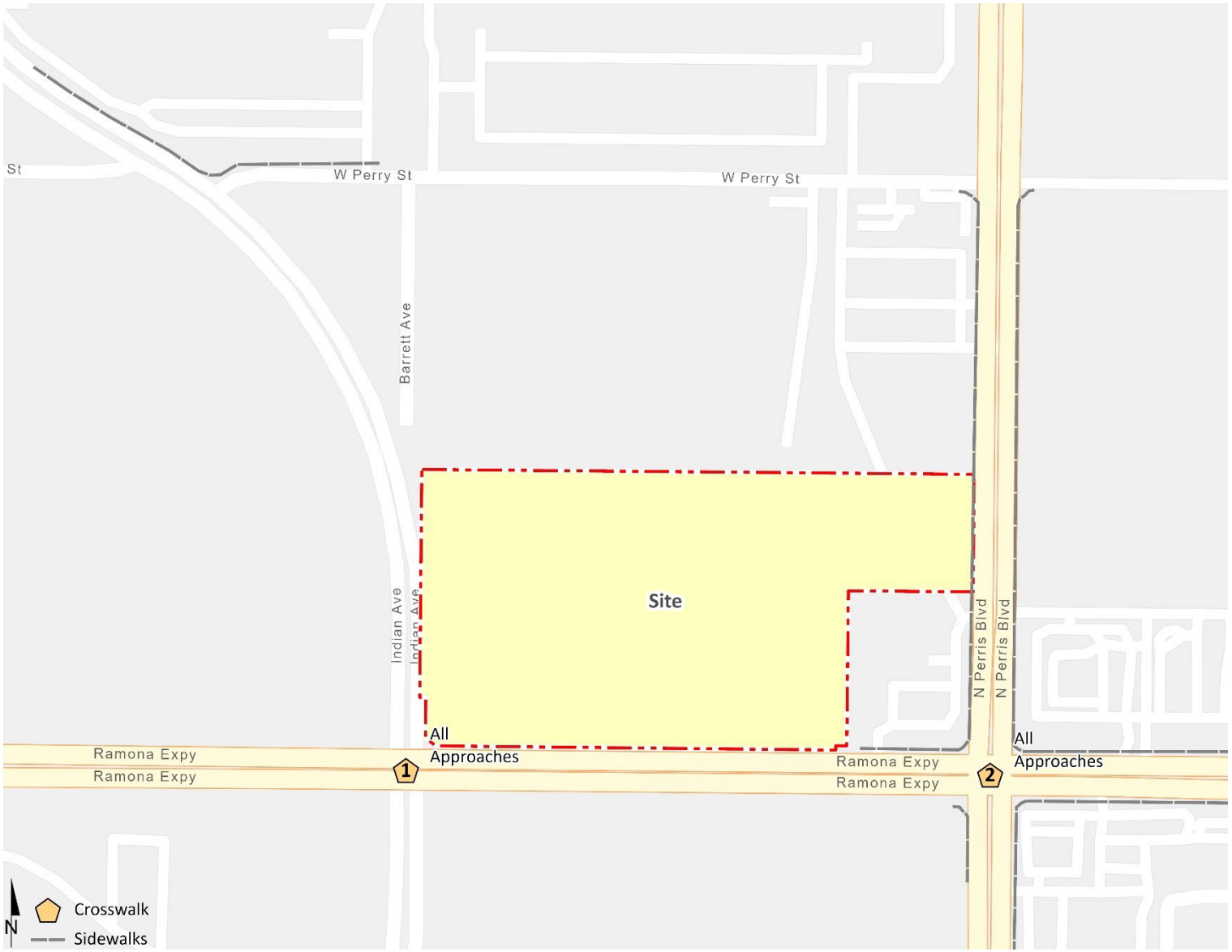
EXHIBIT 3-9: CITY OF PERRIS PROPOSED BIKEWAYS AND TRAIL IMPROVEMENTS



SOURCE: CITY OF PERRIS (FEBRUARY 20, 2015)

EXHIBIT 3-10: PERRIS VALLEY COMMERCE CENTER SPECIFIC PLAN TRAIL SYSTEM

EXHIBIT 3-11: EXISTING PEDESTRIAN FACILITIES



Existing weekday average daily traffic (ADT) volumes on arterial highways throughout the study area are shown on Exhibit 3-12 (in actual vehicles). Where actual 24-hour tube count data was not available, Existing ADT volumes were based upon factored intersection peak hour counts collected by Urban Crossroads, Inc. using the following formula for each intersection leg:

Weekday PM Peak Hour (Approach Volume + Exit Volume) x 12.37 = Leg Volume

A comparison of the PM peak hour and daily traffic volumes of various roadway segments within the study area indicated that the peak-to-daily relationship is approximately 8.08 percent. As such, the above equation utilizing a factor of 12.37 estimates the ADT volumes on the study area roadway segments assuming a peak-to-daily relationship of approximately 8.08 percent (i.e., 1/0.0808 = 12.37) and was assumed to sufficiently estimate average daily traffic (ADT) volumes for planning-level analyses. Existing weekday AM and weekday PM peak hour intersection volumes (in actual vehicles) are also shown on Exhibit 3-12.

3.7 INTERSECTION OPERATIONS ANALYSIS

Existing peak hour traffic operations have been evaluated for the study area intersections based on the analysis methodologies presented in Section 2.2 *Intersection Capacity Analysis* of this report. The intersection operations analysis results are summarized in Table 3-1 which indicates that the study area intersections are currently operating at an acceptable LOS during the peak hours (i.e., LOS D or better). The intersection operations analysis worksheets are included in Appendix 3.2 of this TA.

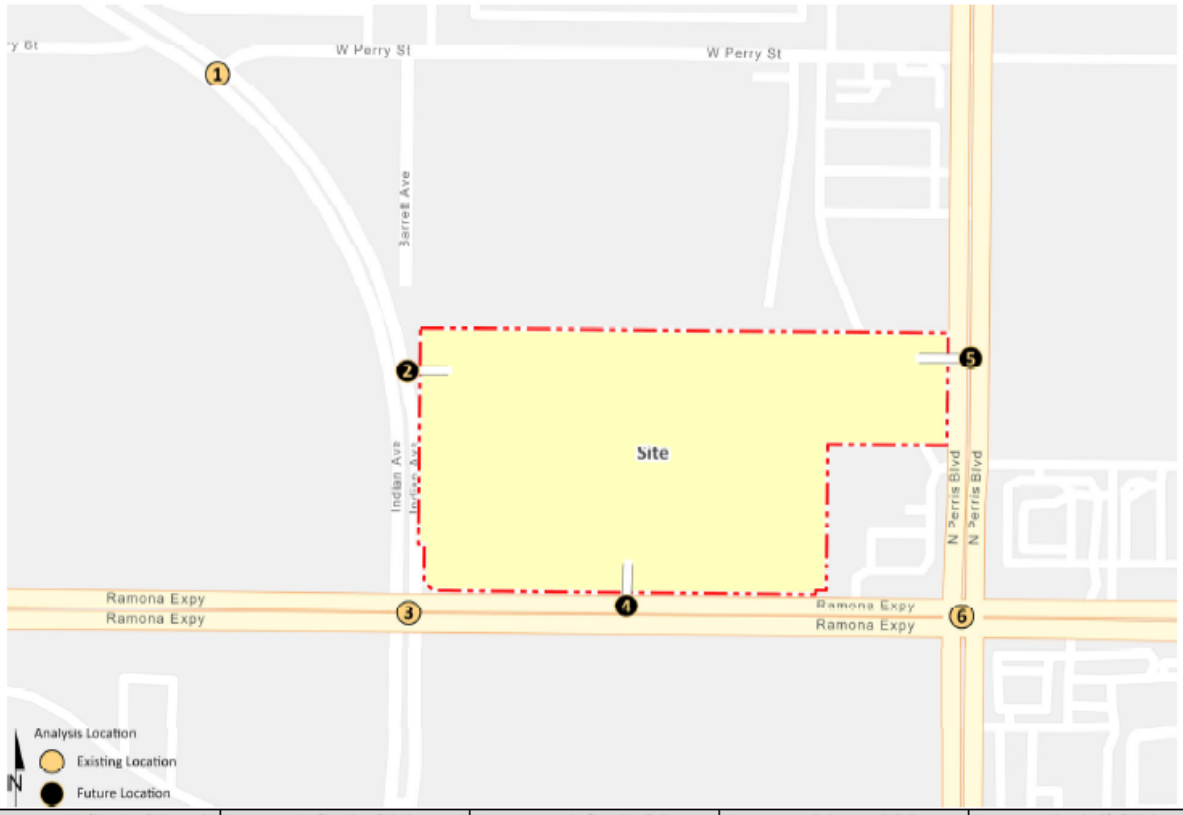
TABLE 3-1: INTERSECTION ANALYSIS FOR EXISTING (2021) CONDITIONS

#	Intersection	Traffic Control[1]	Delay[2] (secs.)		Level of Service	
			AM	PM	AM	PM
1	Indian Av. & Perry St.	CSS	9.8	8.9	A	A
2	Indian Av. & Driveway 1		Future Intersection			
3	Indian Av. & Ramona Exwy.	TS	21.2	24.4	C	C
4	Driveway 2 & Ramona Exwy.	CSS	Future Intersection			
5	Perris Bl. & Driveway 3		Future Intersection			
6	Perris Bl. & Ramona Exwy.	TS	33.0	27.6	C	C

[1] CSS = Cross-street Stop; TS = Traffic Signal

[2] Per the Highway Capacity Manual (6th Edition), overall average intersection delay and level of service are shown for intersections with a traffic signal or all way stop control. For intersections with cross street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown.

EXHIBIT 3-12: EXISTING (2021) TRAFFIC VOLUMES (IN ACTUAL VEHICLES)



1 Indian Av. & Perry St.

4,900 / 100

84(236) ↓ | ↳ 3(5)

362(153) → | ↱ 13(4)

4,850

2 Indian Av. & Driveway 1

Future Intersection

3 Indian Av. & Ramona Exwy.

4,850 / 34,750

18(24) ↲ | 50(139) ↓ | 16(73) ↳ ← 98(30) ← 1476(1068) ↰ 52(103)

132(57) ↳ | 958(1507) → | 53(83) ↲ ↱ 50(90) | → 145(70) | ↱ 27(29)

35,000 / 6,350

4 Driveway 2 & Ramona Exwy.

Future Intersection

5 Perris Bl. & Driveway 3

Future Intersection

6 Perris Bl. & Ramona Exwy.

21,800 / 30,100

177(181) ↲ | 315(604) ↓ | 99(246) ↳ ← 133(117) ← 1153(757) ↰ 87(92)

295(244) ↳ | 613(1121) → | 93(244) ↲ ↱ 276(197) | → 752(370) | ↱ 90(101)

33,950 / 19,900

##(##) AM(PM) Peak Hour Intersection Volumes

Average Daily Trips

3.8 TRAFFIC SIGNAL WARRANTS ANALYSIS

Traffic signal warrants for Existing traffic conditions are based on existing peak hour intersection turning volumes. There are no applicable study area intersections that may warrant a traffic signal for Existing (2021) traffic conditions.

4 PROJECTED FUTURE TRAFFIC

The Project is proposed to consist of a 232,575 sf multi-tenant warehouse building and a 125-room hotel. The warehouse building is anticipated to be constructed by the year 2023 and the hotel is anticipated to be constructed by the year 2025. Vehicular and truck traffic access will be provided via the following driveways:

- Indian Avenue & Driveway 1 – right-in/right-out/left-in access for both passenger cars and trucks
- Driveway 2 & Ramona Expressway – right-in/right-out access for passenger cars only
- Perris Boulevard & Driveway 3 – right-in/right-out access for passenger cars only

Regional access to the Project site is provided via the I-215 Freeway and Harley Knox Boulevard/Ramona Expressway/future Placentia Interchange (anticipated completion of the interchange per RCTC is 2022).

4.1 PROJECT TRIP GENERATION

Trip generation represents the amount of traffic that is attracted and produced by a development, and is based upon the specific land uses planned for a given project. Trip generation rates for the Project are shown in Table 4-1 and Table 4-2 shows the PCE trip generation summary illustrating daily and peak hour trip generation estimates based on the Institute of Transportation Engineers (ITE) Trip Generation Manual (11th Edition, 2021). (2) (10) For purposes of this analysis, the following ITE land use codes and vehicle mixes have been utilized:

- ITE Land Use Code 150 has been used to derive site specific trip generation estimates for the 232,575 sf building of the proposed Project. The vehicle mix has been obtained from the ITE's Trip Generation Manual Supplement (dated February 2020). This study provides the following vehicle mix: AM Peak Hour: 87.0% passenger cars and 13.0% trucks; PM Peak Hour: 85.0% passenger cars and 15.0% trucks; Weekday Daily: 73.0% passenger cars and 27.0% trucks. The truck percentages were further broken down by axle type per the following South Coast Air Quality Management District (SCAQMD) recommended truck mix: 2-Axle = 16.7%; 3-Axle = 20.7%; 4+-Axle = 62.6%.
- Hotel (ITE Land Use Code 310)

As noted on Table 4-2, refinements to the raw trip generation estimates have been made to provide a more detailed breakdown of trips between passenger cars and trucks. Trip generation for heavy trucks was further broken down by truck type (or axle type). The total truck percentage is comprised of 3 different truck types: 2-axle, 3-axle, and 4+-axle trucks. PCE factors were applied to the trip generation rates for heavy trucks (large 2-axles, 3-axles, 4+-axles). PCEs allow the typical "real-world" mix of vehicle types to be represented as a single, standardized unit, such as the passenger car, to be used for the purposes of capacity and level of service analyses. The PCE factors are consistent with the recommended PCE factors in the City's traffic study guidelines. (9)

TABLE 4-1: PROJECT TRIP GENERATION RATES

Land Use[1]	Units[2]	ITE LU Code	AM Peak Hour In	AM Peak Hour Out	AM Peak Hour Total	PM Peak Hour In	PM Peak Hour Out	PM Peak Hour Total	Daily
Actual Vehicle Trip Generation Rates									
Hotel	RM	310	0.26	0.20	0.46	0.30	0.29	0.59	7.99
Warehousing[3]	TSF	150	0.131	0.039	0.170	0.050	0.130	0.180	1.710
Passenger Cars			0.120	0.030	0.150	0.034	0.116	0.150	1.110
2-Axle Trucks			0.002	0.001	0.003	0.003	0.002	0.005	0.100
3-Axle Trucks			0.002	0.002	0.004	0.003	0.003	0.006	0.124
4+-Axle Trucks			0.007	0.006	0.013	0.010	0.009	0.019	0.376
Passenger Car Equivalent (PCE) Trip Generation Rates[4]									
Warehousing[3]	TSF	150	0.131	0.039	0.170	0.050	0.130	0.180	1.710
Passenger Cars			0.120	0.030	0.150	0.034	0.116	0.150	1.110
2-Axle Trucks			0.003	0.002	0.005	0.005	0.003	0.008	0.150
3-Axle Trucks			0.004	0.004	0.008	0.006	0.006	0.012	0.248
4+-Axle Trucks			0.021	0.017	0.038	0.030	0.026	0.056	1.127

[1] Trip Generation Source: Institute of Transportation Engineers (ITE), Trip Generation Manual, 11th Edition (2021).

[2] RM = Rooms; TSF = thousand square feet

[3] Truck Mix: South Coast Air Quality Management District's (SCAQMD) recommended truck mix, by axle type.
Normalized % - Without Cold Storage: 16.7% 2-Axle trucks, 20.7% 3-Axle trucks, 62.6% 4-Axle trucks.
Normalized % - With Cold Storage: 34.7% 2-Axle trucks, 11.0% 3-Axle trucks, 54.3% 4-Axle trucks.

[4] PCE factors per Riverside County TIA Guidelines: 2-axle = 1.5; 3-axle = 2.0; 4+-axle = 3.0.

TABLE 4-2: PROJECT TRIP GENERATION SUMMARY

Land Use	Quantity	Units[1]	AM Peak Hour In	AM Peak Hour Out	AM Peak Hour Total	PM Peak Hour In	PM Peak Hour Out	PM Peak Hour Total	Daily
Project Trip Generation Summary (Actual)									
Hotel	125	RM	33	25	58	38	36	74	1,000
Warehouse	232.575	TSF							
Passenger Cars:			28	7	35	8	27	35	260
Truck Trips:									
2-Axle Trucks			0	0	0	1	0	1	24
3-Axle Trucks			0	0	0	1	1	2	30
4-Axle+ Trucks			2	1	3	2	2	4	88
Truck Trips			2	1	3	4	3	7	142
TOTAL TRIPS (Actual) [2]			**63**	**33**	**96**	**50**	**66**	**116**	**1,402**
Project Trip Generation Summary (PCE)									
Hotel	125	RM	33	25	58	38	36	74	1,000
Warehouse	232.575	TSF							
Passenger Cars:			28	7	35	8	27	35	260
Truck Trips:									
2-Axle Trucks (PCE = 1.5)			1	0	1	1	1	2	36
3-Axle Trucks (PCE = 2.0)			1	1	2	1	1	2	58
4-Axle+ Trucks (PCE = 3.0)			5	4	9	7	6	13	264
Truck Trips			7	5	12	9	8	17	358
TOTAL TRIPS (PCE) [2]			**68**	**37**	**105**	**55**	**71**	**126**	**1,618**

[1] RM = Rooms; TSF = thousand square feet

[2] TOTAL TRIPS = Passenger Cars + Truck Trips.

The proposed Project's trip generation, based on actual vehicles, is included in Table 4-2 for informational purposes only. The proposed Project is anticipated to generate 1,402 two-way trip-ends per day with 96 AM peak hour trips and 116 PM peak hour trips (actual vehicles), as shown in Table 4-2. For the purposes of the operations analysis, the PCE values shown in Table 4-2 will be utilized.

4.2 PROJECT TRIP DISTRIBUTION

Trip distribution is the process of identifying the probable destinations, directions, or traffic routes that will be utilized by Project traffic. The potential interaction between the planned land uses and surrounding regional access routes are considered to identify the route where the Project traffic would distribute.

The Project trip distribution was developed based on anticipated travel patterns to and from the Project site for both passenger cars and truck traffic and are consistent with other similar projects that have been reviewed and approved by City of Perris staff. The truck trip distribution patterns have been developed based on the anticipated travel patterns for the warehousing trucks. The Project trip distribution patterns for both passenger cars and trucks were developed based on an understanding of existing travel patterns in the area, the geographical location of the site, and the site's proximity to the regional arterial and state highway system. It should be noted that the passenger car trip distribution patterns assume the I-215 Freeway and Placentia Avenue interchange is in place (anticipated completion of the interchange is 2022). Given the Project's proximity, project-related trucks are anticipated to utilize the Harley Knox Boulevard interchange to access the I-215 Freeway.

The Project industrial passenger car trip distribution pattern is graphically depicted on Exhibit 4-1. The Project industrial truck trip distribution pattern is graphically depicted on Exhibit 4-2. Finally, the Project industrial truck trip distribution pattern is graphically depicted on Exhibit 4-3. Each of these distribution patterns was reviewed and approved by the City of Perris as part of the traffic study scoping process (see Appendix 1.1).

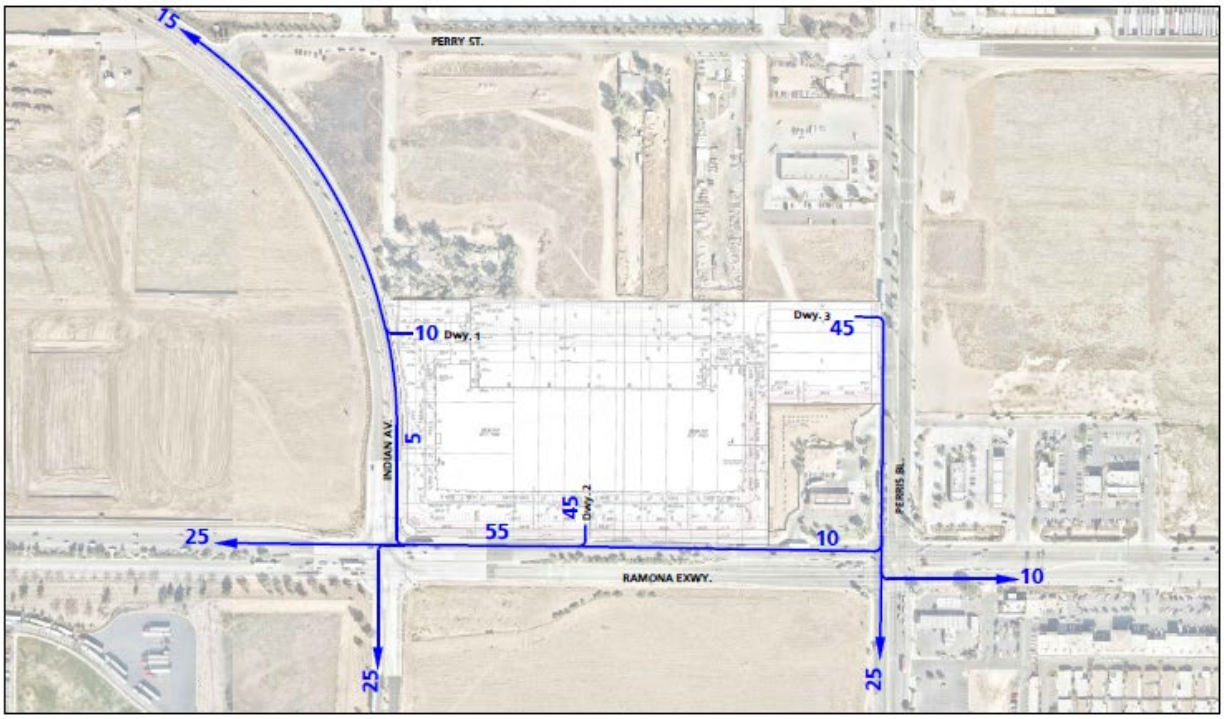
4.3 MODAL SPLIT

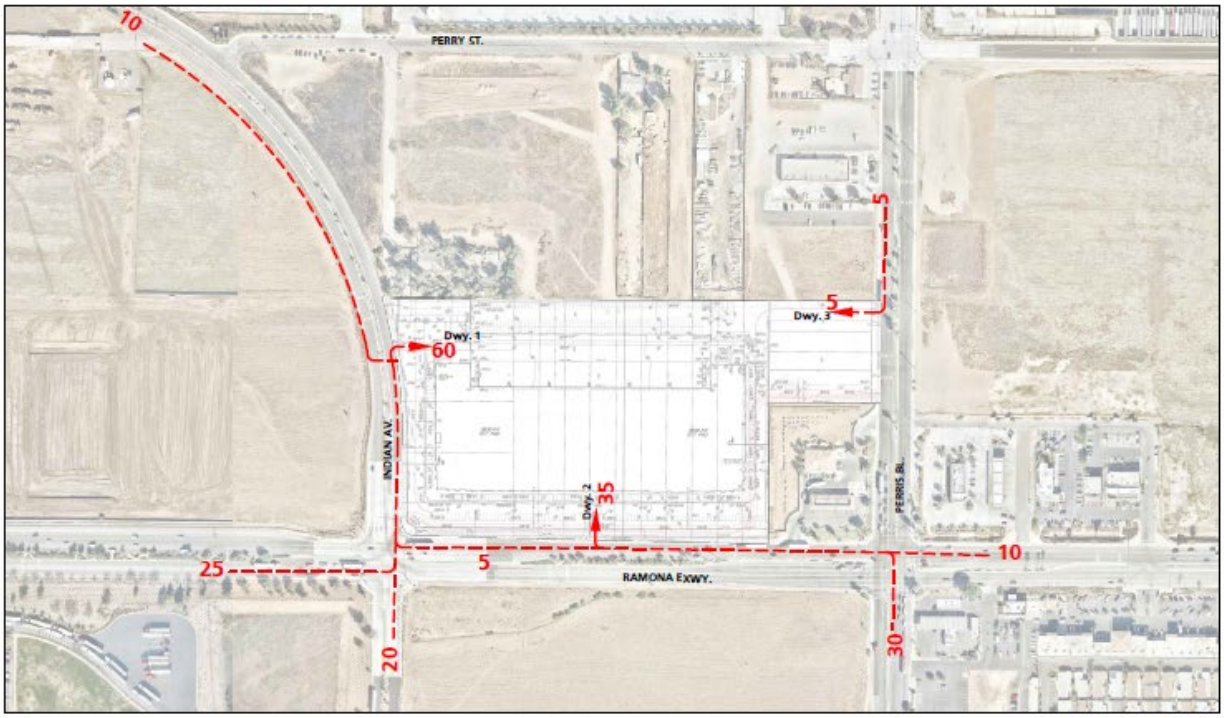
The traffic reducing potential of public transit, walking, or bicycling have not been considered in this TA. Essentially, the traffic projections are "conservative" in that these alternative travel modes might be able to reduce the forecasted traffic volumes (employee trips only).

4.4 PROJECT TRIP ASSIGNMENT

The assignment of traffic from the Project area to the adjoining roadway system is based upon the Project trip generation, trip distribution, and the arterial highway and local street system improvements that would be in place by the time of initial occupancy of the Project. Based on the identified Project traffic generation and trip distribution patterns, Project (Phase I) ADT and peak hour intersection turning movement volumes are shown on Exhibit 4-4 in actual vehicles. Project (Buildout) ADT and peak hour intersection turning movement volumes are shown on Exhibit 4-5 in actual vehicles.

EXHIBIT 4-1: PROJECT (INDUSTRIAL PASSENGER CAR) TRIP DISTRIBUTION





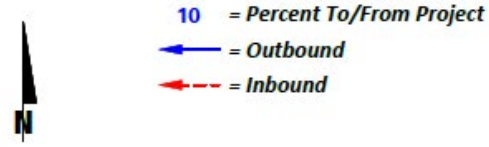


EXHIBIT 4-2: PROJECT (INDUSTRIAL TRUCK) TRIP DISTRIBUTION

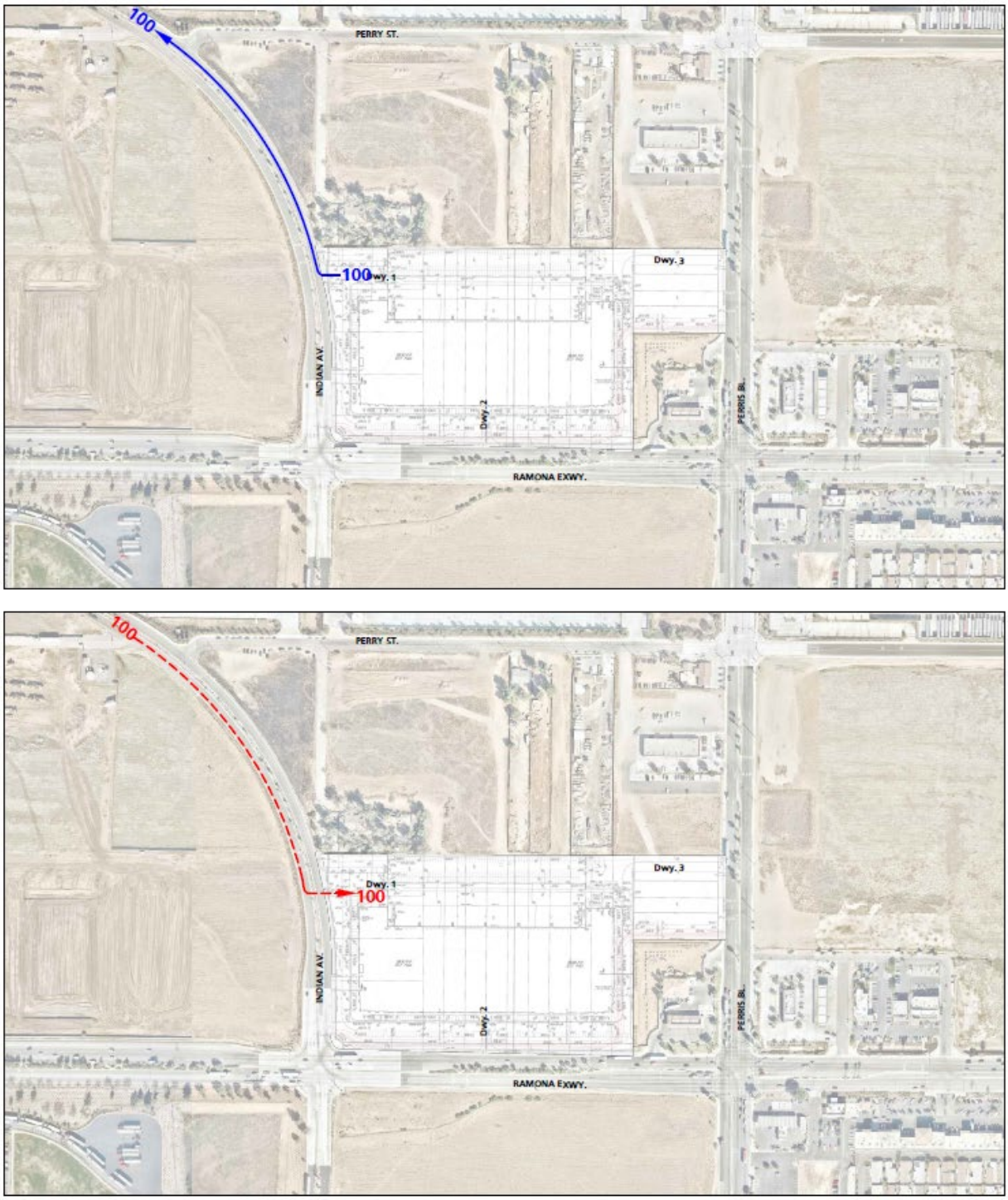


EXHIBIT 4-3: PROJECT (HOTEL) TRIP DISTRIBUTION

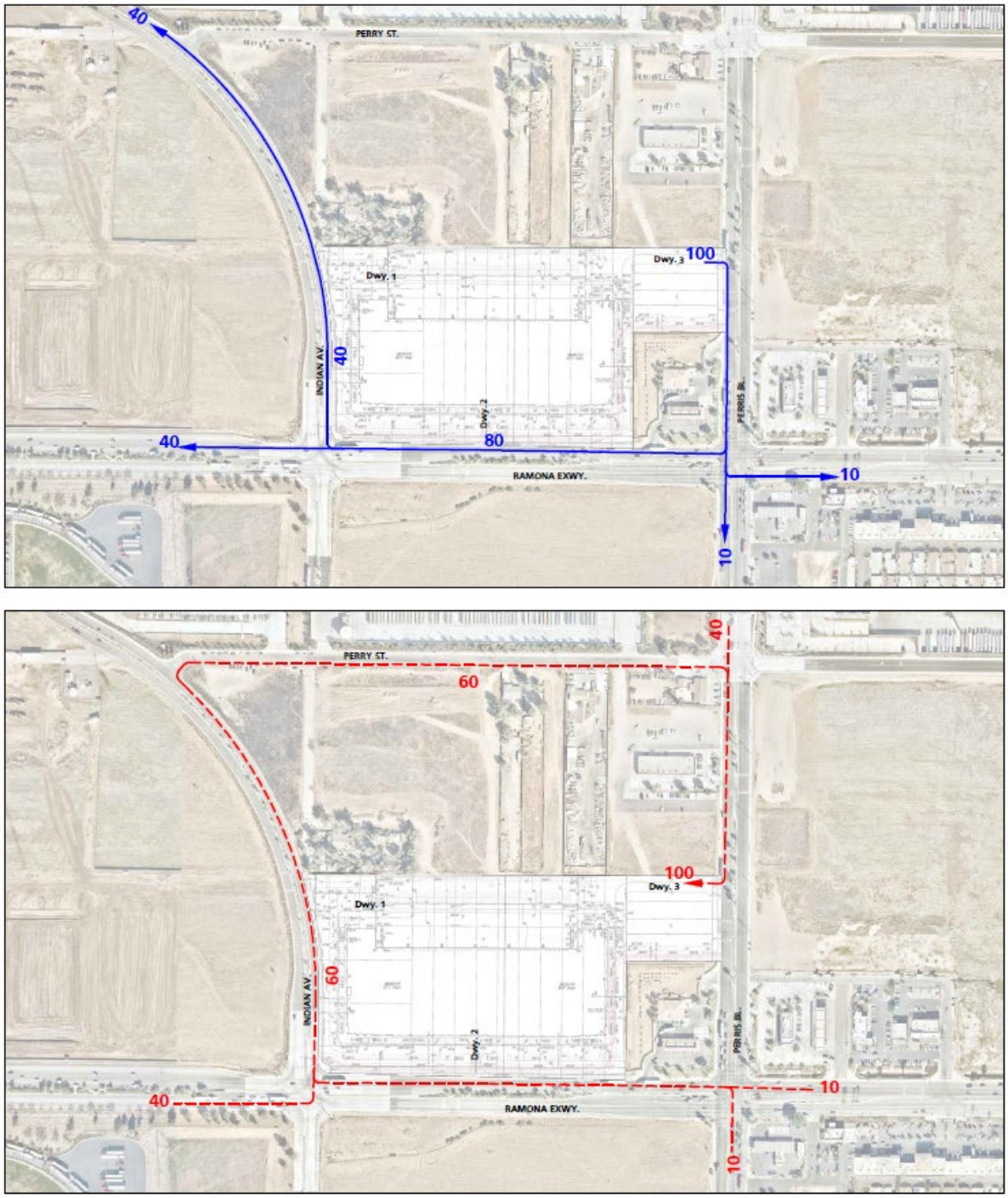
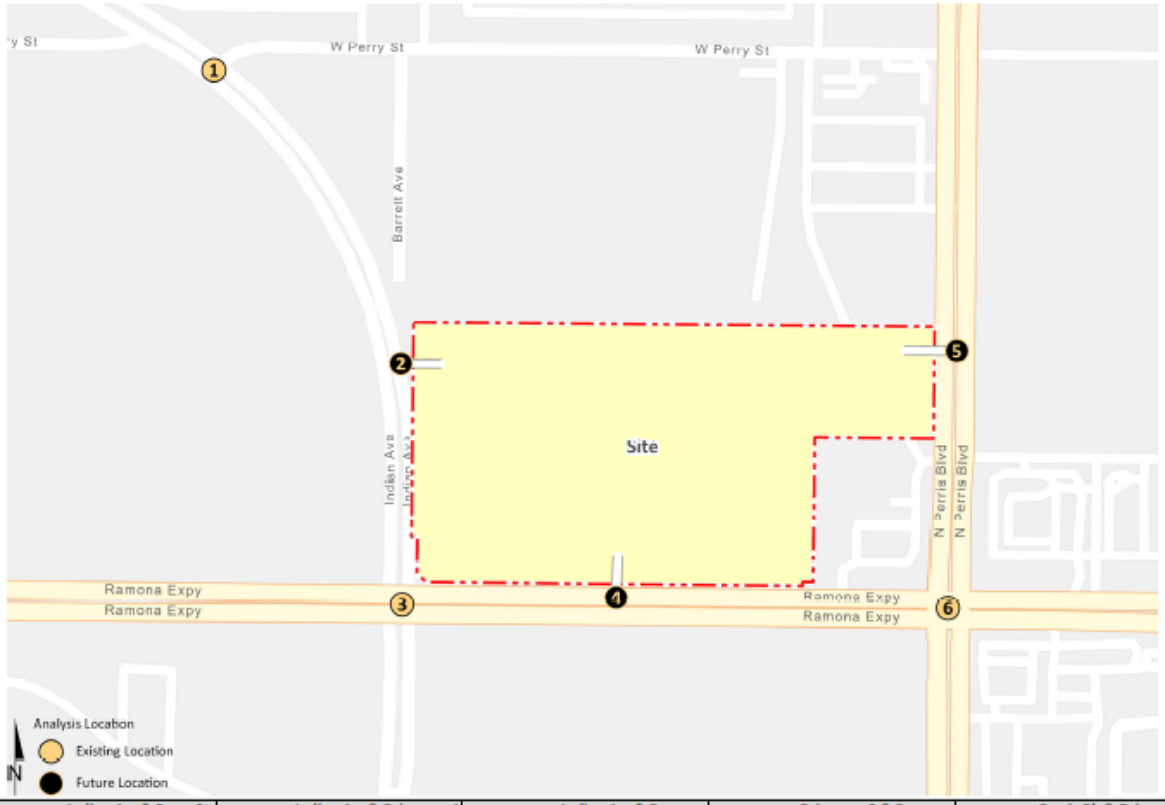
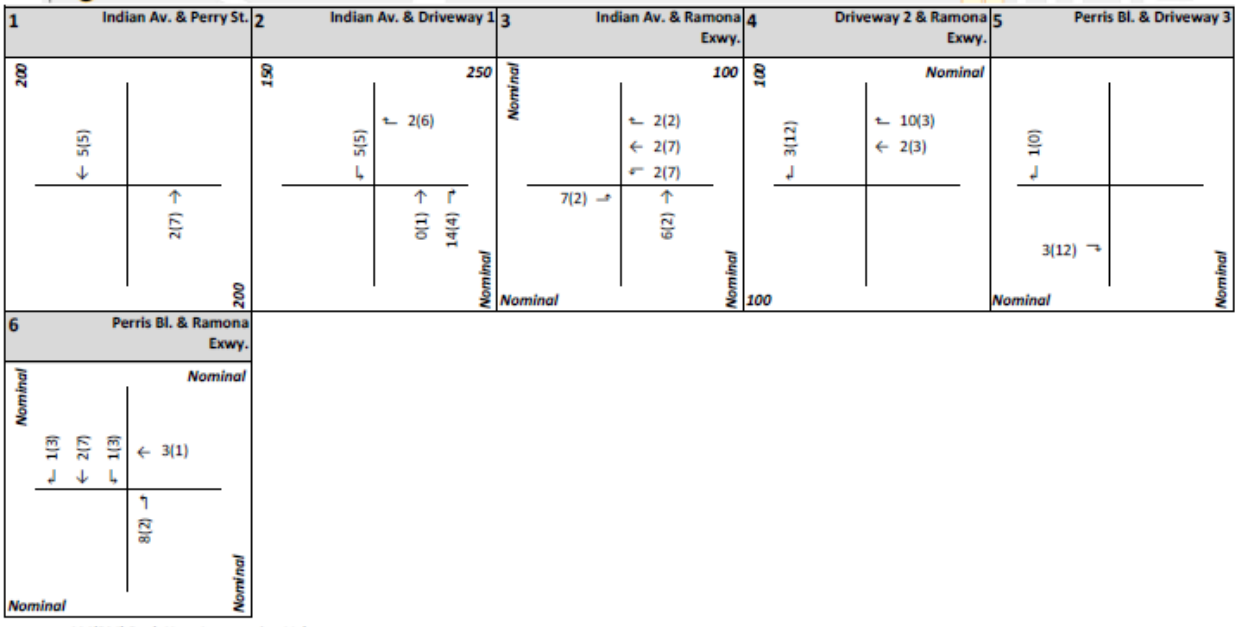


EXHIBIT 4-4: PROJECT (PHASE I) ONLY TRAFFIC VOLUMES (IN ACTUAL VEHICLES)

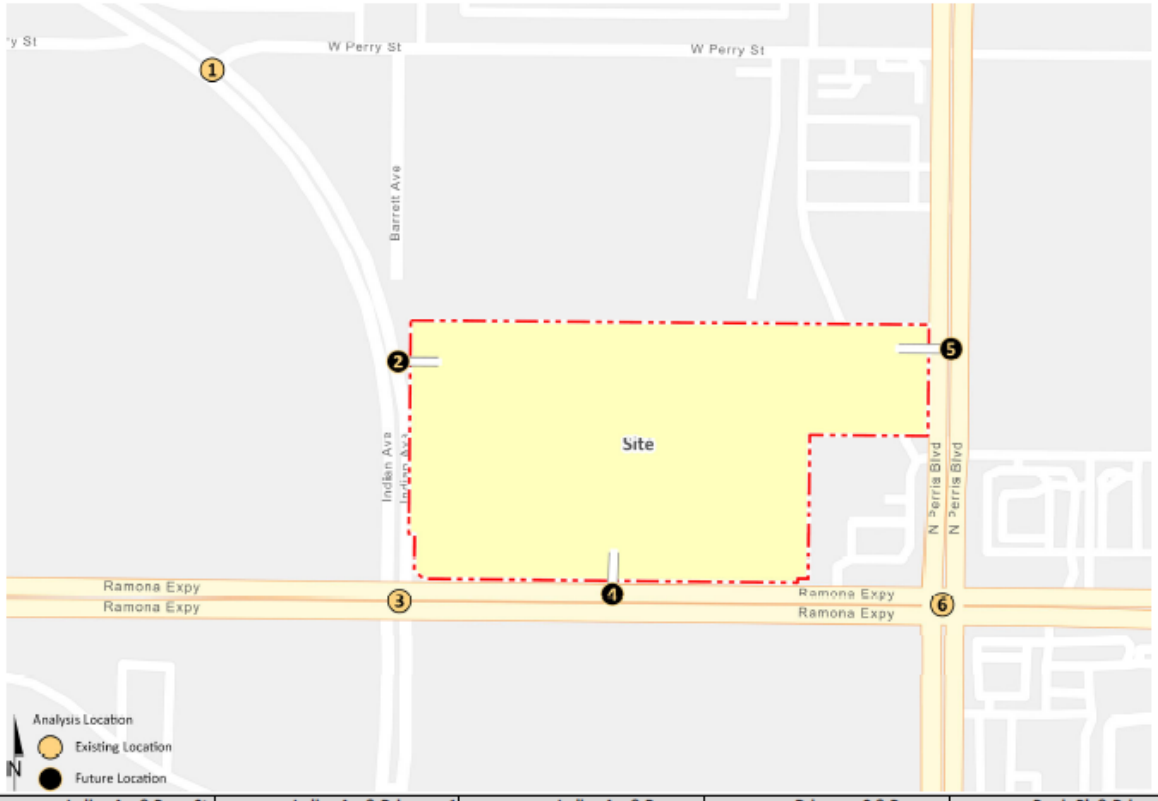


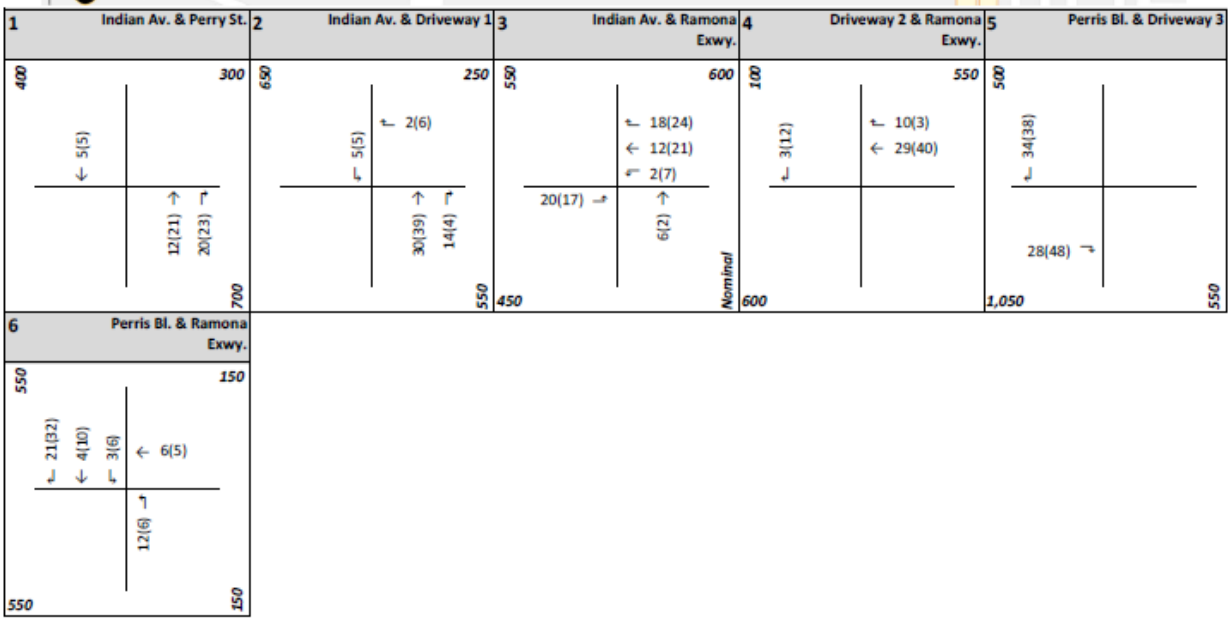


##(##) AM(PM) Peak Hour Intersection Volumes

***Average Daily Trips***

EXHIBIT 4-5: PROJECT (BUILDOUT) ONLY TRAFFIC VOLUMES (IN ACTUAL VEHICLES)





##(##) AM(PM) Peak Hour Intersection Volumes

Average Daily Trips

4.5 BACKGROUND TRAFFIC

Future year traffic forecasts have been based upon background (ambient) growth at 3% per year over 2 years, for 2023 traffic conditions, and 3% per year over 3 years, for 2025 traffic conditions. The total ambient growth is 6.09% for 2023 traffic conditions and 12.55% for 2025 traffic conditions. This ambient growth rate is added to existing traffic volumes to account for area-wide growth not reflected by cumulative development projects.

Ambient growth has been added to daily and peak hour traffic volumes on surrounding roadways, in addition to traffic generated by the development of future projects that have been approved but not yet built and/or for which development applications have been filed and are under consideration by governing agencies.

The Southern California Association of Governments (SCAG) 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) growth forecasts for the City of Perris identifies projected growth in population of 74,900 in 2016 to 121,000 in 2045, or a 61.6% increase over the 29-year period. The change in population equates to roughly a 1.67 percent growth rate compounded annually. Similarly, growth over the same 29-year period in households is projected to increase by 96.5 percent, or 2.36 percent growth rate, compounded annually. Finally, growth in employment over the same 29-year period is projected to increase by 64.0 percent, or a 1.72 percent annual growth rate. The average annual growth rate between population, households, and employment is 1.92 percent per year. (11) Therefore, the use of an annual growth rate of 3.0 percent would appear to conservatively approximate the anticipated regional growth in traffic volumes in the City of Perris, especially when considered along with the addition of Project-related traffic and traffic generated by other known development projects. As such, the growth in traffic volumes assumed in this traffic analysis would tend to overstate as opposed to understate the potential deficiencies to traffic and circulation.

4.6 CUMULATIVE DEVELOPMENT TRAFFIC

Other reasonably foreseeable development projects which are either approved or being processed concurrently in the study area have also been included as part of a cumulative analysis scenario. A cumulative project list was developed for the purposes of this analysis through consultation with planning and engineering staff from the City of Perris. The cumulative project list includes known and foreseeable projects that are anticipated to contribute traffic to the study area intersections. The adjacent jurisdiction of the County of Riverside have also been contacted to obtain the most current list of cumulative projects from their respective jurisdictions.

Where applicable, cumulative projects anticipated to contribute measurable traffic (i.e., 50 or more peak hour trips) to study area intersections have been manually added to the study area network to generate EAC and EAPC forecasts. In other words, this list of cumulative development projects has been reviewed to determine which projects would likely contribute measurable traffic through the study area intersections (e.g., those cumulative projects in close proximity to the proposed Project). For the purposes of this analysis, the cumulative projects that were determined to affect one or more of the study area intersections are shown on Exhibit 4-6, listed in Table 4-3, and have been considered for inclusion.

EXHIBIT 4-6: CUMULATIVE DEVELOPMENT LOCATION MAP

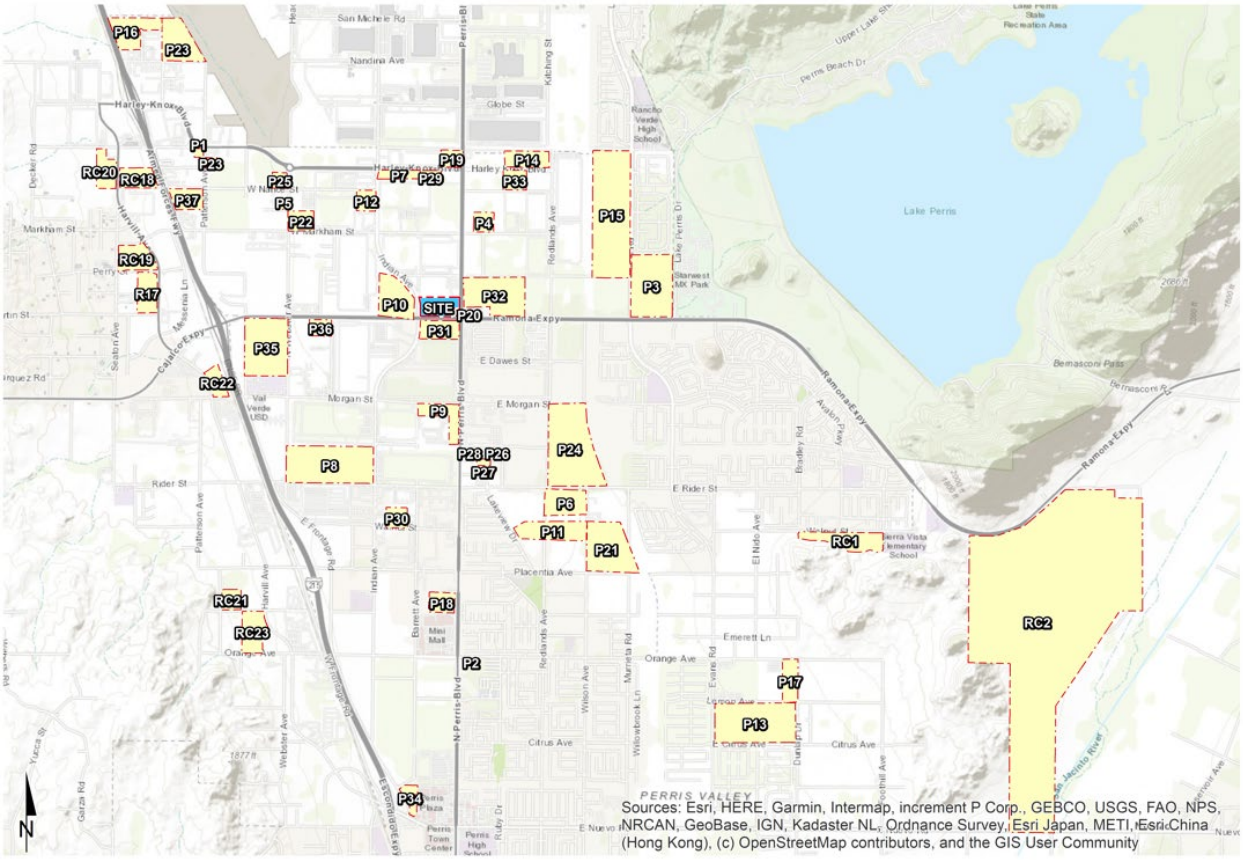


TABLE 4-3: CUMULATIVE DEVELOPMENT LAND USE SUMMARY (1 OF 2)

No.	Project Name / Case Number	Jurisdiction	Land Use	Quantity	Units[1]	Location
P1	Canyon Steel (CS)	Perris	Industrial	25.000	TSF	NWC OF PATTERSON AVE. & CALFORNIA AVE.
P2	Tract 32497	Perris	Single Family Detached	131	DU	SWC OF MEDICAL CENTER DR. & ORANGE AVE.
P3	Stratford Ranch East / TTM 38071	Perris	Single Family Detached	197	DU	NEC OF EVANS RD. & RAMONA EXWY.
	APN 302200005	Perris	Single Family Detached	19	DU	NEC OF EVANS RD. & RAMONA EXWY.
P4	Perris Truck Yard	Perris	Truck Yard	9.5	AC	NORTH OF MARKHAM ST. & EAST OF PERRIS BL.
P5	Marijuana Manufacturing (MM)	Perris	Industrial	1.000	TSF	NWC OF WEBSTER AVE. & WASHINGTON ST.
	Holistic Inc.	Perris	Cultivation	5.000	TSF	872 WASHINGTON AVE.
P6	First Indus (Goodwin)	Perris	High-Cube Warehouse	338.000	TSF	SEC OF REDLANDS AVE. & RIDER ST.
P7	Kwasizur Industrial	Perris	Warehousing	138.000	TSF	SEC OF INDIAN AVE. & HARLEY KNOX BL.
P8	Rados / DPR 07-0119	Perris	High-Cube Warehouse	1,200.000	TSF	NWC OF INDIAN AVE. & RIDER ST.
P9	Patriot Industrial	Perris	Warehousing	286.000	TSF	SWC OF PERRIS BL. & MORGAN ST.
P10	Indian/Ramona Warehouse / DPR 18-00002	Perris	High-Cube Warehouse	428.730	TSF	NORTH OF RAMONA EXWY. WEST OF INDIAN AVE.
P11	Lakecreek East and West	Perris	High-Cube Warehouse	556.000	TSF	SOUTH OF RIDER ST. & EITHER SIDE OF REDLANDS AVE.
P12	Westcoast Textile / DPR 16-00001	Perris	Warehousing	180.000	TSF	SWC OF INDIAN ST. & NANCE ST.
P13	Tract 31659	Perris	Single Family Detached	161	DU	NEC OF EVANS RD. & CITRUS AVE.
	Tract 32041	Perris	Single Family Detached	122	DU	NWC OF DUNLAP RD. & CITRUS AVE.
P14	Harley Knox Commerce Park / DPR 16-004	Perris	High-Cube Warehouse	386.278	TSF	NWC OF HARLEY KNOX BLVD. & REDLANDS AVE.
P15	Stratford Ranch West / TTM 36648	Perris	Single Family Detached	90	DU	WEST OF EVANS RD. AT MARKHAM ST.
P16	First March Logistics	Perris	Warehousing	589.971	TSF	NWC OF NATWAR LN & NANDINA AVE.
P17	Citrus Court / TTM 37038	Perris	Single Family Detached	111	DU	SWC OF DUNLAP RD. & ORANGE AVE.
P18	Weinerschnitzel / CUP 17-05083	Perris	Fast-Food Restaurant	2.000	TSF	WEST OF PERRIS BL., SOUTH OF PLACENTIA AVE.
P19	March Plaza / CUP16-05165	Perris	Commercial Retail	47.253	TSF	NWC OF PERRIS BL. AND HARLEY KNOX BL.
P20	Cali Express Carwash / CUP 16-05258	Perris	Automated Car Wash	5.600	TSF	NWC OF PERRIS BL. AND RAMONA EXWY.
P21	Wilson Industrial / DPR 19-00007	Perris	High-Cube Warehouse	303.000	TSF	SEC OF WILSON AVE. AND RIDER ST.
P22	Integra Expansion / MMOD 17-05075	Perris	High-Cube Warehouse	273.000	TSF	NCE OF MARKHAM ST. AND WEBSTER AVE.
P23	Duke - Patterson at Nance	Perris	High-Cube Warehouse	580.000	TSF	NEC OF PATTERSON AVE. & NANCE ST.
P24	Rider 2/4	Perris	High-Cube Warehouse	1,373.449	TSF	NEC OF REDLANDS AVE. AND RIDER ST.
P25	AAA	Perris	Industrial	2.000	TSF	SEC OF HARLEY KNOX BL. & WEBSTER AVE.
P26	Pulliam Indus	Perris	Industrial	16.000	TSF	LOTS 10 & 12 ON COMMERCE DR., E OF PERRIS
P27	Burge Indus 1	Perris	Industrial	18.000	TSF	E OF PERRIS BL. & N OF COMMERCE DR.
P28	Burge Indus 2	Perris	Industrial	19.000	TSF	E OF PERRIS BL. & S OF COMMERCE DR.
P29	Nance Industrial	Perris	Warehousing	156.000	TSF	BETWEEN HARLEY KNOX BL. & NANCE ST.
P30	Dedeaux Walnut Warehouse	Perris	Industrial	205.830	TSF	N SIDE OF WALNUT AVE. BTW INDIAN AVE. & BARRETT AVE.
P31	Perris and Ramona Warehouse	Perris	Industrial	347.938	TSF	S SIDE OF RAMONA EXWY. BTW INDIAN AVE. & PERRIS BLVD.
P32	OLC3	Perris	High-Cube Warehouse	878.750	TSF	SEC OF PERRY ST. & PERRIS BLVD.
			Retail	45.000	TSF	
P33	Harley Knox Commerce Center	Perris	Warehousing	156.780	TSF	S SIDE OF HARLEY KNOX BL. AND W OF REDLANDS AVE.
P34	Perris Plaza (Buildout)	Perris	Shopping Center	173.000	TSF	NEC OF NEEVO RD. & FRONTAGE RD.
P35	Ramona Gateway Commerce Center	Perris	High-Cube Fulfillment	902.713	TSF	SWC OF WEBSTER AVE. & RAMONA EXWY.
			High-Cube Cold Storage	47.511	TSF	
			Fast-Food Restaurant w/ DT	16.500	TSF	
			Fast-Food Restaurant w/o DT	10.200	TSF	
			Coffee Shop w/ DT	2.400	TSF	
			Automated Car Wash	1	Tunnel	
			Gas Station w/ Market	16	VFP	
P36	Ramona & Brennan	Perris	Warehousing	162.871	TSF	SWC OF BRENNAN AVE. & RAMONA EXWY.
P37	Patterson Commerce Center	Perris	High-Cube Fulfillment	224.247	TSF	SWC OF PATTERSON AVE. & NANCE ST.
			High-Cube Cold Storage	39.573	TSF	

TABLE 4-3: CUMULATIVE DEVELOPMENT LAND USE SUMMARY (2 OF 2)

No.	Project Name / Case Number	Jurisdiction	Land Use	Quantity	Units[1]	Location
RC1	McCanna Hills / TTM 33978	Riv. Co.	Single Family Detached	63	DU	SWC OF SHERMAN AVE. & WALNUT AVE.
RC2	Stoneridge	Riv. Co.	High-Cube Cold Storage	1695.355	TSF	NORTH OF NUEVO RD., SOUTH OF RAMONA EXWY., EAST OF
			High-Cube Fulfillment	2966.872	TSF	
			High-Cube Warehouse	2966.872	TSF	
			Manufacturing	847.678	TSF	
			Warehouse	427.759	TSF	
			Industrial Park	641.639	TSF	
			Free-Standing Discount Superstore	100.000	TSF	
			Commercial Retail	21.968	TSF	
RC3	Majestic Freeway Business Center - Building 12	Riv. Co.	Warehousing	154.751	TSF	NEC OF HARVILL AVE. & COMMERCE CENTER DR.
RC4	Majestic Freeway Business Center - Building 15	Riv. Co.	Warehousing	90.279	TSF	NWC OF HARVILL AVE. & COMMERCE CENTER DR.
RC5	PPT180025: Seaton Commerce Center	Riv. Co.	High-Cube Warehouse	210.800	TSF	SEC OF SEATON AVE. & PERRY ST.
RC6	Majestic Freeway Business Center - Building 11	Riv. Co.	High-Cube Warehouse	391.045	TSF	NEC OF HARVILL AVE. & PERRY ST.
RC7	Majestic Freeway Business Center - Buildings 1, 3 & 4	Riv. Co.	Warehousing	48.930	TSF	NWC OF HARVILL AVE. & CAJALCO RD.
			High-Cube Warehouse	1195.740	TSF	
RC8	Val Verde Logistics Center	Riv. Co.	High-Cube Warehouse	280.308	TSF	NWC OF HARVILL AVE. & OLD CAJALCO RD.
RC9	Dedeaux Truck Terminal	Riv. Co.	Truck Terminal	55.700	TSF	NORTH OF RIDER ST., WEST OF HARVILL AVE.
RC10	Harvill & Rider Warehouse	Riv. Co.	High-Cube Warehouse	284.746	TSF	NORTH OF RIDER ST., EAST OF HARVILL AVE.
			General Light Industrial	50.249	TSF	
RC11	PP26293	Riv. Co.	High-Cube Warehouse	612.481	TSF	SWC OF PATTERSON AVE. & RIDER ST.
RC12	PPT180023: Rider Commerce Center	Riv. Co.	Warehousing	204.330	TSF	NEC OF PATTERSON AVE. & RIDER ST.
RC13	PP26173	Riv. Co.	High-Cube Warehouse	423.665	TSF	SWC OF HARVILL AVE. & RIDER ST.
RC14	Barker Logistics	Riv. Co.	High-Cube Warehouse	699.630	TSF	SWC OF PATTERSON AVE. & PLACENTIA ST.
RC15	Placentia Truck Trailer Parking Lot	Riv. Co.	High-Cube Warehouse	335	Space	NWC OF HARVILL AVE. & PLACENTIA AVE.
RC16	PP26241	Riv. Co.	Warehousing	23.600	TSF	SEC OF HARVILL AVE. & PLACENTIA ST.
RC17	Majestic Freeway Business Center - Building 13	Riv. Co.	High-Cube Warehouse	322.997	TSF	SWC OF HARVILL AVE. & PERRY ST.
RC18	Majestic Freeway Business Center - Building 14A/B	Riv. Co.	Warehousing	354.583	TSF	SWC OF HARVILL AVE. & COMMERCE CENTER DR.
RC19	Majestic Freeway Business Center - Building 17	Riv. Co.	High-Cube Warehouse	268.955	TSF	NEC OF HARVILL AVE. & AMERICA'S TIRE DR.
RC20	Majestic Freeway Business Center - Building 18	Riv. Co.	High-Cube Warehouse	317.760	TSF	SWC OF HARVILL AVE. & PEREGRINE WY.
RC21	Thrifty Oil	Riv. Co.	Warehousing	171.270	TSF	NEC OF TOBACCO RD. & WATER AV.
RC22	Harvill & Cajalco	Riv. Co.	General Light Industrial	99.770	TSF	NEC OF HARVILL AV. & CAJALCO RD.
			Trailer Yard/Storage	133	Spaces	
RC23	Harvill & Water	Riv. Co.	High-Cube Fulfillment	434.823	TSF	SWC OF HARVILL AV. & WATER AV.

[1] DU = Dwelling Units; TSF = Thousand Square Feet

Although it is unlikely that these cumulative projects would be fully built and occupied by Year 2023 or 2025, they have been included in an effort to conduct a conservative analysis and overstate as opposed to understate potential traffic deficiencies.

Any other cumulative projects that are not expected to contribute measurable traffic to study area intersections have not been included since the traffic would dissipate due to the distance from the Project site and study area intersections. Any additional traffic generated by other projects not on the cumulative projects list is accounted for through background ambient growth factors that have been applied to the peak hour volumes at study area intersections as discussed in Section 4.5 *Background Traffic*. Cumulative (2023) Only ADT and peak hour intersection turning movement volumes are shown on Exhibit 4-7 in actual vehicles. Cumulative (2025) Only ADT and peak hour intersection turning movement volumes are shown on Exhibit 4-8 in actual vehicles.

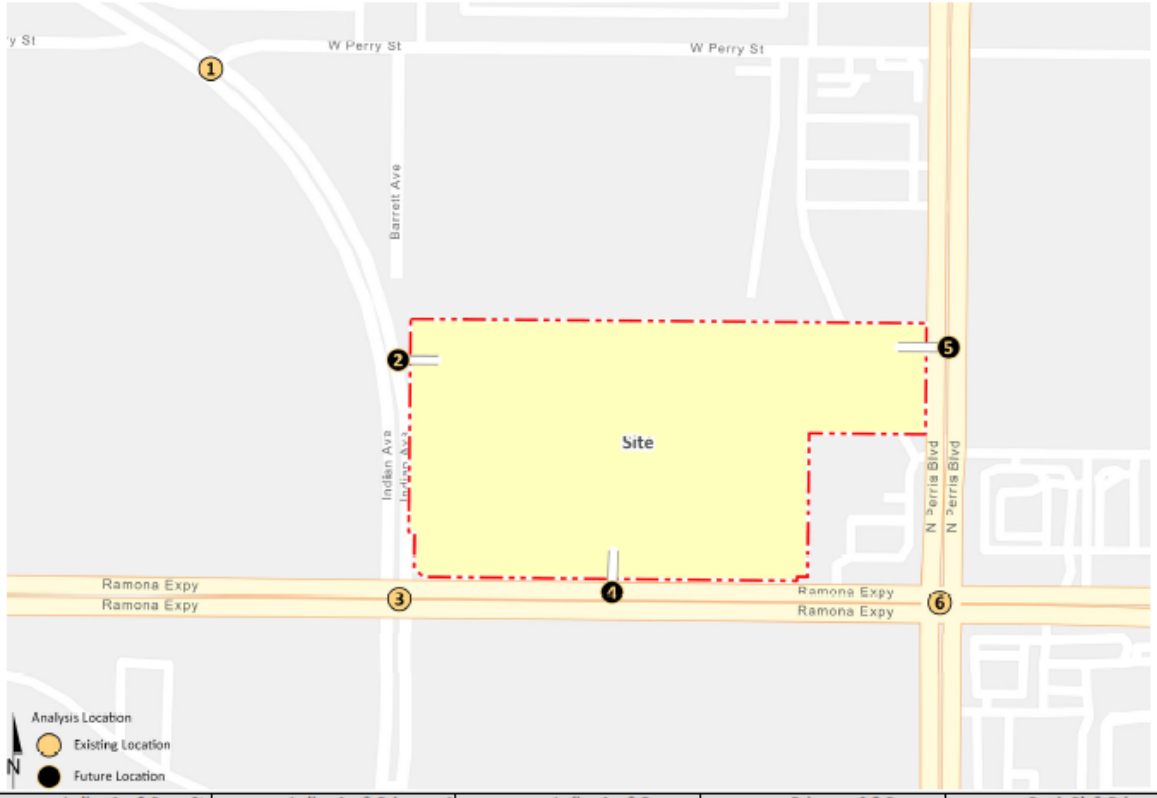
4.7 NEAR-TERM TRAFFIC CONDITIONS

The "buildup" approach combines existing traffic counts with a background ambient growth factor to forecast EAC and EAPC traffic conditions. An ambient growth factor of 3.0% per year to account for background (area-wide) traffic increases that occur over time up to the year 2023 or 2025 from the year 2021 (3.0 percent per year, compounded annually). Traffic volumes generated by the Project are then added to assess the near-term traffic conditions. The 2023 and 2025 roadway networks are similar to the Existing conditions roadway network, with the exception of future driveways proposed to be developed by the Project.

The near-term traffic analysis includes the following traffic conditions, with the various traffic components:

- **Existing Plus Ambient Growth Plus Cumulative (2023)**
    - Existing 2021 counts
    - Ambient growth traffic (6.09%)
    - Cumulative Development traffic
- **Existing Plus Ambient Growth Plus Cumulative Plus Project (2023)**
    - Existing Plus Ambient Growth Plus Cumulative (2023)
    - Project traffic
- **Existing Plus Ambient Growth Plus Cumulative (2025)**
    - Existing 2021 counts
    - Ambient growth traffic (12.55%)
    - Cumulative Development traffic
- **Existing Plus Ambient Growth Plus Cumulative Plus Project (2025)**
    - Existing Plus Ambient Growth Plus Cumulative (2025)
    - Project traffic

EXHIBIT 4-7: CUMULATIVE (2023) ONLY TRAFFIC VOLUMES (IN ACTUAL VEHICLES)



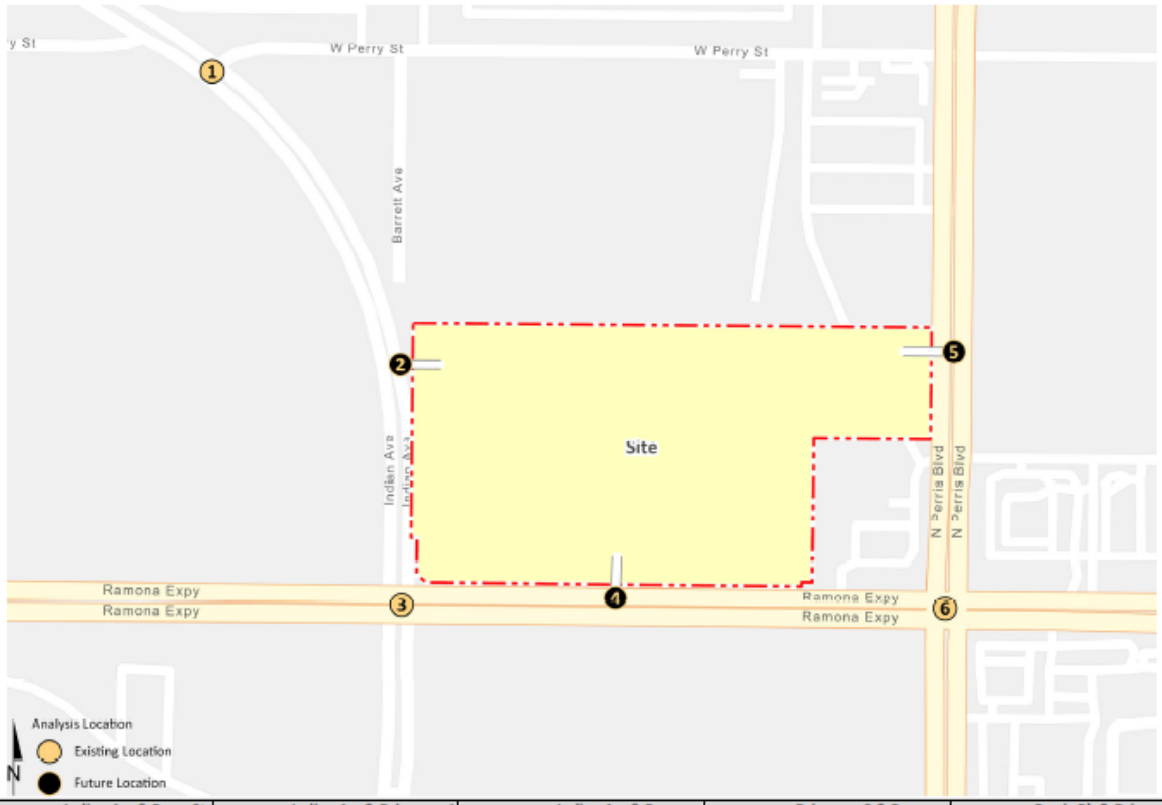
1 Indian Av. & Perry St.	2 Indian Av. & Driveway 1	3 Indian Av. & Ramona Exwy.	4 Driveway 2 & Ramona Exwy.	5 Perris Bl. & Driveway 3
1,450 / 15(5) ← 128(237) ←; 5(14) →; 2(5) ↴; 5(2) ↑; 214(535) ↑; 500 / 1,200	*Future Intersection*	1,450 / 103(128) ↓ 26(10) ↓ 1(104) ↓; 50(100) ↰; 864(582) ←; 1(0) ↰; 160(308) →; 319(1009) →; 21(15) ↴; 17(46) ↑; 9(129) ↑; 1(2) ↱; 52,900 / 55,450 / 1,650	*Future Intersection*	*Future Intersection*

6 Perris Bl. & Ramona Exwy.
1,950 / 15(7) ← 53(54) ← 38(164) ↓; 147(90) ←; 854(576) ←; 70(42) ↰; 5(18) →; 230(1009) →; 87(88) ↴; 65(114) ↑; 41(61) ↑; 22(74) ↱; 51,250 / 53,200 / 4,150

##(##) AM(PM) Peak Hour Intersection Volumes

Average Daily Trips

EXHIBIT 4-7: CUMULATIVE (2025) ONLY TRAFFIC VOLUMES (IN ACTUAL VEHICLES)



1 Indian Av. & Perry St.

1,550 | 500 | 1,300

5(14) →	5(2) ↑	↱ 219(539)
2(5) ↳		
	↓ 15(5)	← 136(241)

2 Indian Av. & Driveway 1

Future Intersection

3 Indian Av. & Ramona Exwy.

1,550 | 54,200 | 56,500 | 1,800

160(308) →	↰ 17(46)	↑ 9(129)	↱ 11(7)
391(1046) →			
21(15) ↳			
	↓ 103(128)	↓ 26(10)	↓ 9(108)
	← 55(104)	← 905(628)	← 7(6)

4 Driveway 2 & Ramona Exwy.

Future Intersection

5 Perris Bl. & Driveway 3

Future Intersection

6 Perris Bl. & Ramona Exwy.

2,600 | 53,050 | 54,550 | 4,850

21(26) →	↰ 65(114)	↑ 45(63)	↱ 47(87)
230(1009) →			
87(88) ↳			
	↓ 20(28)	↓ 54(59)	↓ 55(173)
	← 158(98)	← 901(612)	← 102(66)

##(##) AM(PM) Peak Hour Intersection Volumes

Average Daily Trips

4.8 HORIZON YEAR (2040) CONDITIONS

"Buildout" traffic projections for Horizon Year conditions are based on traffic model forecasts and were derived from the RivTAM using accepted procedures for model forecast refinement and smoothing for study area intersections located within the County of Riverside. The Horizon Year traffic conditions analyses was utilized to determine if improvements funded through regional transportation mitigation fee programs, such as the TUMF, can accommodate the long-range traffic at the target LOS identified in the City of Perris General Plan.

The traffic forecasts reflect the area-wide growth anticipated between Existing (2021) conditions and Horizon Year (2040) traffic conditions. In most instances the traffic model zone structure is not designed to provide accurate turning movements along arterial roadways unless refinement and reasonableness checking is performed. Therefore, the Horizon Year peak hour forecasts were refined using the model derived long range forecasts, base (validation) year model forecasts, along with existing peak hour traffic count data collected at each analysis location in March of 2020. The RivTAM has a base (validation) year of 2012 and a horizon (future forecast) year of 2040. The RivTAM 2040 model utilized for the purposes of this analysis assumes buildout of the City of Perris and includes the future Mid-County Parkway.

The refined future peak hour approach and departure volumes obtained from the model output data are then entered into a spreadsheet program consistent with the National Cooperative Highway Research Program (NCHRP Report 255), along with initial estimates of turning movement proportions. A linear programming algorithm is used to calculate individual turning movements which match the known directional roadway segment forecast volumes computed in the previous step. This program computes a likely set of intersection turning movements from intersection approach counts and the initial turning proportions from each approach leg.

As previously discussed in Section 4.5 *Background Traffic*, the currently adopted SCAG 2020 RTP/SCS growth forecasts for the City of Perris identifies a projected average growth of 1.92 percent per year. Typically, the model growth is prorated and is subsequently added to the existing (base validation) traffic volumes to represent Horizon Year traffic conditions. Horizon Year turning volumes were compared to EAPC (2025) volumes in order to ensure a minimum growth as a part of the refinement process. The minimum growth includes any additional growth between EAPC (2025) and Horizon Year (2040) traffic conditions that is not accounted for by the traffic generated by cumulative development projects and ambient growth rates assumed between Existing (2021) and EAPC (2025) conditions.

The future Horizon Year (2040) Without Project peak hour turning movements were then reviewed by Urban Crossroads, Inc. for reasonableness, and in some cases, were adjusted to achieve flow conservation, reasonable growth, and reasonable diversion between parallel routes. Flow conservation checks ensure that traffic flow between two closely spaced intersections, such as two adjacent driveway locations, is verified in order to make certain that vehicles leaving one intersection are entering the adjacent intersection and that there is no unexplained loss of vehicles. The result of this traffic forecasting procedure is a series of traffic volumes which are suitable for traffic operations analysis.

RivTAM does not include a truck component or have data that is unusually low. As such, in an effort to conduct a conservative analysis, the presence of trucks has been accounted for based on the manual volume adjustments made to demonstrate growth above EAPC (2025) traffic forecasts, which are presented and evaluated in PCE (see Section 3.7 *Existing Traffic Counts* for discussion on PCE). As such, the Horizon Year (2040) forecasts are also assumed to be in PCE for the purposes of this analysis. Post-processing worksheets for Horizon Year (2040) Without Project traffic conditions are provided in Appendix 4.1.

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5 E+P TRAFFIC CONDITIONS

This section discusses the traffic forecasts for Existing Plus Project (E+P) conditions and the resulting intersection operations and traffic signal warrant analyses.

5.1 ROADWAY IMPROVEMENTS

The lane configurations and traffic controls assumed to be in place for E+P conditions are consistent with those shown previously on Exhibit 3-1, with the exception of the following:

- Project driveways and those facilities assumed to be constructed by the Project to provide site access are also assumed to be in place for E+P conditions only (e.g., intersection and roadway improvements at the Project's frontage and driveways).

5.2 E+P TRAFFIC VOLUME FORECASTS

This scenario includes Existing traffic volumes plus Project (Buildout) traffic. The ADT and peak hour intersection turning movement volumes (in actual vehicles), which can be expected for E+P traffic conditions are shown on Exhibit 5-1.

5.3 INTERSECTION OPERATIONS ANALYSIS

E+P peak hour traffic operations have been evaluated for the study area intersections based on the analysis methodologies presented in Section 2 *Methodologies* of this TA. The intersection analysis results are summarized in Table 5-1, which indicates that the study area intersections are anticipated to continue to operate at an acceptable LOS during the peak hours, consistent with Existing (2021) traffic conditions. The intersection operations analysis worksheets are included in Appendix 5.1 of this TA.

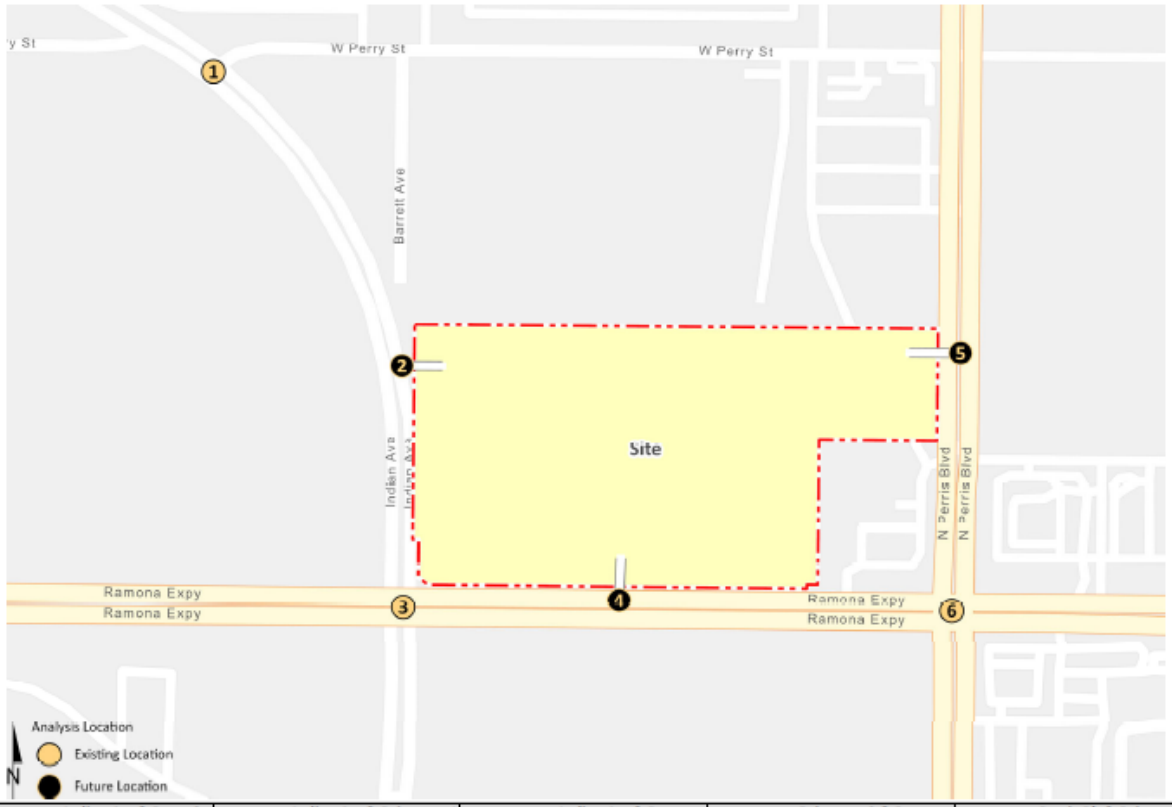
TABLE 5-1: INTERSECTION ANALYSIS FOR E+P CONDITIONS

			Existing				Existing + Project			
			Delay[2] (secs.)		Level of Service		Delay[2] (secs.)		Level of Service	
#	Intersection	Traffic Control[1]	AM	PM	AM	PM	AM	PM	AM	PM
1	Indian Av. & Perry St.	CSS	9.8	8.9	A	A	10.0	9.0	B	A
2	Indian Av. & Driveway 1	CSS	Does Not Exist				9.9	9.0	A	A
3	Indian Av. & Ramona Exwy.	TS	21.2	24.4	C	C	22.1	24.6	C	C
4	Driveway 2 & Ramona Exwy.	CSS	Does Not Exist				20.5	16.4	C	C
5	Perris Bl. & Driveway 3	CSS	Does Not Exist				11.9	15.6	B	C
6	Perris Bl. & Ramona Exwy.	TS	33.0	27.6	C	C	33.1	27.8	C	C

[1] CSS = Cross-street Stop; TS = Traffic Signal; CSS = Improvement

[2] Per the Highway Capacity Manual (6th Edition), overall average intersection delay and level of service are shown for intersections with a traffic signal or all way stop control. For intersections with cross street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown.

EXHIBIT 5-1: E+P TRAFFIC VOLUMES (IN ACTUAL VEHICLES)



1 Indian Av. & Perry St.

5,250 | 400
89(241) ← | ↰ 3(5)
→ 374(174) | ↱ 33(27)
5,550 | 5,550

2 Indian Av. & Driveway 1

5,550 | 250
84(236) ← | 5(5) ↳ | ↰ 2(6)
→ 405(196) | ↱ 14(4)
5,450 | 5,450

3 Indian Av. & Ramona Exwy.

5,450 | 35,350
18(24) ↳ | 50(139) ← | 16(73) ↳ | ↰ 116(54) | ← 1488(1089) | ↱ 54(110)
152(74) ↳ | 958(1507) → | 53(83) ↳
50(90) | 151(72) | 27(29)
35,450 | 6,400

4 Driveway 2 & Ramona Exwy.

100 | 35,350
3(12) ↳ | ← 10(3) | ← 1654(1241)
1001(1609) →
35,350 | 1,050

5 Perris Bl. & Driveway 3

22,300
34(38) ↳ | 591(1031) ←
28(48) ↳ | 1179(731) →
1,050 | 22,350

6 Perris Bl. & Ramona Exwy.

22,350 | 30,250
198(213) ↳ | 319(614) ← | 102(252) ↳ | ↰ 133(117) | ← 1159(762) | ↱ 87(92)
295(244) ↳
613(1121) →
93(244) ↳
288(203) | 752(370) | 90(101)
34,500 | 30,050

###(###) AM(PM) Peak Hour Intersection Volumes

Average Daily Trips

5.4 TRAFFIC SIGNAL WARRANTS ANALYSIS

There are no applicable study area intersections that may meet peak hour volume-based or planning level (ADT) traffic signal warrants under E+P traffic conditions.

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6 EAC AND EAPC (2023) TRAFFIC CONDITIONS

This section discusses the methods used to develop EAC and EAPC (2023) traffic forecasts and the resulting intersection operations and traffic signal warrant analyses.

6.1 ROADWAY IMPROVEMENTS

The lane configurations and traffic controls assumed to be in place for EAC and EAPC (2023) conditions are consistent with those shown previously on Exhibit 3-1, with the exception of the following:

- Project driveways and those facilities assumed to be constructed by the Project to provide site access are also assumed to be in place for EAPC conditions only (e.g., intersection and roadway improvements along the Project's frontage and driveways).
- Driveways and those facilities assumed to be constructed by cumulative developments to provide site access are also assumed to be in place for EAC and EAPC (2023) conditions only (e.g., intersection and roadway improvements along the cumulative development's frontages).

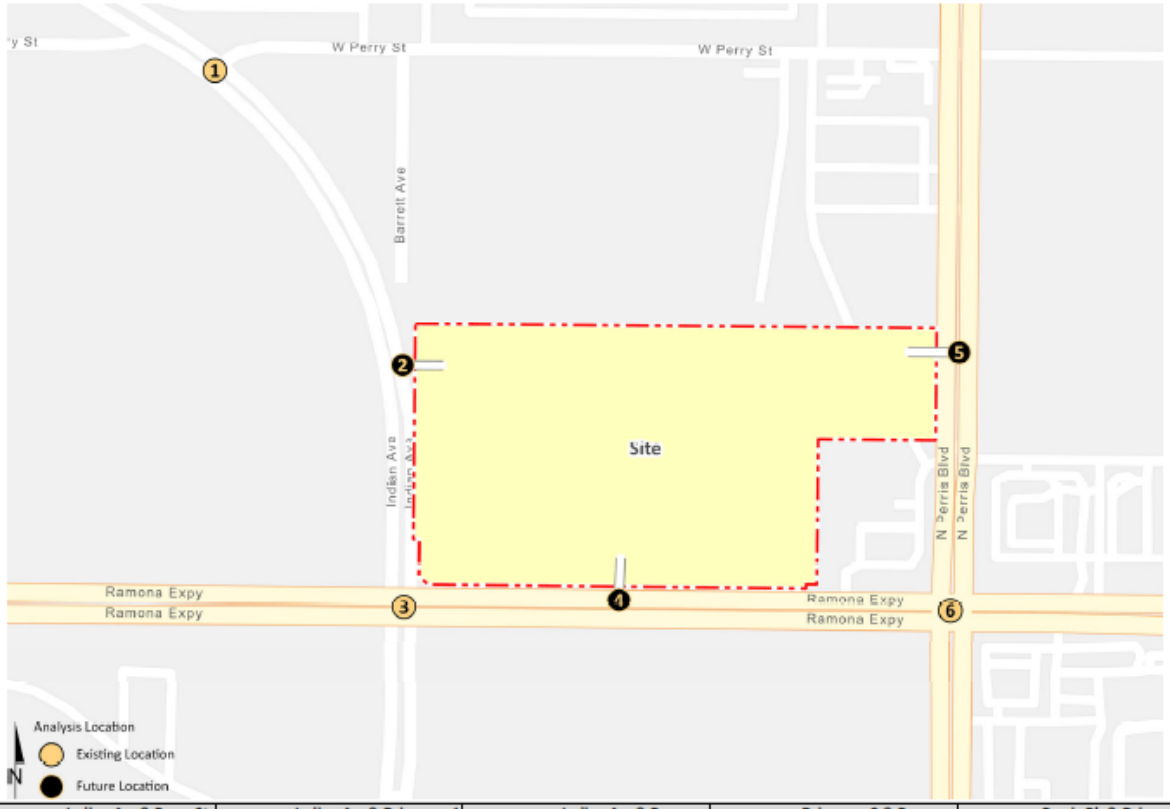
6.2 EAC (2023) TRAFFIC VOLUME FORECASTS

To account for background traffic, other known cumulative development projects in the study area were included in addition to 6.09% of ambient growth for EAC (2023) traffic conditions. The weekday ADT and weekday AM and PM peak hour volumes (in actual vehicles) which can be expected for EAC (2023) traffic conditions are shown on Exhibit 6-1.

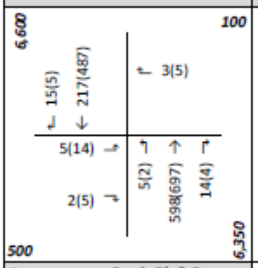
6.3 EAPC (2023) TRAFFIC VOLUME FORECASTS

To account for background traffic, other known cumulative development projects in the study area were included in addition to 6.09% of ambient growth for EAPC (2023) traffic conditions in conjunction with traffic associated with the proposed Project (Phase I). The weekday ADT and weekday AM and PM peak hour volumes (in actual vehicles) which can be expected for EAPC (2023) traffic conditions are shown on Exhibit 6-2.

EXHIBIT 6-1: EAC (2023) TRAFFIC VOLUMES (IN ACTUAL VEHICLES)



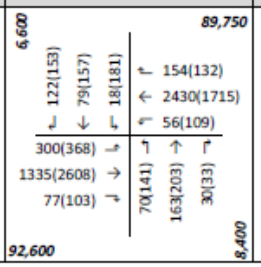
1 Indian Av. & Perry St.



2 Indian Av. & Driveway 1

Future Intersection

3 Indian Av. & Ramona Exwy.



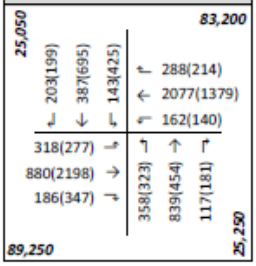
4 Driveway 2 & Ramona Exwy.

Future Intersection

5 Perris Bl. & Driveway 3

Future Intersection

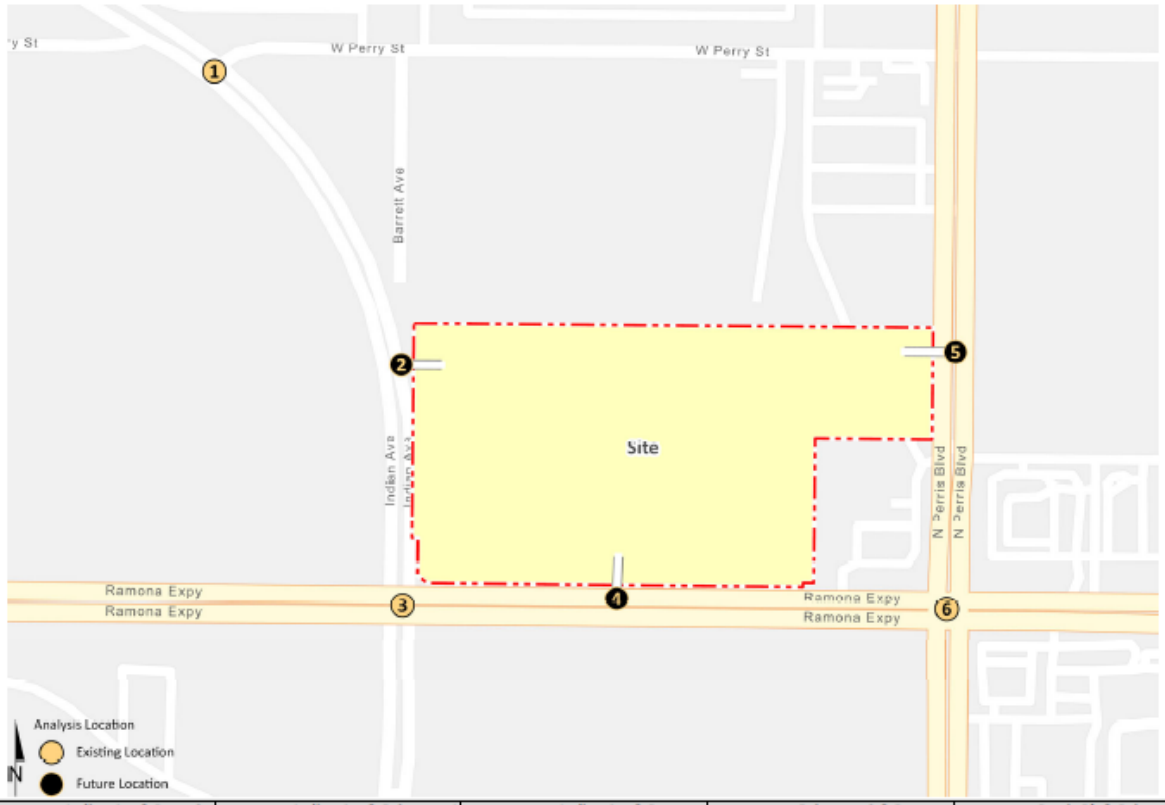
6 Perris Bl. & Ramona Exwy.



###(###) AM(PM) Peak Hour Intersection Volumes

Average Daily Trips

EXHIBIT 6-2: EAPC (2023) TRAFFIC VOLUMES (IN ACTUAL VEHICLES)



1 Indian Av. & Perry St.

6,800 | 100

15(5) | 222(492) | 3(5)

5(14) | 5(2) | 600(704) | 14(4)

2(5)

500 | 6,550

2 Indian Av. & Driveway 1

6,800 | 250

219(492) | 5(5) | 2(6)

617(705) | 14(4)

6,650

3 Indian Av. & Ramona Exwy.

6,650 | 89,850

122(153) | 79(157) | 18(181) | 156(134) | 2432(1722) | 58(116)

307(370) | 70(141) | 169(205) | 30(33)

1335(2608)

77(103)

92,650 | 8,450

4 Driveway 2 & Ramona Exwy.

100 | 89,850

3(12) | 10(3) | 2642(1959)

1383(2822)

89,850

5 Perris Bl. & Driveway 3

25,050

1(0) | 733(1319)

3(12) | 1445(945)

Nominal | 25,100

6 Perris Bl. & Ramona Exwy.

25,100 | 83,250

204(202) | 389(702) | 144(428) | 288(214) | 2080(1380) | 162(140)

318(277) | 366(325) | 839(454) | 117(181)

880(2198)

186(347)

89,300 | 25,350

##(##) AM(PM) Peak Hour Intersection Volumes

Average Daily Trips

6.4 INTERSECTION OPERATIONS ANALYSIS

LOS calculations were conducted for the study intersections to evaluate their operations under EAC (2023) conditions with roadway and intersection geometrics consistent with Section 6.1 *Roadway Improvements*. As shown in Table 6-1, all the study area intersections are anticipated to operate at acceptable LOS during the peak hours under EAC and EAPC (2023) traffic conditions, with the exception of the following intersections:

- Indian Av. & Ramona Exwy. (#3) – LOS F PM peak hour only
- Perris Bl. & Ramona Exwy. (#6) – LOS F AM and PM peak hours

The intersection operations analysis worksheets for EAC and EAPC (2023) traffic conditions are included in Appendix 6.1 and Appendix 6.2 of this TA, respectively.

TABLE 6-1: INTERSECTION ANALYSIS FOR EAC & EAPC (2023) CONDITIONS

#	Intersection	Traffic Control[1]	EAC (2023) Delay[2] (secs.) AM	EAC (2023) Delay[2] (secs.) PM	EAC (2023) Level of Service AM	EAC (2023) Level of Service PM	EAPC (2023) Delay[2] (secs.) AM	EAPC (2023) Delay[2] (secs.) PM	EAPC (2023) Level of Service AM	EAPC (2023) Level of Service PM
1	Indian Av. & Perry St.	CSS	13.6	20.2	B	C	13.8	20.6	B	C
2	Indian Av. & Driveway 1	CSS	Does Not Exist				10.8	11.1	B	B
3	Indian Av. & Ramona Exwy.	TS	68.9	**94.6**	E	**F**	70.3	**96.7**	E	**F**
4	Driveway 2 & Ramona Exwy.	CSS	Does Not Exist				41.5	25.1	E	D
5	Perris Bl. & Driveway 3	CSS	Does Not Exist				12.1	16.4	B	C
6	Perris Bl. & Ramona Exwy.	TS	**116.4**	**88.5**	**F**	**F**	**116.8**	**88.7**	**F**	**F**

* **BOLD** = Level of Service (LOS) does not meet the applicable jurisdictional requirements (i.e., unacceptable LOS).

[1] CSS = Cross-street Stop; TS = Traffic Signal; CSS = Improvement

[2] Per the Highway Capacity Manual (6th Edition), overall average intersection delay and level of service are shown for intersections with a traffic signal or all way stop control. For intersections with cross street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown.

6.5 TRAFFIC SIGNAL WARRANTS ANALYSIS

Traffic signal warrants have been performed for EAC and EAPC (2023) traffic conditions based on peak hour volumes and daily traffic (ADT). No traffic signals are warranted at the study area intersections (see Appendices 6.3 and 6.4).

6.6 RECOMMENDED IMPROVEMENTS

Improvement strategies have been recommended at intersections that have been identified as deficient under EAPC (2023) traffic conditions in an effort to achieve an acceptable LOS (i.e., LOS E or better).

The effectiveness of the recommended improvement strategies to address EAPC (2023) traffic deficiencies are presented in Table 6-2. Worksheets for EAPC (2023) conditions, with improvements, HCM calculation worksheets are provided in Appendix 6.5.

The Project Applicant shall participate in the funding of off-site improvements, including traffic signals that are needed to serve cumulative traffic conditions through the payment of NPRBBD fees (if the improvements are included in the NPRBBD fee program) or on a fair share basis (if the improvements are not included in the NPRBBD fee program). These fees shall be collected by the City of Perris, with the proceeds solely used as part of a funding mechanism aimed at ensuring that regional highways and arterial expansions keep pace with the projected population increases.

TABLE 6-2: INTERSECTION ANALYSIS FOR EAC & EAPC (2023) CONDITIONS WITH IMPROVEMENTS

			Intersection Approach Lanes[2]												Delay[3] (secs.)		Level of Service	
		Traffic	Northbound			Southbound			Eastbound			Westbound						
#	Intersection	Control[1]	L	T	R	L	T	R	L	T	R	L	T	R	AM	PM	AM	PM
3	Indian Av. & Ramona Exwy.																	
	-Without Improvements	TS	1	2	0	1	2	1	1	3	0	1	3	1	70.3	96.7	E	F
	- With Improvements[4]	TS	1	2	0	1	2	1	**2**	3	0	1	3	1	51.5	73.4	D	E
6	Perris Bl. & Ramona Exwy.																	
	-Without Improvements	TS	2	2	1	2	2	1	2	3	1	2	3	0	**116.8**	**88.7**	F	F
	- With Improvements[4]	TS	2	**3**	**0**	2	**3**	**0**	2	3	1	2	3	0	73.7	78.1	E	E

* **BOLD** = Level of Service (LOS) does not meet the applicable jurisdictional requirements (i.e., unacceptable LOS).

[1] TS = Traffic Signal

[2] When a right turn is designated, the lane can either be striped or unstriped. To function as a right turn lane there must be sufficient width for right turning vehicles to travel outside the through lanes.
L = Left; T = Through; R = Right; d = Defacto Right Turn Lane; **1** = Improvement

[3] Per the Highway Capacity Manual (6th Edition), overall average intersection delay and level of service are shown for intersections with a traffic signal or all way stop control. For intersections with cross street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown.

[4] Per the City of Perris General Plan, LOS E is permitted at intersections along the Ramona-Cajalco Expressway.

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7 EAC AND EAPC (2025) TRAFFIC CONDITIONS

This section discusses the methods used to develop EAC and EAPC (2025) traffic forecasts and the resulting intersection operations and traffic signal warrant analyses.

7.1 ROADWAY IMPROVEMENTS

The lane configurations and traffic controls assumed to be in place for EAC and EAPC (2025) conditions are consistent with those shown previously on Exhibit 3-1, with the exception of the following:

- Project driveways and those facilities assumed to be constructed by the Project to provide site access are also assumed to be in place for EAPC conditions only (e.g., intersection and roadway improvements along the Project's frontage and driveways).
- Driveways and those facilities assumed to be constructed by cumulative developments to provide site access are also assumed to be in place for EAC and EAPC (2025) conditions only (e.g., intersection and roadway improvements along the cumulative development's frontages).

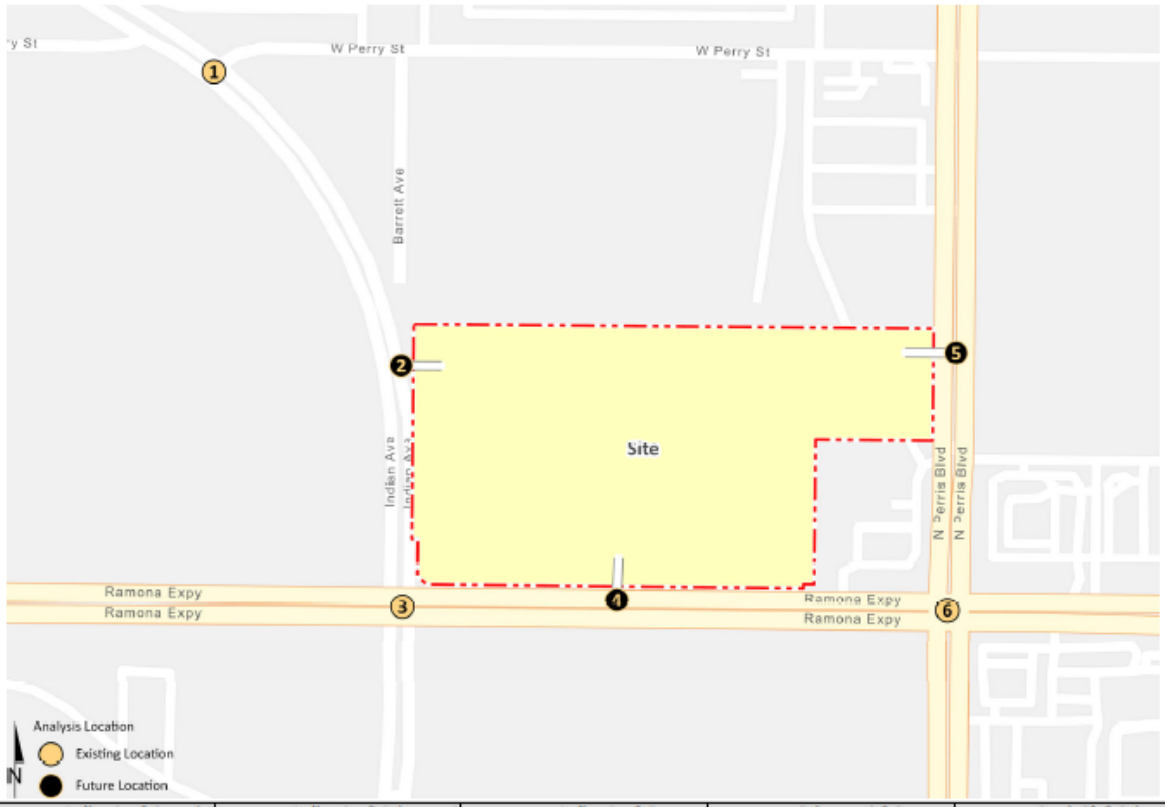
7.2 EAC (2025) TRAFFIC VOLUME FORECASTS

To account for background traffic, other known cumulative development projects in the study area were included in addition to 12.55% of ambient growth for EAC (2025) traffic conditions. The weekday ADT and weekday AM and PM peak hour volumes (in actual vehicles) which can be expected for EAC (2025) traffic conditions are shown on Exhibit 7-1.

7.3 EAPC (2025) TRAFFIC VOLUME FORECASTS

To account for background traffic, other known cumulative development projects in the study area were included in addition to 12.55% of ambient growth for EAPC (2025) traffic conditions in conjunction with traffic associated with the proposed Project (Buildout). The weekday ADT and weekday AM and PM peak hour volumes (in actual vehicles) which can be expected for EAPC (2025) traffic conditions are shown on Exhibit 7-2.

EXHIBIT 7-1: EAC (2025) TRAFFIC VOLUMES (IN ACTUAL VEHICLES)



1 Indian Av. & Perry St.

7,050 | 150
15(5) ← | 231(507) ← | 3(6) →
5(14) → | 5(2) ↑ | 626(711) ↑ | 15(5) ↱
2(5) ↴
500 | 6,800

2 Indian Av. & Driveway 1

Future Intersection

3 Indian Av. & Ramona Exwy.

7,000 | 93,300
123(155) ↲ | 82(166) ↓ | 27(190) ↳ | 165(138) ↰ | 2566(1830) ← | 66(122) ↰
309(372) → | 73(147) ↱ | 172(208) ↑ | 41(40) ↱
1469(2742) →
81(108) ↴
95,900 | 8,950

4 Driveway 2 & Ramona Exwy.

Future Intersection

5 Perris Bl. & Driveway 3

Future Intersection

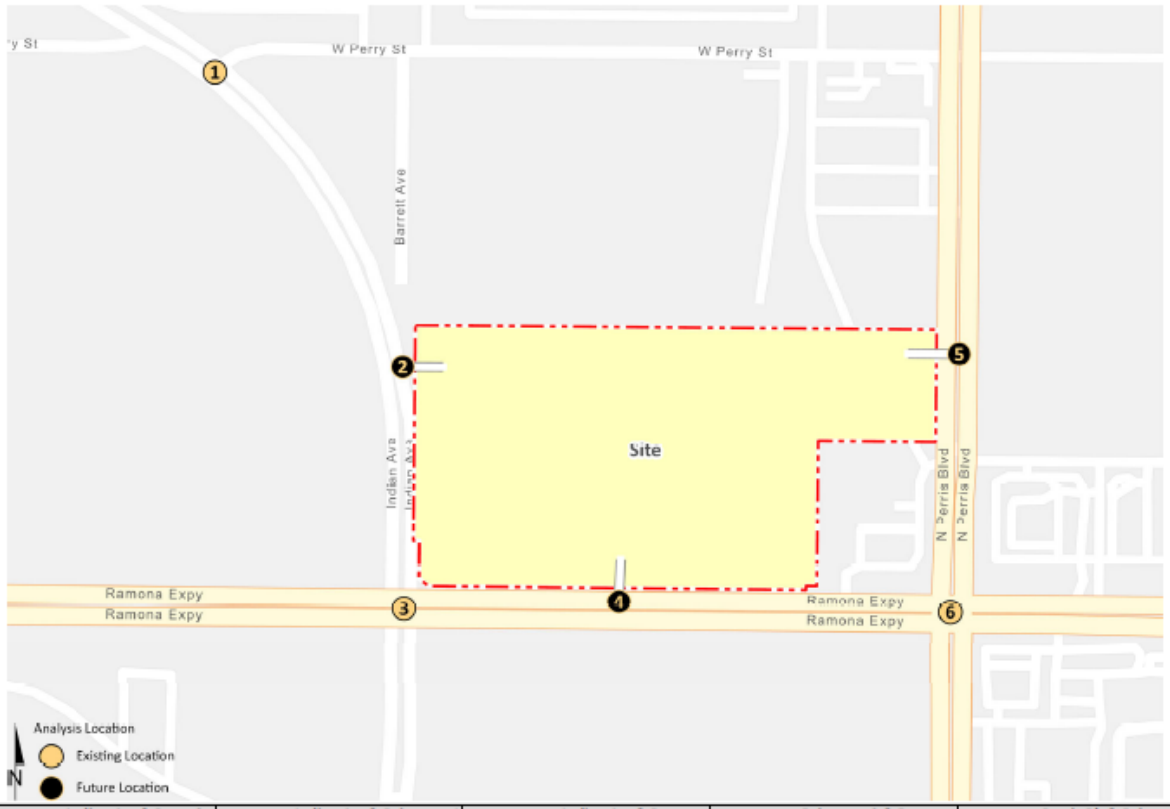
6 Perris Bl. & Ramona Exwy.

27,150 | 86,950
219(232) ↲ | 409(739) ↓ | 166(450) ↳ | 308(230) ↰ | 2199(1464) ← | 200(170) ↰
353(301) → | 376(336) ↱ | 891(479) ↑ | 148(201) ↱
920(2271) →
192(363) ↴
92,750 | 27,250

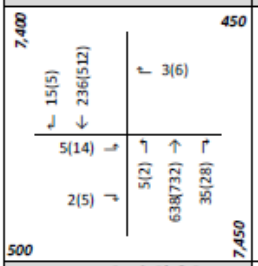
###(###) AM(PM) Peak Hour Intersection Volumes

Average Daily Trips

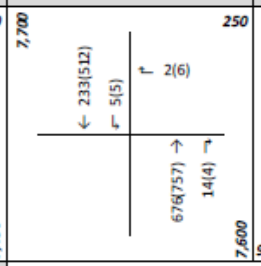
EXHIBIT 7-2: EAPC (2025) TRAFFIC VOLUMES (IN ACTUAL VEHICLES)



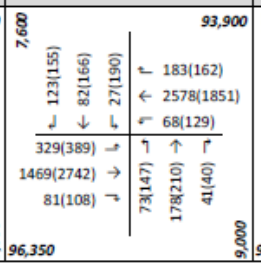
1 Indian Av. & Perry St.



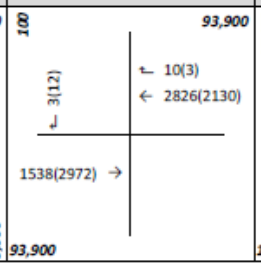
2 Indian Av. & Driveway 1



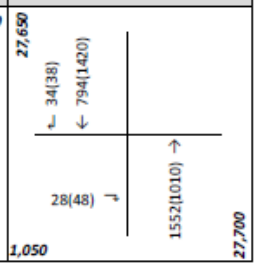
3 Indian Av. & Ramona Exwy.



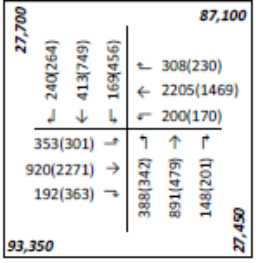
4 Driveway 2 & Ramona Exwy.



5 Perris Bl. & Driveway 3



6 Perris Bl. & Ramona Exwy.



###(###) AM(PM) Peak Hour Intersection Volumes

Average Daily Trips

7.4 INTERSECTION OPERATIONS ANALYSIS

LOS calculations were conducted for the study intersections to evaluate their operations under EAC (2025) conditions with roadway and intersection geometrics consistent with Section 7.1 *Roadway Improvements*. As shown in Table 7-1, all the study area intersections are anticipated to operate at acceptable LOS during the peak hours under EAC and EAPC (2025) traffic conditions, with the exception of the following intersections:

- Indian Av. & Ramona Exwy. (#3) – LOS F PM peak hour only
- Perris Bl. & Ramona Exwy. (#6) – LOS F AM and PM peak hours

The intersection operations analysis worksheets for EAC and EAPC (2025) traffic conditions are included in Appendix 7.1 and Appendix 7.2 of this TA, respectively.

TABLE 7-1: INTERSECTION ANALYSIS FOR EAC & EAPC (2025) CONDITIONS

#	Intersection	Traffic Control[1]	EAC (2025) Delay[2] (secs.) AM	EAC (2025) Delay[2] (secs.) PM	EAC (2025) Level of Service AM	EAC (2025) Level of Service PM	EAPC (2025) Delay[2] (secs.) AM	EAPC (2025) Delay[2] (secs.) PM	EAPC (2025) Level of Service AM	EAPC (2025) Level of Service PM
1	Indian Av. & Perry St.	CSS	14.1	20.8	B	C	14.3	21.7	B	C
2	Indian Av. & Driveway 1	CSS	Does Not Exist				11.1	11.4	B	B
3	Indian Av. & Ramona Exwy.	TS	**83.3**	**111.7**	**F**	**F**	**87.7**	**116.3**	**F**	**F**
4	Driveway 2 & Ramona Exwy.	CSS	Does Not Exist				48.0	30.0	E	D
5	Perris Bl. & Driveway 3	CSS	Does Not Exist				13.2	20.5	B	C
6	Perris Bl. & Ramona Exwy.	TS	**146.9**	**110.4**	**F**	**F**	**147.3**	**113.4**	**F**	**F**

* **BOLD** = Level of Service (LOS) does not meet the applicable jurisdictional requirements (i.e., unacceptable LOS).

[1] CSS = Cross-street Stop; TS = Traffic Signal; CSS = Improvement

[2] Per the Highway Capacity Manual (6th Edition), overall average intersection delay and level of service are shown for intersections with a traffic signal or all way stop control. For intersections with cross street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown.

7.5 TRAFFIC SIGNAL WARRANTS ANALYSIS

Traffic signal warrants have been performed for EAC and EAPC (2025) traffic conditions based on peak hour volumes and daily traffic (ADT). No traffic signals are warranted at the study area intersections (see Appendices 7.3 and 7.4).

7.6 RECOMMENDED IMPROVEMENTS

Improvement strategies have been recommended at intersections that have been identified as deficient under EAPC (2025) traffic conditions in an effort to achieve an acceptable LOS (i.e., LOS E or better).

The effectiveness of the recommended improvement strategies to address EAPC (2025) traffic deficiencies are presented in Table 7-2. Worksheets for EAPC (2025) conditions, with improvements, HCM calculation worksheets are provided in Appendix 7.5.

The Project Applicant shall participate in the funding of off-site improvements, including traffic signals that are needed to serve cumulative traffic conditions through the payment of NPRBBD fees (if the improvements are included in the NPRBBD fee program) or on a fair share basis (if the improvements are not included in the NPRBBD fee program). These fees shall be collected by the City of Perris, with the proceeds solely used as part of a funding mechanism aimed at ensuring that regional highways and arterial expansions keep pace with the projected population increases.

TABLE 7-2: INTERSECTION ANALYSIS FOR EAC & EAPC (2025) CONDITIONS WITH IMPROVEMENTS

			Intersection Approach Lanes[2]												Delay[3] (secs.)		Level of Service	
		Traffic	Northbound			Southbound			Eastbound			Westbound						
#	Intersection	Control[1]	L	T	R	L	T	R	L	T	R	L	T	R	AM	PM	AM	PM
3	Indian Av. & Ramona Exwy.																	
	-Without Improvements	TS	1	2	0	1	2	1	1	3	0	1	3	1	87.7	**116.3**	F	**F**
	- With Improvements[4]	TS	1	2	0	1	2	1	**2**	3	0	1	3	1	67.6	77.7	E	E
6	Perris Bl. & Ramona Exwy.																	
	-Without Improvements	TS	2	2	1	2	2	1	2	3	1	2	3	0	**147.3**	**113.4**	F	**F**
	- With Improvements[4]	TS	2	**3**	**0**	2	**3**	**0**	2	3	1	2	3	0	79.0	79.4	E	E

* **BOLD** = Level of Service (LOS) does not meet the applicable jurisdictional requirements (i.e., unacceptable LOS).

[1] TS = Traffic Signal

[2] When a right turn is designated, the lane can either be striped or unstriped. To function as a right turn lane there must be sufficient width for right turning vehicles to travel outside the through lanes.

L = Left; T = Through; R = Right; d = Defacto Right Turn Lane; **1** = Improvement

[3] Per the Highway Capacity Manual (6th Edition), overall average intersection delay and level of service are shown for intersections with a traffic signal or all way stop control. For intersections with cross street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown.

[4] Per the City of Perris General Plan, LOS E is permitted at intersections along the Ramona-Cajalco Expressway.

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8 HORIZON YEAR (2040) TRAFFIC CONDITIONS

This section discusses the methods used to develop Horizon Year (2040) Without and With Project traffic forecasts, and the resulting intersection operations and traffic signal warrant operations analyses.

8.1 ROADWAY IMPROVEMENTS

The lane configurations and traffic controls assumed to be in place for Horizon Year (2040) conditions are consistent with those shown previously on Exhibit 3-1, with the exception of the following:

- Project driveways and those facilities assumed to be constructed by the Project to provide site access are also assumed to be in place for Horizon Year (2040) conditions only (e.g., intersection and roadway improvements along the Project's frontage and driveways).
- Driveways and those facilities assumed to be constructed by cumulative developments to provide site access are also assumed to be in place for Horizon Year (2040) conditions only (e.g., intersection and roadway improvements along the cumulative development's frontages).
- The regional, grade-separated transportation facility referred to as the Mid-County Parkway between the I-215 Freeway (at Placentia Avenue) and SR-79 is assumed to be in place consistent with the County's long range plans (and RivTAM traffic model infrastructure).

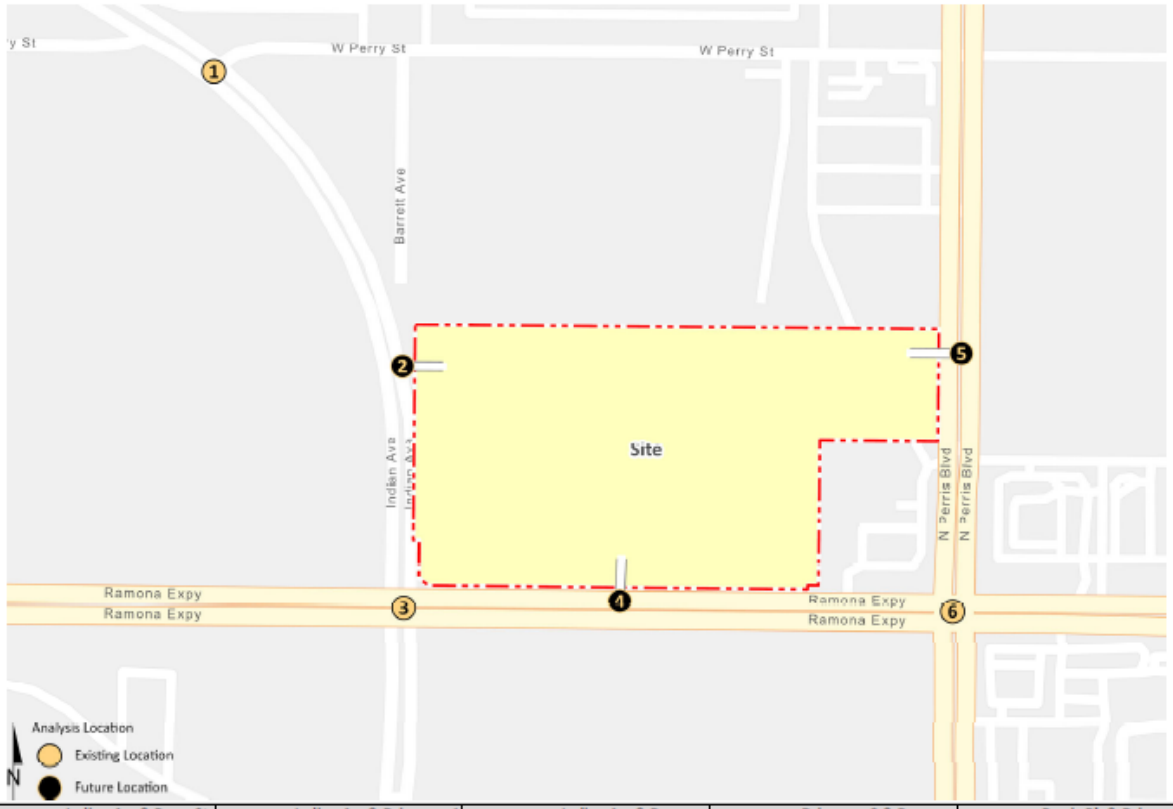
8.2 HORIZON YEAR (2040) WITHOUT PROJECT TRAFFIC VOLUME FORECASTS

This scenario includes the refined post-processed volumes obtained from the RivTAM (see Section 4.8 *Horizon Year Volume Development* of this TA for a detailed discussion on the post-processing methodology). The Horizon Year (2040) Without Project traffic forecasts reflect the future roadway network contemplated by the City's General Plan. The weekday ADT and weekday AM and PM peak hour volumes which can be expected for Horizon Year (2040) Without Project traffic conditions is shown on Exhibit 8-1.

8.3 HORIZON YEAR (2040) WITH PROJECT TRAFFIC VOLUME FORECASTS

This scenario includes the refined post-processed volumes obtained from the RivTAM plus proposed Project volumes. The weekday ADT and weekday AM and PM peak hour volumes which can be expected for Horizon Year (2040) With Project traffic conditions are shown on Exhibit 8-2.

EXHIBIT 8-1: HORIZON YEAR (2040) WITHOUT PROJECT TRAFFIC VOLUMES (IN ACTUAL VEHICLES)



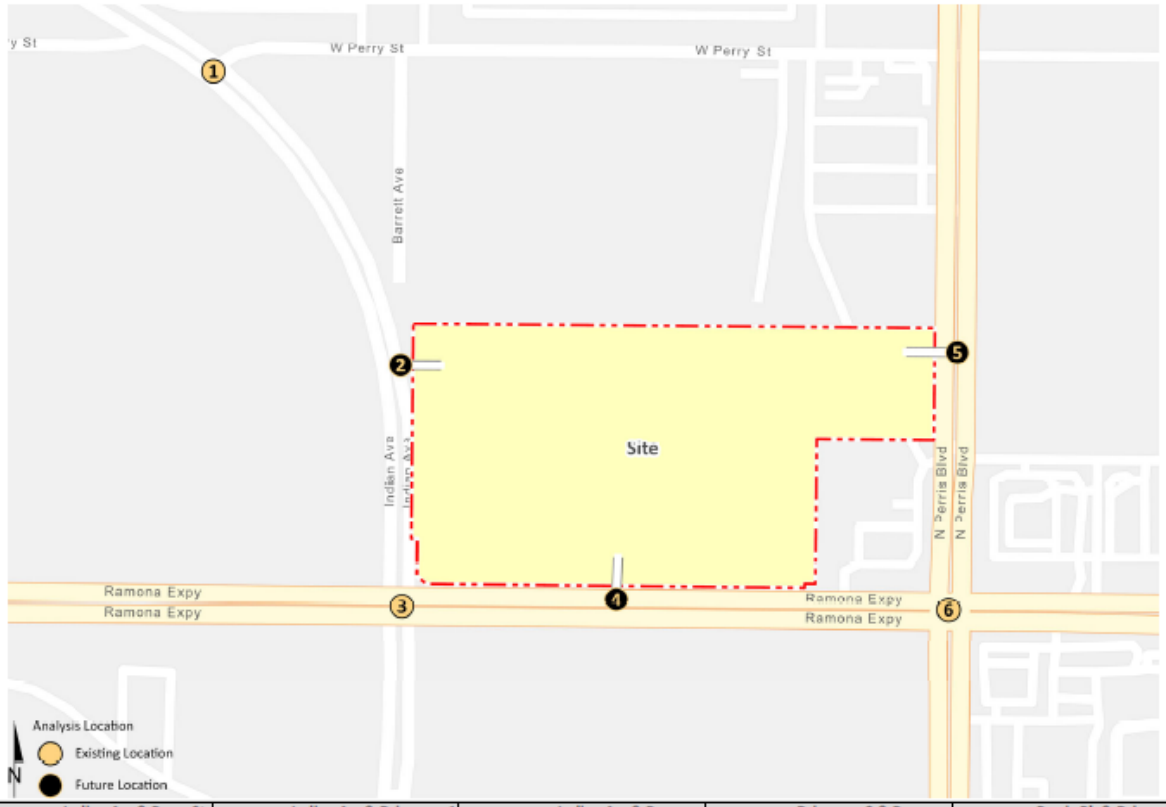
1 Indian Av. & Perry St.	2 Indian Av. & Driveway 1	3 Indian Av. & Ramona Exwy.	4 Driveway 2 & Ramona Exwy.	5 Perris Bl. & Driveway 3
11,250 / 150 16(5) ← 359(1002) ↓ 4(6) ← 5(15) → 2(5) ↳ 5(2) ↑ 482(543) ↑ 15(5) ↱ 500 / 11,250	*Future Intersection*	10,650 / 40,950 149(368) ↓ 143(341) ↓ 69(298) ↳ 164(84) ← 1714(1273) ← 178(126) ↰ 175(219) → 1156(1773) → 192(220) ↳ 131(252) ↑ 163(247) ↑ 62(206) ↱ 40,950 / 13,550	*Future Intersection*	*Future Intersection*

6 Perris Bl. & Ramona Exwy.
32,900 / 73,300 353(249) ↓ 509(825) ↓ 185(373) ↳ 386(263) ← 1356(954) ← 205(187) ↰ 344(422) → 789(1479) → 153(377) ↳ 308(222) ↑ 873(649) ↑ 116(246) ↱ 76,200 / 26,300

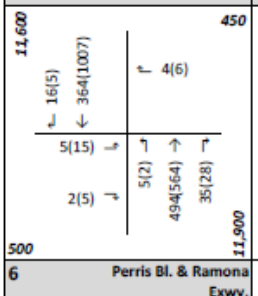
###(###) AM(PM) Peak Hour Intersection Volumes

Average Daily Trips

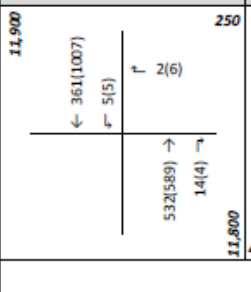
EXHIBIT 8-2: HORIZON YEAR (2040) WITH PROJECT TRAFFIC VOLUMES (IN ACTUAL VEHICLES)



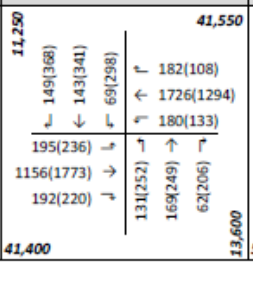
1 Indian Av. & Perry St.



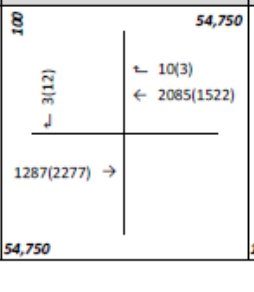
2 Indian Av. & Driveway 1



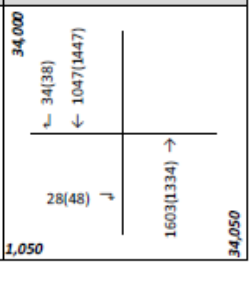
3 Indian Av. & Ramona Exwy.



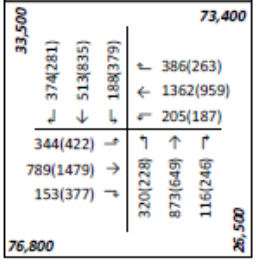
4 Driveway 2 & Ramona Exwy.



5 Perris Bl. & Driveway 3



6 Perris Bl. & Ramona Exwy.



##(##) AM(PM) Peak Hour Intersection Volumes

Average Daily Trips

8.4 INTERSECTION OPERATIONS ANALYSIS

LOS calculations were conducted for the study intersections to evaluate their operations under Horizon Year (2040) conditions with roadway and intersection geometrics consistent with Section 8.1 *Roadway Improvements*. As shown in Table 8-1, all the study area intersections are anticipated to operate at acceptable LOS during the peak hours under Horizon Year (2040) Without and With Project traffic conditions, with the exception of the following intersections:

- Indian Av. & Perry St. (#1) – LOS E PM peak hour only

Vehicles will utilize Mid-County Parkway which will reduce the traffic volumes along Ramona Expressway. As such, the peak hour intersection operations at various locations along Ramona Expressway may improve in comparison to EAPC (2023) traffic conditions.

The intersection operations analysis worksheets for Horizon Year (2040) Without and With Project traffic conditions are included in Appendix 8.1 and Appendix 8.2 of this TA, respectively.

TABLE 8-1: INTERSECTION ANALYSIS FOR HORIZON YEAR (2040) CONDITIONS

#	Intersection	Traffic Control[1]	2040 Without Project Delay[2] (secs.) AM	2040 Without Project Delay[2] (secs.) PM	2040 Without Project Level of Service AM	2040 Without Project Level of Service PM	2040 With Project Delay[2] (secs.) AM	2040 With Project Delay[2] (secs.) PM	2040 With Project Level of Service AM	2040 With Project Level of Service PM
1	Indian Av. & Perry St.	CSS	14.0	**39.1**	B	**E**	14.3	**40.8**	C	**E**
2	Indian Av. & Driveway 1	CSS	Does Not Exist				10.2	10.4	B	B
3	Indian Av. & Ramona Exwy.	TS	28.8	76.4	C	E	30.0	77.3	C	E
4	Driveway 2 & Ramona Exwy.	CSS	Does Not Exist				27.4	19.6	D	C
5	Perris Bl. & Driveway 3	CSS	Does Not Exist				15.0	20.6	C	C
6	Perris Bl. & Ramona Exwy.	TS	62.3	44.2	E	D	63.0	44.9	E	D

* BOLD = Level of Service (LOS) does not meet the applicable jurisdictional requirements (i.e., unacceptable LOS).

[1] CSS = Cross-street Stop; TS = Traffic Signal; CSS = Improvement

[2] Per the Highway Capacity Manual (6th Edition), overall average intersection delay and level of service are shown for intersections with a traffic signal or all way stop control. For intersections with cross street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown.

8.5 TRAFFIC SIGNAL WARRANTS ANALYSIS

Traffic signal warrants have been performed for Horizon Year (2040) Without and With Project traffic conditions based on peak hour volumes. No traffic signals are warranted at the study area intersections (see Appendices 8.3 and 8.4).

8.6 RECOMMENDED IMPROVEMENTS

Improvement strategies have been recommended at intersections that have been identified as deficient under Horizon Year (2040) With Project traffic conditions in an effort to achieve an acceptable LOS (i.e., LOS E or better).

The effectiveness of the recommended improvement strategies to address Horizon Year (2040) With Project traffic deficiencies are presented in Table 8-2. Worksheets for Horizon Year (2040) With Project conditions, with improvements, HCM calculation worksheets are provided in Appendix 8.5.

The Project Applicant shall participate in the funding of off-site improvements, including traffic signals that are needed to serve cumulative traffic conditions through the payment of NPRBBD fees (if the improvements are included in the NPRBBD fee program) or on a fair share basis (if the improvements are not included in the NPRBBD fee program). These fees shall be collected by the City of Perris, with the proceeds solely used as part of a funding mechanism aimed at ensuring that regional highways and arterial expansions keep pace with the projected population increases.

TABLE 8-2: INTERSECTION ANALYSIS FOR HORIZON YEAR (2040) WITH PROJECT CONDITIONS WITH IMPROVEMENTS

			Intersection Approach Lanes[2]												Delay[3] (secs.)		Level of Service	
		Traffic	Northbound			Southbound			Eastbound			Westbound						
#	Intersection	Control[1]	L	T	R	L	T	R	L	T	R	L	T	R	AM	PM	AM	PM
1	Indian Av. & Perry St.																	
	-Without Improvements	CSS	1	2	0	1	2	0	0	1	0	0	1	0	14.3	40.8	C	E
	- With Improvements	TS	1	2	0	1	2	0	0	1	0	0	1	0	4.0	5.7	A	A

* **BOLD** = Level of Service (LOS) does not meet the applicable jurisdictional requirements (i.e., unacceptable LOS).

[1] TS = Traffic Signal

[2] When a right turn is designated, the lane can either be striped or unstriped. To function as a right turn lane there must be sufficient width for right turning vehicles to travel outside the through lanes.

L = Left; T = Through; R = Right; d = Defacto Right Turn Lane; 1 = Improvement

[3] Per the Highway Capacity Manual (6th Edition), overall average intersection delay and level of service are shown for intersections with a traffic signal or all way stop control. For intersections with cross street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown.

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9 LOCAL AND REGIONAL FUNDING MECHANISMS

Transportation improvements throughout the City of Perris are funded through a combination of project mitigation, fair share contributions or development impact fee programs, such as TUMF program, the City's DIF program, or the NPRBBD program.

9.1 TRANSPORTATION UNIFORM MITIGATION FEE (TUMF) PROGRAM

The Western Riverside Council of Governments (WRCOG) is responsible for establishing and updating TUMF rates. The County may grant to developers a credit against the specific components of fees for the dedication of land, or the construction of facilities identified in the list of improvements funded by each of these fee programs. Fees are based upon projected land uses and a related transportation need to address growth based upon a 2016 Nexus study.

TUMF is an ambitious regional program created to address cumulative impacts of growth throughout western Riverside County. Program guidelines are being handled on an iterative basis. Exemptions, credits, reimbursements, and local administration are being deferred to primary agencies. The County of Riverside serves this function for the proposed Project. Fees submitted to the County are passed on to the WRCOG as the ultimate program administrator.

TUMF guidelines empower a local zone committee to prioritize and arbitrate certain projects. The Project is located in the Central Zone. The zone has developed a 5-year capital improvement program to prioritize public construction of certain roads. TUMF is focused on improvements necessitated by regional growth.

9.2 CITY OF PERRIS DEVELOPMENT IMPACT FEE (DIF) PROGRAM

In 1991, the City of Perris created a Development Impact Fee program to impose and collect fees from new residential, commercial, and industrial development for the purpose of funding roadways and intersections necessary to accommodate City growth as identified in the City's General Plan Circulation Element. This DIF program has been successfully implemented by the City since 1991 and was updated in 2014. The City updated the DIF program to add new roadway segments and intersections necessary to accommodate future growth and to ensure that the identified street improvements would operate at or above the City's LOS performance threshold. The City's DIF program includes facilities that are not part of, or which may exceed improvements identified and covered by the TUMF program. As a result, the pairing of the regional and local fee programs provides a more comprehensive funding and implementation plan to ensure an adequate and interconnected transportation system. Under the City's DIF program, the City may grant to developers a credit against specific components of fees when those developers construct certain facilities and landscaped medians identified in the list of improvements funded by the DIF program.

Similar to the TUMF Program, after the City's DIF fees are collected, they are placed in a separate interest-bearing account pursuant to the requirements of Government Code sections 66000 *et seq*. The timing to use the DIF fees is established through periodic capital improvement programs which are overseen by the City's Public Works Department. Periodic traffic counts, review of

traffic accidents, and a review of traffic trends throughout the City are also periodically performed by City staff and consultants. The City uses this data to determine the timing of the improvements listed in its facilities list. The City also uses this data to ensure that the improvements listed on the facilities list are constructed before the LOS falls below the LOS performance standards adopted by the City. In this way, the improvements are constructed before the LOS falls below the City's LOS performance thresholds. The City's DIF program establishes a timeline to fund, design, and build the improvements.

The City has an established, proven track record with respect to implementing the City's DIF Program. Many of the roadway segments and intersections included within the study area for this Traffic Impact Analysis are at various stages of widening and improvement based on the City's collection of DIF fees. Under this Program, as a result of the City's continual monitoring of the local circulation system, the City ensures that DIF improvements are constructed prior to when the LOS would otherwise fall below the City's established performance criteria.

9.3 NORTH PERRIS ROAD AND BRIDGE BENEFIT DISTRICT (NPRBBD)

The NPRBBD is comprised of approximately 3,500 acres of land located within the northern portion of the City of Perris. The NPRBBD boundary is consistent with the boundary of the PVCC SP. As such, the Project will be subject to the NPRBBD. The purpose of the NPRBBD is to improve the efficiency of the financing of specific regional road and bridge improvements that are determined to provide benefit to the developing properties within the NPRBBD boundary. In addition, the NPRBBD includes additional improvements to supplement the TUMF and DIF network. NPRBBD fees are inclusive of TUMF and DIF. A significant portion of the fees collected through this mechanism are earmarked for use within the boundary sufficient to fully fund the included improvements. The balance of TUMF is transmitted to WRCOG for use in addressing cumulative impacts elsewhere within Western Riverside County. The City treats the DIF component collected within the NPRBBD in a similar way to ensure the local circulation network outside the program boundaries is adequately addressed.

Table 9-1 lists each facility identified within the NPRBBD, the General Plan roadway classification and the current estimated construction cost for the facilities.

TABLE 9-1: NPRBBD FACILITES

Facility Name	General Plan Classification	Estimated Cost
Indian Avenue	Secondary Arterial	$11,343,500
Perris Boulevard	Arterial	$17,350,800
Redlands Avenue	Secondary Arterial	$14,845,000
Harley Knox Boulevard	Arterial	$31,813,700
Markham Street	Secondary Arterial	$2,132,000
Ramona Expressway	Expressway	$10,865,000
Morgan Street	Secondary Arterial	$2,899,500
Rider Street	Secondary Arterial	$3,803,000
Placentia Avenue	Arterial	$18,705,900
Indian Avenue Bridge	Secondary Arterial	$701,800
Harley Knox Boulevard Bridge	Arterial	$4,210,800
Ramona Expressway Bridge	Expressway	$2,105,800
Placentia Avenue Bridge	Arterial	$6,316,200
Harley Knox Boulevard Interchange @ I-215	Arterial	$17,371,000
Placentia Avenue Interchange @ I-215	Arterial	$8,389,000
4-Lane Intersections – Traffic Signals	4 – Signal Locations	$870,000
6-Lane Intersections – Traffic Signals	11 – Signal Locations	$3,190,000
District Totals		**$156,913,000**

The facilities identified within the NPRBBD provide additional benefit by providing alternate truck routes within the City of Perris. It should be noted that NPRBBD fees are to be paid in conjunction with TUMF and City DIF fees as a one-time fee payment to the City prior to the issuance of a building permit.

9.4 FAIR SHARE CONTRIBUTION

Project improvements may include a combination of fee payments to established programs, construction of specific improvements, payment of a fair share contribution toward future improvements or a combination of these approaches. Improvements constructed by development may be eligible for a fee credit or reimbursement through the program where appropriate (to be determined at the City's discretion). When off-site improvements are identified with a minor share of responsibility assigned to proposed development, the approving jurisdiction may elect to collect a fair share contribution or require the development to construct improvements. Detailed fair share calculations, for each peak hour, have been provided in Table 9-2 for the applicable deficient study area intersection based on PCE volumes. These fees are collected with the proceeds solely used as part of a funding mechanism aimed at ensuring that regional highways and arterial expansions keep pace with the projected population increases.

TABLE 9-2: FAIR SHARE CONTRIBUTION

#	Intersection		Existing	Project	2040 WP Volume	Net New Traffic	Project % of New Traffic
1	Indian Av. & Perry St.						
		AM:	559	46	955	396	**11.6%**
		PM:	455	59	1,642	1,187	5.0%
3	Indian Av. & Ramona Exwy.						
		AM:	3,367	58	4,506	1,139	**5.1%**
		PM:	3,532	71	5,585	2,053	3.5%
6	Perris Bl. & Ramona Exwy.						
		AM:	4,228	46	5,753	1,525	**3.0%**
		PM:	4,393	59	6,395	2,002	2.9%

BOLD = Denotes highest fair share percentage.

10 REFERENCES

1. **City of Perris.** *Perris Valley Commerce Center Specific Plan.* 2012.

2. **Institute of Transportation Engineers.** *Trip Generation.* 11th Edition. 2021.

3. **Western Riverside Council of Governments.** *TUMF Nexus Study, 2016 Program Update.* July 2017.

4. **Riverside County Transportation Commission.** *2011 Riverside County Congestion Management Program.* County of Riverside : RCTC, December 14, 2011.

5. **City of Perris.** *Transportation Impact Analysis Guidelines for CEQA.* City of Perris : s.n., May 2020.

6. **Transportation Research Board.** *Highway Capacity Manual (HCM).* s.l. : National Academy of Sciences, 2010.

7. **Caltrans.** California Manual on Uniform Traffic Control Devices (MUTCD). [book auth.] California Department of Transportation. *California Manual on Uniform Traffic Control Devices (CAMUTCD).* 2017.

8. **City of Perris.** *General Plan Circulation Element.* City of Perris : s.n., August 26, 2008.

9. **County of Riverside Transportation Department.** *Transportation Analysis Guidelines for Level of Service Vehicle Miles Traveled.* County of Riverside : s.n., December 2020.

10. **WSP.** *TUMF High-Cube Warehouse Trip Generation Study.* County of Riverside : s.n., January 29, 2019.

11. **Southern California Association of Governments.** *Connect SoCal: 2020-20415 Regional Transportation Plan/Sustainable Communities Strategy of the SCAG.* SCAG Region : s.n., Adopted September 2020.

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APPENDIX 1.1:

TRAFFIC STUDY SCOPING AGREEMENT

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June 9, 2021

Ms. Chantal Power
City of Perris
135 N. D Street
Perris, CA 92570

SUBJECT: JM REALTY PERRIS DEVELOPMENT PROJECT (PR 20-05212) SCOPING AGREEMENT

Dear Ms. Chantal Power:

Urban Crossroads, Inc. is pleased to submit this scoping agreement to the City of Perris for the proposed JM Realty Perris Development Project development ("Project"), which is located west of Perris Boulevard, north of Ramona Expressway, east of Indian Avenue, within the City of Perris' *Perris Valley Commerce Center Specific Plan* (PVCC SP). It is our understanding that the Project is to consist of a 232,575 square foot (sf) multi-tenant warehouse building and a 125-room hotel. The Project is anticipated to be constructed in one phase by the year 2022. A preliminary site plan, of which the traffic study will be based on, is shown on Exhibit 1. The following describes the access proposed for the site:

- Indian Avenue & Driveway 1 – right-in/right-out/left-in access for both passenger cars and trucks
- Driveway 2 & Ramona Expressway – right-in/right-out access for passenger cars only
- Perris Boulevard & Driveway 3 – right-in/right-out access for passenger cars only

The purpose of this agreement is to obtain comments from City of Perris on the proposed traffic study scope of work. The remainder of this agreement describes the proposed analysis methodology, trip generation, trip distribution, and traffic assignment/project trips on the surrounding roadway network, which have been used to establish the proposed project study area and analysis locations.

STUDY AREA

Consistent with County of Riverside traffic study guidelines, the study area limits have been set based upon a threshold of 50 peak hour project trips. In other words, the study area includes any intersection of Collector roadway or higher classification street with another Collector roadway or higher classification street, at which the proposed Project will add 50 or more peak hour trips. This methodology is also utilized in other near-by agencies, such as the City of Perris. The proposed intersection analysis locations have been identified on Exhibit 2.

ANALYSIS SCENARIOS

The following analysis scenarios will be analyzed for this traffic study:

- Existing (2021)
- Existing Plus Project (E+P)
- Existing Plus Ambient Growth Plus Cumulative (E+A+C) (2022)
- Existing Plus Ambient Growth Plus Project Plus Cumulative (E+A+P+C) (2022)
- Horizon Year (2040) Without Project
- Horizon Year (2040) With Project

METHODOLOGY

The methodology used to evaluate peak hour intersection performance is based on the Transportation Research Board's Highway Capacity Manual (HCM), 6th Edition. This methodology rates operations based on peak hour delay and associated level of service (LOS).

LEVEL OF SERVICE (LOS) CRITERIA

Required LOS for roadway segments and intersections within the City of Perris is LOS D. An exception to the local road standard is LOS E, at intersections of any Arterials and Expressways with SR-74, the Ramona-Cajalco Expressway or at I-215 Freeway ramps. For the purposes of this traffic impact analysis, LOS D has also been considered the acceptable threshold for all intersections within the study area

PROJECT TRIP GENERATION

In order to develop the traffic characteristics of the proposed Project, trip-generation statistics published in the Institute of Transportation Engineers (ITE) Trip Generation Manual (10th Edition, 2017) have been used. For purposes of this analysis, the following ITE land use codes and vehicle mixes have been utilized:

- Warehousing – ITE Land Use Code 150 has been used to derive site specific trip generation estimates for the 232,575 sf building of the proposed Project. The vehicle mix has been obtained from the ITE's Trip Generation Manual Supplement (dated February 2020). This study provides the following vehicle mix: AM Peak Hour: 87.0% passenger cars and 13.0% trucks; PM Peak Hour: 85.0% passenger cars and 15.0% trucks; Weekday Daily: 73.0% passenger cars and 27.0% trucks. The truck percentages were further broken down by axle type per the following South Coast Air Quality Management District (SCAQMD) recommended truck mix: 2-Axle = 16.7%; 3-Axle = 20.7%; 4+-Axle = 62.6%.

- Hotel – ITE Land Use Code 310 is assumed within the Commercial area.

As noted in Table 1, refinements to the raw trip generation estimates have been made to provide a more detailed breakdown of trips between passenger cars and trucks. Trip generation for heavy trucks was further broken down by truck type (or axle type). The total truck percentage is comprised of 3 different truck types: 2-axle, 3-axle, and 4+-axle trucks. Passenger Car Equivalent (PCE) factors were applied to the trip generation rates for heavy trucks (large 2-axles, 3-axles, 4+-axles). PCEs allow the typical "real-world" mix of vehicle types to be represented as a single, standardized unit, such as the passenger car, to be used for the purposes of capacity and level of service analyses. The PCE factors are consistent with the recommended PCE factors in Riverside County's Transportation Analysis Guidelines for Level of Service Vehicle Miles Travelled (December 2020). Note that these procedures are consistent with those adopted by the County of Riverside for warehouse projects.

The Project is estimated to generate a total of 1,622 two-way trips per day on a typical weekday with approximately 105 AM peak hour trips and 128 PM peak hour trips, as shown in Table 2. For the purposes of the operations analysis, the PCE values shown in Table 2 will be utilized. The trip generation in actual vehicles are shown for informational purposes only.

PROJECT TRIP DISTRIBUTIONS

The project trip distribution patterns for both passenger cars and trucks have been developed based on recent experience on other studies for similar land uses in the vicinity and comments provided by City of Perris staff. Passenger car distribution patterns will be based on existing and planned land uses and roadway infrastructure in the area. Truck distribution patterns will be based on City truck routes, proximity to the freeway system, and the Project Applicant's input on percentage of traffic oriented to the Port of Long Beach or other destination. The industrial passenger car and truck trip distributions are illustrated on Exhibits 3 and 4, respectively. The hotel trip distribution is illustrated on Exhibit 5. It should be noted that the passenger car and truck trip distribution patterns assume the I-215 Freeway and Placentia Avenue interchange is in place (anticipated completion of the intersection per the County of Riverside is 2021).

AMBIENT GROWTH RATE

Consistent with other City of Perris traffic studies performed by Urban Crossroads, an ambient growth rate of 3 percent per year will be used for this analysis.

SPECIAL ISSUES

The following special issues will be addressed as part of the TA:

- A truck turning template will be overlaid on the site plan for each project driveway anticipated to have heavy trucks in order to determine appropriate curb radii and to verify that trucks will have sufficient space to execute turn maneuvers.
- Traffic signal warrant analyses will be conducted for all unsignalized study area intersections for all applicable analysis scenarios.
- Review driveway spacing for Indian Avenue along the Project frontage per the Perris Valley Commerce Center Specific Plan driveway spacing criteria.
- Evaluate the potential need for right turn deceleration lanes on Perris Boulevard based upon the speed of the roadway and the peak hour volumes.
- Evaluate the potential need for right turn deceleration lanes on Ramona Expressway based upon the speed of the roadway and the peak hour volumes.
- Evaluate the peak hour queuing at the Project driveways located along Perris Boulevard and Indian Avenue.

CUMULATIVE DEVELOPMENT PROJECTS

A list of cumulative development projects and their proposed land uses are shown in Table 3. Exhibit 6 illustrates the locations of these cumulative development projects.

If you have any questions, please contact me directly at (949) 861-0177.

Respectfully submitted,

URBAN CROSSROADS, INC.

Charlene So, PE
Associate Principal

City of Perris
www.cityofperris.org

CITY OF PERRIS
VMT SCOPING FORM FOR LAND USE PROJECTS

This Scoping Form acknowledges the City of Perris requirements for the evaluation of transportation impacts under CEQA. The analysis provided in this form should follow the City of Perris TIA Guidelines, dated May 12, 2020.

I. Project Description

Tract/Case No. PR 20-05212

Project Name: Ramona and Indian Warehouse Project

Project Location: west of Perris Boulevard, north of Ramona Expressway

Project Description: 232,575 square foot multi-tenant small-scale warehouse

(Please attach a copy of the project Site Plan)

Current GP Land Use: PVCC SP **Proposed GP Land Use:** PVCC SP

Current Zoning: Commercial **Proposed Zoning:** Business/Professional Office (BPO)

If a project requires a General Plan Amendment or Zone change, then additional information and analysis should be provided to ensure the project is consistent with RHNA and RTP/SCS Strategies.

II. VMT Screening Criteria

A. Is the Project 100% affordable housing?	**YES**		**NO**	**X**	Attachments:
B. Is the Project within 1/2 mile of qualifying transit?	**YES**		**NO**	**X**	Attachments:
C. Is the Project a local serving land use?	**YES**		**NO**	**X**	Attachments:
D. Is the Project in a low VMT area?	**YES**		**NO**	**X**	Attachments:
E. Are the Project's Net Daily Trips less than 500 ADT?	**YES**	**X**	**NO**		Attachments:

Low VMT Area Evaluation:

Citywide VMT Averages[1]		
Citywide Home-Based VMT =	15.05	VMT/Capita
Citywide Employment-Based VMT =	11.62	VMT/Employee

WRCOG VMT MAP

Project TAZ	**VMT Rate for Project TAZ[1]**		**Type of Project**	
3754	**13.42**	VMT/Capita	Residential:	
	12.19	VMT/Employee	Non-Residential:	**X**

[1] Base year (2012) projections from RIVTAM.

Trip Generation Evaluation:

Source of Trip Generation: TUMF High-Cube Warehouse Trip Generation Study

Project Trip Generation: **402** **Average Daily Trips (ADT)**

Internal Trip Credit:	YES		NO	**X**	% Trip Credit:	
Pass-By Trip Credit:	YES		NO	**X**	% Trip Credit:	
Affordable Housing Credit:	YES		NO	**X**	% Trip Credit:	
Existing Land Use Trip Credit:	YES		NO	**X**	Trip Credit:	

Net Project Daily Trips: **402** **Average Daily Trips (ADT)** Attachments:

Does project trip generation warrant an LOS evaluation outside of CEQA? **YES** | | **NO** **X**

III. VMT Screening Summary

A. Is the Project presumed to have a less than significant impact on VMT? A Project is presumed to have a less than significant impact on VMT if the Project satisfies at least one (1) of the VMT screening criteria.	**Less Than Significant**
B. Is mitigation required? If the Project does not satisfy at least one (1) of the VMT screening criteria, then mitigation is required to reduce the Project's impact on VMT.	**No Mitigation Required**

C. Is additional VMT modeling required to evaluate Project impacts?	**YES**		**NO**	**X**

If the Project requires a zone change and/or General Plan Amendment AND generates 2,500 or more net daily trips, then additional VMT modeling using RIVTAM/RIVCOM is required. If the project generates less than 2,500 net daily trips, the Project TAZ VMT Rate can be used for mitigation purposes.

IV. MITIGATION

A. Citywide Average VMT Rate (Threshold of Significance) for Mitigation Purposes:	**N/A**	**N/A**
B. Unmitigated Project TAZ VMT Rate:	**N/A**	**N/A**
C. Percentage Reduction Required to Achieve the Citywide Average VMT:	**N/A**	

D. VMT Reduction Mitigation Measures:

Source of VMT Reduction Estimates:	**CAPCOA**

Project Location Setting	**Suburban Center**

	VMT Reduction Mitigation Measure:	**Estimated VMT Reduction (%)**
1.		0.00%
2.		0.00%
3.		0.00%
4.		0.00%
5.		0.00%
6.		0.00%
7.		0.00%
8.		0.00%
9.		0.00%
10.		0.00%
Total VMT Reduction (%)		**0.00%**

(Attach additional pages, if necessary, and a copy of all mitigation calculations.)

E. Mitigated Project TAZ VMT Rate:	**N/A**	**N/A**

F. Is the project pressumed to have a less than significant impact with mitigation?	**N/A**

If the mitigated Project VMT rate is below the Citywide Average Rate, then the Project is presumed to have a less than significant impact with mitigation. If the answer is no, then additional VMT modeling may be required and a potentially significant and unavoidable impact may occur. All mitigation measures identified in Section IV.D. are subject to become Conditions of Approval of the project. Development review and processing fees should be submitted with, or prior to the submittal of this Form. The Planning Department staff will not process the Form prior to fees being paid to the City.

Prepared By		**Developer/Applicant**	
Company:	Urban Crossroads, Inc.	**Company:**	JM Realty Group, Inc.
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Date:	6/22/2022	**Date:**	6/22/2022

Approved by:	
Perris Planning Division **Date**	**Perris City Engineer** **Date**

City of Perris
www.cityofperris.org

CITY OF PERRIS
VMT SCOPING FORM FOR LAND USE PROJECTS

This Scoping Form acknowledges the City of Perris requirements for the evaluation of transportation impacts under CEQA. The analysis provided in this form should follow the City of Perris TIA Guidelines, dated May 12, 2020.

I. Project Description

Tract/Case No. PR 20-05212

Project Name: Ramona – Indian Warehouse Project

Project Location: west of Perris Boulevard, north of Ramona Expressway

Project Description: 125 room hotel

(Please attach a copy of the project Site Plan)

Current GP Land Use: PVCC SP **Proposed GP Land Use:** PVCC SP

Current Zoning: Commercial **Proposed Zoning:** Business/Professional Office (BPO)

If a project requires a General Plan Amendment or Zone change, then additional information and analysis should be provided to ensure the project is consistent with RHNA and RTP/SCS Strategies.

II. VMT Screening Criteria

A. Is the Project 100% affordable housing?	**YES**		**NO**	**X**	Attachments:	
B. Is the Project within 1/2 mile of qualifying transit?	**YES**		**NO**	**X**	Attachments:	
C. Is the Project a local serving land use?	**YES**	**X**	**NO**		Attachments:	
D. Is the Project in a low VMT area?	**YES**		**NO**	**X**	Attachments:	
E. Are the Project's Net Daily Trips less than 500 ADT?	**YES**		**NO**	**X**	Attachments:	

Low VMT Area Evaluation:

Citywide VMT Averages[1]		
Citywide Home-Based VMT =	15.05	VMT/Capita
Citywide Employment-Based VMT =	11.62	VMT/Employee

WRCOG VMT MAP

Project TAZ	**VMT Rate for Project TAZ[1]**		**Type of Project**	
3754	**13.42**	VMT/Capita	Residential:	
	12.19	VMT/Employee	Non-Residential:	**X**

[1] Base year (2012) projections from RIVTAM.

Trip Generation Evaluation:

Source of Trip Generation: ITE Trip Generation Manual (11th Edition, 2021)

Project Trip Generation: **1,000** **Average Daily Trips (ADT)**

Internal Trip Credit:	YES		NO	**X**	% Trip Credit:	
Pass-By Trip Credit:	YES		NO	**X**	% Trip Credit:	
Affordable Housing Credit:	YES		NO	**X**	% Trip Credit:	
Existing Land Use Trip Credit:	YES		NO	**X**	Trip Credit:	

Net Project Daily Trips: **1,000** **Average Daily Trips (ADT)** Attachments:

Does project trip generation warrant an LOS evaluation outside of CEQA? **YES** **X** **NO**

III. VMT Screening Summary

A. Is the Project presumed to have a less than significant impact on VMT? A Project is presumed to have a less than significant impact on VMT if the Project satisfies at least one (1) of the VMT screening criteria.	**Less Than Significant**
B. Is mitigation required? If the Project does not satisfy at least one (1) of the VMT screening criteria, then mitigation is required to reduce the Project's impact on VMT.	**No Mitigation Required**

C. Is additional VMT modeling required to evaluate Project impacts?	**YES**		**NO**	**X**

If the Project requires a zone change and/or General Plan Amendment AND generates 2,500 or more net daily trips, then additional VMT modeling using RIVTAM/RIVCOM is required. If the project generates less than 2,500 net daily trips, the Project TAZ VMT Rate can be used for mitigation purposes.

IV. MITIGATION

A. Citywide Average VMT Rate (Threshold of Significance) for Mitigation Purposes:	**N/A**	**N/A**
B. Unmitigated Project TAZ VMT Rate:	**N/A**	**N/A**
C. Percentage Reduction Required to Achieve the Citywide Average VMT:	**N/A**	

D. VMT Reduction Mitigation Measures:

Source of VMT Reduction Estimates:	**CAPCOA**

Project Location Setting	**Suburban Center**

	VMT Reduction Mitigation Measure:	**Estimated VMT Reduction (%)**
1.		0.00%
2.		0.00%
3.		0.00%
4.		0.00%
5.		0.00%
6.		0.00%
7.		0.00%
8.		0.00%
9.		0.00%
10.		0.00%
Total VMT Reduction (%)		**0.00%**

(Attach additional pages, if necessary, and a copy of all mitigation calculations.)

E. Mitigated Project TAZ VMT Rate:	**N/A**	**N/A**

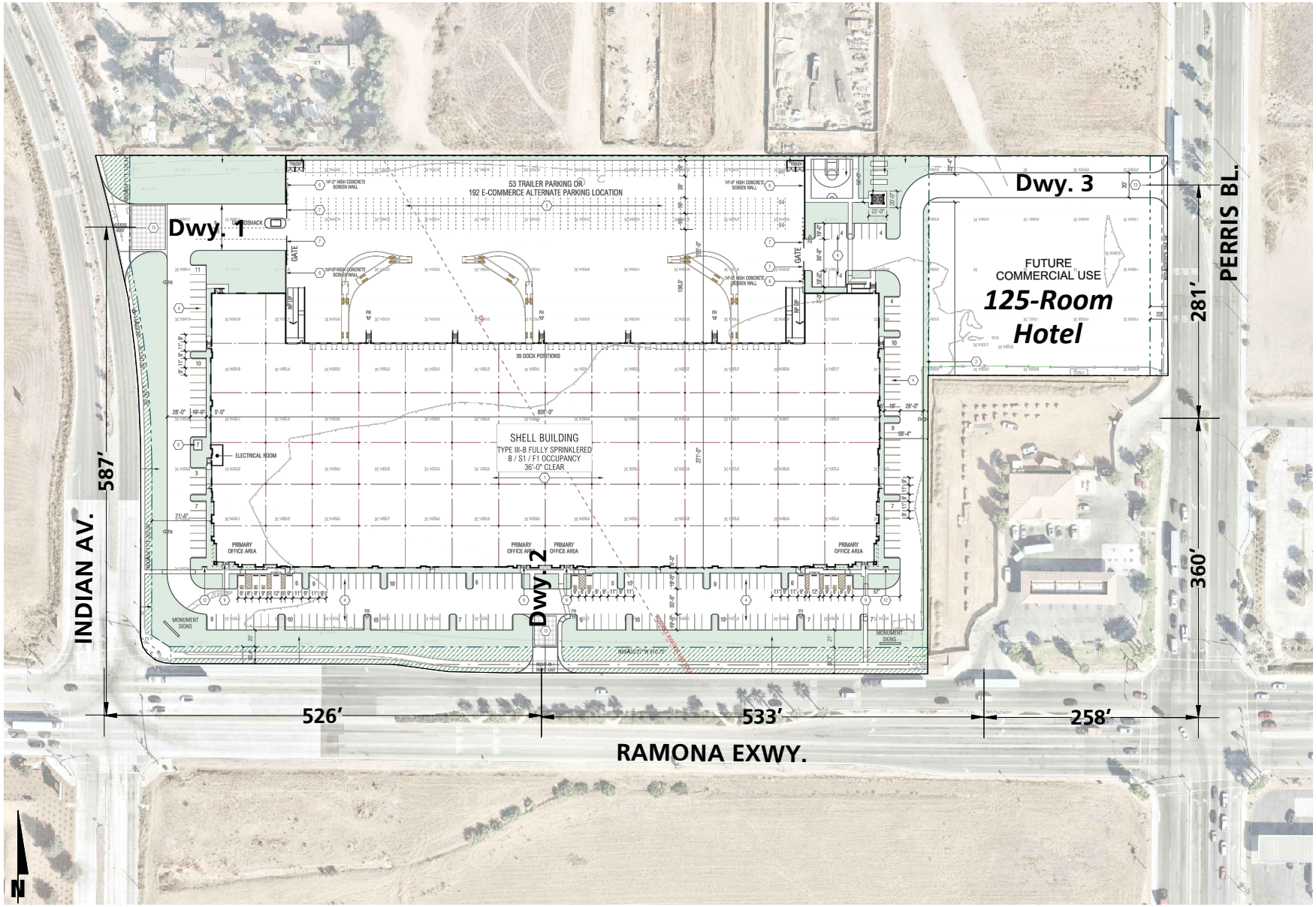
F. Is the project pressumed to have a less than significant impact with mitigation?	**N/A**

If the mitigated Project VMT rate is below the Citywide Average Rate, then the Project is presumed to have a less than significant impact with mitigation. If the answer is no, then additional VMT modeling may be required and a potentially significant and unavoidable impact may occur. All mitigation measures identified in Section IV.D. are subject to become Conditions of Approval of the project. Development review and processing fees should be submitted with, or prior to the submittal of this Form. The Planning Department staff will not process the Form prior to fees being paid to the City.

Prepared By		**Developer/Applicant**	
Company:	Urban Crossroads, Inc.	**Company:**	JM Realty Group, Inc.
Contact:	Charlene So	**Contact:**	Joe McKay
Address:	1133 Camelback St. #8329, Newport Beach, CA 92	**Address:**	3535 Inland Empire Blvd, Ontario, CA 91764
Phone:	(949) 861-0177	**Phone:**	714-313-1452
Email:	cso@urbanxroads.com	**Email:**	jmckay@jmrealtygroup.com | mfine@jmrealtygr
Date:	6/24/2022	**Date:**	6/24/2022

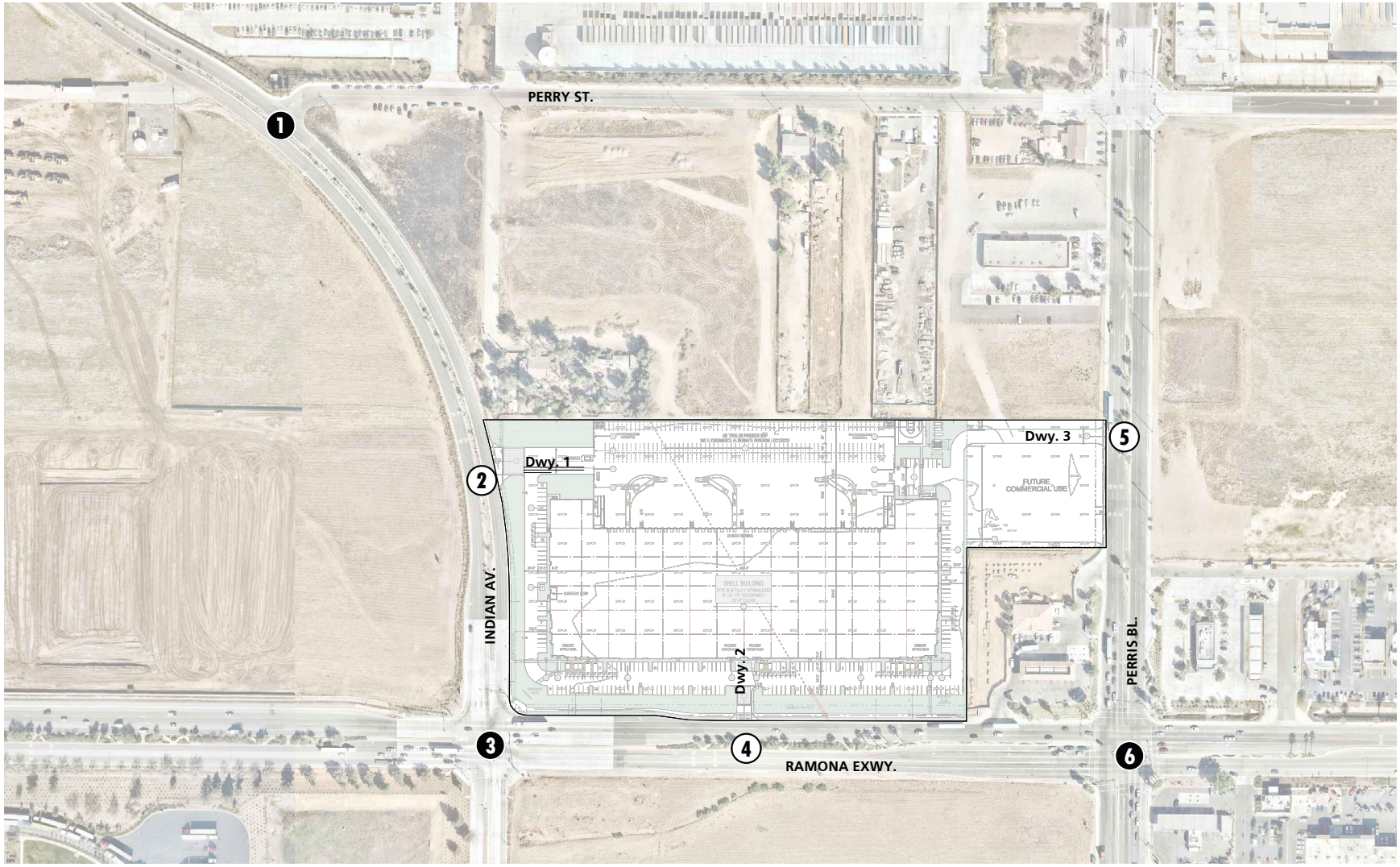
Approved by:	
Perris Planning Division **Date**	**Perris City Engineer** **Date**

EXHIBIT 1: PRELIMINARY SITE PLAN



13758 - siteplan.dwg

EXHIBIT 2: LOCATION MAP



N

0 = Existing Intersection Analysis Location

0 = Future Intersection Analysis Location

EXHIBIT 3: PROJECT (INDUSTRIAL PASSENGER CAR) TRIP DISTRIBUTION

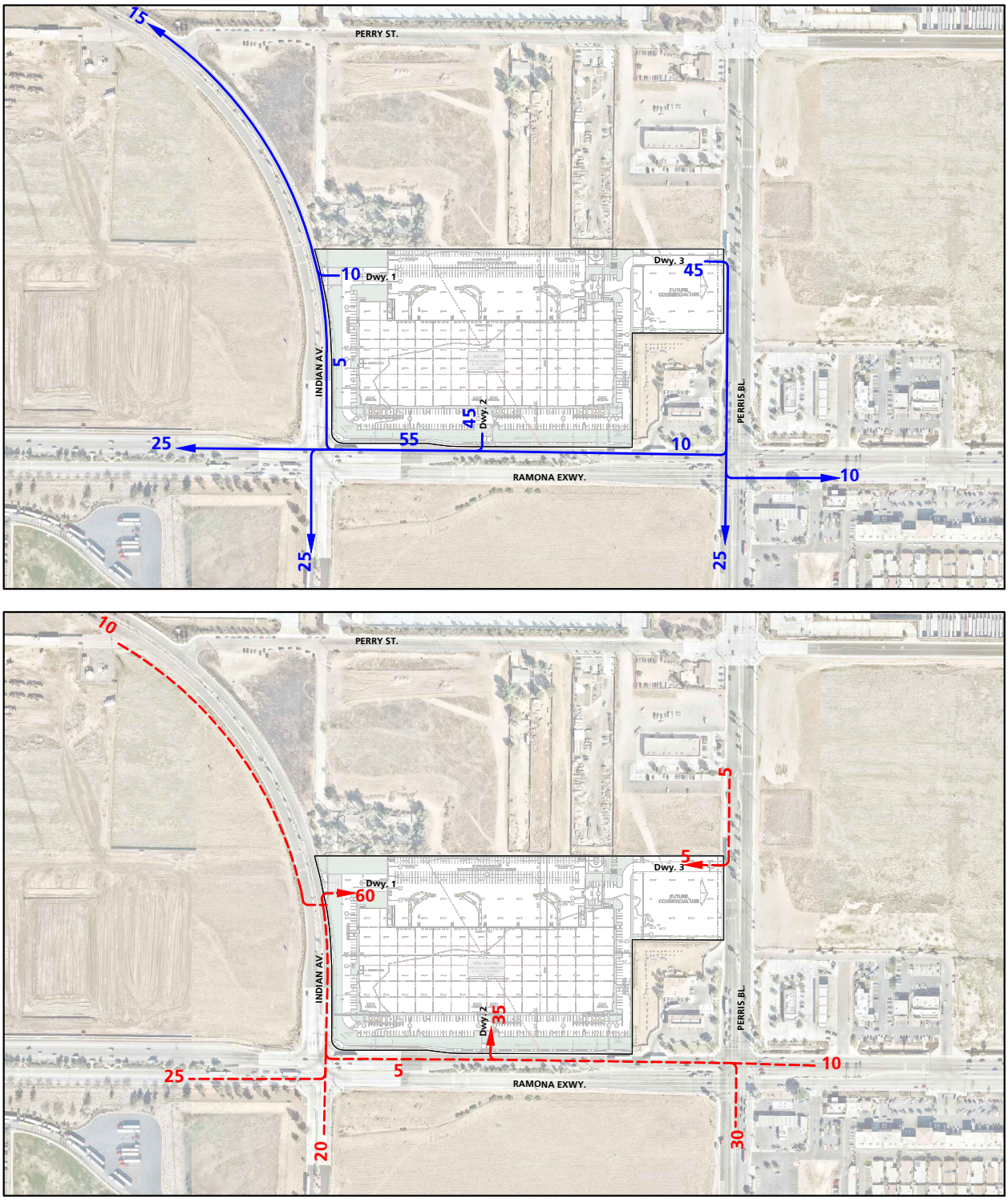


EXHIBIT 4: PROJECT (INDUSTRIAL TRUCK) TRIP DISTRIBUTION

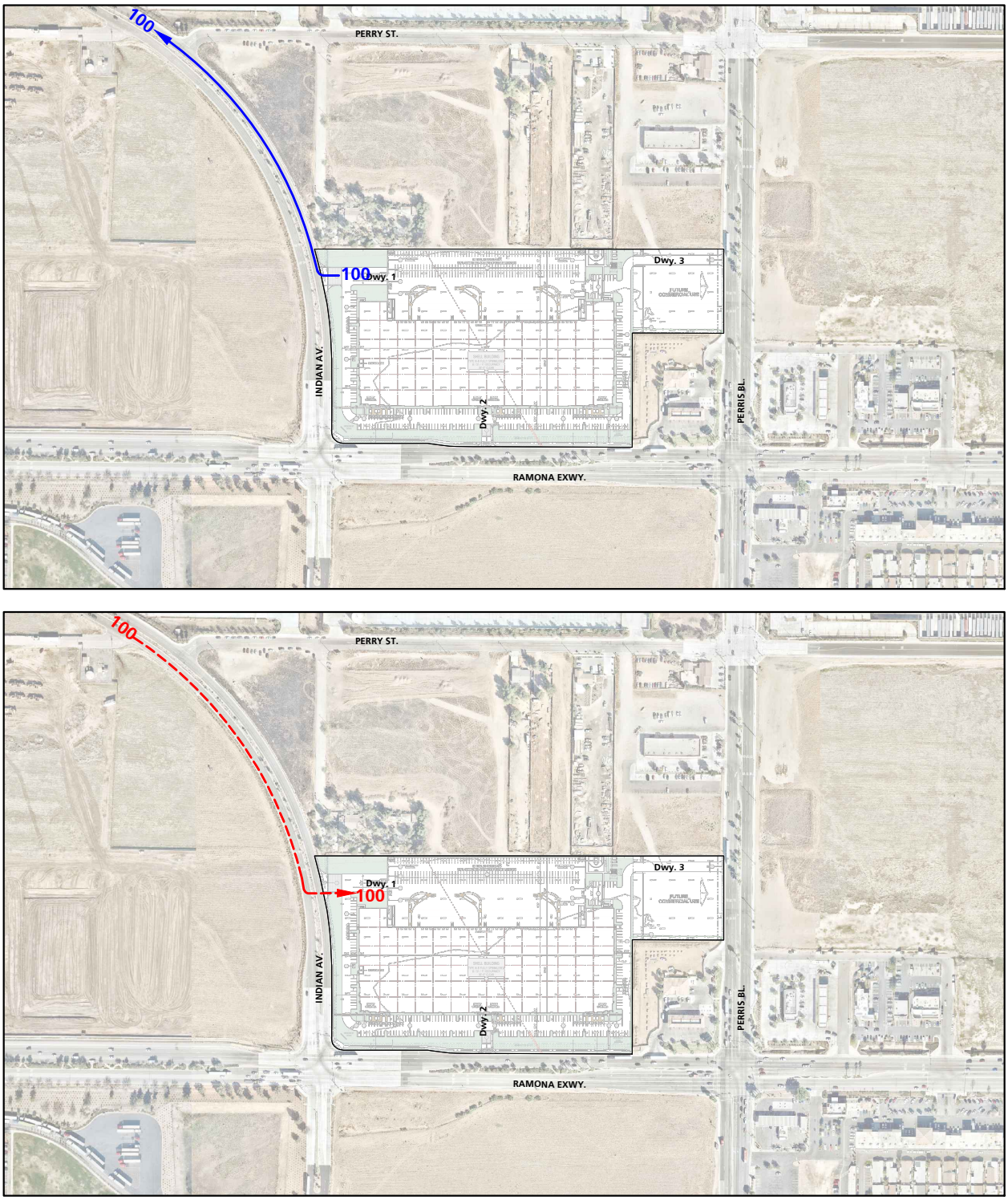


EXHIBIT 5: PROJECT (HOTEL) TRIP DISTRIBUTION

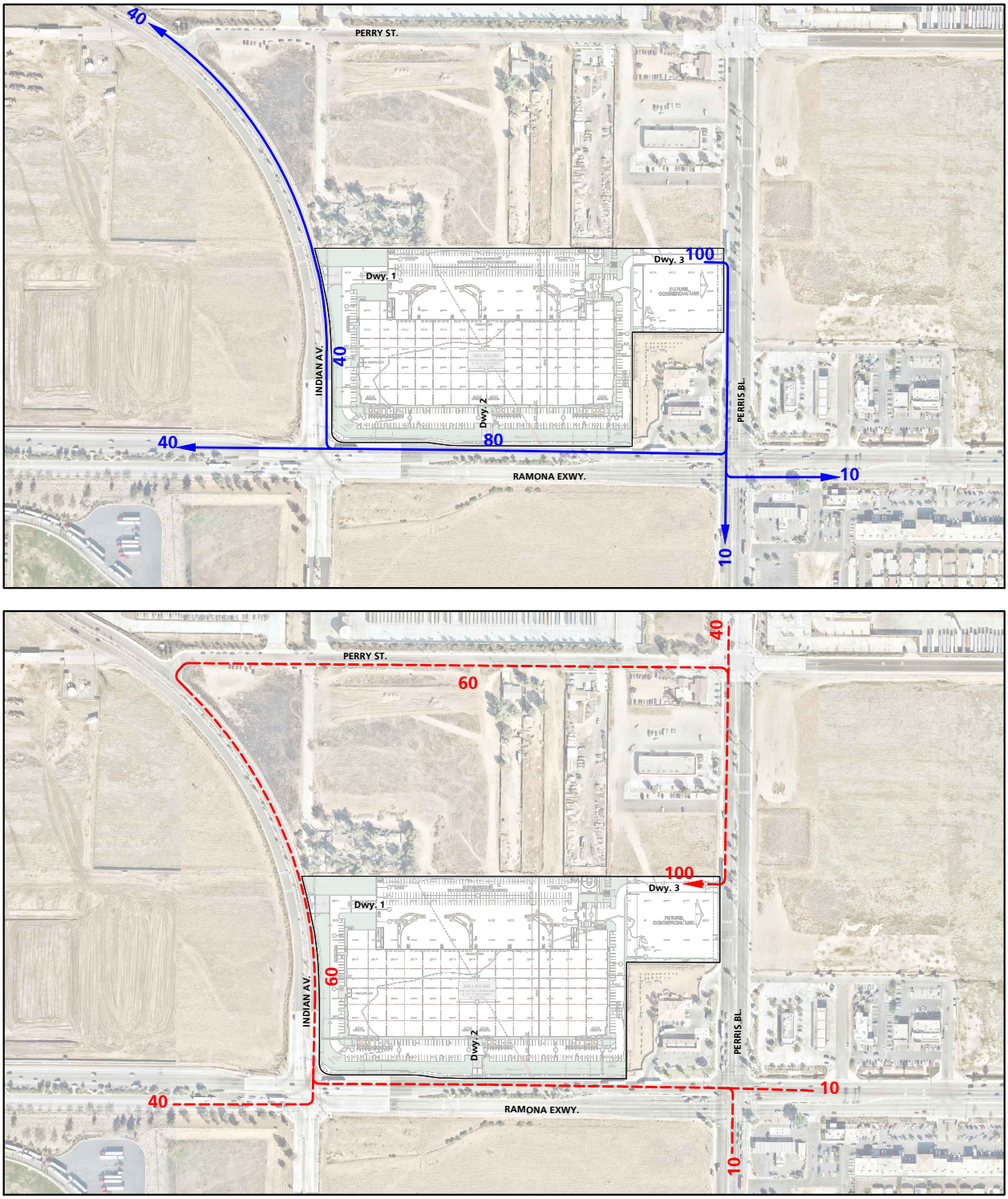


EXHIBIT 6: CUMULATIVE DEVELOPMENT LOCATION MAP

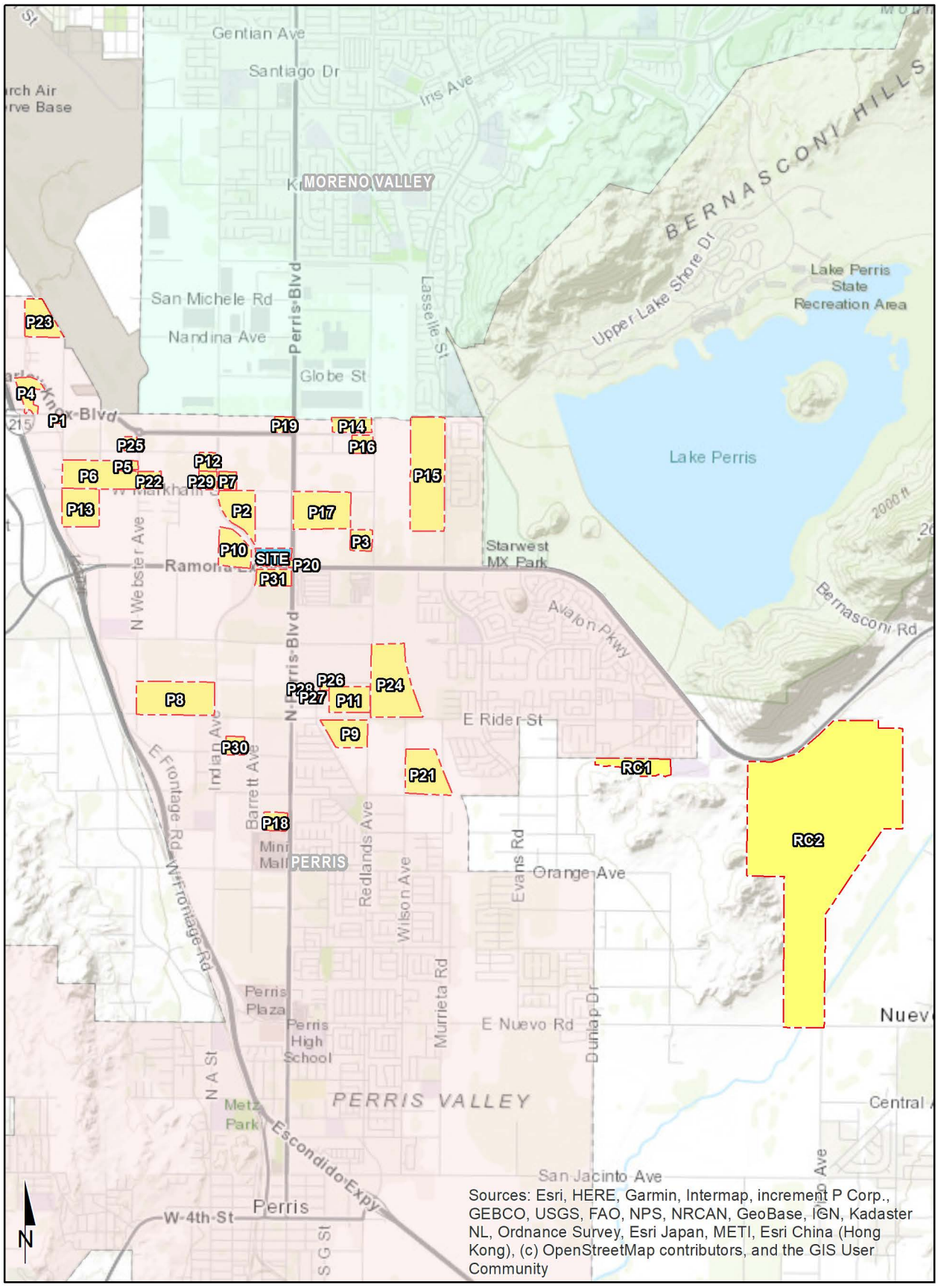


Table 1

Trip Generation Rates

Land Use[1]	Units[2]	ITE LU Code	AM Peak Hour In	AM Peak Hour Out	AM Peak Hour Total	PM Peak Hour In	PM Peak Hour Out	PM Peak Hour Total	Daily
Actual Vehicle Trip Generation Rates									
Hotel	RM	310	0.28	0.19	0.47	0.31	0.29	0.60	8.36
Warehousing[3]	TSF	150	0.131	0.039	0.170	0.051	0.139	0.190	1.740
Passenger Cars (AM-87.0%; PM-85.0%; Daily-73.0%)			0.114	0.034	0.148	0.044	0.118	0.162	1.270
2-Axle Trucks (AM-2.17%; PM-2.51%; Daily-4.51%)			0.003	0.001	0.004	0.001	0.003	0.005	0.078
3-Axle Trucks (AM-2.69%; PM-3.11%; Daily-5.59%)			0.004	0.001	0.005	0.002	0.004	0.006	0.097
4-Axle+ Trucks (AM-8.14%; PM-9.39%; Daily-16.90%)			0.011	0.003	0.014	0.005	0.013	0.018	0.294
Passenger Car Equivalent (PCE) Trip Generation Rates[4]									
Warehousing[3]	TSF	150	0.131	0.039	0.170	0.051	0.139	0.190	1.740
Passenger Cars			0.114	0.034	0.148	0.044	0.118	0.162	1.270
2-Axle Trucks (PCE = 1.5)			0.004	0.001	0.006	0.002	0.005	0.007	0.118
3-Axle Trucks (PCE = 2.0)			0.007	0.002	0.009	0.003	0.009	0.012	0.194
4-Axle+ Trucks (PCE = 3.0)			0.032	0.010	0.042	0.014	0.039	0.054	0.882

[1] Trip Generation Source: Institute of Transportation Engineers (ITE), Trip Generation Manual, Tenth Edition (2017).

[2] TSF = thousand square feet

[3] Vehicle Mix Source: ITE Trip Generation Handbook Supplement (2020), Appendix C.
Truck Mix: South Coast Air Quality Management District's (SCAQMD) recommended truck mix, by axle type.
Normalized % - Without Cold Storage: 16.7% 2-Axle trucks, 20.7% 3-Axle trucks, 62.6% 4-Axle trucks.

[4] PCE factors per Riverside County TIA Guidelines: 2-axle = 1.5; 3-axle = 2.0; 4+-axle = 3.0.

Table 2

Project Trip Generation Summary

Land Use	Quantity	Units[1]	AM Peak Hour In	AM Peak Hour Out	AM Peak Hour Total	PM Peak Hour In	PM Peak Hour Out	PM Peak Hour Total	Daily
Project Trip Generation Summary (Actual)									
Hotel	125	RM	35	24	59	38	37	75	1,046
Warehouse	232.575	TSF							
Passenger Cars:			26	8	34	10	27	37	296
Truck Trips:									
2-Axle Trucks			1	0	1	0	1	1	20
3-Axle Trucks			1	0	1	0	1	1	24
4-Axle+ Trucks			2	1	3	1	3	4	70
Truck Trips			4	1	5	1	5	6	114
TOTAL TRIPS (Actual) [2]			**65**	**33**	**98**	**49**	**69**	**118**	**1,456**
Project Trip Generation Summary (PCE)									
Hotel	125	RM	35	24	59	38	37	75	1,046
Warehouse	232.575	TSF							
Passenger Cars:			26	8	34	10	27	37	296
Truck Trips:									
2-Axle Trucks (PCE = 1.5)			1	0	1	0	1	1	28
3-Axle Trucks (PCE = 2.0)			2	0	2	1	2	3	46
4-Axle+ Trucks (PCE = 3.0)			7	2	9	3	9	12	206
Truck Trips			10	2	12	4	12	16	280
TOTAL TRIPS (PCE) [2]			**71**	**34**	**105**	**52**	**76**	**128**	**1,622**

[1] TSF = thousand square feet

[2] TOTAL TRIPS = Passenger Cars + Truck Trips.

Table 3

Cumulative Development Land Use Summary

No.	Project Name / Case Number	Jurisdiction	Land Use[1]	Quantity	Units[2]	Location
P1	Canyon Steel (CS)	Perris	Industrial	25.000	TSF	NWC OF PATTERSON AVE. & CALFORNIA AVE.
P2	Duke 2 / DPR 16-00008	Perris	High-Cube Warehouse	669.000	TSF	NEC OF INDIAN AVE. & MARKHAM ST.
P3	First Perry / DPR 16-00013	Perris	High-Cube Warehouse	240.000	TSF	SWC OF REDLANDS AVE. & PERRY ST.
P4	Gateway / DPR 16-00003	Perris	High-Cube Warehouse	400.000	TSF	SOUTH OF HARLEY KNOX BLVD. EAST OF HWY. 215
P5	Marijuana Manufacturing (MM)	Perris	Industrial	1.000	TSF	NW CORNER OF WEBSTER AVE. & WASHINGTON ST.
P6	OLC2 / DPR 14-01-0015	Perris	High-Cube Warehouse	1,037.000	TSF	WEST OF WEBSTER AVE. NORTH OF MARKHAM ST.
P7	Markham Industrial / DPR 16-00015	Perris	Warehousing	170.000	TSF	NEC OF INDIAN AVE. & MARKHAM ST.
P8	Rados / DPR 07-0119	Perris	High-Cube Warehouse	1,200.000	TSF	NWC OF INDIAN AVE. & RIDER ST.
P9	Rider 1 / DPR 16-0365	Perris	High-Cube Warehouse	350.000	TSF	SWC OF REDLANDS AVE. & RIDER ST.
P10	Indian/Ramona Warehouse / DPR 18-00002	Perris	High-Cube Warehouse	428.730	TSF	NORTH OF RAMONA EXWY. WEST OF INDIAN AVE.
P11	Rider 3 / DPR 06-0432	Perris	High-Cube Warehouse	640.000	TSF	NORTH OF RIDER ST. WEST OF REDLANDS AVE.
P12	Westcoast Textile / DPR 16-00001	Perris	Warehousing	180.000	TSF	SWC OF INDIAN ST. & NANCE ST.
P13	Duke at Patterson / DPR 17-00001	Perris	High-Cube Warehouse	811.000	TSF	SEC OF PATTERSON AVE. & MARKHAM ST.
P14	Harley Knox Commerce Park / DPR 16-004	Perris	High-Cube Warehouse	386.278	TSF	NWC OF HARLEY KNOX BLVD. & REDLANDS AVE.
P15	Stratford Ranch Residential / TTM 36648	Perris	SFDR	90	DU	WEST OF EVANS RD. AT MARKHAM ST.
P16	Circle Industrial III	Perris	Warehousing	211.000	TSF	NWC OF REDLANDS AVE. AND NANCE AVE.
P17	Duke @ Perris Blvd.	Perris	High-Cube Warehouse	1,070.000	TSF	SEC OF PERRIS BL. AND MARKHAM ST.
P18	Weinerschnitzel / CUP 17-05083	Perris	Fast-Food Restaurant	2.000	TSF	WEST OF PERRIS BL., SOUTH OF PLACENTIA AVE.
P19	March Plaza / CUP16-05165	Perris	Commercial Retail	47.253	TSF	NWC OF PERRIS BL. AND HARLEY KNOX BL.
P20	Cali Express Carwash / CUP 16-05258	Perris	Carwash	5.600	TSF	NWC OF PERRIS BL. AND RAMONA EXWY.
P21	Wilson Industrial / DPR 19-00007	Perris	High-Cube Warehouse	303.000	TSF	SEC OF WILSON AVE. AND RIDER ST.
P22	Integra Expansion / MMOD 17-05075	Perris	High-Cube Warehouse	273.000	TSF	NCE OF MARKHAM ST. AND WEBSTER AVE.
P23	Western Industrial / DRP 19-00003	Perris	High-Cube Warehouse	250.000	TSF	NEC OF WESTERN WY. AND NANDINA AVE.
P24	Rider 2/4	Perris	High-Cube Warehouse	1,373.449	TSF	NEC OF REDLANDS AV. AND RIDER ST.
P25	AAA	Perris	Industrial	2.000	TSF	SE CORNER OF HARLEY KNOX BL. & WEBSTER AVE.
P26	Pulliam Indus	Perris	Industrial	16.000	TSF	LOTS 10 & 12 ON COMMERCE DR., E OF PERRIS
P27	Burge Indus 1	Perris	Industrial	18.000	TSF	E OF PERRIS BL. & N OF COMMERCE DR.
P28	Burge Indus 2	Perris	Industrial	19.000	TSF	E OF PERRIS BL. & S OF COMMERCE DR.
P29	Phelan Indus	Perris	Industrial	81.000	TSF	N SIDE OF MARKHAM BTW WEBSTER AVE. & PERRIS BLVD.
P30	Dedeaux Walnut Warehouse	Perris	Industrial	205.830	TSF	N SIDE OF WALNUT AVE. BTW INDIAN AVE. & BARRETT AVE.
P31	Perris and Ramona Warehouse	Perris	Industrial	347.938	TSF	S SIDE OF RAMONA EXWY. BTW INDIAN AVE. & PERRIS BLVD.
RC1	McCanna Hills / TTM 33978	Riverside County	SFDR	63	DU	SWC OF SHERMAN AVE. & WALNUT AVE.
RC2	Stoneridge	Riverside County	High-Cube Cold Storage	1695.355	TSF	NORTH OF NUEVO RD., SOUTH OF RAMONA EXWY., EAST OF ANTELOPE RD.
			High-Cube Fulfillment	2966.872	TSF	
			High-Cube Warehouse	2966.872	TSF	
			Manufacturing	847.678	TSF	
			Warehouse	427.759	TSF	
			Industrial Park	641.639	TSF	
			Free-Standing Discount Superstore	100.000	TSF	
			Commercial Retail	21.968	TSF	

[1] SFDR = Single Family Detached Residential

[2] DU = Dwelling Units; TSF = Thousand Square Feet

APPENDIX 1.2:

SITE ADJACENT QUEUING ANALYSIS

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Intersection: 2: Indian Av. & Driveway 1

Movement	WB	SB
Directions Served	R	L
Maximum Queue (ft)	25	30
Average Queue (ft)	4	3
95th Queue (ft)	18	17
Link Distance (ft)	483	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		200
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 4: Ramona Exwy. & Driveway 2

Movement	SB
Directions Served	R
Maximum Queue (ft)	22
Average Queue (ft)	1
95th Queue (ft)	11
Link Distance (ft)	416
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 5: Perris Bl. & Driveway 3

Movement	EB
Directions Served	R
Maximum Queue (ft)	31
Average Queue (ft)	17
95th Queue (ft)	41
Link Distance (ft)	246
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Zone Summary

Zone wide Queuing Penalty: 0

Intersection: 2: Indian Av. & Driveway 1

Movement	WB	SB	SB	SB
Directions Served	R	L	T	T
Maximum Queue (ft)	25	300	759	793
Average Queue (ft)	8	71	618	438
95th Queue (ft)	26	279	928	919
Link Distance (ft)	483		741	741
Upstream Blk Time (%)			34	3
Queuing Penalty (veh)			171	14
Storage Bay Dist (ft)		200		
Storage Blk Time (%)			88	
Queuing Penalty (veh)			9	

Intersection: 4: Ramona Exwy. & Driveway 2

Movement	WB	WB	WB	SB
Directions Served	T	T	T	R
Maximum Queue (ft)	225	154	139	22
Average Queue (ft)	65	42	10	10
95th Queue (ft)	174	145	64	26
Link Distance (ft)	692	692	692	416
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)			0	
Queuing Penalty (veh)			0	

Intersection: 5: Perris Bl. & Driveway 3

Movement	EB
Directions Served	R
Maximum Queue (ft)	56
Average Queue (ft)	34
95th Queue (ft)	53
Link Distance (ft)	246
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Zone Summary

Zone wide Queuing Penalty: 194

APPENDIX 3.1:

EXISTING TRAFFIC COUNTS – MARCH 2020

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Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Perris
N/S: Indian Avenue
E/W: Perry Street
Weather: Clear

File Name : 03_PER_Indian_Perry AM
Site Code : 05118430
Start Date : 5/24/2018
Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

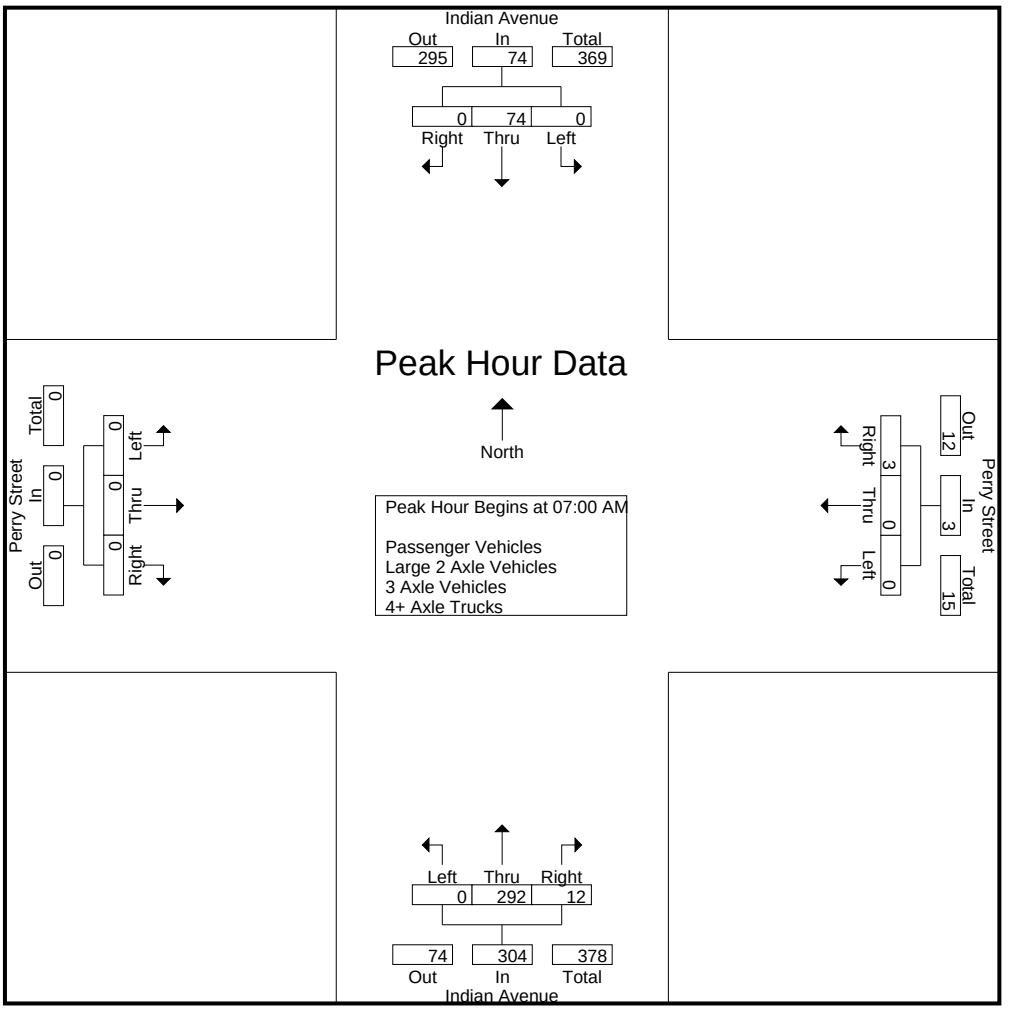
	Indian Avenue Southbound				Perry Street Westbound				Indian Avenue Northbound				Perry Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	13	0	13	0	0	0	0	0	80	2	82	0	0	0	0	95
07:15 AM	0	15	0	15	0	0	1	1	0	76	1	77	0	0	0	0	93
07:30 AM	0	21	0	21	0	0	0	0	0	88	4	92	0	0	0	0	113
07:45 AM	0	25	0	25	0	0	2	2	0	48	5	53	0	0	0	0	80
Total	0	74	0	74	0	0	3	3	0	292	12	304	0	0	0	0	381
08:00 AM	0	18	0	18	0	0	1	1	0	51	1	52	0	0	0	0	71
08:15 AM	0	13	0	13	0	0	1	1	0	25	4	29	0	0	0	0	43
08:30 AM	0	21	0	21	0	0	4	4	0	29	2	31	0	0	0	0	56
08:45 AM	0	22	0	22	0	0	3	3	0	27	1	28	0	0	0	0	53
Total	0	74	0	74	0	0	9	9	0	132	8	140	0	0	0	0	223
Grand Total	0	148	0	148	0	0	12	12	0	424	20	444	0	0	0	0	604
Apprch %	0	100	0		0	0	100		0	95.5	4.5		0	0	0		
Total %	0	24.5	0	24.5	0	0	2	2	0	70.2	3.3	73.5	0	0	0	0	
Passenger Vehicles	0	101	0	101	0	0	12	12	0	374	4	378	0	0	0	0	491
% Passenger Vehicles	0	68.2	0	68.2	0	0	100	100	0	88.2	20	85.1	0	0	0	0	81.3
Large 2 Axle Vehicles	0	7	0	7	0	0	0	0	0	12	11	23	0	0	0	0	30
% Large 2 Axle Vehicles	0	4.7	0	4.7	0	0	0	0	0	2.8	55	5.2	0	0	0	0	5
3 Axle Vehicles	0	6	0	6	0	0	0	0	0	2	3	5	0	0	0	0	11
% 3 Axle Vehicles	0	4.1	0	4.1	0	0	0	0	0	0.5	15	1.1	0	0	0	0	1.8
4+ Axle Trucks	0	34	0	34	0	0	0	0	0	36	2	38	0	0	0	0	72
% 4+ Axle Trucks	0	23	0	23	0	0	0	0	0	8.5	10	8.6	0	0	0	0	11.9

	Indian Avenue Southbound				Perry Street Westbound				Indian Avenue Northbound				Perry Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	13	0	13	0	0	0	0	0	80	2	82	0	0	0	0	95
07:15 AM	0	15	0	15	0	0	1	1	0	76	1	77	0	0	0	0	93
07:30 AM	0	21	0	21	0	0	0	0	0	**88**	4	**92**	0	0	0	0	**113**
07:45 AM	0	**25**	0	**25**	0	0	**2**	**2**	0	48	**5**	53	0	0	0	0	80
Total Volume	0	74	0	74	0	0	3	3	0	292	12	304	0	0	0	0	381
% App. Total	0	100	0		0	0	100		0	96.1	3.9		0	0	0		
PHF	.000	.740	.000	.740	.000	.000	.375	.375	.000	.830	.600	.826	.000	.000	.000	.000	.843

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Perris
N/S: Indian Avenue
E/W: Perry Street
Weather: Clear

File Name : 03_PER_Indian_Perry AM
Site Code : 05118430
Start Date : 5/24/2018
Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				08:00 AM				07:00 AM				07:00 AM			
+0 mins.	0	15	0	15	0	0	1	1	0	80	2	82	0	0	0	0
+15 mins.	0	21	0	21	0	0	1	1	0	76	1	77	0	0	0	0
+30 mins.	0	**25**	0	**25**	0	0	**4**	**4**	0	**88**	4	**92**	0	0	0	0
+45 mins.	0	18	0	18	0	0	3	3	0	48	**5**	53	0	0	0	0
Total Volume	0	79	0	79	0	0	9	9	0	292	12	304	0	0	0	0
% App. Total	0	100	0		0	0	100		0	96.1	3.9		0	0	0	
PHF	.000	.790	.000	.790	.000	.000	.563	.563	.000	.830	.600	.826	.000	.000	.000	.000

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City of Perris
N/S: Indian Avenue
E/W: Perry Street
Weather: Clear

File Name : 03_PER_Indian_Perry AM
Site Code : 05118430
Start Date : 5/24/2018
Page No : 1

Groups Printed- Large 2 Axle Vehicles

	Indian Avenue Southbound				Perry Street Westbound				Indian Avenue Northbound				Perry Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	3	1	4	0	0	0	0	4
07:15 AM	0	1	0	1	0	0	0	0	0	3	1	4	0	0	0	0	5
07:30 AM	0	0	0	0	0	0	0	0	0	2	3	5	0	0	0	0	5
07:45 AM	0	1	0	1	0	0	0	0	0	1	2	3	0	0	0	0	4
Total	0	2	0	2	0	0	0	0	0	9	7	16	0	0	0	0	18
08:00 AM	0	2	0	2	0	0	0	0	0	1	1	2	0	0	0	0	4
08:15 AM	0	2	0	2	0	0	0	0	0	1	2	3	0	0	0	0	5
08:30 AM	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
08:45 AM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1
Total	0	5	0	5	0	0	0	0	0	3	4	7	0	0	0	0	12
Grand Total	0	7	0	7	0	0	0	0	0	12	11	23	0	0	0	0	30
Apprch %	0	100	0		0	0	0		0	52.2	47.8		0	0	0		
Total %	0	23.3	0	23.3	0	0	0	0	0	40	36.7	76.7	0	0	0	0	

	Indian Avenue Southbound				Perry Street Westbound				Indian Avenue Northbound				Perry Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	0	0	0	0	0	0	0	0	**3**	1	4	0	0	0	0	4
07:15 AM	0	**1**	0	**1**	0	0	0	0	0	3	1	4	0	0	0	0	**5**
07:30 AM	0	0	0	0	0	0	0	0	0	2	**3**	**5**	0	0	0	0	5
07:45 AM	0	1	0	1	0	0	0	0	0	1	2	3	0	0	0	0	4
Total Volume	0	2	0	2	0	0	0	0	0	9	7	16	0	0	0	0	18
% App. Total	0	100	0		0	0	0		0	56.2	43.8		0	0	0		
PHF	.000	.500	.000	.500	.000	.000	.000	.000	.000	.750	.583	.800	.000	.000	.000	.000	.900

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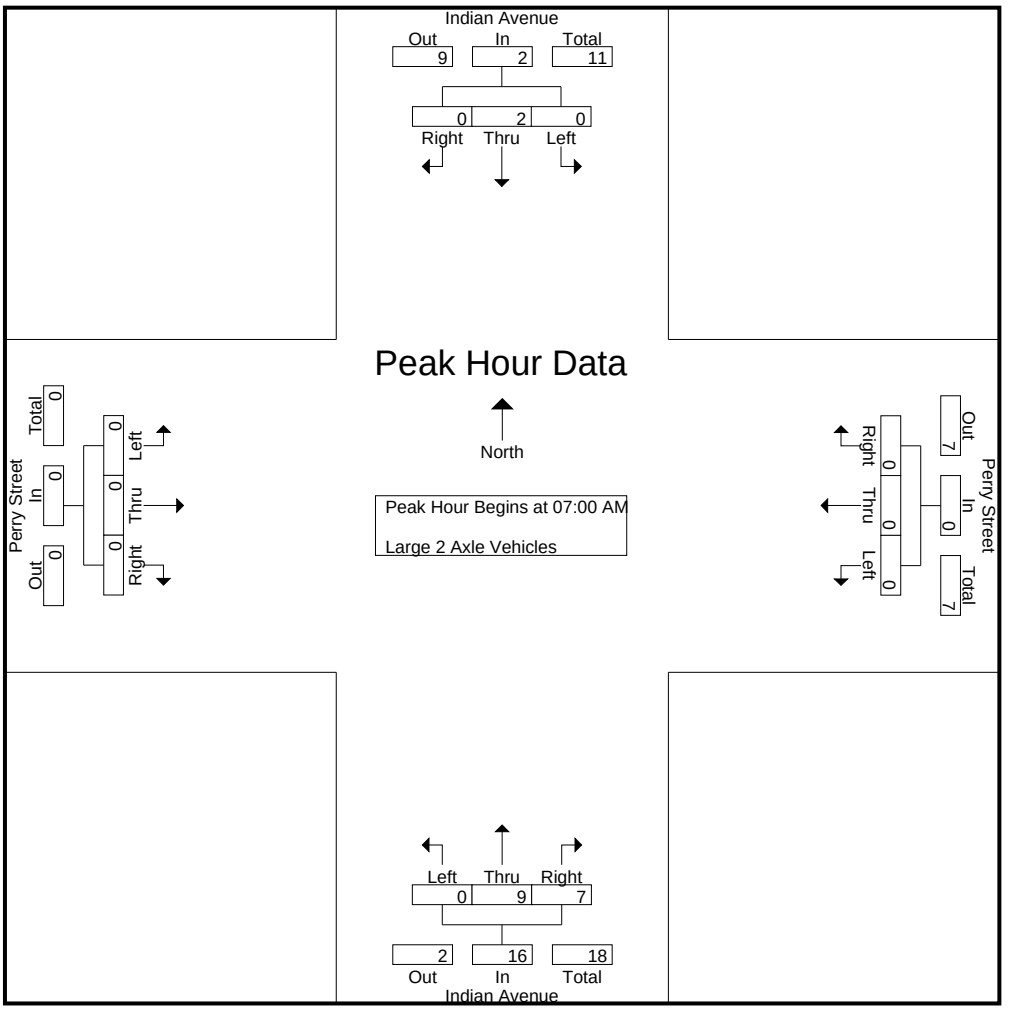
City of Perris
N/S: Indian Avenue
E/W: Perry Street
Weather: Clear

File Name : 03_PER_Indian_Perry AM
Site Code : 05118430
Start Date : 5/24/2018
Page No : 2



Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM				07:00 AM				07:00 AM				07:00 AM			
+0 mins.	0	0	0	0	0	0	0	0	0	**3**	1	4	0	0	0	0
+15 mins.	0	**1**	0	**1**	0	0	0	0	0	3	1	4	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	2	**3**	**5**	0	0	0	0
+45 mins.	0	1	0	1	0	0	0	0	0	1	2	3	0	0	0	0
Total Volume	0	2	0	2	0	0	0	0	0	9	7	16	0	0	0	0
% App. Total	0	100	0		0	0	0		0	56.2	43.8		0	0	0	
PHF	.000	.500	.000	.500	.000	.000	.000	.000	.000	.750	.583	.800	.000	.000	.000	.000

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City of Perris
N/S: Indian Avenue
E/W: Perry Street
Weather: Clear

File Name : 03_PER_Indian_Perry AM
Site Code : 05118430
Start Date : 5/24/2018
Page No : 1

Groups Printed- 3 Axle Vehicles

	Indian Avenue Southbound				Perry Street Westbound				Indian Avenue Northbound				Perry Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	1	0	1	0	0	0	0	0	2	0	2	0	0	0	0	3
07:15 AM	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
07:30 AM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1
07:45 AM	0	1	0	1	0	0	0	0	0	0	1	1	0	0	0	0	2
Total	0	4	0	4	0	0	0	0	0	2	2	4	0	0	0	0	8
08:00 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
08:15 AM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1
08:30 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	2	0	2	0	0	0	0	0	0	1	1	0	0	0	0	3
Grand Total	0	6	0	6	0	0	0	0	0	2	3	5	0	0	0	0	11
Apprch %	0	100	0		0	0	0		0	40	60		0	0	0		
Total %	0	54.5	0	54.5	0	0	0	0	0	18.2	27.3	45.5	0	0	0	0	

	Indian Avenue Southbound				Perry Street Westbound				Indian Avenue Northbound				Perry Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	1	0	1	0	0	0	0	0	**2**	0	**2**	0	0	0	0	**3**
07:15 AM	0	**2**	0	**2**	0	0	0	0	0	0	0	0	0	0	0	0	2
07:30 AM	0	0	0	0	0	0	0	0	0	0	**1**	1	0	0	0	0	1
07:45 AM	0	1	0	1	0	0	0	0	0	0	1	1	0	0	0	0	2
Total Volume	0	4	0	4	0	0	0	0	0	2	2	4	0	0	0	0	8
% App. Total	0	100	0		0	0	0		0	50	50		0	0	0		
PHF	.000	.500	.000	.500	.000	.000	.000	.000	.000	.250	.500	.500	.000	.000	.000	.000	.667

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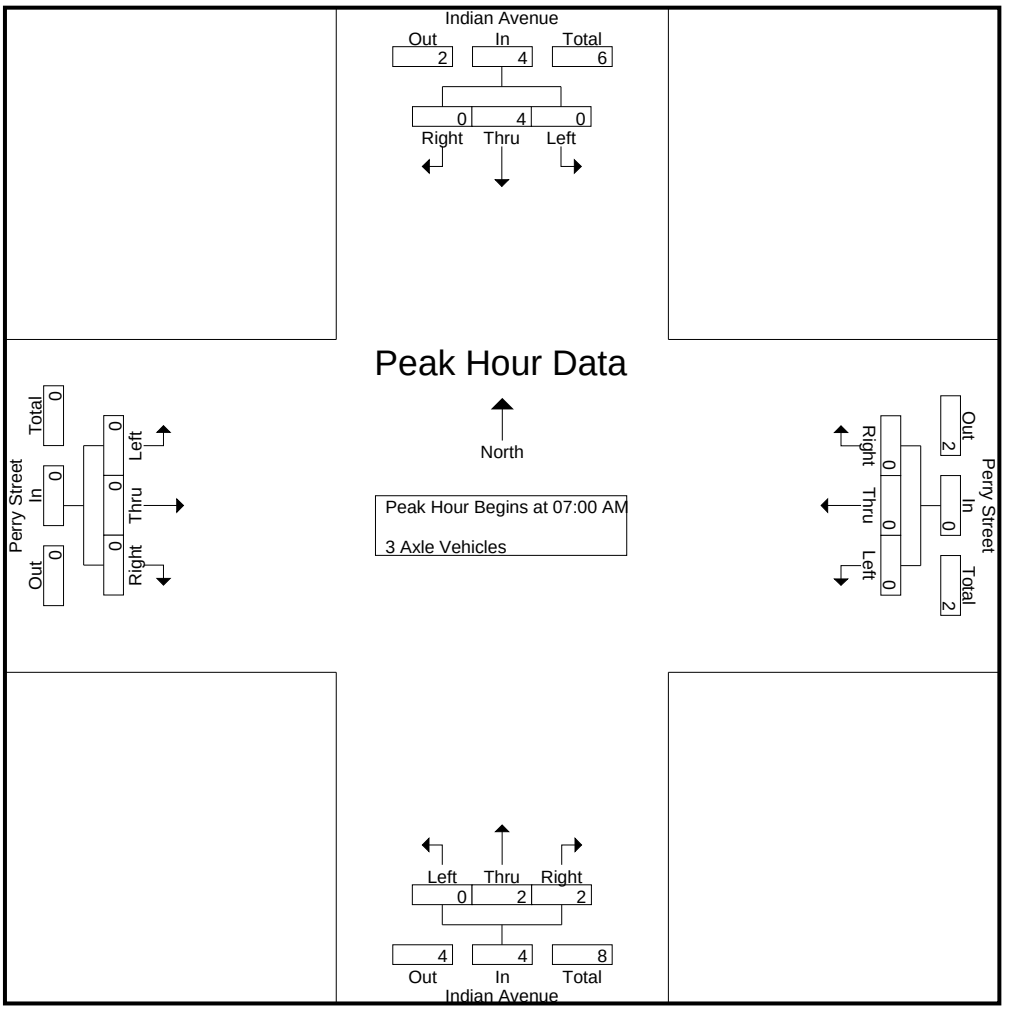
City of Perris
N/S: Indian Avenue
E/W: Perry Street
Weather: Clear

File Name : 03_PER_Indian_Perry AM
Site Code : 05118430
Start Date : 5/24/2018



Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM				07:00 AM				07:00 AM				07:00 AM			
+0 mins.	0	1	0	1	0	0	0	0	0	**2**	0	**2**	0	0	0	0
+15 mins.	0	**2**	0	**2**	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	**1**	1	0	0	0	0
+45 mins.	0	1	0	1	0	0	0	0	0	0	1	1	0	0	0	0
Total Volume	0	4	0	4	0	0	0	0	0	2	2	4	0	0	0	0
% App. Total	0	100	0		0	0	0		0	50	50		0	0	0	
PHF	.000	.500	.000	.500	.000	.000	.000	.000	.000	.250	.500	.500	.000	.000	.000	.000

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City of Perris
N/S: Indian Avenue
E/W: Perry Street
Weather: Clear

File Name : 03_PER_Indian_Perry AM
Site Code : 05118430
Start Date : 5/24/2018
Page No : 1

Groups Printed- 4+ Axle Trucks

	Indian Avenue Southbound				Perry Street Westbound				Indian Avenue Northbound				Perry Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	3	0	3	0	0	0	0	0	5	1	6	0	0	0	0	9
07:15 AM	0	2	0	2	0	0	0	0	0	7	0	7	0	0	0	0	9
07:30 AM	0	4	0	4	0	0	0	0	0	4	0	4	0	0	0	0	8
07:45 AM	0	4	0	4	0	0	0	0	0	5	0	5	0	0	0	0	9
Total	0	13	0	13	0	0	0	0	0	21	1	22	0	0	0	0	35
08:00 AM	0	2	0	2	0	0	0	0	0	3	0	3	0	0	0	0	5
08:15 AM	0	3	0	3	0	0	0	0	0	6	0	6	0	0	0	0	9
08:30 AM	0	8	0	8	0	0	0	0	0	3	1	4	0	0	0	0	12
08:45 AM	0	8	0	8	0	0	0	0	0	3	0	3	0	0	0	0	11
Total	0	21	0	21	0	0	0	0	0	15	1	16	0	0	0	0	37
Grand Total	0	34	0	34	0	0	0	0	0	36	2	38	0	0	0	0	72
Apprch %	0	100	0		0	0	0		0	94.7	5.3		0	0	0		
Total %	0	47.2	0	47.2	0	0	0	0	0	50	2.8	52.8	0	0	0	0	

	Indian Avenue Southbound				Perry Street Westbound				Indian Avenue Northbound				Perry Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	3	0	3	0	0	0	0	0	5	**1**	6	0	0	0	0	**9**
07:15 AM	0	2	0	2	0	0	0	0	0	**7**	0	**7**	0	0	0	0	9
07:30 AM	0	**4**	0	**4**	0	0	0	0	0	4	0	4	0	0	0	0	8
07:45 AM	0	4	0	4	0	0	0	0	0	5	0	5	0	0	0	0	9
Total Volume	0	13	0	13	0	0	0	0	0	21	1	22	0	0	0	0	35
% App. Total	0	100	0		0	0	0		0	95.5	4.5		0	0	0		
PHF	.000	.813	.000	.813	.000	.000	.000	.000	.000	.750	.250	.786	.000	.000	.000	.000	.972

Counts Unlimited
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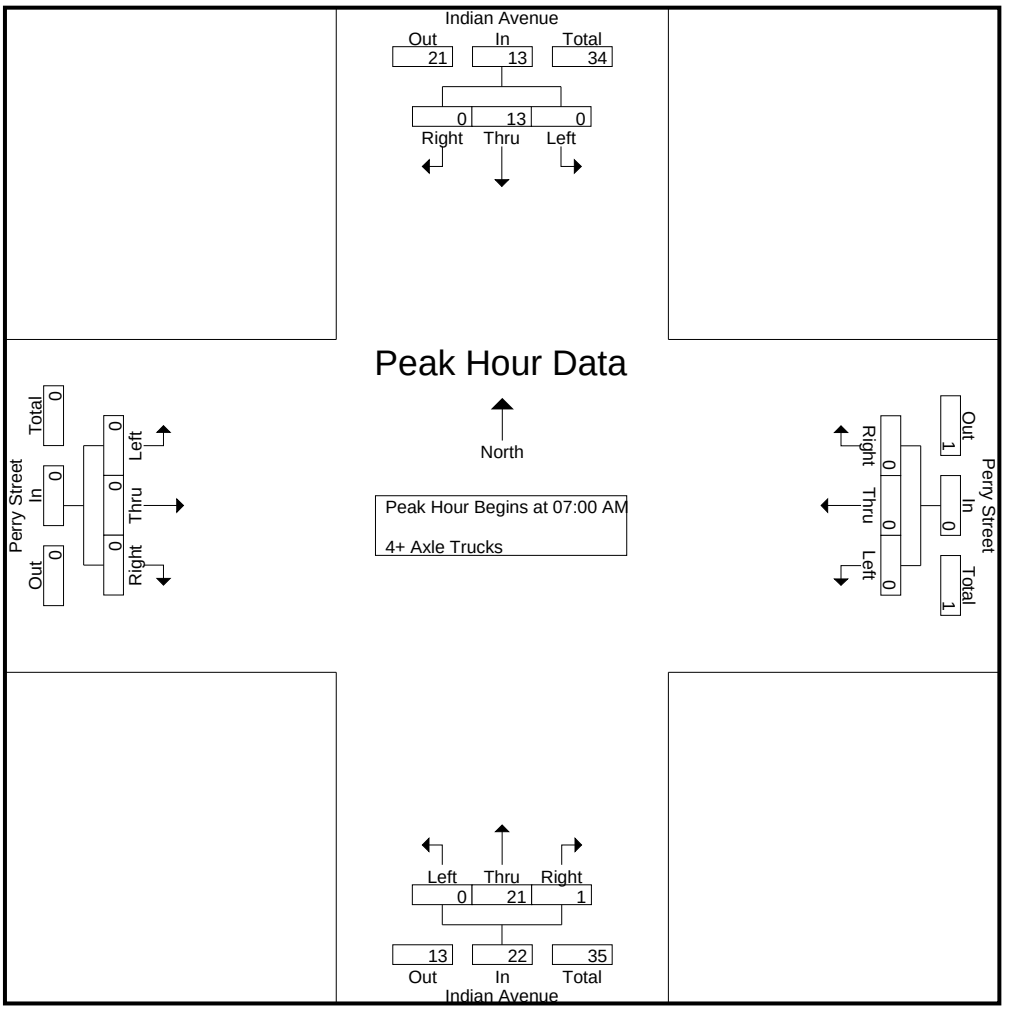
City of Perris
N/S: Indian Avenue
E/W: Perry Street
Weather: Clear

File Name : 03_PER_Indian_Perry AM
Site Code : 05118430
Start Date : 5/24/2018



Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM				07:00 AM				07:00 AM				07:00 AM			
+0 mins.	0	3	0	3	0	0	0	0	0	5	**1**	6	0	0	0	0
+15 mins.	0	2	0	2	0	0	0	0	0	**7**	0	**7**	0	0	0	0
+30 mins.	0	**4**	0	**4**	0	0	0	0	0	4	0	4	0	0	0	0
+45 mins.	0	4	0	4	0	0	0	0	0	5	0	5	0	0	0	0
Total Volume	0	13	0	13	0	0	0	0	0	21	1	22	0	0	0	0
% App. Total	0	100	0		0	0	0		0	95.5	4.5		0	0	0	
PHF	.000	.813	.000	.813	.000	.000	.000	.000	.000	.750	.250	.786	.000	.000	.000	.000

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City of Perris
N/S: Indian Avenue
E/W: Perry Street
Weather: Clear

File Name : 03_PER_Indian_Perry PM
Site Code : 05118430
Start Date : 5/24/2018
Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Indian Avenue Southbound				Perry Street Westbound				Indian Avenue Northbound				Perry Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	54	0	54	0	0	0	0	0	44	0	44	0	0	0	0	98
04:15 PM	0	68	0	68	0	0	0	0	0	41	0	41	0	0	0	0	109
04:30 PM	0	61	0	61	0	0	1	1	0	61	3	64	0	0	0	0	126
04:45 PM	0	58	0	58	0	0	4	4	0	50	1	51	0	0	0	0	113
Total	0	241	0	241	0	0	5	5	0	196	4	200	0	0	0	0	446
05:00 PM	0	63	0	63	0	0	2	2	0	29	2	31	0	0	0	0	96
05:15 PM	0	67	0	67	0	0	1	1	0	16	1	17	0	0	0	0	85
05:30 PM	0	77	0	77	0	0	1	1	0	31	0	31	0	0	0	0	109
05:45 PM	0	49	0	49	0	0	0	0	0	27	0	27	0	0	0	0	76
Total	0	256	0	256	0	0	4	4	0	103	3	106	0	0	0	0	366
Grand Total	0	497	0	497	0	0	9	9	0	299	7	306	0	0	0	0	812
Apprch %	0	100	0		0	0	100		0	97.7	2.3		0	0	0		
Total %	0	61.2	0	61.2	0	0	1.1	1.1	0	36.8	0.9	37.7	0	0	0	0	
Passenger Vehicles	0	450	0	450	0	0	8	8	0	242	4	246	0	0	0	0	704
% Passenger Vehicles	0	90.5	0	90.5	0	0	88.9	88.9	0	80.9	57.1	80.4	0	0	0	0	86.7
Large 2 Axle Vehicles	0	4	0	4	0	0	1	1	0	8	0	8	0	0	0	0	13
% Large 2 Axle Vehicles	0	0.8	0	0.8	0	0	11.1	11.1	0	2.7	0	2.6	0	0	0	0	1.6
3 Axle Vehicles	0	8	0	8	0	0	0	0	0	17	3	20	0	0	0	0	28
% 3 Axle Vehicles	0	1.6	0	1.6	0	0	0	0	0	5.7	42.9	6.5	0	0	0	0	3.4
4+ Axle Trucks	0	35	0	35	0	0	0	0	0	32	0	32	0	0	0	0	67
% 4+ Axle Trucks	0	7	0	7	0	0	0	0	0	10.7	0	10.5	0	0	0	0	8.3

	Indian Avenue Southbound				Perry Street Westbound				Indian Avenue Northbound				Perry Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	0	54	0	54	0	0	0	0	0	44	0	44	0	0	0	0	98
04:15 PM	0	**68**	0	**68**	0	0	0	0	0	41	0	41	0	0	0	0	109
04:30 PM	0	61	0	61	0	0	1	1	0	**61**	**3**	**64**	0	0	0	0	**126**
04:45 PM	0	58	0	58	0	0	**4**	**4**	0	50	1	51	0	0	0	0	113
Total Volume	0	241	0	241	0	0	5	5	0	196	4	200	0	0	0	0	446
% App. Total	0	100	0		0	0	100		0	98	2		0	0	0		
PHF	.000	.886	.000	.886	.000	.000	.313	.313	.000	.803	.333	.781	.000	.000	.000	.000	.885

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City of Perris
N/S: Indian Avenue
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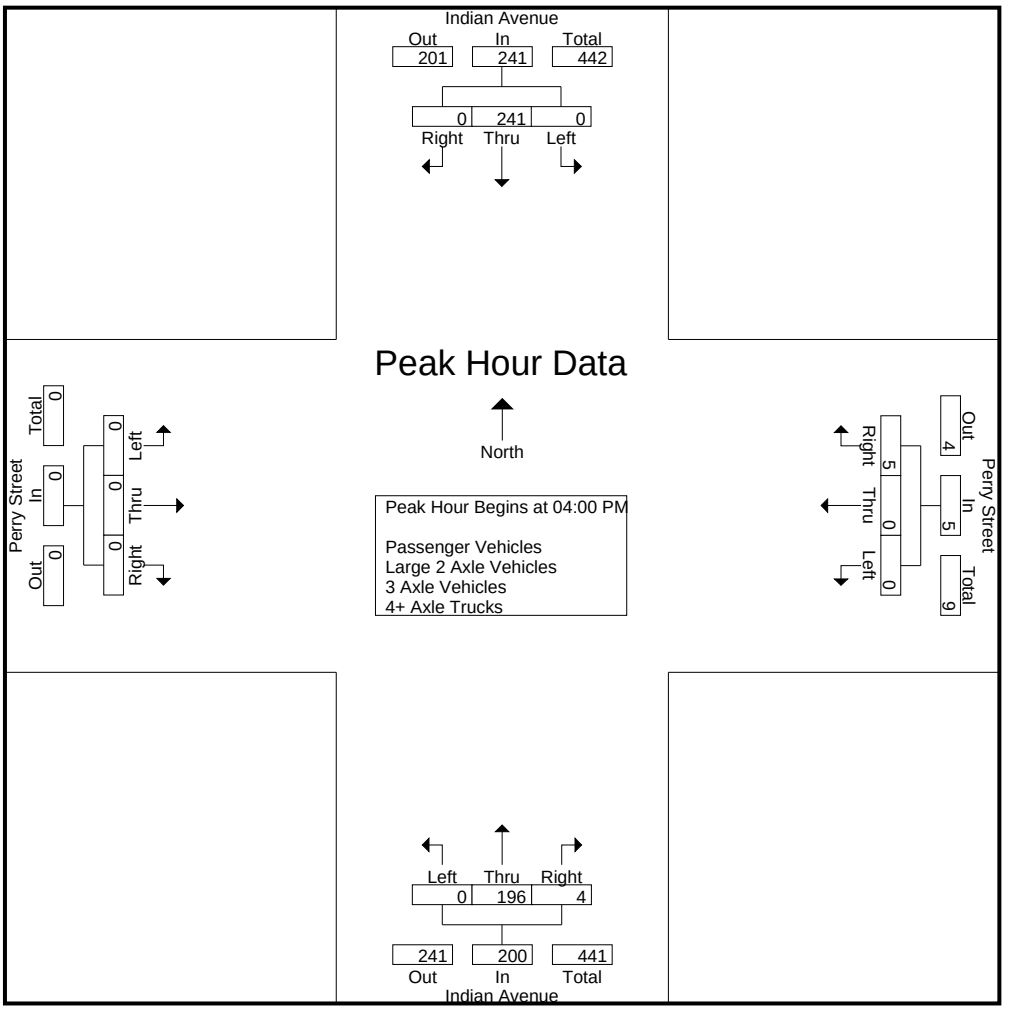
Weather: Clear

File Name : 03_PER_Indian_Perry PM
Site Code : 05118430
Start Date : 5/24/2018



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:30 PM				04:00 PM				04:00 PM			
+0 mins.	0	58	0	58	0	0	1	1	0	44	0	44	0	0	0	0
+15 mins.	0	63	0	63	0	0	**4**	**4**	0	41	0	41	0	0	0	0
+30 mins.	0	67	0	67	0	0	2	2	0	**61**	**3**	**64**	0	0	0	0
+45 mins.	0	**77**	0	**77**	0	0	1	1	0	50	1	51	0	0	0	0
Total Volume	0	265	0	265	0	0	8	8	0	196	4	200	0	0	0	0
% App. Total	0	100	0		0	0	100		0	98	2		0	0	0	
PHF	.000	.860	.000	.860	.000	.000	.500	.500	.000	.803	.333	.781	.000	.000	.000	.000

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City of Perris
N/S: Indian Avenue
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Weather: Clear

File Name : 03_PER_Indian_Perry PM
Site Code : 05118430
Start Date : 5/24/2018
Page No : 1

Groups Printed- Large 2 Axle Vehicles

	Indian Avenue Southbound				Perry Street Westbound				Indian Avenue Northbound				Perry Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
04:15 PM	0	1	0	1	0	0	0	0	0	2	0	2	0	0	0	0	3
04:30 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
04:45 PM	0	0	0	0	0	0	1	1	0	1	0	1	0	0	0	0	2
Total	0	1	0	1	0	0	1	1	0	5	0	5	0	0	0	0	7
05:00 PM	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
05:45 PM	0	2	0	2	0	0	0	0	0	1	0	1	0	0	0	0	3
Total	0	3	0	3	0	0	0	0	0	3	0	3	0	0	0	0	6
Grand Total	0	4	0	4	0	0	1	1	0	8	0	8	0	0	0	0	13
Apprch %	0	100	0		0	0	100		0	100	0		0	0	0		
Total %	0	30.8	0	30.8	0	0	7.7	7.7	0	61.5	0	61.5	0	0	0	0	

	Indian Avenue Southbound				Perry Street Westbound				Indian Avenue Northbound				Perry Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
04:15 PM	0	**1**	0	**1**	0	0	0	0	0	**2**	0	**2**	0	0	0	0	**3**
04:30 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
04:45 PM	0	0	0	0	0	0	**1**	**1**	0	1	0	1	0	0	0	0	2
Total Volume	0	1	0	1	0	0	1	1	0	5	0	5	0	0	0	0	7
% App. Total	0	100	0		0	0	100		0	100	0		0	0	0		
PHF	.000	.250	.000	.250	.000	.000	.250	.250	.000	.625	.000	.625	.000	.000	.000	.000	.583

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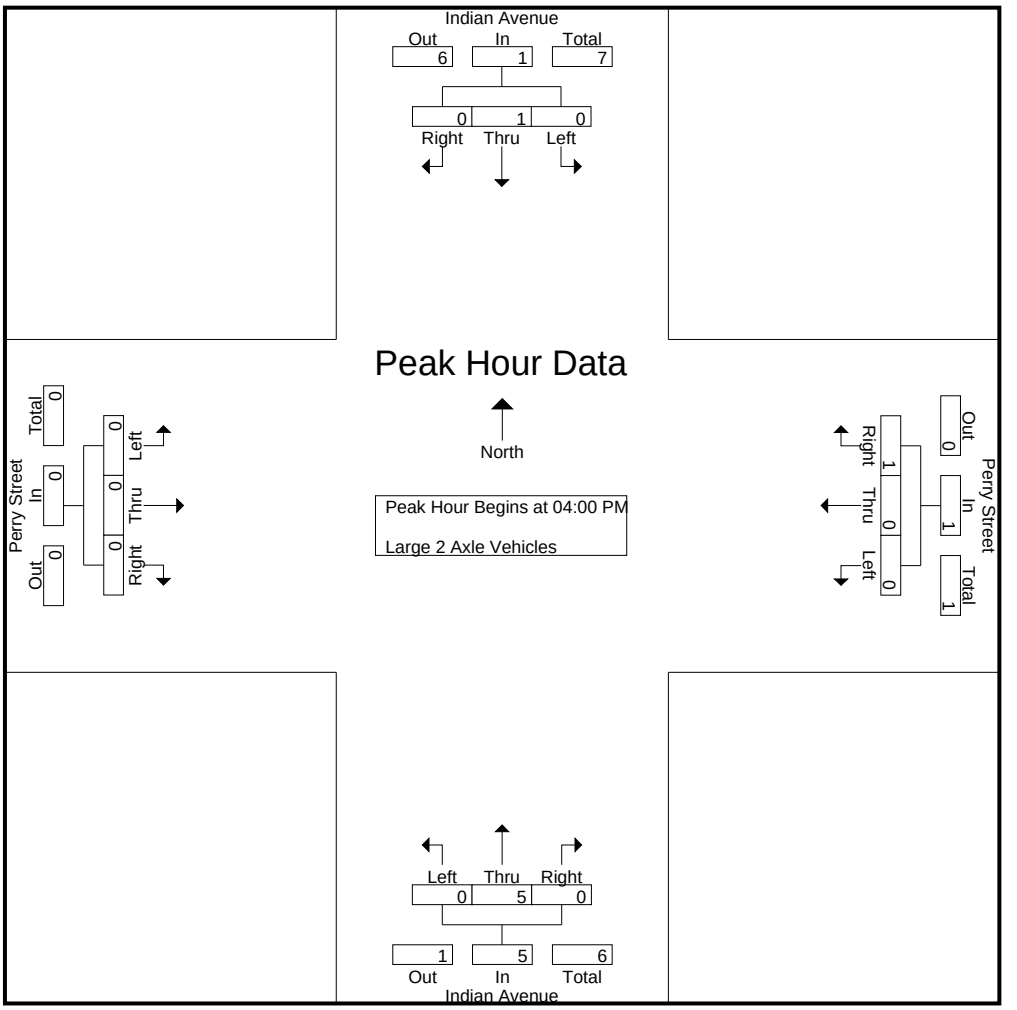
City of Perris
N/S: Indian Avenue
E/W: Perry Street
Weather: Clear

File Name : 03_PER_Indian_Perry PM
Site Code : 05118430
Start Date : 5/24/2018
Page No : 2



Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:00 PM				04:00 PM				04:00 PM				04:00 PM			
+0 mins.	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0
+15 mins.	0	**1**	0	**1**	0	0	0	0	0	**2**	0	**2**	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0
+45 mins.	0	0	0	0	0	0	**1**	**1**	0	1	0	1	0	0	0	0
Total Volume	0	1	0	1	0	0	1	1	0	5	0	5	0	0	0	0
% App. Total	0	100	0		0	0	100		0	100	0		0	0	0	
PHF	.000	.250	.000	.250	.000	.000	.250	.250	.000	.625	.000	.625	.000	.000	.000	.000

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City of Perris
N/S: Indian Avenue
E/W: Perry Street
Weather: Clear

File Name : 03_PER_Indian_Perry PM
Site Code : 05118430
Start Date : 5/24/2018
Page No : 1

Groups Printed- 3 Axle Vehicles

	Indian Avenue Southbound				Perry Street Westbound				Indian Avenue Northbound				Perry Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	4	0	4	0	0	0	0	0	1	0	1	0	0	0	0	5
04:15 PM	0	1	0	1	0	0	0	0	0	2	0	2	0	0	0	0	3
04:30 PM	0	0	0	0	0	0	0	0	0	4	0	4	0	0	0	0	4
04:45 PM	0	0	0	0	0	0	0	0	0	7	1	8	0	0	0	0	8
Total	0	5	0	5	0	0	0	0	0	14	1	15	0	0	0	0	20
05:00 PM	0	0	0	0	0	0	0	0	0	1	1	2	0	0	0	0	2
05:15 PM	0	1	0	1	0	0	0	0	0	0	1	1	0	0	0	0	2
05:30 PM	0	2	0	2	0	0	0	0	0	2	0	2	0	0	0	0	4
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	3	0	3	0	0	0	0	0	3	2	5	0	0	0	0	8
Grand Total	0	8	0	8	0	0	0	0	0	17	3	20	0	0	0	0	28
Apprch %	0	100	0		0	0	0		0	85	15		0	0	0		
Total %	0	28.6	0	28.6	0	0	0	0	0	60.7	10.7	71.4	0	0	0	0	

	Indian Avenue Southbound				Perry Street Westbound				Indian Avenue Northbound				Perry Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	0	**4**	0	**4**	0	0	0	0	0	1	0	1	0	0	0	0	5
04:15 PM	0	1	0	1	0	0	0	0	0	2	0	2	0	0	0	0	3
04:30 PM	0	0	0	0	0	0	0	0	0	4	0	4	0	0	0	0	4
04:45 PM	0	0	0	0	0	0	0	0	0	**7**	**1**	**8**	0	0	0	0	**8**
Total Volume	0	5	0	5	0	0	0	0	0	14	1	15	0	0	0	0	20
% App. Total	0	100	0		0	0	0		0	93.3	6.7		0	0	0		
PHF	.000	.313	.000	.313	.000	.000	.000	.000	.000	.500	.250	.469	.000	.000	.000	.000	.625

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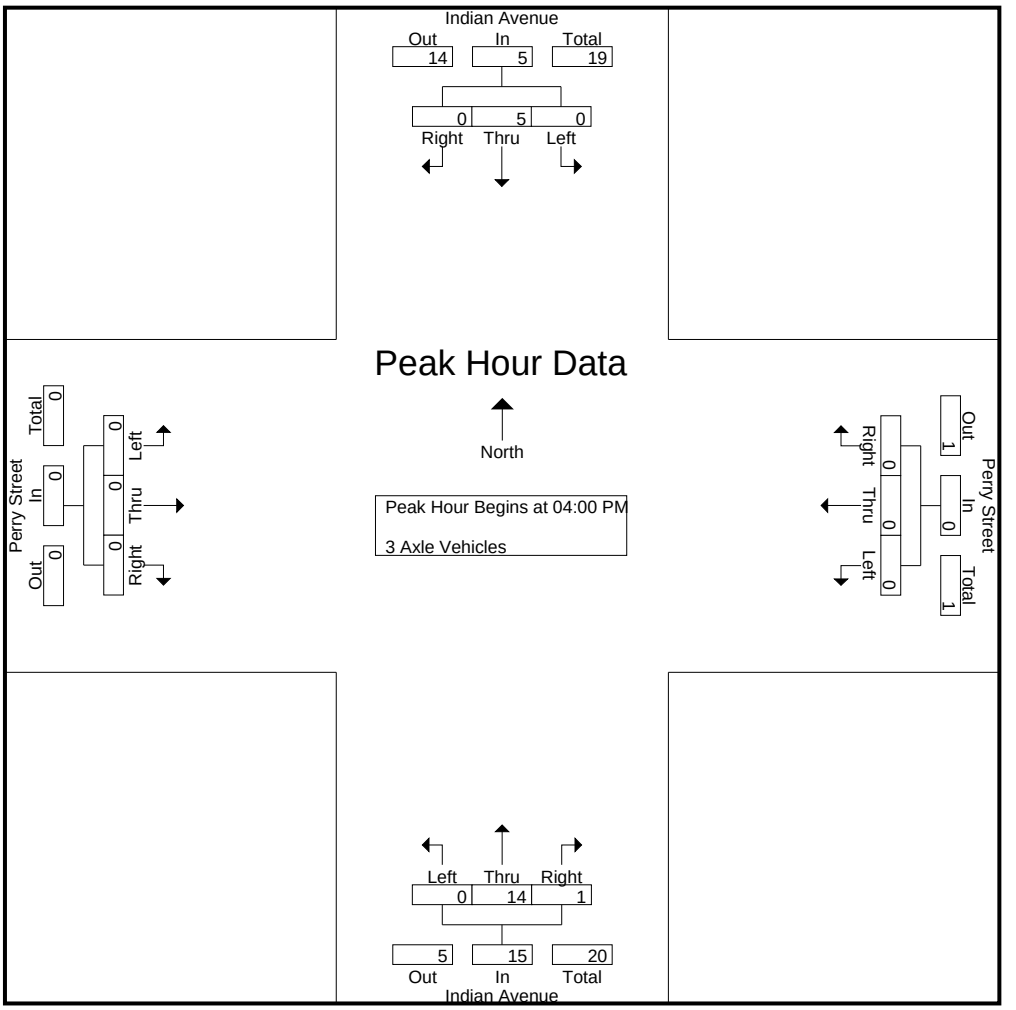
City of Perris
N/S: Indian Avenue
E/W: Perry Street
Weather: Clear

File Name : 03_PER_Indian_Perry PM
Site Code : 05118430
Start Date : 5/24/2018



Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:00 PM				04:00 PM				04:00 PM				04:00 PM			
+0 mins.	0	**4**	0	**4**	0	0	0	0	0	1	0	1	0	0	0	0
+15 mins.	0	1	0	1	0	0	0	0	0	2	0	2	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	4	0	4	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	**7**	**1**	**8**	0	0	0	0
Total Volume	0	5	0	5	0	0	0	0	0	14	1	15	0	0	0	0
% App. Total	0	100	0		0	0	0		0	93.3	6.7		0	0	0	
PHF	.000	.313	.000	.313	.000	.000	.000	.000	.000	.500	.250	.469	.000	.000	.000	.000

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City of Perris
N/S: Indian Avenue
E/W: Perry Street
Weather: Clear

File Name : 03_PER_Indian_Perry PM
Site Code : 05118430
Start Date : 5/24/2018
Page No : 1

Groups Printed- 4+ Axle Trucks

	Indian Avenue Southbound				Perry Street Westbound				Indian Avenue Northbound				Perry Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	3	0	3	0	0	0	0	0	4	0	4	0	0	0	0	7
04:15 PM	0	7	0	7	0	0	0	0	0	3	0	3	0	0	0	0	10
04:30 PM	0	5	0	5	0	0	0	0	0	5	0	5	0	0	0	0	10
04:45 PM	0	5	0	5	0	0	0	0	0	6	0	6	0	0	0	0	11
Total	0	20	0	20	0	0	0	0	0	18	0	18	0	0	0	0	38
05:00 PM	0	4	0	4	0	0	0	0	0	4	0	4	0	0	0	0	8
05:15 PM	0	6	0	6	0	0	0	0	0	0	0	0	0	0	0	0	6
05:30 PM	0	2	0	2	0	0	0	0	0	6	0	6	0	0	0	0	8
05:45 PM	0	3	0	3	0	0	0	0	0	4	0	4	0	0	0	0	7
Total	0	15	0	15	0	0	0	0	0	14	0	14	0	0	0	0	29
Grand Total	0	35	0	35	0	0	0	0	0	32	0	32	0	0	0	0	67
Apprch %	0	100	0		0	0	0		0	100	0		0	0	0		
Total %	0	52.2	0	52.2	0	0	0	0	0	47.8	0	47.8	0	0	0	0	

	Indian Avenue Southbound				Perry Street Westbound				Indian Avenue Northbound				Perry Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	0	3	0	3	0	0	0	0	0	4	0	4	0	0	0	0	7
04:15 PM	0	**7**	0	**7**	0	0	0	0	0	3	0	3	0	0	0	0	10
04:30 PM	0	5	0	5	0	0	0	0	0	5	0	5	0	0	0	0	10
04:45 PM	0	5	0	5	0	0	0	0	0	**6**	0	**6**	0	0	0	0	**11**
Total Volume	0	20	0	20	0	0	0	0	0	18	0	18	0	0	0	0	38
% App. Total	0	100	0		0	0	0		0	100	0		0	0	0		
PHF	.000	.714	.000	.714	.000	.000	.000	.000	.000	.750	.000	.750	.000	.000	.000	.000	.864

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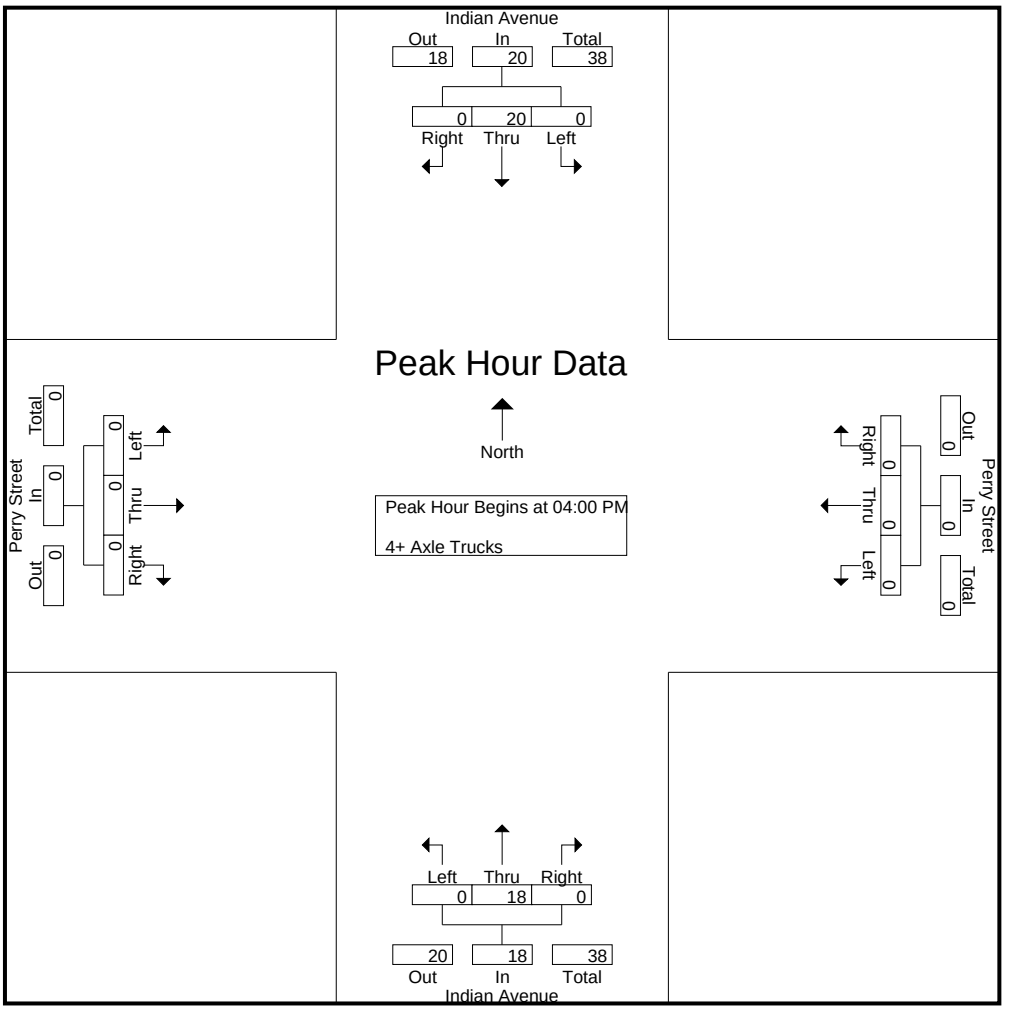
City of Perris
N/S: Indian Avenue
E/W: Perry Street
Weather: Clear

File Name : 03_PER_Indian_Perry PM
Site Code : 05118430
Start Date : 5/24/2018
Page No : 2



Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:00 PM				04:00 PM				04:00 PM				04:00 PM			
+0 mins.	0	3	0	3	0	0	0	0	0	4	0	4	0	0	0	0
+15 mins.	0	**7**	0	**7**	0	0	0	0	0	3	0	3	0	0	0	0
+30 mins.	0	5	0	5	0	0	0	0	0	5	0	5	0	0	0	0
+45 mins.	0	5	0	5	0	0	0	0	0	**6**	0	**6**	0	0	0	0
Total Volume	0	20	0	20	0	0	0	0	0	18	0	18	0	0	0	0
% App. Total	0	100	0		0	0	0		0	100	0		0	0	0	
PHF	.000	.714	.000	.714	.000	.000	.000	.000	.000	.750	.000	.750	.000	.000	.000	.000

Location: Perris
N/S: Indian Avenue
E/W: Perry Street

Date: 5/24/2018
Day: Thursday

PEDESTRIANS

	North Leg Indian Avenue	East Leg Perry Street	South Leg Indian Avenue	West Leg Perry Street	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0

	North Leg Indian Avenue	East Leg Perry Street	South Leg Indian Avenue	West Leg Perry Street	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0

Location: Perris
N/S: Indian Avenue
E/W: Perry Street

Date: 5/24/2018
Day: Thursday

BICYCLES

	Southbound Indian Avenue			Westbound Perry Street			Northbound Indian Avenue			Eastbound Perry Street			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	0	0	0	0	0	0	0

	Southbound Indian Avenue			Westbound Perry Street			Northbound Indian Avenue			Eastbound Perry Street			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	0	1	0	0	0	0	1

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City of Perris
N/S: Indian Avenue
E/W: Ramona Expressway
Weather: Clear

File Name : 04_PER_Indian_Ramona Expy AM
Site Code : 05118430
Start Date : 5/24/2018
Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Indian Avenue Southbound					Ramona Expressway Westbound					Indian Avenue Northbound					Ramona Expressway Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	3	5	6	1	14	7	340	31	5	378	14	28	10	7	52	28	208	11	0	247	13	691	704
07:15 AM	4	9	4	2	17	10	296	22	4	328	9	31	8	6	48	24	223	10	2	257	14	650	664
07:30 AM	5	8	7	2	20	14	344	24	12	382	11	37	9	4	57	30	246	10	3	286	21	745	766
07:45 AM	3	18	5	3	26	25	329	20	7	374	13	18	11	5	42	22	231	10	6	263	21	705	726
Total	15	40	22	8	77	56	1309	97	28	1462	47	114	38	22	199	104	908	41	11	1053	69	2791	2860
08:00 AM	3	8	8	2	19	14	300	18	5	332	9	13	12	6	34	24	221	9	3	254	16	639	655
08:15 AM	0	9	4	3	13	3	287	10	2	300	5	8	6	5	19	11	203	14	2	228	12	560	572
08:30 AM	4	9	7	2	20	15	275	8	2	298	18	8	11	7	37	13	197	17	3	227	14	582	596
08:45 AM	5	11	7	3	23	12	262	9	0	283	14	9	11	6	34	11	147	11	3	169	12	509	521
Total	12	37	26	10	75	44	1124	45	9	1213	46	38	40	24	124	59	768	51	11	878	54	2290	2344
Grand Total	27	77	48	18	152	100	2433	142	37	2675	93	152	78	46	323	163	1676	92	22	1931	123	5081	5204
Apprch %	17.8	50.7	31.6			3.7	91	5.3			28.8	47.1	24.1			8.4	86.8	4.8					
Total %	0.5	1.5	0.9		3	2	47.9	2.8		52.6	1.8	3	1.5		6.4	3.2	33	1.8		38	2.4	97.6	
Passenger Vehicles	24	66	18		117	84	2313	139		2572	52	124	70		291	129	1550	54		1749	0	0	4729
% Passenger Vehicles	88.9	85.7	37.5	50	68.8	84	95.1	97.9	97.3	94.8	55.9	81.6	89.7	97.8	78.9	79.1	92.5	58.7	72.7	89.6	0	0	90.9
Large 2 Axle Vehicles	0	2	4		9	12	70	2		85	7	17	1		25	4	79	6		90	0	0	209
% Large 2 Axle Vehicles	0	2.6	8.3	16.7	5.3	12	2.9	1.4	2.7	3.1	7.5	11.2	1.3	0	6.8	2.5	4.7	6.5	4.5	4.6	0	0	4
3 Axle Vehicles	0	1	5		8	2	9	0		11	2	3	1		7	2	13	3		19	0	0	45
% 3 Axle Vehicles	0	1.3	10.4	11.1	4.7	2	0.4	0	0	0.4	2.2	2	1.3	2.2	1.9	1.2	0.8	3.3	4.5	1	0	0	0.9
4+ Axle Trucks	3	8	21		36	2	41	1		44	32	8	6		46	28	34	29		95	0	0	221
% 4+ Axle Trucks	11.1	10.4	43.8	22.2	21.2	2	1.7	0.7	0	1.6	34.4	5.3	7.7	0	12.5	17.2	2	31.5	18.2	4.9	0	0	4.2

	Indian Avenue Southbound				Ramona Expressway Westbound				Indian Avenue Northbound				Ramona Expressway Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	3	5	6	14	7	340	**31**	378	**14**	28	10	52	28	208	**11**	247	691
07:15 AM	4	9	4	17	10	296	22	328	9	31	8	48	24	223	10	257	650
07:30 AM	**5**	8	**7**	20	14	**344**	24	**382**	11	**37**	9	**57**	**30**	**246**	10	**286**	**745**
07:45 AM	3	**18**	5	**26**	**25**	329	20	374	13	18	**11**	42	22	231	10	263	705
Total Volume	15	40	22	77	56	1309	97	1462	47	114	38	199	104	908	41	1053	2791
% App. Total	19.5	51.9	28.6		3.8	89.5	6.6		23.6	57.3	19.1		9.9	86.2	3.9		
PHF	.750	.556	.786	.740	.560	.951	.782	.957	.839	.770	.864	.873	.867	.923	.932	.920	.937

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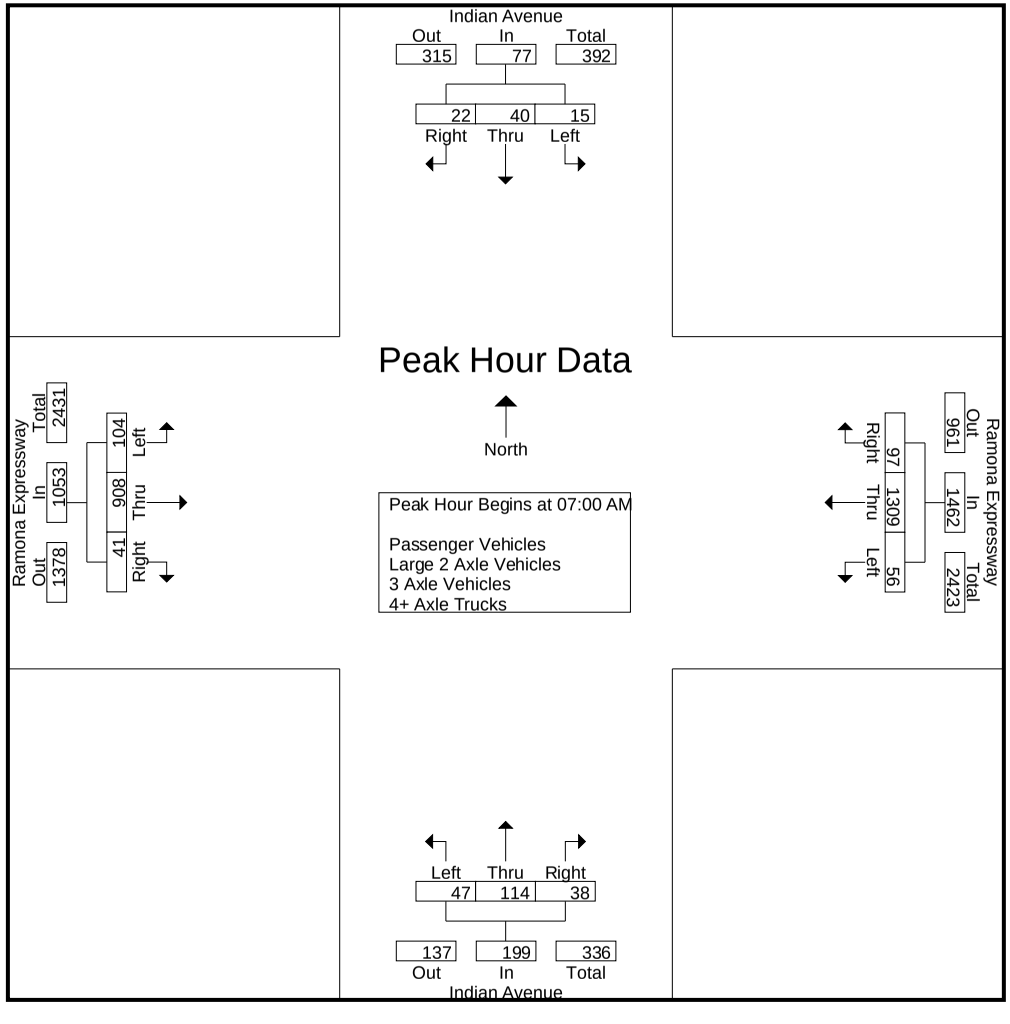
City of Perris
N/S: Indian Avenue
E/W: Ramona Expressway
Weather: Clear

File Name : 04_PER_Indian_Ramona Expy AM
Site Code : 05118430
Start Date : 5/24/2018
Page No : 2



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City of Perris
N/S: Indian Avenue
E/W: Ramona Expressway
Weather: Clear

File Name : 04_PER_Indian_Ramona Expy AM
Site Code : 05118430
Start Date : 5/24/2018
Page No : 1

Groups Printed- Large 2 Axle Vehicles

	Indian Avenue Southbound					Ramona Expressway Westbound					Indian Avenue Northbound					Ramona Expressway Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	0	0	0	0	0	2	6	0	0	8	0	2	0	0	2	1	6	1	0	8	0	18	18
07:15 AM	0	0	0	0	0	3	8	1	0	12	0	2	0	0	2	0	11	1	0	12	0	26	26
07:30 AM	0	0	0	0	0	0	6	0	0	6	1	4	0	0	5	1	9	0	0	10	0	21	21
07:45 AM	0	0	1	1	1	2	8	0	0	10	0	3	0	0	3	0	14	0	0	14	1	28	29
Total	0	0	1	1	1	7	28	1	0	36	1	11	0	0	12	2	40	2	0	44	1	93	94
08:00 AM	0	1	1	0	2	3	13	0	0	16	3	2	0	0	5	1	7	0	0	8	0	31	31
08:15 AM	0	1	1	1	2	1	6	1	1	8	1	2	1	0	4	0	16	3	1	19	3	33	36
08:30 AM	0	0	0	0	0	1	15	0	0	16	2	1	0	0	3	1	8	0	0	9	0	28	28
08:45 AM	0	0	1	1	1	0	8	0	0	8	0	1	0	0	1	0	8	1	0	9	1	19	20
Total	0	2	3	2	5	5	42	1	1	48	6	6	1	0	13	2	39	4	1	45	4	111	115
Grand Total	0	2	4	3	6	12	70	2	1	84	7	17	1	0	25	4	79	6	1	89	5	204	209
Apprch %	0	33.3	66.7			14.3	83.3	2.4			28	68	4			4.5	88.8	6.7					
Total %	0	1	2		2.9	5.9	34.3	1		41.2	3.4	8.3	0.5		12.3	2	38.7	2.9		43.6	2.4	97.6	

3.1-21

	Indian Avenue Southbound				Ramona Expressway Westbound				Indian Avenue Northbound				Ramona Expressway Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	0	0	0	2	6	0	8	0	2	0	2	**1**	6	**1**	8	18
07:15 AM	0	0	0	0	**3**	**8**	**1**	**12**	0	2	0	2	0	11	1	12	26
07:30 AM	0	0	0	0	0	6	0	6	**1**	**4**	0	**5**	1	9	0	10	21
07:45 AM	0	0	**1**	**1**	2	8	0	10	0	3	0	3	0	**14**	0	**14**	**28**
Total Volume	0	0	1	1	7	28	1	36	1	11	0	12	2	40	2	44	93
% App. Total	0	0	100		19.4	77.8	2.8		8.3	91.7	0		4.5	90.9	4.5		
PHF	.000	.000	.250	.250	.583	.875	.250	.750	.250	.688	.000	.600	.500	.714	.500	.786	.830

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City of Perris
N/S: Indian Avenue
E/W: Ramona Expressway
Weather: Clear

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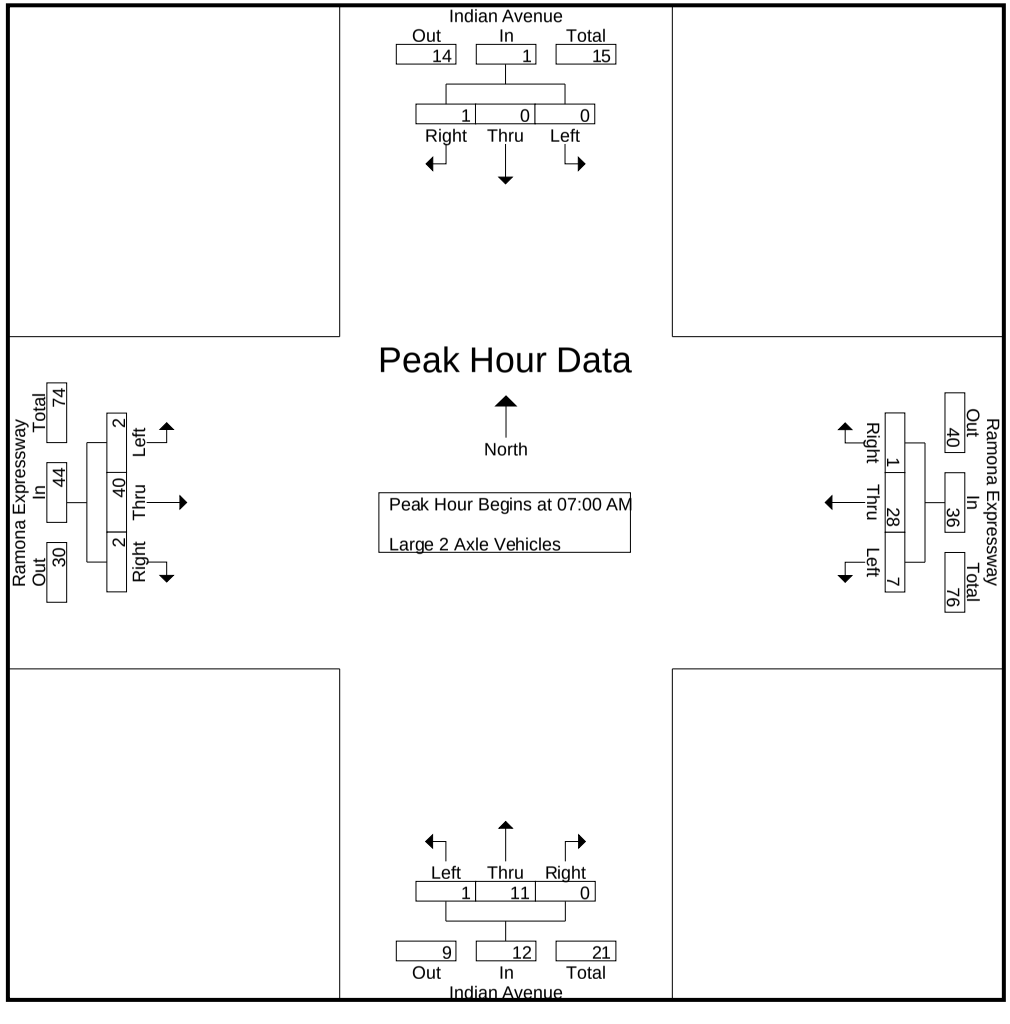

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City of Perris
N/S: Indian Avenue
E/W: Ramona Expressway
Weather: Clear

File Name : 04_PER_Indian_Ramona Expy AM
Site Code : 05118430
Start Date : 5/24/2018
Page No : 1

Groups Printed- 3 Axle Vehicles

	Indian Avenue Southbound					Ramona Expressway Westbound					Indian Avenue Northbound					Ramona Expressway Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	0	0	1	1	1	1	4	0	0	5	0	0	0	0	0	2	1	1	0	4	1	10	11
07:15 AM	0	0	2	1	2	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	1	4	5
07:30 AM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	2	0	1	0	0	1	0	3	3
07:45 AM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	1	1	1	2	1	4	5
Total	0	1	3	2	4	1	5	0	0	6	1	2	0	0	3	2	4	2	1	8	3	21	24
08:00 AM	0	0	1	0	1	1	0	0	0	1	0	0	0	0	0	0	2	0	0	2	0	4	4
08:15 AM	0	0	0	0	0	0	1	0	0	1	0	1	1	1	2	0	0	1	0	1	1	4	5
08:30 AM	0	0	1	0	1	0	2	0	0	2	0	0	0	0	0	0	3	0	0	3	0	6	6
08:45 AM	0	0	0	0	0	0	1	0	0	1	1	0	0	0	1	0	4	0	0	4	0	6	6
Total	0	0	2	0	2	1	4	0	0	5	1	1	1	1	3	0	9	1	0	10	1	20	21
Grand Total	0	1	5	2	6	2	9	0	0	11	2	3	1	1	6	2	13	3	1	18	4	41	45
Apprch %	0	16.7	83.3			18.2	81.8	0			33.3	50	16.7			11.1	72.2	16.7					
Total %	0	2.4	12.2		14.6	4.9	22	0		26.8	4.9	7.3	2.4		14.6	4.9	31.7	7.3		43.9	8.9	91.1	

	Indian Avenue Southbound				Ramona Expressway Westbound				Indian Avenue Northbound				Ramona Expressway Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	0	1	1	**1**	**4**	0	**5**	0	0	0	0	**2**	**1**	**1**	**4**	**10**
07:15 AM	0	0	**2**	**2**	0	1	0	1	0	0	0	0	0	1	0	1	4
07:30 AM	0	0	0	0	0	0	0	0	**1**	**1**	0	**2**	0	1	0	1	3
07:45 AM	0	**1**	0	1	0	0	0	0	0	1	0	1	0	1	1	2	4
Total Volume	0	1	3	4	1	5	0	6	1	2	0	3	2	4	2	8	21
% App. Total	0	25	75		16.7	83.3	0		33.3	66.7	0		25	50	25		
PHF	.000	.250	.375	.500	.250	.313	.000	.300	.250	.500	.000	.375	.250	1.00	.500	.500	.525

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City of Perris
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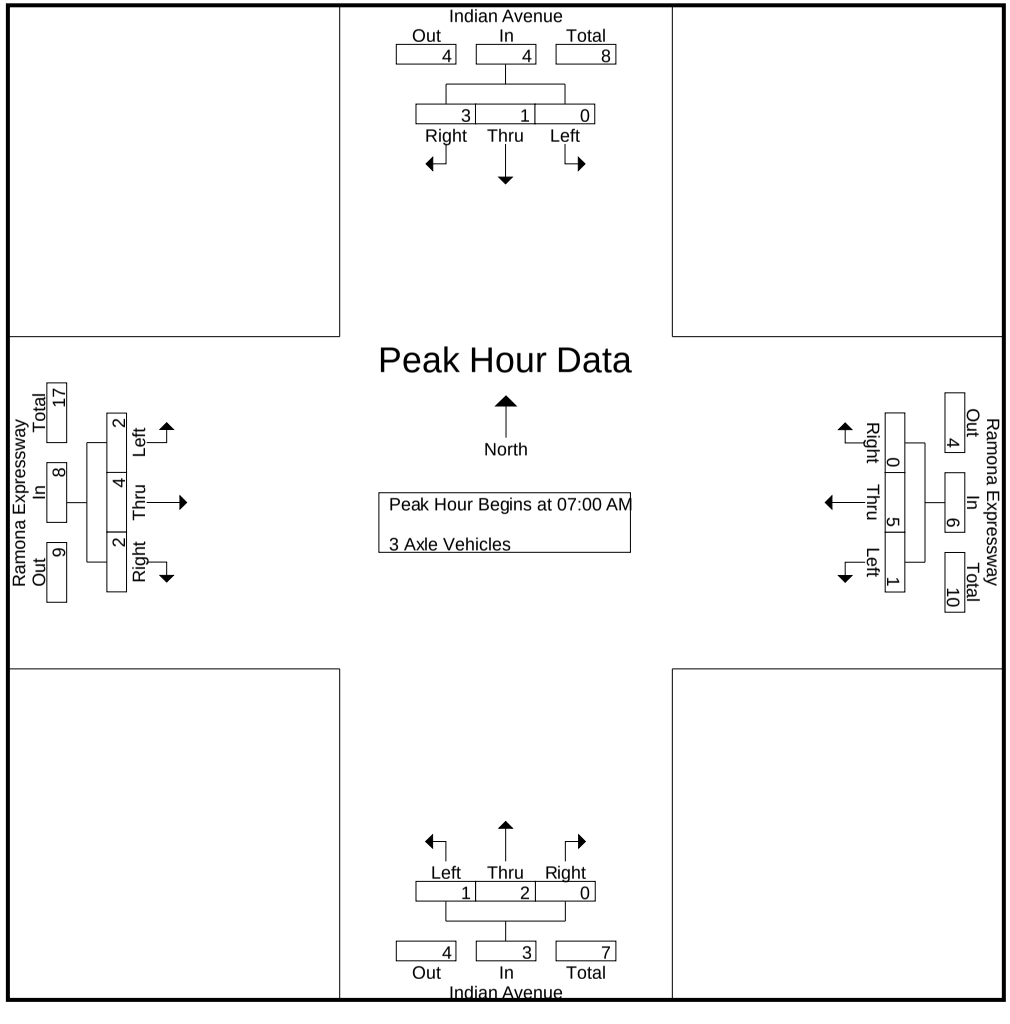

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City of Perris
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Groups Printed- 4+ Axle Trucks

	Indian Avenue Southbound					Ramona Expressway Westbound					Indian Avenue Northbound					Ramona Expressway Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	0	0	2	0	2	0	7	0	0	7	5	3	0	0	8	4	2	3	0	9	0	26	26
07:15 AM	0	2	1	0	3	0	4	0	0	4	5	1	2	0	8	6	3	2	0	11	0	26	26
07:30 AM	1	1	2	0	4	0	9	0	0	9	4	1	0	0	5	3	7	2	1	12	1	30	31
07:45 AM	1	1	1	0	3	1	6	0	0	7	4	1	1	0	6	4	5	1	0	10	0	26	26
Total	2	4	6	0	12	1	26	0	0	27	18	6	3	0	27	17	17	8	1	42	1	108	109
08:00 AM	1	0	2	0	3	0	2	1	0	3	3	0	1	0	4	1	3	3	0	7	0	17	17
08:15 AM	0	1	2	1	3	0	5	0	0	5	2	1	0	0	3	4	5	5	1	14	2	25	27
08:30 AM	0	0	6	2	6	1	4	0	0	5	5	0	2	0	7	3	5	8	1	16	3	34	37
08:45 AM	0	3	5	1	8	0	4	0	0	4	4	1	0	0	5	3	4	5	1	12	2	29	31
Total	1	4	15	4	20	1	15	1	0	17	14	2	3	0	19	11	17	21	3	49	7	105	112
Grand Total	3	8	21	4	32	2	41	1	0	44	32	8	6	0	46	28	34	29	4	91	8	213	221
Apprch %	9.4	25	65.6			4.5	93.2	2.3			69.6	17.4	13			30.8	37.4	31.9					
Total %	1.4	3.8	9.9		15	0.9	19.2	0.5		20.7	15	3.8	2.8		21.6	13.1	16	13.6		42.7	3.6	96.4	

3.1-25

	Indian Avenue Southbound				Ramona Expressway Westbound				Indian Avenue Northbound				Ramona Expressway Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	0	**2**	2	0	7	0	7	**5**	**3**	0	**8**	4	2	**3**	9	26
07:15 AM	0	**2**	1	3	0	4	0	4	5	1	**2**	8	**6**	3	2	11	26
07:30 AM	**1**	1	2	**4**	0	**9**	0	**9**	4	1	0	5	3	**7**	2	**12**	**30**
07:45 AM	1	1	1	3	**1**	6	0	7	4	1	1	6	4	5	1	10	26
Total Volume	2	4	6	12	1	26	0	27	18	6	3	27	17	17	8	42	108
% App. Total	16.7	33.3	50		3.7	96.3	0		66.7	22.2	11.1		40.5	40.5	19		
PHF	.500	.500	.750	.750	.250	.722	.000	.750	.900	.500	.375	.844	.708	.607	.667	.875	.900

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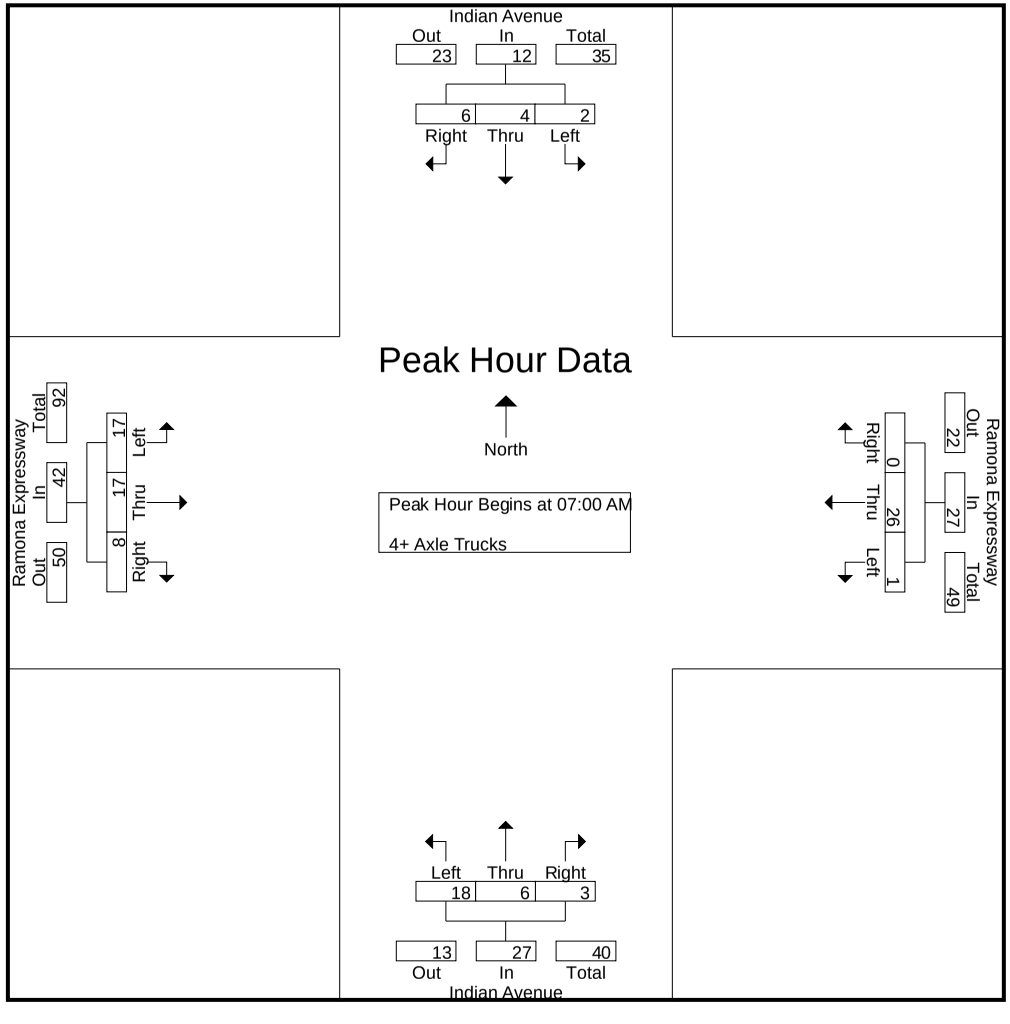

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Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Indian Avenue Southbound					Ramona Expressway Westbound					Indian Avenue Northbound					Ramona Expressway Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	18	26	13	5	57	16	252	10	4	278	19	20	10	4	49	16	304	12	1	332	14	716	730
04:15 PM	16	29	13	5	58	8	304	15	1	327	16	9	11	5	36	14	314	12	5	340	16	761	777
04:30 PM	12	32	15	4	59	5	254	13	3	272	59	35	52	8	146	20	263	11	2	294	17	771	788
04:45 PM	17	40	13	5	70	11	257	16	2	284	24	24	12	6	60	13	277	13	2	303	15	717	732
Total	63	127	54	19	244	40	1067	54	10	1161	118	88	85	23	291	63	1158	48	10	1269	62	2965	3027
05:00 PM	10	32	17	9	59	10	250	5	1	265	23	14	7	1	44	14	302	8	2	324	13	692	705
05:15 PM	15	47	9	7	71	22	290	5	0	317	22	9	6	3	37	6	329	11	3	346	13	771	784
05:30 PM	17	40	14	10	71	37	263	8	2	308	15	12	9	6	36	13	310	28	6	351	24	766	790
05:45 PM	13	32	8	7	53	42	282	7	3	331	12	11	8	5	31	8	301	25	6	334	21	749	770
Total	55	151	48	33	254	111	1085	25	6	1221	72	46	30	15	148	41	1242	72	17	1355	71	2978	3049
Grand Total	118	278	102	52	498	151	2152	79	16	2382	190	134	115	38	439	104	2400	120	27	2624	133	5943	6076
Apprch %	23.7	55.8	20.5			6.3	90.3	3.3			43.3	30.5	26.2			4	91.5	4.6					
Total %	2	4.7	1.7		8.4	2.5	36.2	1.3		40.1	3.2	2.3	1.9		7.4	1.7	40.4	2		44.2	2.2	97.8	
Passenger Vehicles	114	255	83		501	132	2052	68		2265	153	106	114		411	82	2291	87		2483	0	0	5660
% Passenger Vehicles	96.6	91.7	81.4	94.2	91.1	87.4	95.4	86.1	81.2	94.5	80.5	79.1	99.1	100	86.2	78.8	95.5	72.5	85.2	93.7	0	0	93.2
Large 2 Axle Vehicles	0	3	1		5	16	41	1		59	3	6	1		10	2	62	6		71	0	0	145
% Large 2 Axle Vehicles	0	1.1	1	1.9	0.9	10.6	1.9	1.3	6.2	2.5	1.6	4.5	0.9	0	2.1	1.9	2.6	5	3.7	2.7	0	0	2.4
3 Axle Vehicles	2	1	4		8	2	11	7		21	4	5	0		9	8	12	4		25	0	0	63
% 3 Axle Vehicles	1.7	0.4	3.9	1.9	1.5	1.3	0.5	8.9	6.2	0.9	2.1	3.7	0	0	1.9	7.7	0.5	3.3	3.7	0.9	0	0	1
4+ Axle Trucks	2	19	14		36	1	48	3		53	30	17	0		47	12	35	23		72	0	0	208
% 4+ Axle Trucks	1.7	6.8	13.7	1.9	6.5	0.7	2.2	3.8	6.2	2.2	15.8	12.7	0	0	9.9	11.5	1.5	19.2	7.4	2.7	0	0	3.4

	Indian Avenue Southbound				Ramona Expressway Westbound				Indian Avenue Northbound				Ramona Expressway Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	10	32	**17**	59	10	250	5	265	**23**	**14**	7	**44**	**14**	302	8	324	692
05:15 PM	15	**47**	9	**71**	22	**290**	5	317	22	9	6	37	6	**329**	11	346	**771**
05:30 PM	**17**	40	14	71	37	263	**8**	308	15	12	**9**	36	13	310	**28**	**351**	766
05:45 PM	13	32	8	53	**42**	282	7	**331**	12	11	8	31	8	301	25	334	749
Total Volume	55	151	48	254	111	1085	25	1221	72	46	30	148	41	1242	72	1355	2978
% App. Total	21.7	59.4	18.9		9.1	88.9	2		48.6	31.1	20.3		3	91.7	5.3		
PHF	.809	.803	.706	.894	.661	.935	.781	.922	.783	.821	.833	.841	.732	.944	.643	.965	.966

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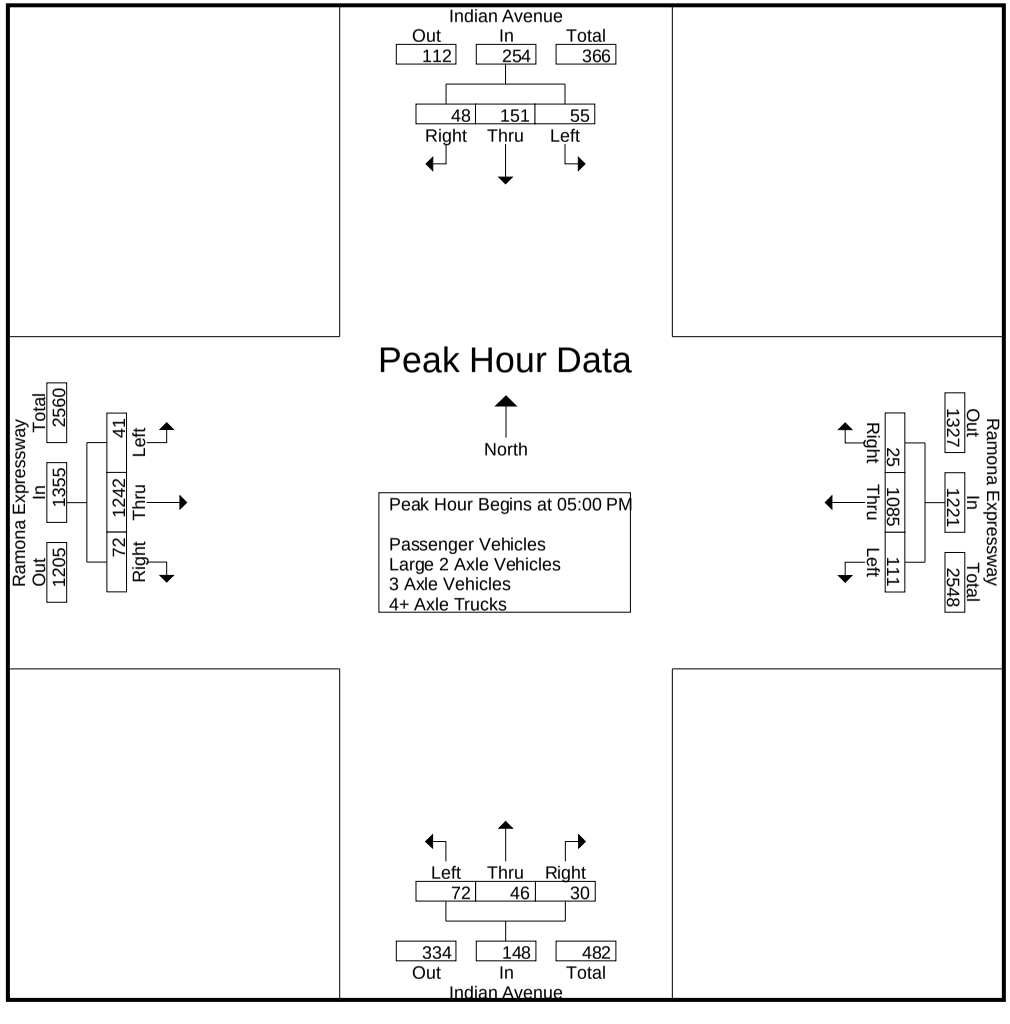

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Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	0	0	0	0	0	3	6	0	0	9	1	0	0	0	1	1	12	1	0	14	0	24	24
04:15 PM	0	2	0	0	2	2	8	0	0	10	0	1	0	0	1	1	9	1	0	11	0	24	24
04:30 PM	0	0	0	0	0	1	6	0	0	7	1	2	1	0	4	0	9	2	0	11	0	22	22
04:45 PM	0	0	0	0	0	2	6	1	1	9	0	0	0	0	0	0	7	0	0	7	1	16	17
Total	0	2	0	0	2	8	26	1	1	35	2	3	1	0	6	2	37	4	0	43	1	86	87
05:00 PM	0	0	0	0	0	2	6	0	0	8	0	1	0	0	1	0	8	1	1	9	1	18	19
05:15 PM	0	1	0	0	1	1	3	0	0	4	0	0	0	0	0	0	3	1	0	4	0	9	9
05:30 PM	0	0	0	0	0	3	2	0	0	5	0	1	0	0	1	0	10	0	0	10	0	16	16
05:45 PM	0	0	1	1	1	2	4	0	0	6	1	1	0	0	2	0	4	0	0	4	1	13	14
Total	0	1	1	1	2	8	15	0	0	23	1	3	0	0	4	0	25	2	1	27	2	56	58
Grand Total	0	3	1	1	4	16	41	1	1	58	3	6	1	0	10	2	62	6	1	70	3	142	145
Apprch %	0	75	25			27.6	70.7	1.7			30	60	10			2.9	88.6	8.6					
Total %	0	2.1	0.7		2.8	11.3	28.9	0.7		40.8	2.1	4.2	0.7		7	1.4	43.7	4.2		49.3	2.1	97.9	

	Indian Avenue Southbound				Ramona Expressway Westbound				Indian Avenue Northbound				Ramona Expressway Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	0	0	0	0	2	**6**	0	**8**	0	**1**	0	1	0	8	**1**	9	**18**
05:15 PM	0	**1**	0	**1**	1	3	0	4	0	0	0	0	0	3	1	4	9
05:30 PM	0	0	0	0	**3**	2	0	5	0	1	0	1	0	**10**	0	**10**	16
05:45 PM	0	0	**1**	1	2	4	0	6	**1**	1	0	**2**	0	4	0	4	13
Total Volume	0	1	1	2	8	15	0	23	1	3	0	4	0	25	2	27	56
% App. Total	0	50	50		34.8	65.2	0		25	75	0		0	92.6	7.4		
PHF	.000	.250	.250	.500	.667	.625	.000	.719	.250	.750	.000	.500	.000	.625	.500	.675	.778

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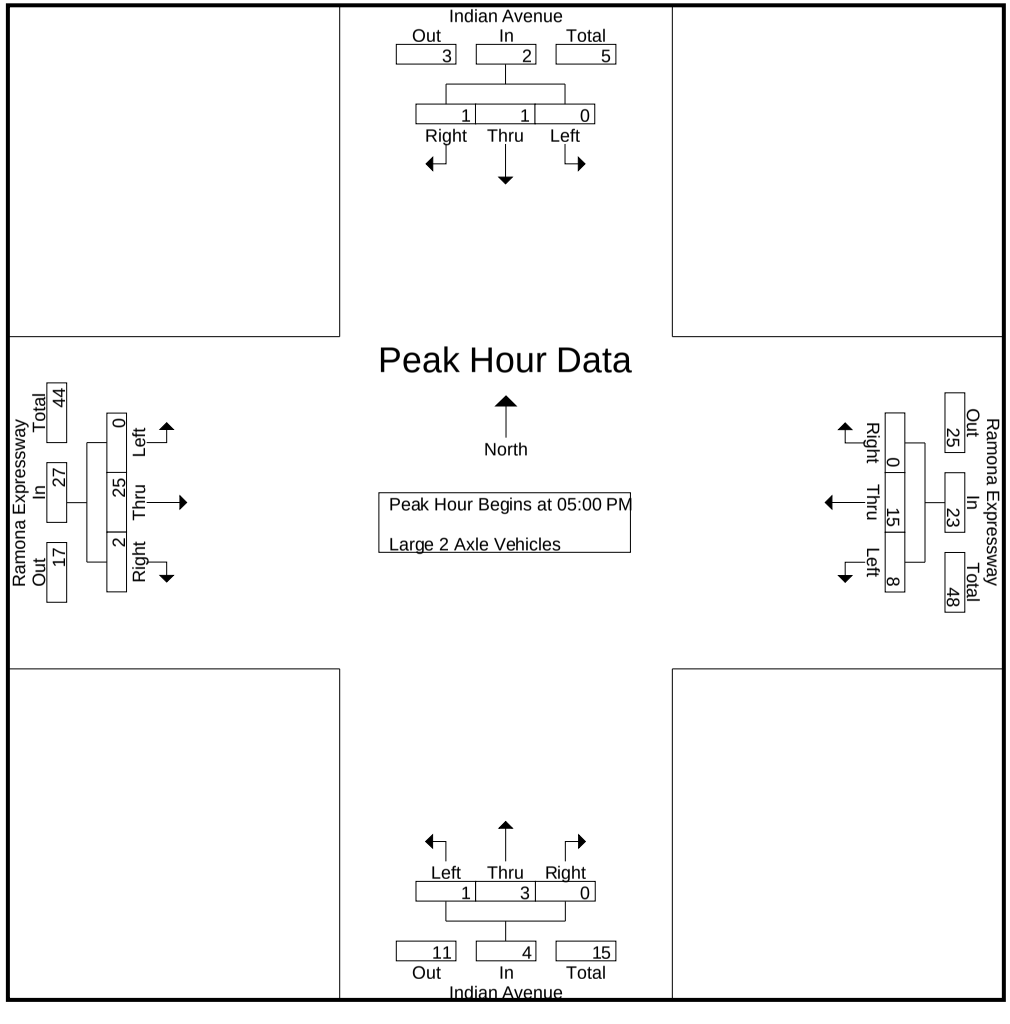
City of Perris
N/S: Indian Avenue
E/W: Ramona Expressway
Weather: Clear

File Name : 04_PER_Indian_Ramona Expy PM
Site Code : 05118430
Start Date : 5/24/2018
Page No : 2



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City of Perris
N/S: Indian Avenue
E/W: Ramona Expressway
Weather: Clear

File Name : 04_PER_Indian_Ramona Expy PM
Site Code : 05118430
Start Date : 5/24/2018
Page No : 1

Groups Printed- 3 Axle Vehicles

	Indian Avenue Southbound					Ramona Expressway Westbound					Indian Avenue Northbound					Ramona Expressway Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	0	0	4	1	4	1	1	0	0	2	1	0	0	0	1	1	1	0	0	2	1	9	10
04:15 PM	0	0	0	0	0	0	3	1	0	4	0	1	0	0	1	0	2	0	0	2	0	7	7
04:30 PM	0	0	0	0	0	0	0	1	0	1	1	0	0	0	1	3	3	1	1	7	1	9	10
04:45 PM	0	0	0	0	0	0	1	1	0	2	1	4	0	0	5	3	1	2	0	6	0	13	13
Total	0	0	4	1	4	1	5	3	0	9	3	5	0	0	8	7	7	3	1	17	2	38	40
05:00 PM	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	1	1	1	0	3	0	4	4
05:15 PM	0	1	0	0	1	0	3	1	0	4	1	0	0	0	1	0	1	0	0	1	0	7	7
05:30 PM	2	0	0	0	2	1	1	2	1	4	0	0	0	0	0	0	1	0	0	1	1	7	8
05:45 PM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2	0	4	4
Total	2	1	0	0	3	1	6	4	1	11	1	0	0	0	1	1	5	1	0	7	1	22	23
Grand Total	2	1	4	1	7	2	11	7	1	20	4	5	0	0	9	8	12	4	1	24	3	60	63
Apprch %	28.6	14.3	57.1			10	55	35			44.4	55.6	0			33.3	50	16.7					
Total %	3.3	1.7	6.7		11.7	3.3	18.3	11.7		33.3	6.7	8.3	0		15	13.3	20	6.7		40	4.8	95.2	

	Indian Avenue Southbound				Ramona Expressway Westbound				Indian Avenue Northbound				Ramona Expressway Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	0	0	0	0	0	0	1	1	0	0	0	0	**1**	1	**1**	**3**	4
05:15 PM	0	**1**	0	1	0	**3**	1	**4**	**1**	0	0	**1**	0	1	0	1	**7**
05:30 PM	**2**	0	0	**2**	**1**	1	**2**	4	0	0	0	0	0	1	0	1	7
05:45 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	**2**	0	2	4
Total Volume	2	1	0	3	1	6	4	11	1	0	0	1	1	5	1	7	22
% App. Total	66.7	33.3	0		9.1	54.5	36.4		100	0	0		14.3	71.4	14.3		
PHF	.250	.250	.000	.375	.250	.500	.500	.688	.250	.000	.000	.250	.250	.625	.250	.583	.786

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City of Perris
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Weather: Clear

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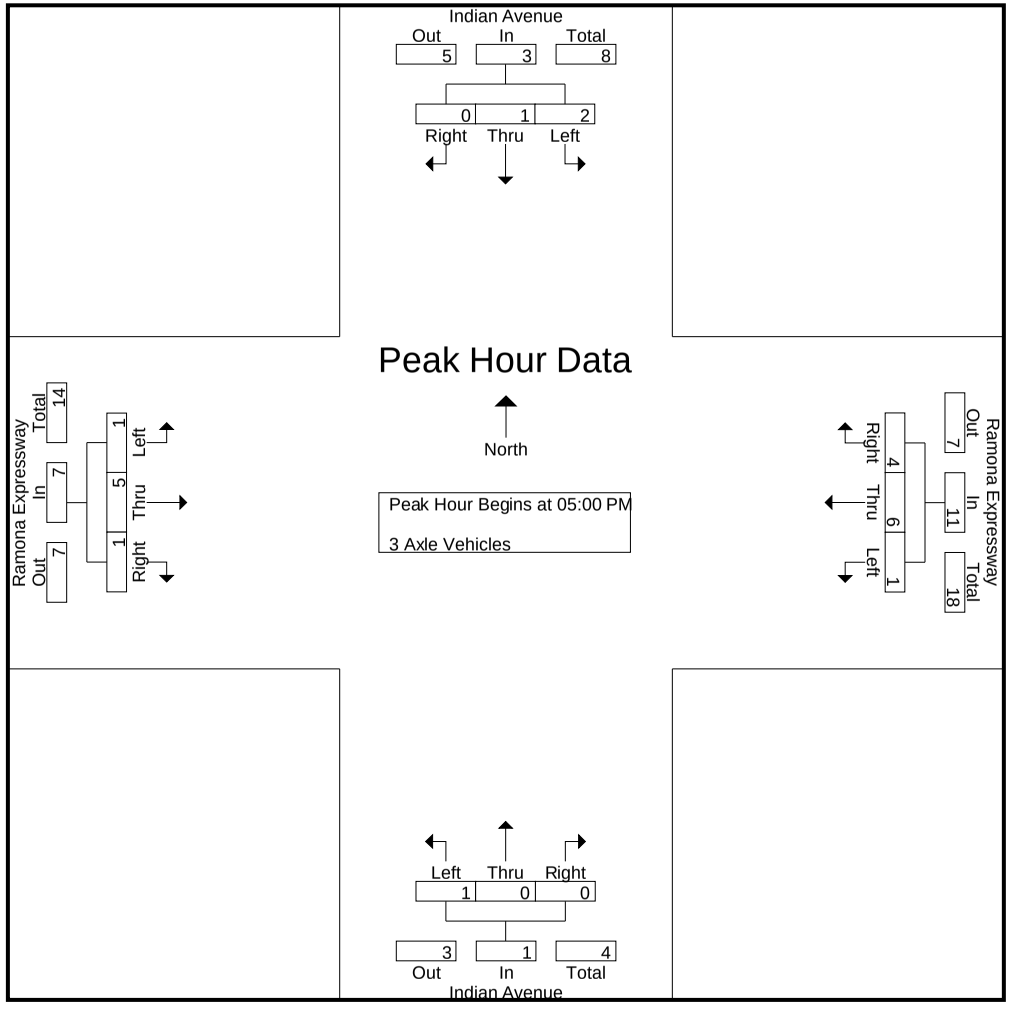
Site Code : 05118430
Start Date : 5/24/2018
Page No : 2



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City of Perris
N/S: Indian Avenue
E/W: Ramona Expressway
Weather: Clear

File Name : 04_PER_Indian_Ramona Expy PM
Site Code : 05118430
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Page No : 1

Groups Printed- 4+ Axle Trucks

	Indian Avenue Southbound					Ramona Expressway Westbound					Indian Avenue Northbound					Ramona Expressway Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	0	2	1	0	3	0	9	1	1	10	6	2	0	0	8	1	3	7	0	11	1	32	33
04:15 PM	0	3	3	0	6	0	6	1	0	7	5	1	0	0	6	1	7	2	1	10	1	29	30
04:30 PM	0	3	2	0	5	0	7	0	0	7	6	2	0	0	8	3	5	2	0	10	0	30	30
04:45 PM	0	3	3	0	6	0	7	1	0	8	2	5	0	0	7	0	7	2	1	9	1	30	31
Total	0	11	9	0	20	0	29	3	1	32	19	10	0	0	29	5	22	13	2	40	3	121	124
05:00 PM	0	1	2	0	3	0	5	0	0	5	5	2	0	0	7	2	3	1	0	6	0	21	21
05:15 PM	0	5	1	0	6	0	4	0	0	4	2	0	0	0	2	0	3	2	0	5	0	17	17
05:30 PM	1	0	2	1	3	0	7	0	0	7	1	3	0	0	4	3	4	3	0	10	1	24	25
05:45 PM	1	2	0	0	3	1	3	0	0	4	3	2	0	0	5	2	3	4	0	9	0	21	21
Total	2	8	5	1	15	1	19	0	0	20	11	7	0	0	18	7	13	10	0	30	1	83	84
Grand Total	2	19	14	1	35	1	48	3	1	52	30	17	0	0	47	12	35	23	2	70	4	204	208
Apprch %	5.7	54.3	40			1.9	92.3	5.8			63.8	36.2	0			17.1	50	32.9					
Total %	1	9.3	6.9		17.2	0.5	23.5	1.5		25.5	14.7	8.3	0		23	5.9	17.2	11.3		34.3	1.9	98.1	

	Indian Avenue Southbound				Ramona Expressway Westbound				Indian Avenue Northbound				Ramona Expressway Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	0	1	**2**	3	0	5	0	5	**5**	2	0	**7**	2	3	1	6	21
05:15 PM	0	**5**	1	**6**	0	4	0	4	2	0	0	2	0	3	2	5	17
05:30 PM	**1**	0	2	3	0	**7**	0	**7**	1	**3**	0	4	**3**	**4**	3	**10**	**24**
05:45 PM	1	2	0	3	**1**	3	0	4	3	2	0	5	2	3	**4**	9	21
Total Volume	2	8	5	15	1	19	0	20	11	7	0	18	7	13	10	30	83
% App. Total	13.3	53.3	33.3		5	95	0		61.1	38.9	0		23.3	43.3	33.3		
PHF	.500	.400	.625	.625	.250	.679	.000	.714	.550	.583	.000	.643	.583	.813	.625	.750	.865

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City of Perris
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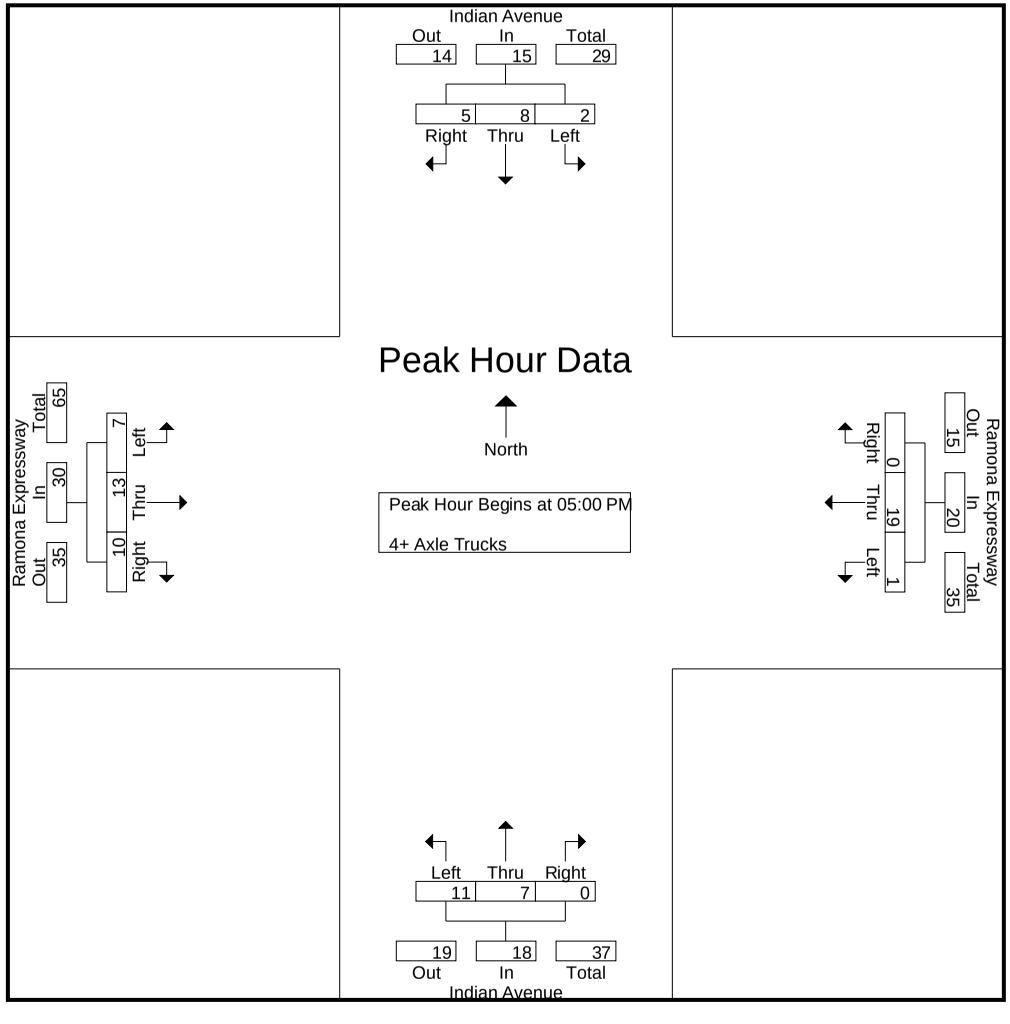
E/W: Ramona Expressway
Weather: Clear

File Name : 04_PER_Indian_Ramona Expy PM
Site Code : 05118430
Start Date : 5/24/2018
Page No : 2



Location: Perris
N/S: Indian Avenue
E/W: Ramona Expressway

Date: 5/24/2018
Day: Thursday

PEDESTRIANS

	North Leg Indian Avenue	East Leg Ramona Expressway	South Leg Indian Avenue	West Leg Ramona Expressway	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	1	0	1
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
TOTAL VOLUMES:	0	0	1	0	1

	North Leg Indian Avenue	East Leg Ramona Expressway	South Leg Indian Avenue	West Leg Ramona Expressway	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
4:00 PM	1	1	0	0	2
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	1	0	0	0	1
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
TOTAL VOLUMES:	2	1	0	0	3

Location: Perris
N/S: Indian Avenue
E/W: Ramona Expressway

Date: 5/24/2018
Day: Thursday

BICYCLES

	Southbound Indian Avenue			Westbound Ramona Expressway			Northbound Indian Avenue			Eastbound Ramona Expressway			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	0	0	0	0	0	0	0

	Southbound Indian Avenue			Westbound Ramona Expressway			Northbound Indian Avenue			Eastbound Ramona Expressway			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	1	1	0	0	0	0	0	0	2
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	2	1	0	0	0	0	1	0	4

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City of Perris
N/S: Indian Avenue
E/W: Ramona Expressway
Weather: Clear

File Name : 14_PER_Indian_Ram AM
Site Code : 05120169
Start Date : 3/11/2020
Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Indian Avenue Southbound					Ramona Expressway Westbound					Indian Avenue Northbound					Ramona Expressway Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	6	5	3	2	14	16	406	27	12	449	16	39	9	4	64	25	198	9	0	232	18	759	777
07:15 AM	3	13	3	3	19	9	352	25	7	386	12	37	7	5	56	46	209	15	1	270	16	731	747
07:30 AM	4	20	6	0	30	14	328	24	5	366	8	29	7	1	44	36	254	9	0	299	6	739	745
07:45 AM	3	11	5	2	19	11	347	19	4	377	13	36	3	1	52	21	268	18	1	307	8	755	763
Total	16	49	17	7	82	50	1433	95	28	1578	49	141	26	11	216	128	929	51	2	1108	48	2984	3032
08:00 AM	7	14	4	3	25	14	363	22	11	399	13	21	5	3	39	23	199	14	1	236	18	699	717
08:15 AM	6	9	3	2	18	13	350	11	3	374	18	15	3	3	36	19	216	15	1	250	9	678	687
08:30 AM	3	14	7	4	24	5	260	15	7	280	20	6	9	8	35	8	162	17	3	187	22	526	548
08:45 AM	9	12	4	0	25	5	266	10	5	281	15	11	5	3	31	8	206	9	1	223	9	560	569
Total	25	49	18	9	92	37	1239	58	26	1334	66	53	22	17	141	58	783	55	6	896	58	2463	2521
Grand Total	41	98	35	16	174	87	2672	153	54	2912	115	194	48	28	357	186	1712	106	8	2004	106	5447	5553
Apprch %	23.6	56.3	20.1			3	91.8	5.3			32.2	54.3	13.4			9.3	85.4	5.3					
Total %	0.8	1.8	0.6		3.2	1.6	49.1	2.8		53.5	2.1	3.6	0.9		6.6	3.4	31.4	1.9		36.8	1.9	98.1	
Passenger Vehicles	37	74	19		142	75	2572	151		2852	63	170	45		305	151	1588	44		1789	0	0	5088
% Passenger Vehicles	90.2	75.5	54.3	75	74.7	86.2	96.3	98.7	100	96.2	54.8	87.6	93.8	96.4	79.2	81.2	92.8	41.5	75	88.9	0	0	91.6
Large 2 Axle Vehicles	2	2	1		6	10	47	0		57	5	1	1		8	7	67	4		78	0	0	149
% Large 2 Axle Vehicles	4.9	2	2.9	6.2	3.2	11.5	1.8	0	0	1.9	4.3	0.5	2.1	3.6	2.1	3.8	3.9	3.8	0	3.9	0	0	2.7
3 Axle Vehicles	1	6	1		8	0	11	1		12	7	2	1		10	4	9	6		19	0	0	49
% 3 Axle Vehicles	2.4	6.1	2.9	0	4.2	0	0.4	0.7	0	0.4	6.1	1	2.1	0	2.6	2.2	0.5	5.7	0	0.9	0	0	0.9
4+ Axle Trucks	1	16	14		34	2	42	1		45	40	21	1		62	24	48	52		126	0	0	267
% 4+ Axle Trucks	2.4	16.3	40	18.8	17.9	2.3	1.6	0.7	0	1.5	34.8	10.8	2.1	0	16.1	12.9	2.8	49.1	25	6.3	0	0	4.8

	Indian Avenue Southbound				Ramona Expressway Westbound				Indian Avenue Northbound				Ramona Expressway Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	**6**	5	3	14	**16**	**406**	**27**	**449**	**16**	**39**	**9**	**64**	25	198	9	232	**759**
07:15 AM	3	13	3	19	9	352	25	386	12	37	7	56	**46**	209	15	270	731
07:30 AM	4	**20**	**6**	**30**	14	328	24	366	8	29	7	44	36	254	9	299	739
07:45 AM	3	11	5	19	11	347	19	377	13	36	3	52	21	**268**	**18**	**307**	755
Total Volume	16	49	17	82	50	1433	95	1578	49	141	26	216	128	929	51	1108	2984
% App. Total	19.5	59.8	20.7		3.2	90.8	6		22.7	65.3	12		11.6	83.8	4.6		
PHF	.667	.613	.708	.683	.781	.882	.880	.879	.766	.904	.722	.844	.696	.867	.708	.902	.983

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File Name : 14_PER_Indian_Ram AM
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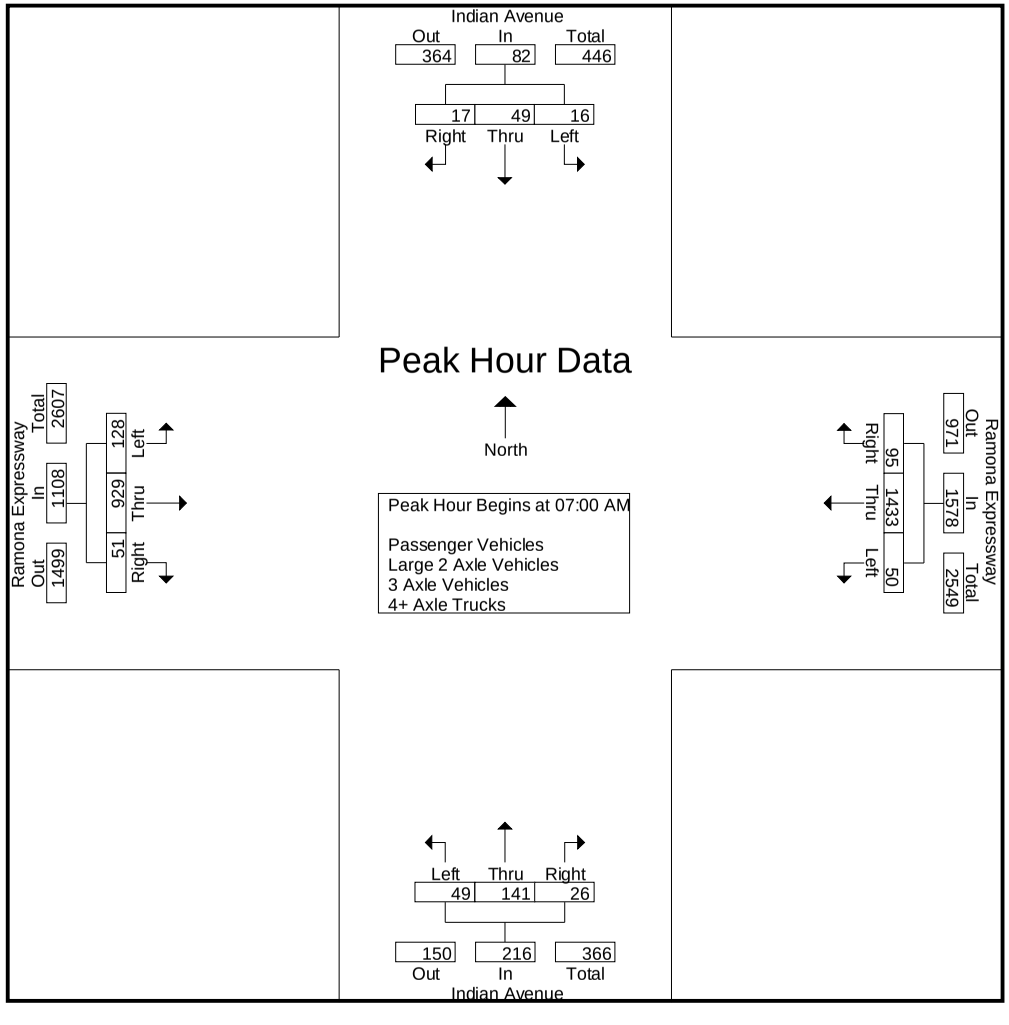
Page No : 2



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City of Perris
N/S: Indian Avenue
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Site Code : 05120169
Start Date : 3/11/2020
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	Indian Avenue Southbound				Ramona Expressway Westbound				Indian Avenue Northbound				Ramona Expressway Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:15 AM				07:00 AM				07:00 AM				07:15 AM				
+0 mins.	3	13	3	19	**16**	**406**	**27**	**449**	**16**	**39**	**9**	**64**	**46**	209	15	270	
+15 mins.	4	**20**	**6**	**30**	9	352	25	386	12	37	7	56	36	254	9	299	
+30 mins.	3	11	5	19	14	328	24	366	8	29	7	44	21	**268**	**18**	**307**	
+45 mins.	**7**	14	4	25	11	347	19	377	13	36	3	52	23	199	14	236	
Total Volume	17	58	18	93	50	1433	95	1578	49	141	26	216	126	930	56	1112	
% App. Total	18.3	62.4	19.4		3.2	90.8	6		22.7	65.3	12		11.3	83.6	5		
PHF	.607	.725	.750	.775	.781	.882	.880	.879	.766	.904	.722	.844	.685	.868	.778	.906	

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City of Perris
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File Name : 14_PER_Indian_Ram AM
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Page No : 1

Groups Printed- Passenger Vehicles

	Indian Avenue Southbound					Ramona Expressway Westbound					Indian Avenue Northbound					Ramona Expressway Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	6	5	2	2	13	14	395	27	12	436	10	34	9	4	53	17	183	4	0	204	18	706	724
07:15 AM	3	12	2	2	17	7	338	25	7	370	9	36	6	4	51	45	196	6	1	247	14	685	699
07:30 AM	3	14	2	0	19	12	319	23	5	354	3	27	6	1	36	33	236	4	0	273	6	682	688
07:45 AM	3	10	2	1	15	9	340	19	4	368	6	34	3	1	43	18	252	12	1	282	7	708	715
Total	15	41	8	5	64	42	1392	94	28	1528	28	131	24	10	183	113	867	26	2	1006	45	2781	2826
08:00 AM	6	10	3	3	19	13	349	22	11	384	4	17	4	3	25	16	186	7	1	209	18	637	655
08:15 AM	6	7	3	2	16	13	335	11	3	359	9	6	3	3	18	13	196	6	1	215	9	608	617
08:30 AM	3	11	3	2	17	2	243	15	7	260	13	5	9	8	27	4	149	2	1	155	18	459	477
08:45 AM	7	5	2	0	14	5	253	9	5	267	9	11	5	3	25	5	190	3	1	198	9	504	513
Total	22	33	11	7	66	33	1180	57	26	1270	35	39	21	17	95	38	721	18	4	777	54	2208	2262
Grand Total	37	74	19	12	130	75	2572	151	54	2798	63	170	45	27	278	151	1588	44	6	1783	99	4989	5088
Apprch %	28.5	56.9	14.6			2.7	91.9	5.4			22.7	61.2	16.2			8.5	89.1	2.5					
Total %	0.7	1.5	0.4		2.6	1.5	51.6	3		56.1	1.3	3.4	0.9		5.6	3	31.8	0.9		35.7	1.9	98.1	

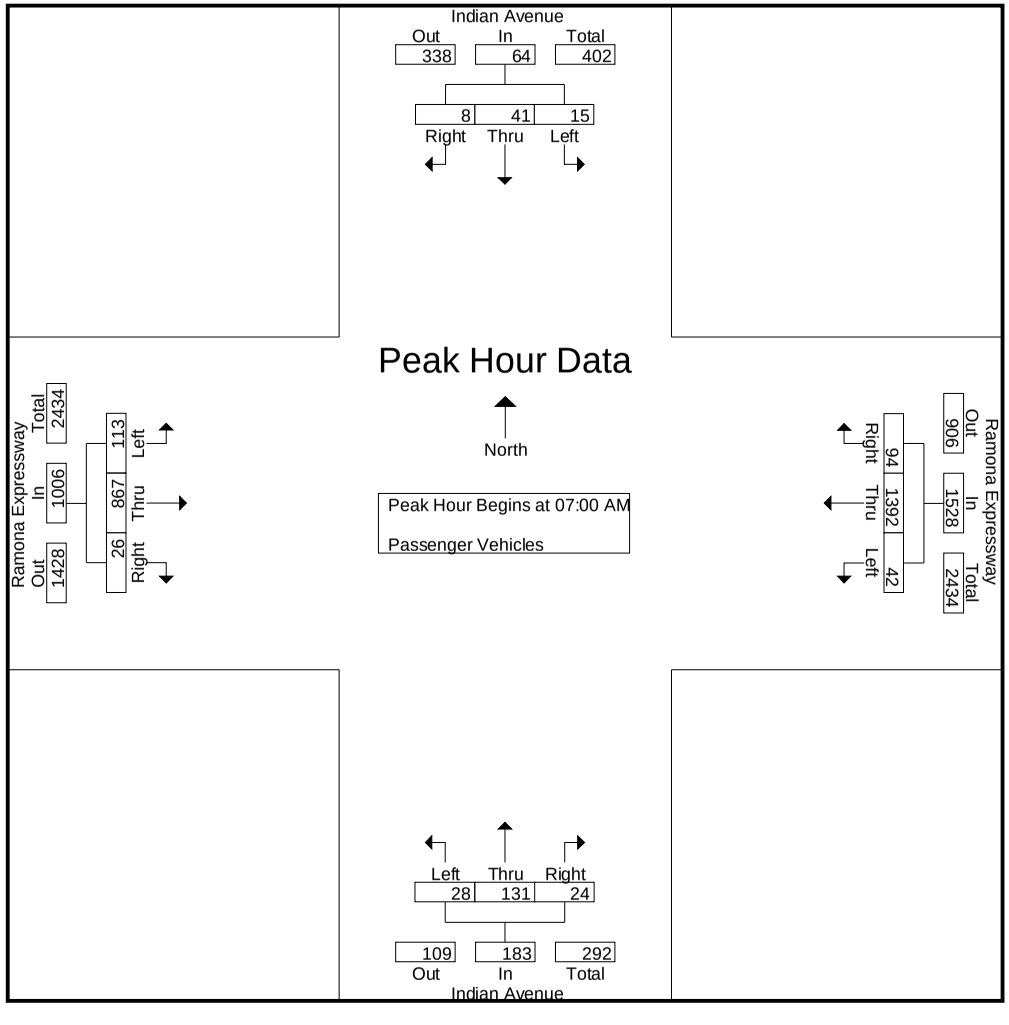
3.1-40

	Indian Avenue Southbound				Ramona Expressway Westbound				Indian Avenue Northbound				Ramona Expressway Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	**6**	5	**2**	13	**14**	**395**	**27**	**436**	**10**	34	**9**	**53**	17	183	4	204	706
07:15 AM	3	12	2	17	7	338	25	370	9	**36**	6	51	**45**	196	6	247	685
07:30 AM	3	**14**	2	**19**	12	319	23	354	3	27	6	36	33	236	4	273	682
07:45 AM	3	10	2	15	9	340	19	368	6	34	3	43	18	**252**	**12**	**282**	**708**
Total Volume	15	41	8	64	42	1392	94	1528	28	131	24	183	113	867	26	1006	2781
% App. Total	23.4	64.1	12.5		2.7	91.1	6.2		15.3	71.6	13.1		11.2	86.2	2.6		
PHF	.625	.732	1.00	.842	.750	.881	.870	.876	.700	.910	.667	.863	.628	.860	.542	.892	.982

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Perris
N/S: Indian Avenue
E/W: Ramona Expressway
Weather: Clear

File Name : 14_PER_Indian_Ram AM
Site Code : 05120169
Start Date : 3/11/2020
Page No : 2



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Corona, CA 92878
(951) 268-6268

City of Perris
N/S: Indian Avenue
E/W: Ramona Expressway
Weather: Clear

File Name : 14_PER_Indian_Ram AM
Site Code : 05120169
Start Date : 3/11/2020
Page No : 3

	Indian Avenue Southbound				Ramona Expressway Westbound				Indian Avenue Northbound				Ramona Expressway Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:00 AM				07:00 AM				07:00 AM				07:00 AM				
+0 mins.	**6**	5	**2**	13	**14**	**395**	**27**	**436**	**10**	34	**9**	**53**	17	183	4	204	
+15 mins.	3	12	2	17	7	338	25	370	9	**36**	6	51	**45**	196	6	247	
+30 mins.	3	**14**	2	**19**	12	319	23	354	3	27	6	36	33	236	4	273	
+45 mins.	3	10	2	15	9	340	19	368	6	34	3	43	18	**252**	**12**	**282**	
Total Volume	15	41	8	64	42	1392	94	1528	28	131	24	183	113	867	26	1006	
% App. Total	23.4	64.1	12.5		2.7	91.1	6.2		15.3	71.6	13.1		11.2	86.2	2.6		
PHF	.625	.732	1.000	.842	.750	.881	.870	.876	.700	.910	.667	.863	.628	.860	.542	.892	

Counts Unlimited
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City of Perris
N/S: Indian Avenue
E/W: Ramona Expressway
Weather: Clear

File Name : 14_PER_Indian_Ram AM
Site Code : 05120169
Start Date : 3/11/2020
Page No : 1

Groups Printed- Large 2 Axle Vehicles

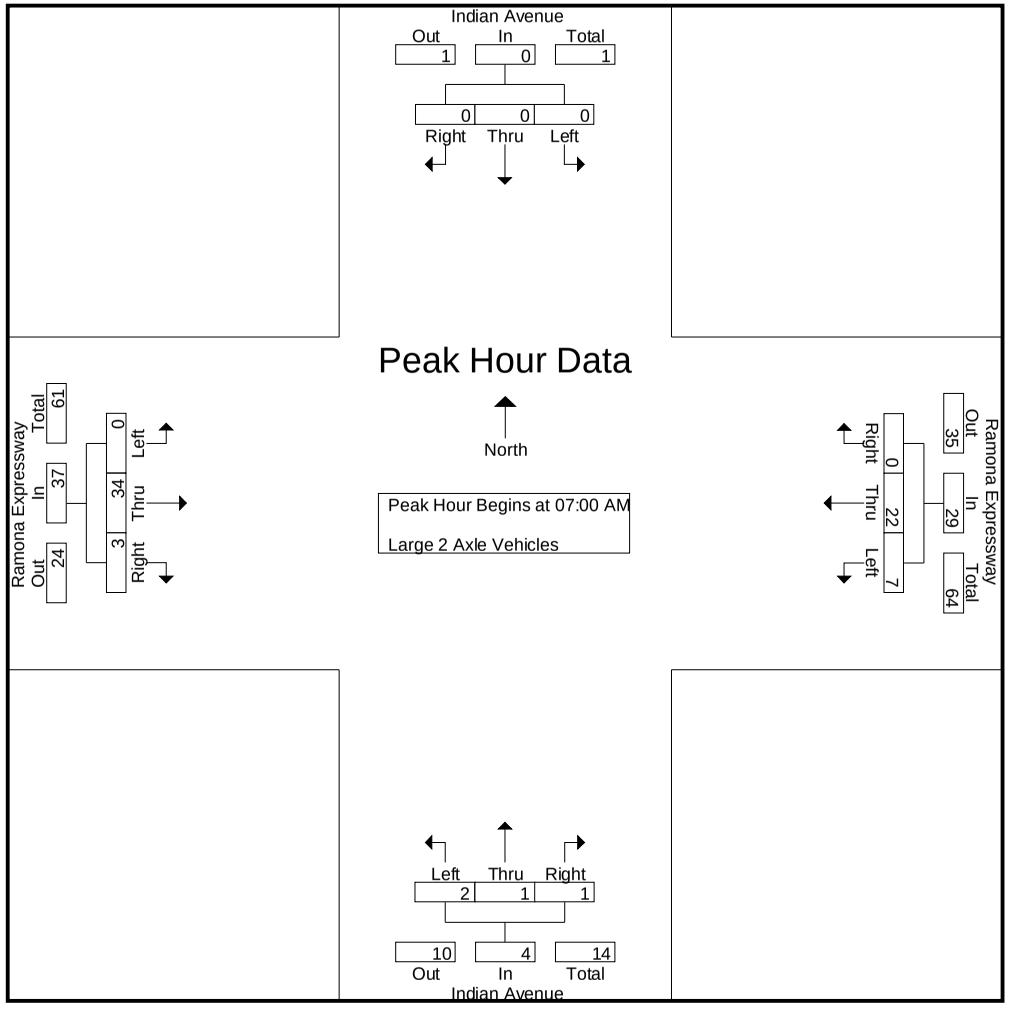
	Indian Avenue Southbound					Ramona Expressway Westbound					Indian Avenue Northbound					Ramona Expressway Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	0	0	0	0	0	2	3	0	0	5	0	0	0	0	0	0	11	1	0	12	0	17	17
07:15 AM	0	0	0	0	0	2	7	0	0	9	1	0	1	1	2	0	4	1	0	5	1	16	17
07:30 AM	0	0	0	0	0	1	6	0	0	7	1	1	0	0	2	0	9	0	0	9	0	18	18
07:45 AM	0	0	0	0	0	2	6	0	0	8	0	0	0	0	0	0	10	1	0	11	0	19	19
Total	0	0	0	0	0	7	22	0	0	29	2	1	1	1	4	0	34	3	0	37	1	70	71
08:00 AM	1	1	0	0	2	1	11	0	0	12	1	0	0	0	1	4	9	1	0	14	0	29	29
08:15 AM	0	0	0	0	0	0	8	0	0	8	1	0	0	0	1	0	10	0	0	10	0	19	19
08:30 AM	0	0	1	1	1	2	1	0	0	3	1	0	0	0	1	1	7	0	0	8	1	13	14
08:45 AM	1	1	0	0	2	0	5	0	0	5	0	0	0	0	0	2	7	0	0	9	0	16	16
Total	2	2	1	1	5	3	25	0	0	28	3	0	0	0	3	7	33	1	0	41	1	77	78
Grand Total	2	2	1	1	5	10	47	0	0	57	5	1	1	1	7	7	67	4	0	78	2	147	149
Apprch %	40	40	20			17.5	82.5	0			71.4	14.3	14.3			9	85.9	5.1					
Total %	1.4	1.4	0.7		3.4	6.8	32	0		38.8	3.4	0.7	0.7		4.8	4.8	45.6	2.7		53.1	1.3	98.7	

	Indian Avenue Southbound				Ramona Expressway Westbound				Indian Avenue Northbound				Ramona Expressway Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	0	0	0	**2**	3	0	5	0	0	0	0	0	**11**	**1**	**12**	17
07:15 AM	0	0	0	0	2	**7**	0	**9**	**1**	0	**1**	**2**	0	4	1	5	16
07:30 AM	0	0	0	0	1	6	0	7	1	**1**	0	2	0	9	0	9	18
07:45 AM	0	0	0	0	2	6	0	8	0	0	0	0	0	10	1	11	**19**
Total Volume	0	0	0	0	7	22	0	29	2	1	1	4	0	34	3	37	70
% App. Total	0	0	0		24.1	75.9	0		50	25	25		0	91.9	8.1		
PHF	.000	.000	.000	.000	.875	.786	.000	.806	.500	.250	.250	.500	.000	.773	.750	.771	.921

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Perris
N/S: Indian Avenue
E/W: Ramona Expressway
Weather: Clear

File Name : 14_PER_Indian_Ram AM
Site Code : 05120169
Start Date : 3/11/2020
Page No : 2



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City of Perris
N/S: Indian Avenue
E/W: Ramona Expressway
Weather: Clear

File Name : 14_PER_Indian_Ram AM
Site Code : 05120169
Start Date : 3/11/2020
Page No : 3

	Indian Avenue Southbound				Ramona Expressway Westbound				Indian Avenue Northbound				Ramona Expressway Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:00 AM				07:00 AM				07:00 AM				07:00 AM				
+0 mins.	0	0	0	0	**2**	3	0	5	0	0	0	0	0	**11**	**1**	**12**	
+15 mins.	0	0	0	0	2	**7**	0	**9**	**1**	0	**1**	**2**	0	4	1	5	
+30 mins.	0	0	0	0	1	6	0	7	1	**1**	0	2	0	9	0	9	
+45 mins.	0	0	0	0	2	6	0	8	0	0	0	0	0	10	1	11	
Total Volume	0	0	0	0	7	22	0	29	2	1	1	4	0	34	3	37	
% App. Total	0	0	0		24.1	75.9	0		50	25	25		0	91.9	8.1		
PHF	.000	.000	.000	.000	.875	.786	.000	.806	.500	.250	.250	.500	.000	.773	.750	.771	

Counts Unlimited
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City of Perris
N/S: Indian Avenue
E/W: Ramona Expressway
Weather: Clear

File Name : 14_PER_Indian_Ram AM
Site Code : 05120169
Start Date : 3/11/2020
Page No : 1

Groups Printed- 3 Axle Vehicles

	Indian Avenue Southbound					Ramona Expressway Westbound					Indian Avenue Northbound					Ramona Expressway Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	0	0	0	0	0	0	3	0	0	3	0	1	0	0	1	1	0	0	0	1	0	5	5
07:15 AM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	3	0	0	3	0	5	5
07:30 AM	0	1	0	0	1	0	1	0	0	1	0	0	1	0	1	1	1	3	0	5	0	8	8
07:45 AM	0	0	0	0	0	0	0	0	0	0	3	0	0	0	3	0	2	1	0	3	0	6	6
Total	0	1	0	0	1	0	6	0	0	6	3	1	1	0	5	2	6	4	0	12	0	24	24
08:00 AM	0	1	0	0	1	0	1	0	0	1	2	0	0	0	2	0	0	0	0	0	0	4	4
08:15 AM	0	0	0	0	0	0	1	0	0	1	0	1	0	0	1	1	1	1	0	3	0	5	5
08:30 AM	0	2	1	0	3	0	2	0	0	2	2	0	0	0	2	1	1	0	0	2	0	9	9
08:45 AM	1	2	0	0	3	0	1	1	0	2	0	0	0	0	0	0	1	1	0	2	0	7	7
Total	1	5	1	0	7	0	5	1	0	6	4	1	0	0	5	2	3	2	0	7	0	25	25
Grand Total	1	6	1	0	8	0	11	1	0	12	7	2	1	0	10	4	9	6	0	19	0	49	49
Apprch %	12.5	75	12.5			0	91.7	8.3			70	20	10			21.1	47.4	31.6					
Total %	2	12.2	2		16.3	0	22.4	2		24.5	14.3	4.1	2		20.4	8.2	18.4	12.2		38.8	0	100	

3.1-46

	Indian Avenue Southbound				Ramona Expressway Westbound				Indian Avenue Northbound				Ramona Expressway Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	0	0	0	0	**3**	0	**3**	0	**1**	0	1	**1**	0	0	1	5
07:15 AM	0	0	0	0	0	2	0	2	0	0	0	0	0	**3**	0	3	5
07:30 AM	0	**1**	0	**1**	0	1	0	1	0	0	**1**	1	1	1	**3**	**5**	**8**
07:45 AM	0	0	0	0	0	0	0	0	**3**	0	0	**3**	0	2	1	3	6
Total Volume	0	1	0	1	0	6	0	6	3	1	1	5	2	6	4	12	24
% App. Total	0	100	0		0	100	0		60	20	20		16.7	50	33.3		
PHF	.000	.250	.000	.250	.000	.500	.000	.500	.250	.250	.250	.417	.500	.500	.333	.600	.750

Counts Unlimited
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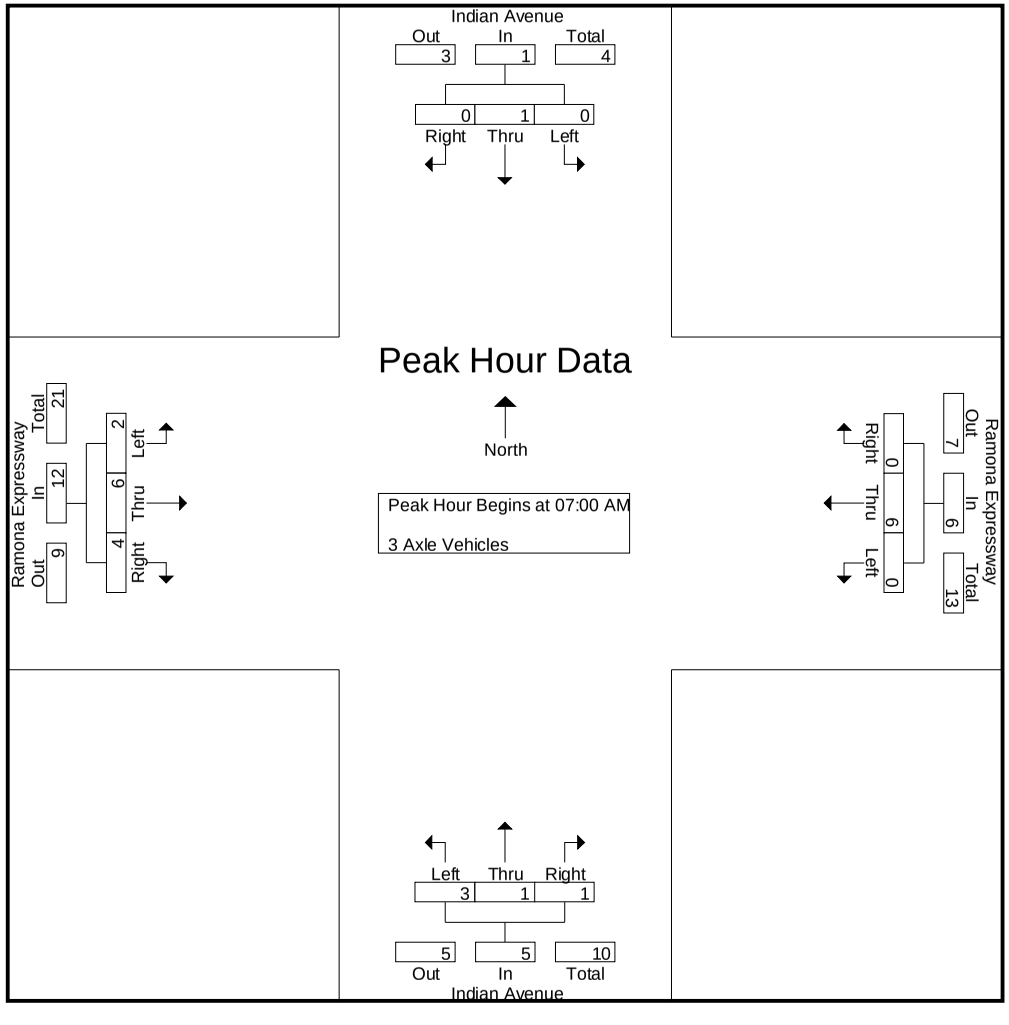
City of Perris
N/S: Indian Avenue
E/W: Ramona Expressway
Weather: Clear

File Name : 14_PER_Indian_Ram AM
Site Code : 05120169
Start Date : 3/11/2020
Page No : 2



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PO Box 1178
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(951) 268-6268

City of Perris
N/S: Indian Avenue
E/W: Ramona Expressway
Weather: Clear

File Name : 14_PER_Indian_Ram AM
Site Code : 05120169
Start Date : 3/11/2020
Page No : 3

	Indian Avenue Southbound				Ramona Expressway Westbound				Indian Avenue Northbound				Ramona Expressway Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:00 AM				07:00 AM				07:00 AM				07:00 AM				
+0 mins.	0	0	0	0	0	**3**	0	**3**	0	**1**	0	1	**1**	0	0	1	
+15 mins.	0	0	0	0	0	2	0	2	0	0	0	0	0	**3**	0	3	
+30 mins.	0	**1**	0	**1**	0	1	0	1	0	0	**1**	1	1	1	**3**	**5**	
+45 mins.	0	0	0	0	0	0	0	0	**3**	0	0	**3**	0	2	1	3	
Total Volume	0	1	0	1	0	6	0	6	3	1	1	5	2	6	4	12	
% App. Total	0	100	0		0	100	0		60	20	20		16.7	50	33.3		
PHF	.000	.250	.000	.250	.000	.500	.000	.500	.250	.250	.250	.417	.500	.500	.333	.600	

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City of Perris
N/S: Indian Avenue
E/W: Ramona Expressway
Weather: Clear

File Name : 14_PER_Indian_Ram AM
Site Code : 05120169
Start Date : 3/11/2020
Page No : 1

Groups Printed- 4+ Axle Trucks

	Indian Avenue Southbound					Ramona Expressway Westbound					Indian Avenue Northbound					Ramona Expressway Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	0	0	1	0	1	0	5	0	0	5	6	4	0	0	10	7	4	4	0	15	0	31	31
07:15 AM	0	1	1	1	2	0	5	0	0	5	2	1	0	0	3	1	6	8	0	15	1	25	26
07:30 AM	1	5	4	0	10	1	2	1	0	4	4	1	0	0	5	2	8	2	0	12	0	31	31
07:45 AM	0	1	3	1	4	0	1	0	0	1	4	2	0	0	6	3	4	4	0	11	1	22	23
Total	1	7	9	2	17	1	13	1	0	15	16	8	0	0	24	13	22	18	0	53	2	109	111
08:00 AM	0	2	1	0	3	0	2	0	0	2	6	4	1	0	11	3	4	6	0	13	0	29	29
08:15 AM	0	2	0	0	2	0	6	0	0	6	8	8	0	0	16	5	9	8	0	22	0	46	46
08:30 AM	0	1	2	1	3	1	14	0	0	15	4	1	0	0	5	2	5	15	2	22	3	45	48
08:45 AM	0	4	2	0	6	0	7	0	0	7	6	0	0	0	6	1	8	5	0	14	0	33	33
Total	0	9	5	1	14	1	29	0	0	30	24	13	1	0	38	11	26	34	2	71	3	153	156
Grand Total	1	16	14	3	31	2	42	1	0	45	40	21	1	0	62	24	48	52	2	124	5	262	267
Apprch %	3.2	51.6	45.2			4.4	93.3	2.2			64.5	33.9	1.6			19.4	38.7	41.9					
Total %	0.4	6.1	5.3		11.8	0.8	16	0.4		17.2	15.3	8	0.4		23.7	9.2	18.3	19.8		47.3	1.9	98.1	

	Indian Avenue Southbound				Ramona Expressway Westbound				Indian Avenue Northbound				Ramona Expressway Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	0	1	1	0	**5**	0	**5**	**6**	**4**	0	**10**	**7**	4	4	**15**	**31**
07:15 AM	0	1	1	2	0	5	0	5	2	1	0	3	1	6	**8**	15	25
07:30 AM	**1**	**5**	**4**	**10**	**1**	2	**1**	4	4	1	0	5	2	**8**	2	12	31
07:45 AM	0	1	3	4	0	1	0	1	4	2	0	6	3	4	4	11	22
Total Volume	1	7	9	17	1	13	1	15	16	8	0	24	13	22	18	53	109
% App. Total	5.9	41.2	52.9		6.7	86.7	6.7		66.7	33.3	0		24.5	41.5	34		
PHF	.250	.350	.563	.425	.250	.650	.250	.750	.667	.500	.000	.600	.464	.688	.563	.883	.879

Counts Unlimited
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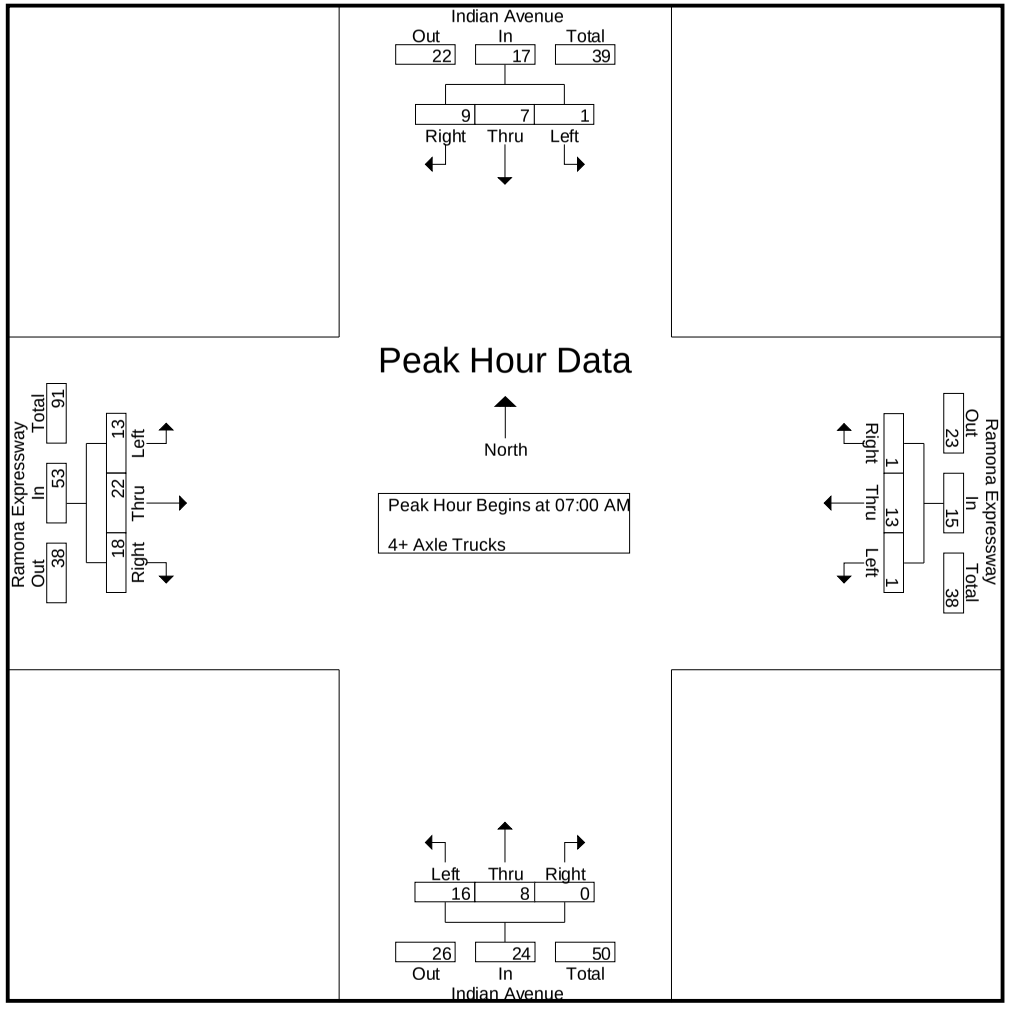
City of Perris
N/S: Indian Avenue
E/W: Ramona Expressway
Weather: Clear

File Name : 14_PER_Indian_Ram AM
Site Code : 05120169
Start Date : 3/11/2020
Page No : 2



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City of Perris
N/S: Indian Avenue
E/W: Ramona Expressway
Weather: Clear

File Name : 14_PER_Indian_Ram AM
Site Code : 05120169
Start Date : 3/11/2020
Page No : 3

	Indian Avenue Southbound				Ramona Expressway Westbound				Indian Avenue Northbound				Ramona Expressway Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:00 AM				07:00 AM				07:00 AM				07:00 AM				
+0 mins.	0	0	1	1	0	**5**	0	**5**	**6**	**4**	0	**10**	**7**	4	4	**15**	
+15 mins.	0	1	1	2	0	5	0	5	2	1	0	3	1	6	**8**	15	
+30 mins.	**1**	**5**	**4**	**10**	**1**	2	**1**	4	4	1	0	5	2	**8**	2	12	
+45 mins.	0	1	3	4	0	1	0	1	4	2	0	6	3	4	4	11	
Total Volume	1	7	9	17	1	13	1	15	16	8	0	24	13	22	18	53	
% App. Total	5.9	41.2	52.9		6.7	86.7	6.7		66.7	33.3	0		24.5	41.5	34		
PHF	.250	.350	.563	.425	.250	.650	.250	.750	.667	.500	.000	.600	.464	.688	.563	.883	

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City of Perris
N/S: Indian Avenue
E/W: Ramona Expressway
Weather: Clear

File Name : 14_PER_Indian_Ram PM
Site Code : 05120169
Start Date : 3/11/2020
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Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Indian Avenue Southbound					Ramona Expressway Westbound					Indian Avenue Northbound					Ramona Expressway Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	14	22	5	9	41	13	273	4	3	290	21	14	6	7	41	13	287	15	0	315	19	687	706
04:15 PM	14	27	6	4	47	10	221	11	4	242	26	18	15	13	59	17	298	17	0	332	21	680	701
04:30 PM	11	44	5	4	60	7	261	8	8	276	52	42	44	13	138	16	296	19	3	331	28	805	833
04:45 PM	20	26	8	4	54	16	267	9	9	292	25	28	7	5	60	20	350	15	1	385	19	791	810
Total	59	119	24	21	202	46	1022	32	24	1100	124	102	72	38	298	66	1231	66	4	1363	87	2963	3050
05:00 PM	25	27	8	10	60	16	267	7	1	290	23	11	5	4	39	15	362	16	9	393	24	782	806
05:15 PM	13	40	1	9	54	21	271	6	5	298	20	14	7	3	41	7	371	23	2	401	19	794	813
05:30 PM	13	42	6	5	61	47	232	7	7	286	19	15	9	8	43	13	380	27	10	420	30	810	840
05:45 PM	10	24	3	2	37	18	238	3	3	259	26	8	3	4	37	6	409	13	3	428	12	761	773
Total	61	133	18	26	212	102	1008	23	16	1133	88	48	24	19	160	41	1522	79	24	1642	85	3147	3232
Grand Total	120	252	42	47	414	148	2030	55	40	2233	212	150	96	57	458	107	2753	145	28	3005	172	6110	6282
Apprch %	29	60.9	10.1			6.6	90.9	2.5			46.3	32.8	21			3.6	91.6	4.8					
Total %	2	4.1	0.7		6.8	2.4	33.2	0.9		36.5	3.5	2.5	1.6		7.5	1.8	45.1	2.4		49.2	2.7	97.3	
Passenger Vehicles	114	234	28		416	124	1977	55		2194	166	133	87		441	83	2694	70		2871	0	0	5922
% Passenger Vehicles	95	92.9	66.7	85.1	90.2	83.8	97.4	100	95	96.5	78.3	88.7	90.6	96.5	85.6	77.6	97.9	48.3	85.7	94.7	0	0	94.3
Large 2 Axle Vehicles	0	8	0		8	18	24	0		44	4	3	2		10	4	38	5		47	0	0	109
% Large 2 Axle Vehicles	0	3.2	0	0	1.7	12.2	1.2	0	5	1.9	1.9	2	2.1	1.8	1.9	3.7	1.4	3.4	0	1.5	0	0	1.7
3 Axle Vehicles	1	3	0		4	2	6	0		8	13	6	4		24	9	5	2		16	0	0	52
% 3 Axle Vehicles	0.8	1.2	0	0	0.9	1.4	0.3	0	0	0.4	6.1	4	4.2	1.8	4.7	8.4	0.2	1.4	0	0.5	0	0	0.8
4+ Axle Trucks	5	7	14		33	4	23	0		27	29	8	3		40	11	16	68		99	0	0	199
% 4+ Axle Trucks	4.2	2.8	33.3	14.9	7.2	2.7	1.1	0	0	1.2	13.7	5.3	3.1	0	7.8	10.3	0.6	46.9	14.3	3.3	0	0	3.2

	Indian Avenue Southbound				Ramona Expressway Westbound				Indian Avenue Northbound				Ramona Expressway Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	20	26	**8**	54	16	267	**9**	292	**25**	**28**	7	**60**	**20**	350	15	385	791
05:00 PM	**25**	27	8	60	16	267	7	290	23	11	5	39	15	362	16	393	782
05:15 PM	13	40	1	54	21	**271**	6	**298**	20	14	7	41	7	371	23	401	794
05:30 PM	13	**42**	6	**61**	**47**	232	7	286	19	15	**9**	43	13	**380**	**27**	**420**	**810**
Total Volume	71	135	23	229	100	1037	29	1166	87	68	28	183	55	1463	81	1599	3177
% App. Total	31	59	10		8.6	88.9	2.5		47.5	37.2	15.3		3.4	91.5	5.1		
PHF	.710	.804	.719	.939	.532	.957	.806	.978	.870	.607	.778	.763	.688	.963	.750	.952	.981

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City of Perris
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Site Code : 05120169
Start Date : 3/11/2020
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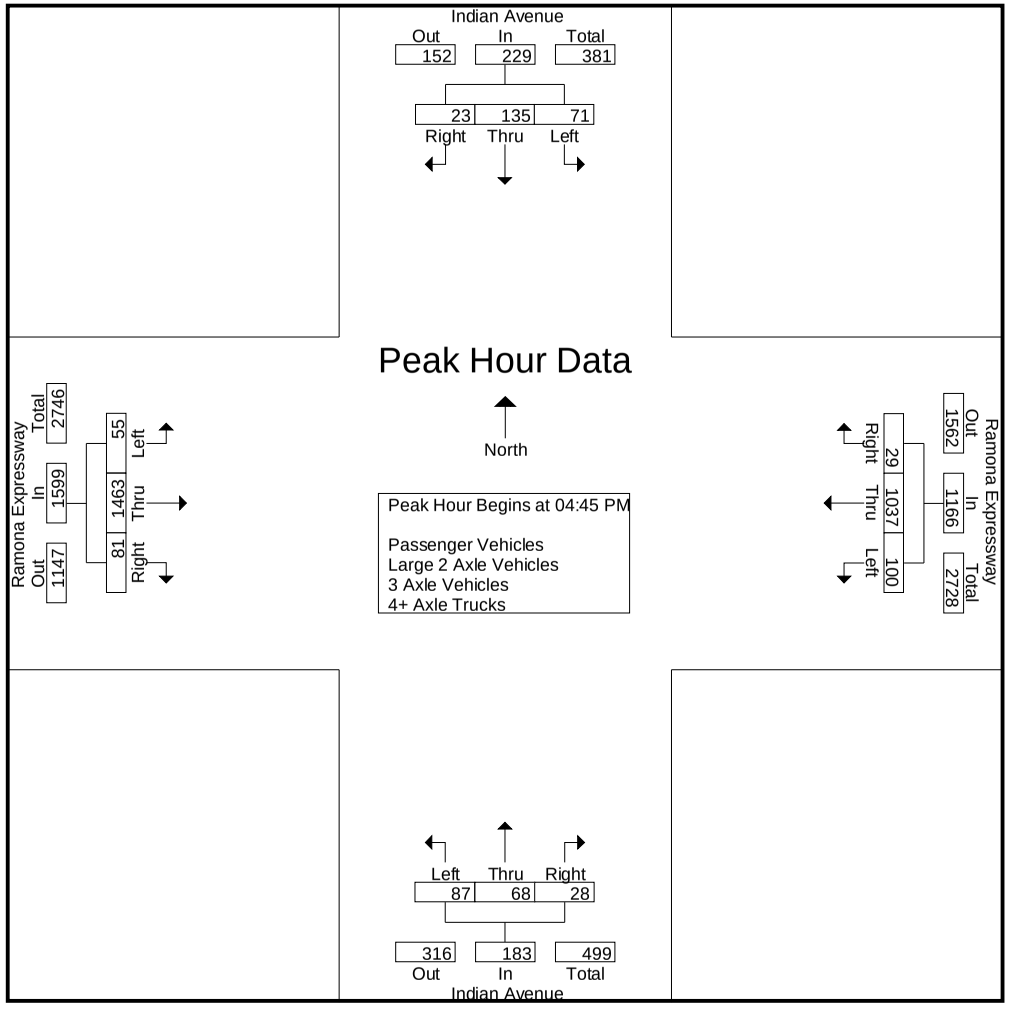

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Start Date : 3/11/2020
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	Indian Avenue Southbound				Ramona Expressway Westbound				Indian Avenue Northbound				Ramona Expressway Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:45 PM				04:45 PM				04:00 PM				05:00 PM				
+0 mins.	20	26	**8**	54	16	267	**9**	292	21	14	6	41	**15**	362	16	393	
+15 mins.	**25**	27	8	60	16	267	7	290	26	18	15	59	7	371	23	401	
+30 mins.	13	40	1	54	21	**271**	6	**298**	**52**	**42**	**44**	**138**	13	380	**27**	420	
+45 mins.	13	**42**	6	**61**	**47**	232	7	286	25	28	7	60	6	**409**	13	**428**	
Total Volume	71	135	23	229	100	1037	29	1166	124	102	72	298	41	1522	79	1642	
% App. Total	31	59	10		8.6	88.9	2.5		41.6	34.2	24.2		2.5	92.7	4.8		
PHF	.710	.804	.719	.939	.532	.957	.806	.978	.596	.607	.409	.540	.683	.930	.731	.959	

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Groups Printed- Passenger Vehicles

	Indian Avenue Southbound					Ramona Expressway Westbound					Indian Avenue Northbound					Ramona Expressway Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	13	22	2	7	37	8	266	4	3	278	15	13	3	7	31	10	282	6	0	298	17	644	661
04:15 PM	13	25	2	3	40	7	217	11	4	235	19	14	15	13	48	12	294	5	0	311	20	634	654
04:30 PM	9	40	5	4	54	6	255	8	8	269	50	39	42	13	131	13	280	4	3	297	28	751	779
04:45 PM	19	24	7	3	50	13	261	9	7	283	19	26	7	5	52	14	341	7	0	362	15	747	762
Total	54	111	16	17	181	34	999	32	22	1065	103	92	67	38	262	49	1197	22	3	1268	80	2776	2856
05:00 PM	25	25	6	10	56	12	254	7	1	273	16	8	5	3	29	10	358	9	9	377	23	735	758
05:15 PM	13	37	0	8	50	18	263	6	5	287	14	12	5	3	31	6	364	8	0	378	16	746	762
05:30 PM	13	38	5	4	56	44	226	7	7	277	15	13	7	7	35	12	373	21	10	406	28	774	802
05:45 PM	9	23	1	1	33	16	235	3	3	254	18	8	3	4	29	6	402	10	2	418	10	734	744
Total	60	123	12	23	195	90	978	23	16	1091	63	41	20	17	124	34	1497	48	21	1579	77	2989	3066
Grand Total	114	234	28	40	376	124	1977	55	38	2156	166	133	87	55	386	83	2694	70	24	2847	157	5765	5922
Apprch %	30.3	62.2	7.4			5.8	91.7	2.6			43	34.5	22.5			2.9	94.6	2.5					
Total %	2	4.1	0.5		6.5	2.2	34.3	1		37.4	2.9	2.3	1.5		6.7	1.4	46.7	1.2		49.4	2.7	97.3	

	Indian Avenue Southbound				Ramona Expressway Westbound				Indian Avenue Northbound				Ramona Expressway Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	19	24	**7**	50	13	261	**9**	283	**19**	**26**	**7**	**52**	**14**	341	7	362	747
05:00 PM	**25**	25	6	**56**	12	254	7	273	16	8	5	29	10	358	9	377	735
05:15 PM	13	37	0	50	18	**263**	6	**287**	14	12	5	31	6	364	8	378	746
05:30 PM	13	**38**	5	56	**44**	226	7	277	15	13	7	35	12	**373**	**21**	**406**	**774**
Total Volume	70	124	18	212	87	1004	29	1120	64	59	24	147	42	1436	45	1523	3002
% App. Total	33	58.5	8.5		7.8	89.6	2.6		43.5	40.1	16.3		2.8	94.3	3		
PHF	.700	.816	.643	.946	.494	.954	.806	.976	.842	.567	.857	.707	.750	.962	.536	.938	.970

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City of Perris
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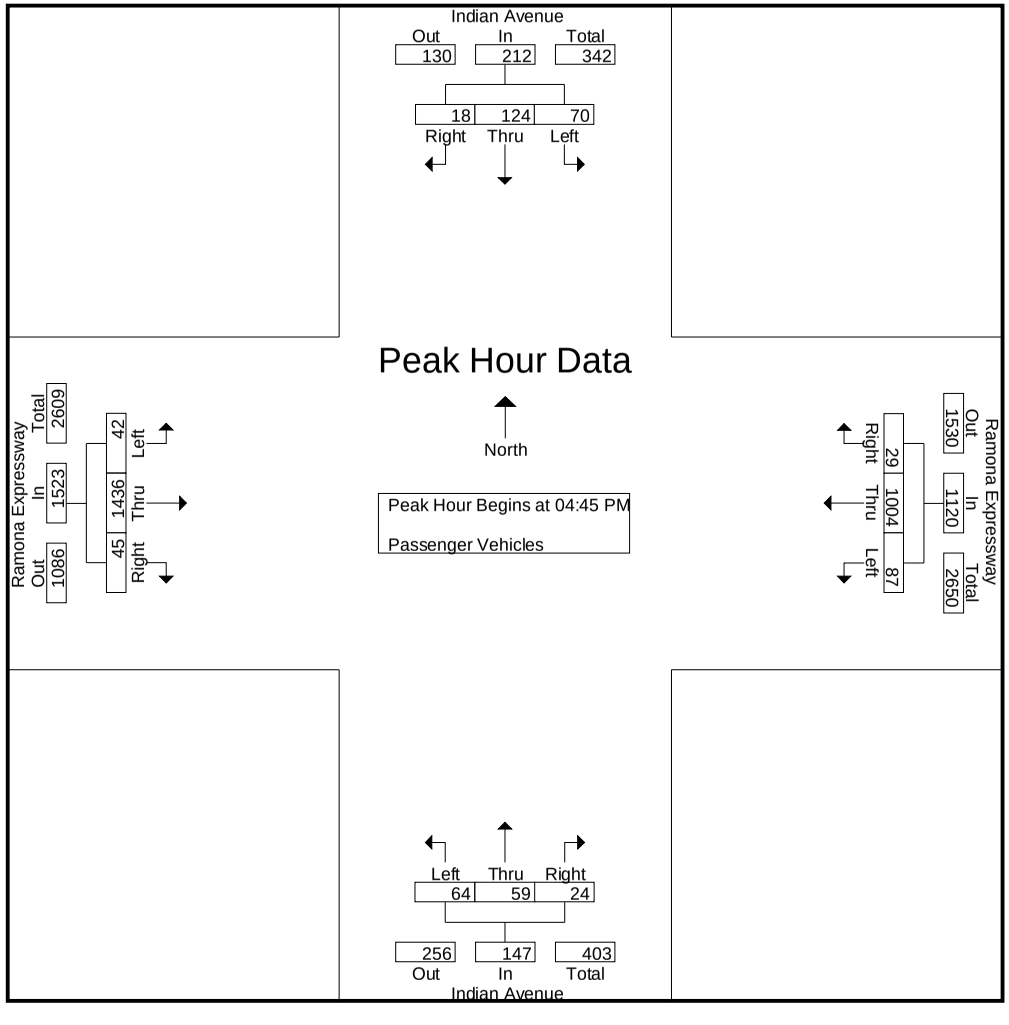

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	Indian Avenue Southbound				Ramona Expressway Westbound				Indian Avenue Northbound				Ramona Expressway Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:45 PM				04:45 PM				04:45 PM				04:45 PM				
+0 mins.	19	24	**7**	50	13	261	**9**	283	**19**	**26**	**7**	**52**	**14**	341	7	362	
+15 mins.	**25**	25	6	**56**	12	254	7	273	16	8	5	29	10	358	9	377	
+30 mins.	13	37	0	50	18	**263**	6	**287**	14	12	5	31	6	364	8	378	
+45 mins.	13	**38**	5	56	**44**	226	7	277	15	13	7	35	12	**373**	**21**	**406**	
Total Volume	70	124	18	212	87	1004	29	1120	64	59	24	147	42	1436	45	1523	
% App. Total	33	58.5	8.5		7.8	89.6	2.6		43.5	40.1	16.3		2.8	94.3	3		
PHF	.700	.816	.643	.946	.494	.954	.806	.976	.842	.567	.857	.707	.750	.962	.536	.938	

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Groups Printed- Large 2 Axle Vehicles

	Indian Avenue Southbound					Ramona Expressway Westbound					Indian Avenue Northbound					Ramona Expressway Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	0	0	0	0	0	4	4	0	0	8	1	1	0	0	2	2	3	0	0	5	0	15	15
04:15 PM	0	1	0	0	1	3	1	0	0	4	0	1	0	0	1	0	2	1	0	3	0	9	9
04:30 PM	0	2	0	0	2	1	3	0	0	4	0	0	2	0	2	0	13	3	0	16	0	24	24
04:45 PM	0	1	0	0	1	2	3	0	2	5	1	0	0	0	1	0	5	0	0	5	2	12	14
Total	0	4	0	0	4	10	11	0	2	21	2	2	2	0	6	2	23	4	0	29	2	60	62
05:00 PM	0	1	0	0	1	2	5	0	0	7	0	0	0	1	0	1	2	0	0	3	1	11	12
05:15 PM	0	1	0	0	1	2	4	0	0	6	1	1	0	0	2	0	6	1	0	7	0	16	16
05:30 PM	0	2	0	0	2	2	3	0	0	5	1	0	0	0	1	1	4	0	0	5	0	13	13
05:45 PM	0	0	0	0	0	2	1	0	0	3	0	0	0	0	0	0	3	0	0	3	0	6	6
Total	0	4	0	0	4	8	13	0	0	21	2	1	0	1	3	2	15	1	0	18	1	46	47
Grand Total	0	8	0	0	8	18	24	0	2	42	4	3	2	1	9	4	38	5	0	47	3	106	109
Apprch %	0	100	0			42.9	57.1	0			44.4	33.3	22.2			8.5	80.9	10.6					
Total %	0	7.5	0		7.5	17	22.6	0		39.6	3.8	2.8	1.9		8.5	3.8	35.8	4.7		44.3	2.8	97.2	

	Indian Avenue Southbound				Ramona Expressway Westbound				Indian Avenue Northbound				Ramona Expressway Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	1	0	1	**2**	3	0	5	**1**	0	0	1	0	5	0	5	12
05:00 PM	0	1	0	1	2	**5**	0	**7**	0	0	0	0	**1**	2	0	3	11
05:15 PM	0	1	0	1	2	4	0	6	1	**1**	0	**2**	0	**6**	**1**	**7**	**16**
05:30 PM	0	**2**	0	**2**	2	3	0	5	1	0	0	1	1	4	0	5	13
Total Volume	0	5	0	5	8	15	0	23	3	1	0	4	2	17	1	20	52
% App. Total	0	100	0		34.8	65.2	0		75	25	0		10	85	5		
PHF	.000	.625	.000	.625	1.00	.750	.000	.821	.750	.250	.000	.500	.500	.708	.250	.714	.813

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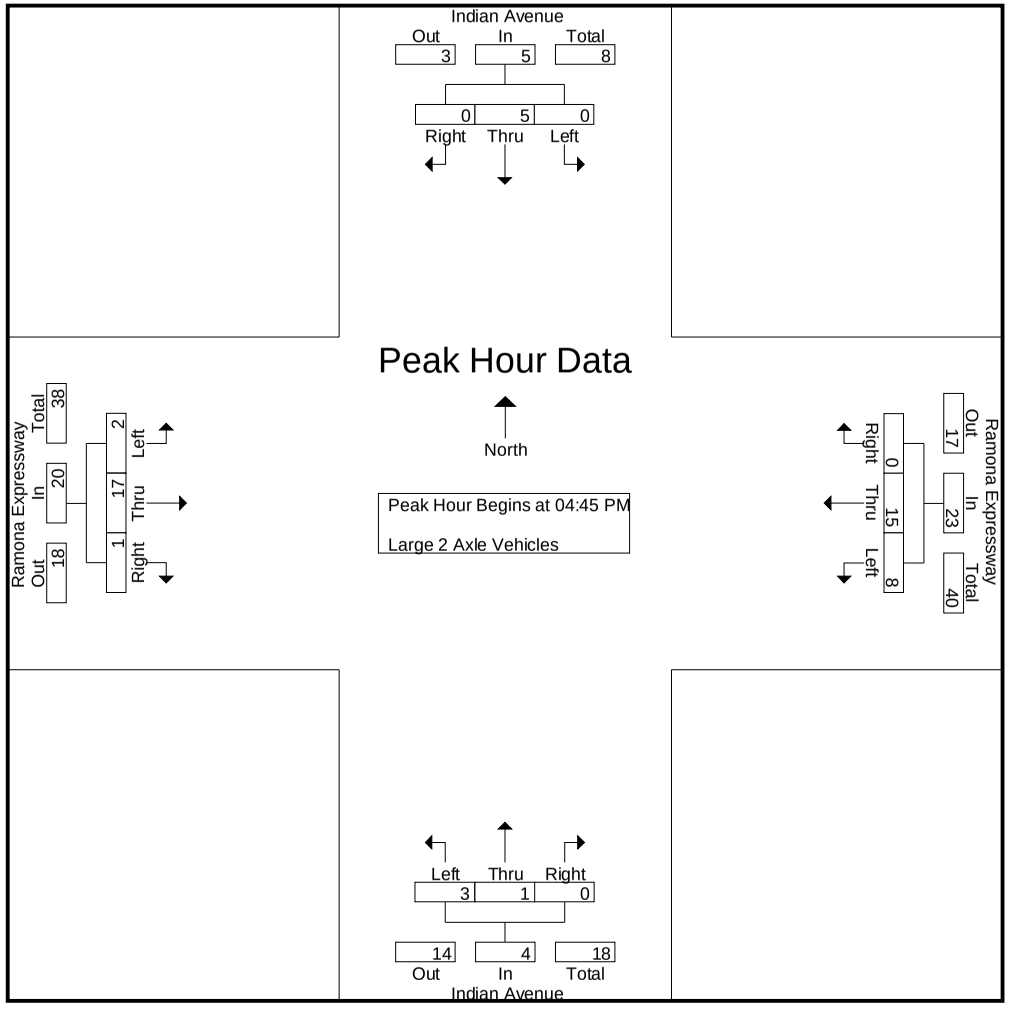

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	Indian Avenue Southbound				Ramona Expressway Westbound				Indian Avenue Northbound				Ramona Expressway Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:45 PM				04:45 PM				04:45 PM				04:45 PM				
+0 mins.	0	1	0	1	**2**	3	0	5	**1**	0	0	1	0	5	0	5	
+15 mins.	0	1	0	1	2	**5**	0	**7**	0	0	0	0	**1**	2	0	3	
+30 mins.	0	1	0	1	2	4	0	6	1	**1**	0	**2**	0	**6**	**1**	**7**	
+45 mins.	0	**2**	0	**2**	2	3	0	5	1	0	0	1	1	4	0	5	
Total Volume	0	5	0	5	8	15	0	23	3	1	0	4	2	17	1	20	
% App. Total	0	100	0		34.8	65.2	0		75	25	0		10	85	5		
PHF	.000	.625	.000	.625	1.000	.750	.000	.821	.750	.250	.000	.500	.500	.708	.250	.714	

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Groups Printed- 3 Axle Vehicles

	Indian Avenue Southbound					Ramona Expressway Westbound					Indian Avenue Northbound					Ramona Expressway Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	1	0	2	0	3	1	0	0	0	1	0	4	4
04:15 PM	0	1	0	0	1	0	1	0	0	1	3	1	0	0	4	3	0	1	0	4	0	10	10
04:30 PM	1	0	0	0	1	0	0	0	0	0	1	1	0	0	2	1	1	1	0	3	0	6	6
04:45 PM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	2	3	1	0	0	4	0	6	6
Total	1	1	0	0	2	0	1	0	0	1	6	3	2	0	11	8	2	2	0	12	0	26	26
05:00 PM	0	1	0	0	1	0	2	0	0	2	2	1	0	0	3	1	0	0	0	1	0	7	7
05:15 PM	0	0	0	0	0	1	0	0	0	1	1	1	1	0	3	0	0	0	0	0	0	4	4
05:30 PM	0	1	0	0	1	1	2	0	0	3	1	1	1	1	3	0	1	0	0	1	1	8	9
05:45 PM	0	0	0	0	0	0	1	0	0	1	3	0	0	0	3	0	2	0	0	2	0	6	6
Total	0	2	0	0	2	2	5	0	0	7	7	3	2	1	12	1	3	0	0	4	1	25	26
Grand Total	1	3	0	0	4	2	6	0	0	8	13	6	4	1	23	9	5	2	0	16	1	51	52
Apprch %	25	75	0			25	75	0			56.5	26.1	17.4			56.2	31.2	12.5					
Total %	2	5.9	0		7.8	3.9	11.8	0		15.7	25.5	11.8	7.8		45.1	17.6	9.8	3.9		31.4	1.9	98.1	

	Indian Avenue Southbound				Ramona Expressway Westbound				Indian Avenue Northbound				Ramona Expressway Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	0	0	0	0	0	0	0	1	**1**	0	2	**3**	**1**	0	**4**	6
05:00 PM	0	**1**	0	**1**	0	**2**	0	2	**2**	1	0	**3**	1	0	0	1	7
05:15 PM	0	0	0	0	**1**	0	0	1	1	1	**1**	3	0	0	0	0	4
05:30 PM	0	1	0	1	1	2	0	**3**	1	1	1	3	0	1	0	1	**8**
Total Volume	0	2	0	2	2	4	0	6	5	4	2	11	4	2	0	6	25
% App. Total	0	100	0		33.3	66.7	0		45.5	36.4	18.2		66.7	33.3	0		
PHF	.000	.500	.000	.500	.500	.500	.000	.500	.625	1.00	.500	.917	.333	.500	.000	.375	.781

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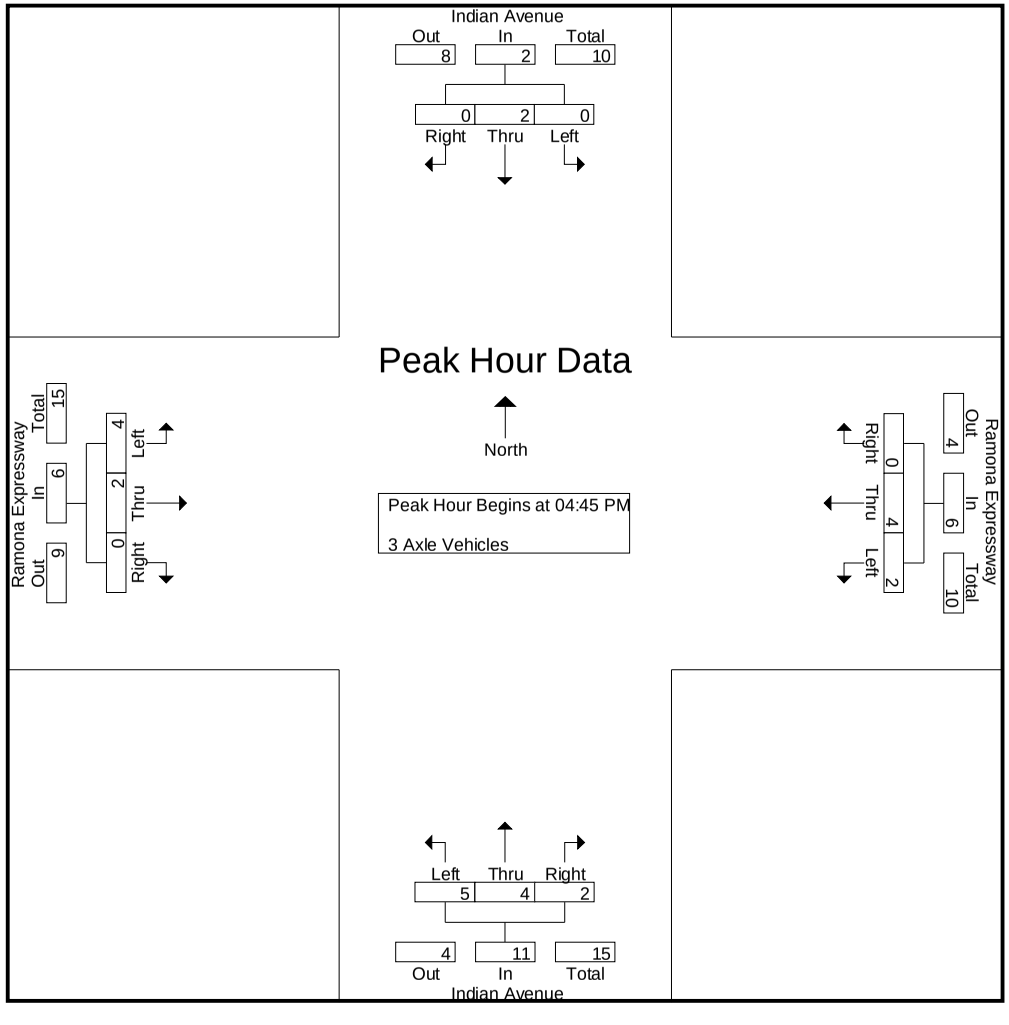
City of Perris
N/S: Indian Avenue
E/W: Ramona Expressway
Weather: Clear

File Name : 14_PER_Indian_Ram PM
Site Code : 05120169
Start Date : 3/11/2020
Page No : 2



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City of Perris
N/S: Indian Avenue
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	Indian Avenue Southbound				Ramona Expressway Westbound				Indian Avenue Northbound				Ramona Expressway Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:45 PM				04:45 PM				04:45 PM				04:45 PM				
+0 mins.	0	0	0	0	0	0	0	0	1	**1**	0	2	**3**	**1**	0	**4**	
+15 mins.	0	**1**	0	**1**	0	**2**	0	2	**2**	1	0	**3**	1	0	0	1	
+30 mins.	0	0	0	0	**1**	0	0	1	1	1	**1**	3	0	0	0	0	
+45 mins.	0	1	0	1	1	2	0	**3**	1	1	1	3	0	1	0	1	
Total Volume	0	2	0	2	2	4	0	6	5	4	2	11	4	2	0	6	
% App. Total	0	100	0		33.3	66.7	0		45.5	36.4	18.2		66.7	33.3	0		
PHF	.000	.500	.000	.500	.500	.500	.000	.500	.625	1.000	.500	.917	.333	.500	.000	.375	

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City of Perris
N/S: Indian Avenue
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File Name : 14_PER_Indian_Ram PM
Site Code : 05120169
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Groups Printed- 4+ Axle Trucks

	Indian Avenue Southbound					Ramona Expressway Westbound					Indian Avenue Northbound					Ramona Expressway Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	1	0	3	2	4	1	3	0	0	4	4	0	1	0	5	0	2	9	0	11	2	24	26
04:15 PM	1	0	4	1	5	0	2	0	0	2	4	2	0	0	6	2	2	10	0	14	1	27	28
04:30 PM	1	2	0	0	3	0	3	0	0	3	1	2	0	0	3	2	2	11	0	15	0	24	24
04:45 PM	1	1	1	1	3	1	3	0	0	4	4	1	0	0	5	3	3	8	1	14	2	26	28
Total	4	3	8	4	15	2	11	0	0	13	13	5	1	0	19	7	9	38	1	54	5	101	106
05:00 PM	0	0	2	0	2	2	6	0	0	8	5	2	0	0	7	3	2	7	0	12	0	29	29
05:15 PM	0	2	1	1	3	0	4	0	0	4	4	0	1	0	5	1	1	14	2	16	3	28	31
05:30 PM	0	1	1	1	2	0	1	0	0	1	2	1	1	0	4	0	2	6	0	8	1	15	16
05:45 PM	1	1	2	1	4	0	1	0	0	1	5	0	0	0	5	0	2	3	1	5	2	15	17
Total	1	4	6	3	11	2	12	0	0	14	16	3	2	0	21	4	7	30	3	41	6	87	93
Grand Total	5	7	14	7	26	4	23	0	0	27	29	8	3	0	40	11	16	68	4	95	11	188	199
Apprch %	19.2	26.9	53.8			14.8	85.2	0			72.5	20	7.5			11.6	16.8	71.6					
Total %	2.7	3.7	7.4		13.8	2.1	12.2	0		14.4	15.4	4.3	1.6		21.3	5.9	8.5	36.2		50.5	5.5	94.5	

	Indian Avenue Southbound				Ramona Expressway Westbound				Indian Avenue Northbound				Ramona Expressway Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	**1**	1	1	**3**	1	3	0	4	4	1	0	5	**3**	**3**	8	14	26
05:00 PM	0	0	**2**	2	**2**	**6**	0	**8**	**5**	**2**	0	**7**	3	2	7	12	**29**
05:15 PM	0	**2**	1	3	0	4	0	4	4	0	**1**	5	1	1	**14**	**16**	28
05:30 PM	0	1	1	2	0	1	0	1	2	1	1	4	0	2	6	8	15
Total Volume	1	4	5	10	3	14	0	17	15	4	2	21	7	8	35	50	98
% App. Total	10	40	50		17.6	82.4	0		71.4	19	9.5		14	16	70		
PHF	.250	.500	.625	.833	.375	.583	.000	.531	.750	.500	.500	.750	.583	.667	.625	.781	.845

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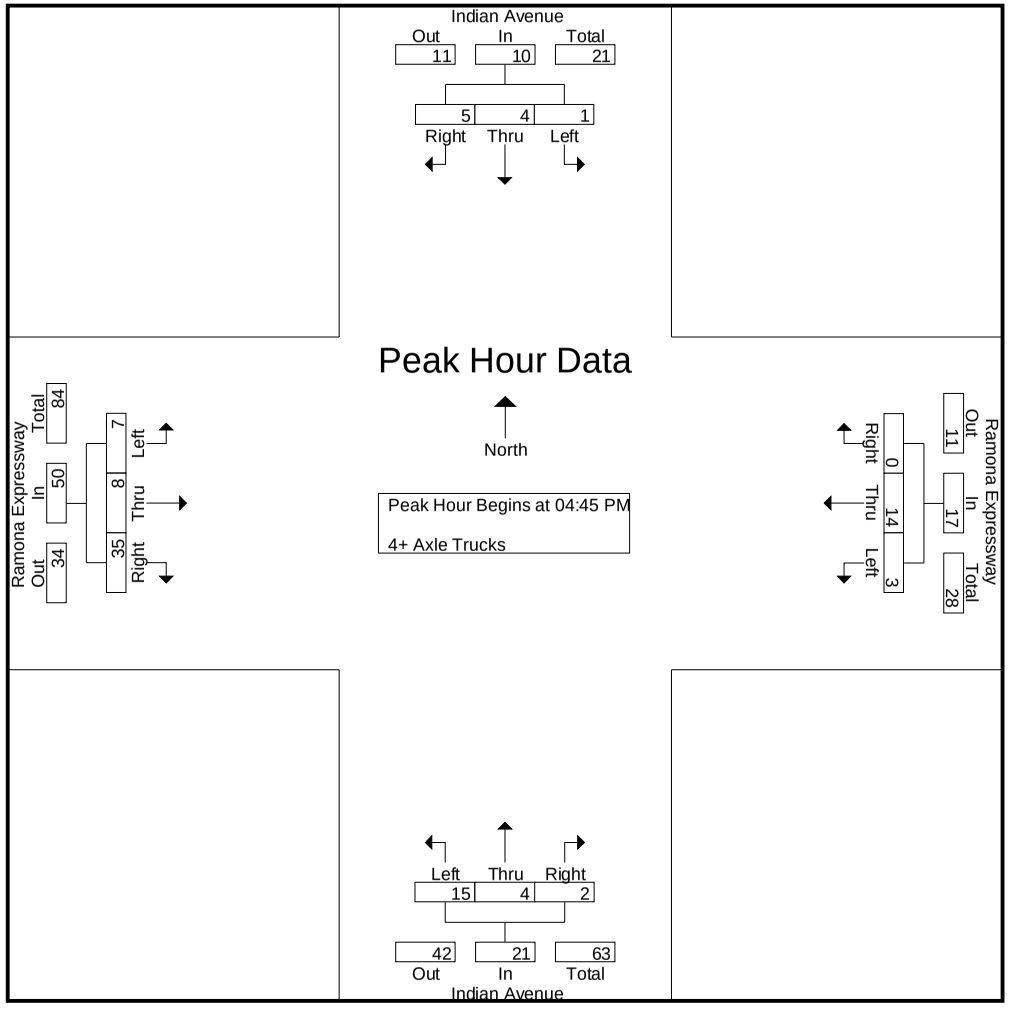
City of Perris
N/S: Indian Avenue
E/W: Ramona Expressway
Weather: Clear

File Name : 14_PER_Indian_Ram PM
Site Code : 05120169
Start Date : 3/11/2020
Page No : 2



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City of Perris
N/S: Indian Avenue
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	Indian Avenue Southbound				Ramona Expressway Westbound				Indian Avenue Northbound				Ramona Expressway Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:45 PM				04:45 PM				04:45 PM				04:45 PM				
+0 mins.	**1**	1	1	**3**	1	3	0	4	4	1	0	5	**3**	**3**	8	14	
+15 mins.	0	0	**2**	2	**2**	**6**	0	**8**	**5**	**2**	0	**7**	3	2	7	12	
+30 mins.	0	**2**	1	3	0	4	0	4	4	0	**1**	5	1	1	**14**	**16**	
+45 mins.	0	1	1	2	0	1	0	1	2	1	1	4	0	2	6	8	
Total Volume	1	4	5	10	3	14	0	17	15	4	2	21	7	8	35	50	
% App. Total	10	40	50		17.6	82.4	0		71.4	19	9.5		14	16	70		
PHF	.250	.500	.625	.833	.375	.583	.000	.531	.750	.500	.500	.750	.583	.667	.625	.781	

Location: Perris
N/S: Indian Avenue
E/W: Ramona Expressway

Date: 3/11/2020
Day: Wednesday

PEDESTRIANS

	North Leg Indian Avenue	East Leg Ramona Expressway	South Leg Indian Avenue	West Leg Ramona Expressway	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
7:00 AM	0	0	1	0	1
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	2	0	0	2
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
TOTAL VOLUMES:	0	2	1	0	3

	North Leg Indian Avenue	East Leg Ramona Expressway	South Leg Indian Avenue	West Leg Ramona Expressway	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0

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Location: Perris
N/S: Indian Avenue
E/W: Ramona Expressway

Date: 3/11/2020
Day: Wednesday

BICYCLES

	Southbound Indian Avenue			Westbound Ramona Expressway			Northbound Indian Avenue			Eastbound Ramona Expressway			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	0	0	1	0	0	1
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	0	0	0	1	0	0	1

	Southbound Indian Avenue			Westbound Ramona Expressway			Northbound Indian Avenue			Eastbound Ramona Expressway			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	2	0	0	0	0	0	0	0	0	0	0	2
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	2	0	0	0	0	0	0	0	0	0	0	2

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City of Perris
N/S: Perris Boulevard
E/W: Ramona Expressway
Weather: Clear

File Name : 22_PER_Perris_Ram AM
Site Code : 05120169
Start Date : 3/11/2020
Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Perris Boulevard Southbound					Ramona Expressway Westbound					Perris Boulevard Northbound					Ramona Expressway Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	30	53	37	11	120	15	306	23	0	344	77	210	13	7	300	63	118	28	15	209	33	973	1006
07:15 AM	25	65	43	18	133	21	290	35	5	346	76	195	19	16	290	72	123	10	4	205	43	974	1017
07:30 AM	17	90	47	20	154	20	246	40	6	306	54	189	31	11	274	59	165	24	13	248	50	982	1032
07:45 AM	24	98	45	9	167	28	277	31	8	336	61	136	24	13	221	81	167	25	12	273	42	997	1039
Total	96	306	172	58	574	84	1119	129	19	1332	268	730	87	47	1085	275	573	87	44	935	168	3926	4094
08:00 AM	27	59	39	16	125	25	320	26	5	371	55	96	16	10	167	56	133	33	12	222	43	885	928
08:15 AM	35	74	45	20	154	20	238	28	3	286	69	118	8	2	195	46	141	26	9	213	34	848	882
08:30 AM	16	63	43	21	122	36	190	14	3	240	54	73	14	9	141	47	111	27	15	185	48	688	736
08:45 AM	20	67	34	13	121	22	203	22	2	247	53	68	17	10	138	40	152	25	13	217	38	723	761
Total	98	263	161	70	522	103	951	90	13	1144	231	355	55	31	641	189	537	111	49	837	163	3144	3307
Grand Total	194	569	333	128	1096	187	2070	219	32	2476	499	1085	142	78	1726	464	1110	198	93	1772	331	7070	7401
Apprch %	17.7	51.9	30.4			7.6	83.6	8.8			28.9	62.9	8.2			26.2	62.6	11.2					
Total %	2.7	8	4.7		15.5	2.6	29.3	3.1		35	7.1	15.3	2		24.4	6.6	15.7	2.8		25.1	4.5	95.5	
Passenger Vehicles	189	546	310		1169	182	2022	213		2449	472	1055	140		1744	433	1052	173		1743	0	0	7105
% Passenger Vehicles	97.4	96	93.1	96.9	95.5	97.3	97.7	97.3	100	97.6	94.6	97.2	98.6	98.7	96.7	93.3	94.8	87.4	91.4	93.5	0	0	96
Large 2 Axle Vehicles	3	18	10		34	2	13	4		19	14	25	2		42	8	32	14		58	0	0	153
% Large 2 Axle Vehicles	1.5	3.2	3	2.3	2.8	1.1	0.6	1.8	0	0.8	2.8	2.3	1.4	1.3	2.3	1.7	2.9	7.1	4.3	3.1	0	0	2.1
3 Axle Vehicles	1	0	3		5	0	8	1		9	2	3	0		5	5	8	1		15	0	0	34
% 3 Axle Vehicles	0.5	0	0.9	0.8	0.4	0	0.4	0.5	0	0.4	0.4	0.3	0	0	0.3	1.1	0.7	0.5	1.1	0.8	0	0	0.5
4+ Axle Trucks	1	5	10		16	3	27	1		31	11	2	0		13	18	18	10		49	0	0	109
% 4+ Axle Trucks	0.5	0.9	3	0	1.3	1.6	1.3	0.5	0	1.2	2.2	0.2	0	0	0.7	3.9	1.6	5.1	3.2	2.6	0	0	1.5

	Perris Boulevard Southbound				Ramona Expressway Westbound				Perris Boulevard Northbound				Ramona Expressway Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	**30**	53	37	120	15	**306**	23	344	**77**	**210**	13	**300**	63	118	**28**	209	973
07:15 AM	25	65	43	133	21	290	35	**346**	76	195	19	290	72	123	10	205	974
07:30 AM	17	90	**47**	154	20	246	**40**	306	54	189	**31**	274	59	165	24	248	982
07:45 AM	24	**98**	45	**167**	**28**	277	31	336	61	136	24	221	**81**	**167**	25	**273**	**997**
Total Volume	96	306	172	574	84	1119	129	1332	268	730	87	1085	275	573	87	935	3926
% App. Total	16.7	53.3	30		6.3	84	9.7		24.7	67.3	8		29.4	61.3	9.3		
PHF	.800	.781	.915	.859	.750	.914	.806	.962	.870	.869	.702	.904	.849	.858	.777	.856	.984

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City of Perris
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File Name : 22_PER_Perris_Ram AM
Site Code : 05120169
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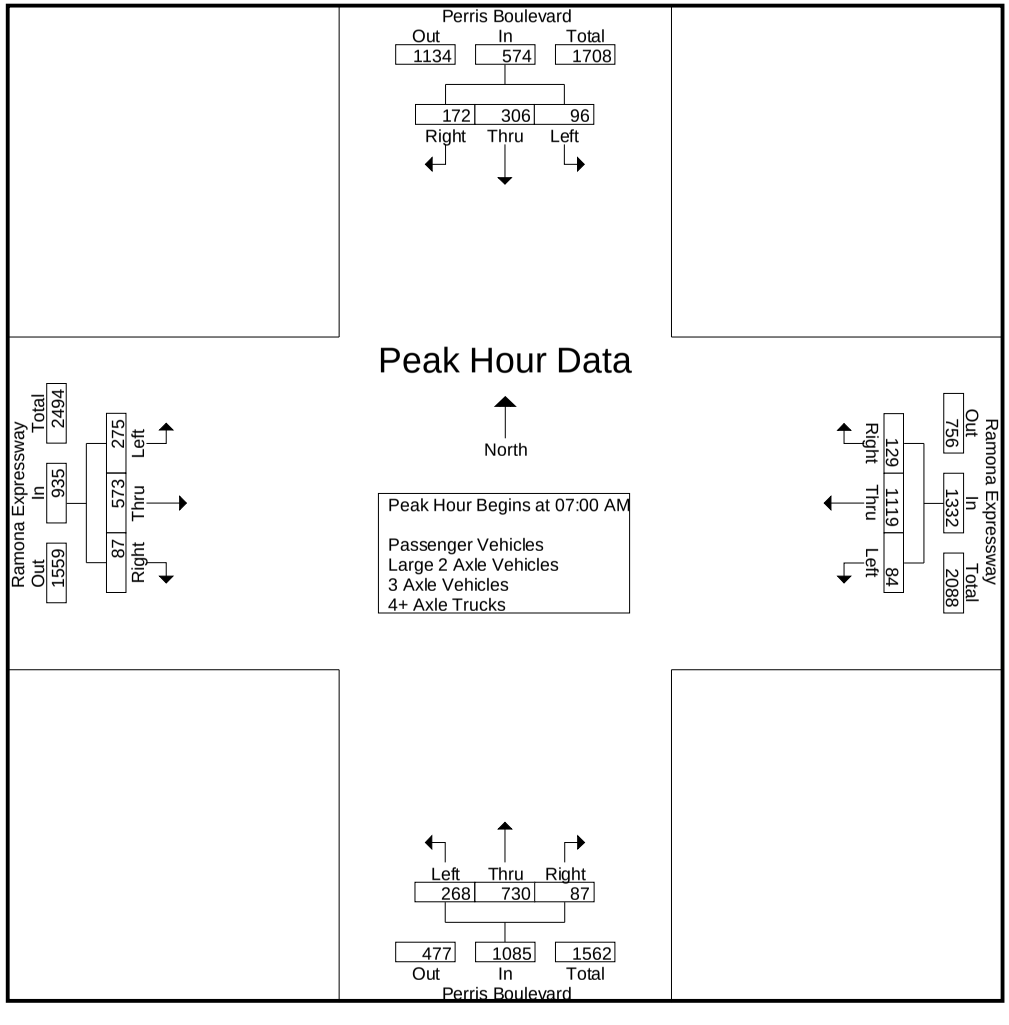

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City of Perris
N/S: Perris Boulevard
E/W: Ramona Expressway
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File Name : 22_PER_Perris_Ram AM
Site Code : 05120169
Start Date : 3/11/2020

	Perris Boulevard Southbound				Ramona Expressway Westbound				Perris Boulevard Northbound				Ramona Expressway Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:30 AM				07:15 AM				07:00 AM				07:30 AM				
+0 mins.	17	90	**47**	154	21	290	35	346	**77**	**210**	13	**300**	59	165	24	248	
+15 mins.	24	**98**	45	**167**	20	246	**40**	306	76	195	19	290	**81**	**167**	25	**273**	
+30 mins.	27	59	39	125	**28**	277	31	336	54	189	**31**	274	56	133	**33**	222	
+45 mins.	**35**	74	45	154	25	**320**	26	**371**	61	136	24	221	46	141	26	213	
Total Volume	103	321	176	600	94	1133	132	1359	268	730	87	1085	242	606	108	956	
% App. Total	17.2	53.5	29.3		6.9	83.4	9.7		24.7	67.3	8		25.3	63.4	11.3		
PHF	.736	.819	.936	.898	.839	.885	.825	.916	.870	.869	.702	.904	.747	.907	.818	.875	

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Groups Printed- Passenger Vehicles

	Perris Boulevard Southbound					Ramona Expressway Westbound					Perris Boulevard Northbound					Ramona Expressway Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	30	52	35	11	117	13	303	23	0	339	73	203	13	7	289	59	115	22	11	196	29	941	970
07:15 AM	25	64	39	17	128	21	284	35	5	340	70	192	18	15	280	70	116	8	3	194	40	942	982
07:30 AM	17	88	44	19	149	19	242	39	6	300	52	186	31	11	269	50	160	21	11	231	47	949	996
07:45 AM	24	96	42	9	162	27	274	30	8	331	59	132	23	13	214	79	159	24	12	262	42	969	1011
Total	96	300	160	56	556	80	1103	127	19	1310	254	713	85	46	1052	258	550	75	37	883	158	3801	3959
08:00 AM	27	54	38	16	119	25	313	26	5	364	53	96	16	10	165	50	129	28	12	207	43	855	898
08:15 AM	34	73	42	19	149	20	231	26	3	277	67	109	8	2	184	44	130	21	8	195	32	805	837
08:30 AM	14	58	40	20	112	36	179	14	3	229	48	71	14	9	133	43	103	25	15	171	47	645	692
08:45 AM	18	61	30	13	109	21	196	20	2	237	50	66	17	10	133	38	140	24	13	202	38	681	719
Total	93	246	150	68	489	102	919	86	13	1107	218	342	55	31	615	175	502	98	48	775	160	2986	3146
Grand Total	189	546	310	124	1045	182	2022	213	32	2417	472	1055	140	77	1667	433	1052	173	85	1658	318	6787	7105
Apprch %	18.1	52.2	29.7			7.5	83.7	8.8			28.3	63.3	8.4			26.1	63.4	10.4					
Total %	2.8	8	4.6		15.4	2.7	29.8	3.1		35.6	7	15.5	2.1		24.6	6.4	15.5	2.5		24.4	4.5	95.5	

	Perris Boulevard Southbound				Ramona Expressway Westbound				Perris Boulevard Northbound				Ramona Expressway Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	**30**	52	35	117	13	**303**	23	339	**73**	**203**	13	**289**	59	115	22	196	941
07:15 AM	25	64	39	128	21	284	35	**340**	70	192	18	280	70	116	8	194	942
07:30 AM	17	88	**44**	149	19	242	**39**	300	52	186	**31**	269	50	**160**	21	231	949
07:45 AM	24	**96**	42	**162**	**27**	274	30	331	59	132	23	214	**79**	159	**24**	**262**	**969**
Total Volume	96	300	160	556	80	1103	127	1310	254	713	85	1052	258	550	75	883	3801
% App. Total	17.3	54	28.8		6.1	84.2	9.7		24.1	67.8	8.1		29.2	62.3	8.5		
PHF	.800	.781	.909	.858	.741	.910	.814	.963	.870	.878	.685	.910	.816	.859	.781	.843	.981

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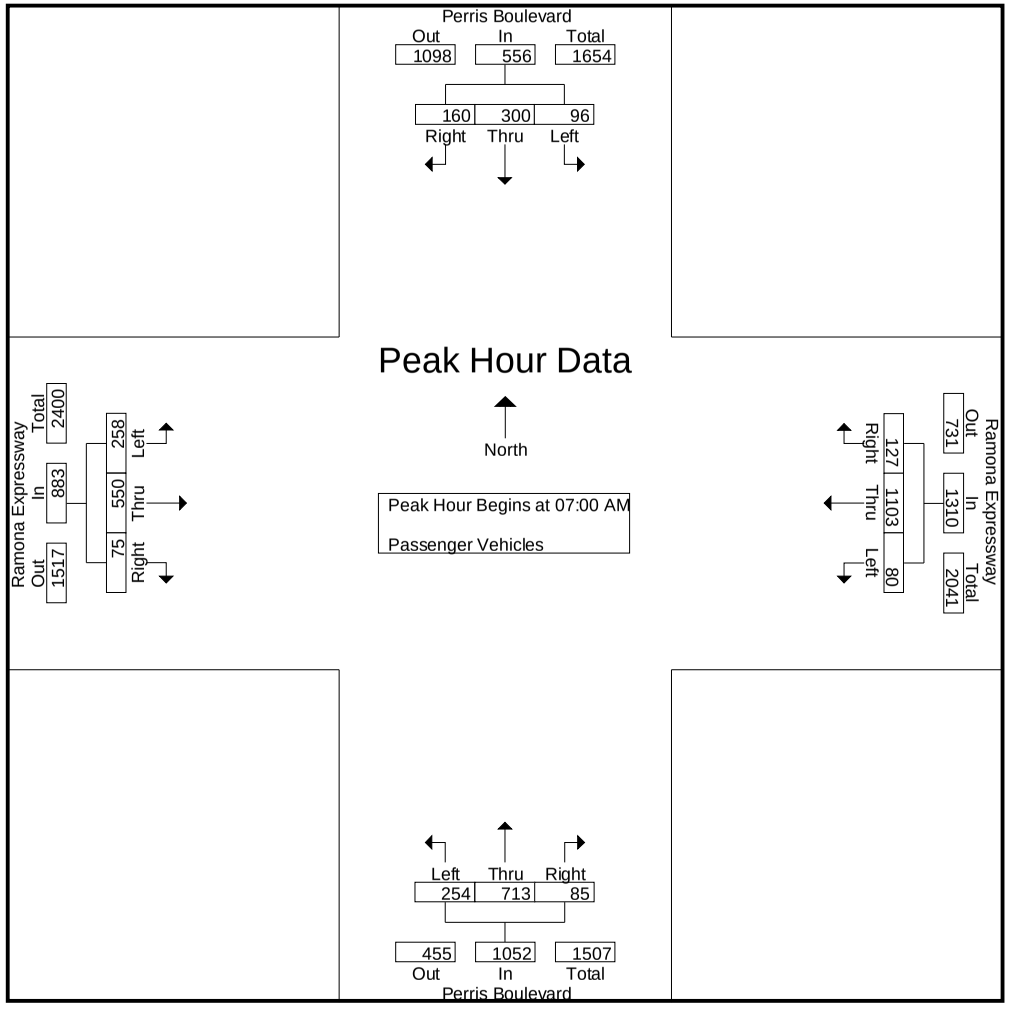
City of Perris
N/S: Perris Boulevard
E/W: Ramona Expressway
Weather: Clear

File Name : 22_PER_Perris_Ram AM
Site Code : 05120169
Start Date : 3/11/2020
Page No : 2



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City of Perris
N/S: Perris Boulevard
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File Name : 22_PER_Perris_Ram AM
Site Code : 05120169
Start Date : 3/11/2020
Page No : 3

	Perris Boulevard Southbound				Ramona Expressway Westbound				Perris Boulevard Northbound				Ramona Expressway Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:00 AM				07:00 AM				07:00 AM				07:00 AM				
+0 mins.	**30**	52	35	117	13	**303**	23	339	**73**	**203**	13	**289**	59	115	22	196	
+15 mins.	25	64	39	128	21	284	35	**340**	70	192	18	280	70	116	8	194	
+30 mins.	17	88	**44**	149	19	242	**39**	300	52	186	**31**	269	50	**160**	21	231	
+45 mins.	24	**96**	42	**162**	**27**	274	30	331	59	132	23	214	**79**	159	**24**	**262**	
Total Volume	96	300	160	556	80	1103	127	1310	254	713	85	1052	258	550	75	883	
% App. Total	17.3	54	28.8		6.1	84.2	9.7		24.1	67.8	8.1		29.2	62.3	8.5		
PHF	.800	.781	.909	.858	.741	.910	.814	.963	.870	.878	.685	.910	.816	.859	.781	.843	

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City of Perris
N/S: Perris Boulevard
E/W: Ramona Expressway
Weather: Clear

File Name : 22_PER_Perris_Ram AM
Site Code : 05120169
Start Date : 3/11/2020
Page No : 1

Groups Printed- Large 2 Axle Vehicles

	Perris Boulevard Southbound					Ramona Expressway Westbound					Perris Boulevard Northbound					Ramona Expressway Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	0	1	1	0	2	2	0	0	0	2	2	6	0	0	8	2	2	4	2	8	2	20	22
07:15 AM	0	0	1	1	1	0	2	0	0	2	5	3	1	1	9	0	4	0	0	4	2	16	18
07:30 AM	0	0	2	1	2	0	1	0	0	1	2	2	0	0	4	1	2	2	1	5	2	12	14
07:45 AM	0	2	2	0	4	0	2	1	0	3	2	3	1	0	6	1	5	1	0	7	0	20	20
Total	0	3	6	2	9	2	5	1	0	8	11	14	2	1	27	4	13	7	3	24	6	68	74
08:00 AM	0	5	1	0	6	0	3	0	0	3	1	0	0	0	1	4	1	4	0	9	0	19	19
08:15 AM	1	0	1	0	2	0	4	2	0	6	0	7	0	0	7	0	6	2	1	8	1	23	24
08:30 AM	1	5	1	1	7	0	0	0	0	0	1	2	0	0	3	0	6	1	0	7	1	17	18
08:45 AM	1	5	1	0	7	0	1	1	0	2	1	2	0	0	3	0	6	0	0	6	0	18	18
Total	3	15	4	1	22	0	8	3	0	11	3	11	0	0	14	4	19	7	1	30	2	77	79
Grand Total	3	18	10	3	31	2	13	4	0	19	14	25	2	1	41	8	32	14	4	54	8	145	153
Apprch %	9.7	58.1	32.3			10.5	68.4	21.1			34.1	61	4.9			14.8	59.3	25.9					
Total %	2.1	12.4	6.9		21.4	1.4	9	2.8		13.1	9.7	17.2	1.4		28.3	5.5	22.1	9.7		37.2	5.2	94.8	

	Perris Boulevard Southbound				Ramona Expressway Westbound				Perris Boulevard Northbound				Ramona Expressway Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	1	1	2	**2**	0	0	2	2	**6**	0	8	**2**	2	**4**	**8**	**20**
07:15 AM	0	0	1	1	0	**2**	0	2	**5**	3	**1**	**9**	0	4	0	4	16
07:30 AM	0	0	**2**	2	0	1	0	1	2	2	0	4	1	2	2	5	12
07:45 AM	0	**2**	2	**4**	0	2	**1**	**3**	2	3	1	6	1	**5**	1	7	20
Total Volume	0	3	6	9	2	5	1	8	11	14	2	27	4	13	7	24	68
% App. Total	0	33.3	66.7		25	62.5	12.5		40.7	51.9	7.4		16.7	54.2	29.2		
PHF	.000	.375	.750	.563	.250	.625	.250	.667	.550	.583	.500	.750	.500	.650	.438	.750	.850

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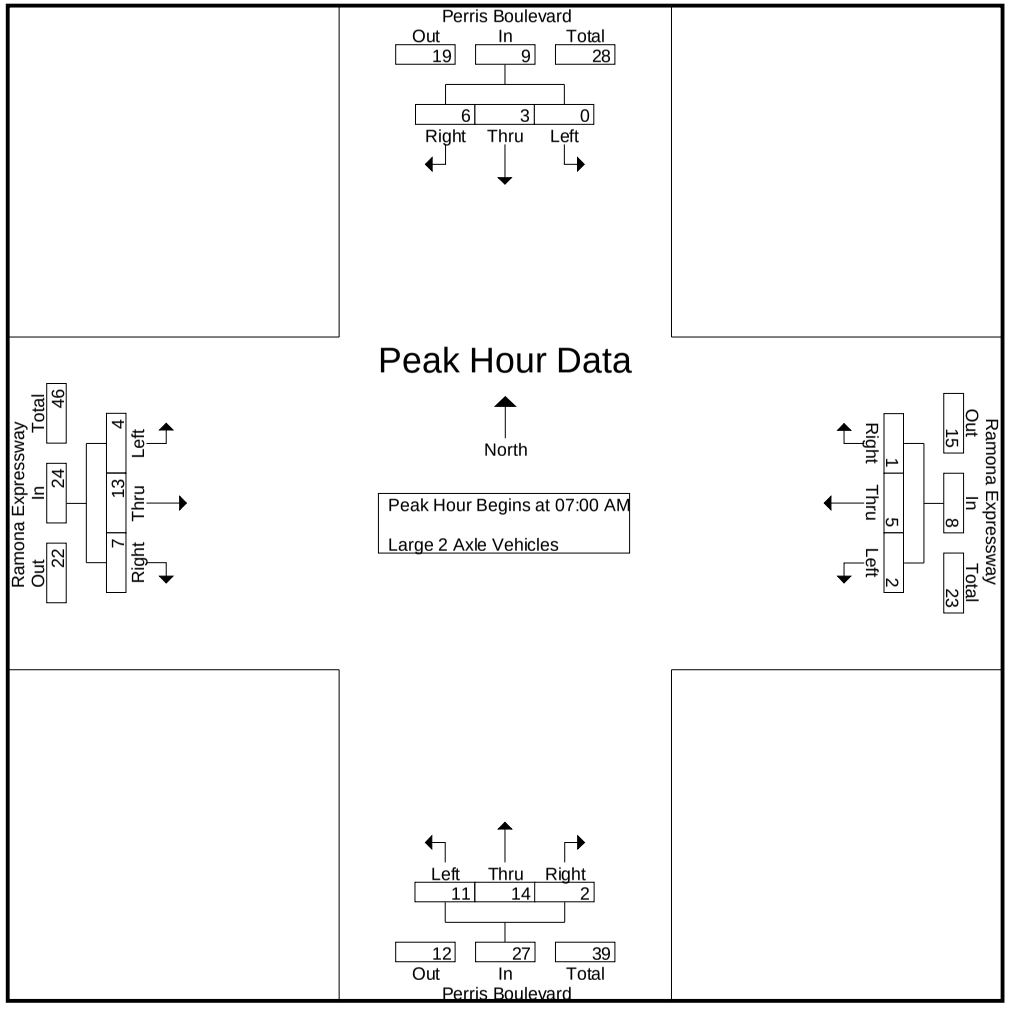
City of Perris
N/S: Perris Boulevard
E/W: Ramona Expressway
Weather: Clear

File Name : 22_PER_Perris_Ram AM
Site Code : 05120169
Start Date : 3/11/2020
Page No : 2



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City of Perris
N/S: Perris Boulevard
E/W: Ramona Expressway
Weather: Clear

File Name : 22_PER_Perris_Ram AM
Site Code : 05120169
Start Date : 3/11/2020
Page No : 3

	Perris Boulevard Southbound				Ramona Expressway Westbound				Perris Boulevard Northbound				Ramona Expressway Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:00 AM				07:00 AM				07:00 AM				07:00 AM				
+0 mins.	0	1	1	2	**2**	0	0	2	2	**6**	0	8	**2**	2	**4**	**8**	
+15 mins.	0	0	1	1	0	**2**	0	2	**5**	3	**1**	**9**	0	4	0	4	
+30 mins.	0	0	**2**	2	0	1	0	1	2	2	0	4	1	2	2	5	
+45 mins.	0	**2**	2	**4**	0	2	**1**	**3**	2	3	1	6	1	**5**	1	7	
Total Volume	0	3	6	9	2	5	1	8	11	14	2	27	4	13	7	24	
% App. Total	0	33.3	66.7		25	62.5	12.5		40.7	51.9	7.4		16.7	54.2	29.2		
PHF	.000	.375	.750	.563	.250	.625	.250	.667	.550	.583	.500	.750	.500	.650	.438	.750	

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City of Perris
N/S: Perris Boulevard
E/W: Ramona Expressway
Weather: Clear

File Name : 22_PER_Perris_Ram AM
Site Code : 05120169
Start Date : 3/11/2020
Page No : 1

Groups Printed- 3 Axle Vehicles

	Perris Boulevard Southbound					Ramona Expressway Westbound					Perris Boulevard Northbound					Ramona Expressway Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	2	1	0	0	0	1	0	3	3
07:15 AM	0	0	1	0	1	0	2	0	0	2	0	0	0	0	0	0	1	1	1	2	1	5	6
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	0	2	2
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	2	0	0	2	0	3	3
Total	0	0	1	0	1	0	2	0	0	2	1	2	0	0	3	3	3	1	1	7	1	13	14
08:00 AM	0	0	0	0	0	0	2	0	0	2	1	0	0	0	1	0	0	0	0	0	0	3	3
08:15 AM	0	0	1	1	1	0	0	0	0	0	0	1	0	0	1	1	2	0	0	3	1	5	6
08:30 AM	1	0	0	0	1	0	1	0	0	1	0	0	0	0	0	1	1	0	0	2	0	4	4
08:45 AM	0	0	1	0	1	0	3	1	0	4	0	0	0	0	0	0	2	0	0	2	0	7	7
Total	1	0	2	1	3	0	6	1	0	7	1	1	0	0	2	2	5	0	0	7	1	19	20
Grand Total	1	0	3	1	4	0	8	1	0	9	2	3	0	0	5	5	8	1	1	14	2	32	34
Apprch %	25	0	75			0	88.9	11.1			40	60	0			35.7	57.1	7.1					
Total %	3.1	0	9.4		12.5	0	25	3.1		28.1	6.2	9.4	0		15.6	15.6	25	3.1		43.8	5.9	94.1	

	Perris Boulevard Southbound				Ramona Expressway Westbound				Perris Boulevard Northbound				Ramona Expressway Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	0	0	0	0	0	0	0	**1**	**1**	0	**2**	1	0	0	1	3
07:15 AM	0	0	**1**	**1**	0	**2**	0	**2**	0	0	0	0	0	1	**1**	**2**	**5**
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	**2**	0	0	2	2
07:45 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	**2**	0	2	3
Total Volume	0	0	1	1	0	2	0	2	1	2	0	3	3	3	1	7	13
% App. Total	0	0	100		0	100	0		33.3	66.7	0		42.9	42.9	14.3		
PHF	.000	.000	.250	.250	.000	.250	.000	.250	.250	.500	.000	.375	.375	.375	.250	.875	.650

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City of Perris
N/S: Perris Boulevard
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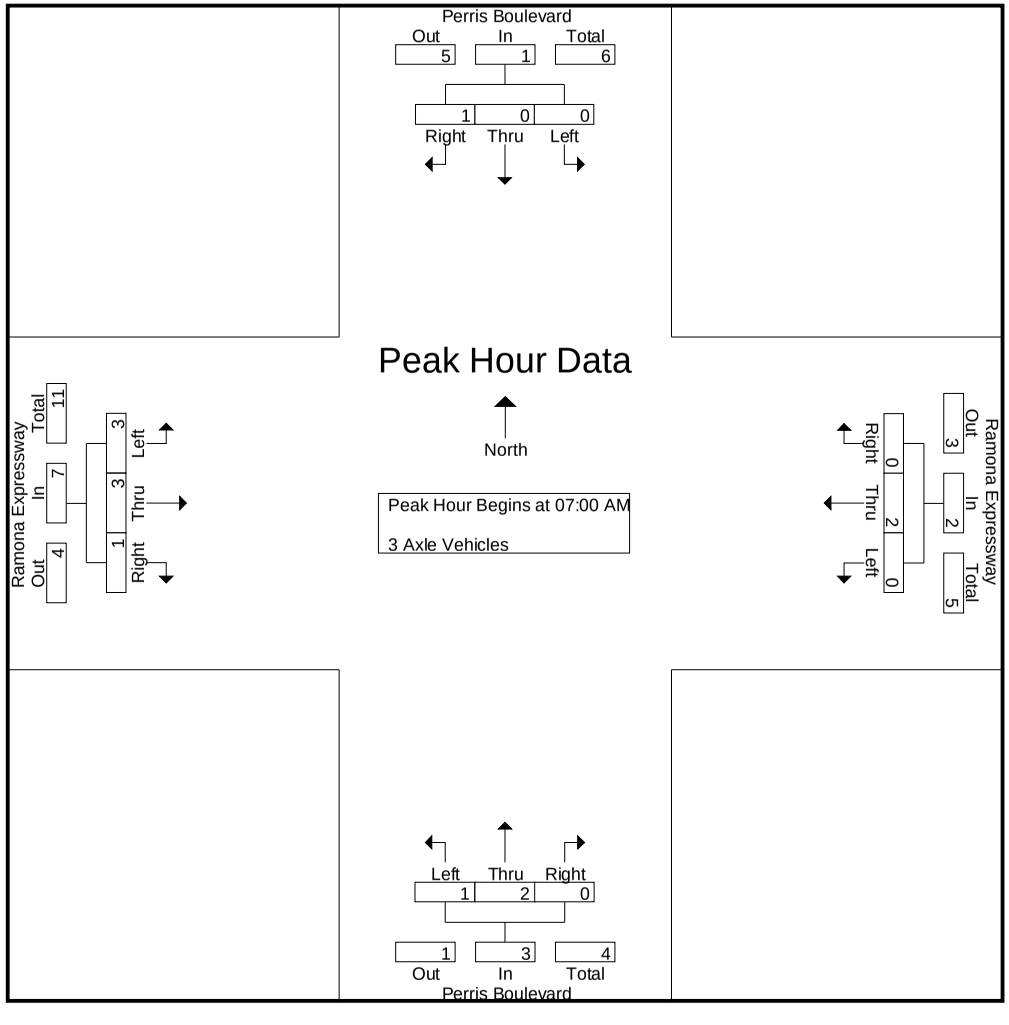
Weather: Clear

File Name : 22_PER_Perris_Ram AM
Site Code : 05120169
Start Date : 3/11/2020
Page No : 2



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City of Perris
N/S: Perris Boulevard
E/W: Ramona Expressway
Weather: Clear

File Name : 22_PER_Perris_Ram AM
Site Code : 05120169
Start Date : 3/11/2020
Page No : 3

	Perris Boulevard Southbound				Ramona Expressway Westbound				Perris Boulevard Northbound				Ramona Expressway Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:00 AM				07:00 AM				07:00 AM				07:00 AM				
+0 mins.	0	0	0	0	0	0	0	0	**1**	**1**	0	**2**	1	0	0	1	
+15 mins.	0	0	**1**	**1**	0	**2**	0	**2**	0	0	0	0	0	1	**1**	**2**	
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	**2**	0	0	2	
+45 mins.	0	0	0	0	0	0	0	0	0	1	0	1	0	**2**	0	2	
Total Volume	0	0	1	1	0	2	0	2	1	2	0	3	3	3	1	7	
% App. Total	0	0	100		0	100	0		33.3	66.7	0		42.9	42.9	14.3		
PHF	.000	.000	.250	.250	.000	.250	.000	.250	.250	.500	.000	.375	.375	.375	.250	.875	

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File Name : 22_PER_Perris_Ram AM
Site Code : 05120169
Start Date : 3/11/2020
Page No : 1

Groups Printed- 4+ Axle Trucks

	Perris Boulevard Southbound					Ramona Expressway Westbound					Perris Boulevard Northbound					Ramona Expressway Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	0	0	1	0	1	0	3	0	0	3	1	0	0	0	1	1	1	2	2	4	2	9	11
07:15 AM	0	1	2	0	3	0	2	0	0	2	1	0	0	0	1	2	2	1	0	5	0	11	11
07:30 AM	0	2	1	0	3	1	3	1	0	5	0	1	0	0	1	6	3	1	1	10	1	19	20
07:45 AM	0	0	1	0	1	1	1	0	0	2	0	0	0	0	0	1	1	0	0	2	0	5	5
Total	0	3	5	0	8	2	9	1	0	12	2	1	0	0	3	10	7	4	3	21	3	44	47
08:00 AM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	2	3	1	0	6	0	8	8
08:15 AM	0	1	1	0	2	0	3	0	0	3	2	1	0	0	3	1	3	3	0	7	0	15	15
08:30 AM	0	0	2	0	2	0	10	0	0	10	5	0	0	0	5	3	1	1	0	5	0	22	22
08:45 AM	1	1	2	0	4	1	3	0	0	4	2	0	0	0	2	2	4	1	0	7	0	17	17
Total	1	2	5	0	8	1	18	0	0	19	9	1	0	0	10	8	11	6	0	25	0	62	62
Grand Total	1	5	10	0	16	3	27	1	0	31	11	2	0	0	13	18	18	10	3	46	3	106	109
Apprch %	6.2	31.2	62.5			9.7	87.1	3.2			84.6	15.4	0			39.1	39.1	21.7					
Total %	0.9	4.7	9.4		15.1	2.8	25.5	0.9		29.2	10.4	1.9	0		12.3	17	17	9.4		43.4	2.8	97.2	

	Perris Boulevard Southbound				Ramona Expressway Westbound				Perris Boulevard Northbound				Ramona Expressway Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	0	1	1	0	**3**	0	3	**1**	0	0	**1**	1	1	**2**	4	9
07:15 AM	0	1	**2**	**3**	0	2	0	2	1	0	0	1	2	2	1	5	11
07:30 AM	0	**2**	1	3	**1**	3	**1**	**5**	0	**1**	0	1	**6**	**3**	1	**10**	**19**
07:45 AM	0	0	1	1	1	1	0	2	0	0	0	0	1	1	0	2	5
Total Volume	0	3	5	8	2	9	1	12	2	1	0	3	10	7	4	21	44
% App. Total	0	37.5	62.5		16.7	75	8.3		66.7	33.3	0		47.6	33.3	19		
PHF	.000	.375	.625	.667	.500	.750	.250	.600	.500	.250	.000	.750	.417	.583	.500	.525	.579

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City of Perris
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E/W: Ramona Expressway
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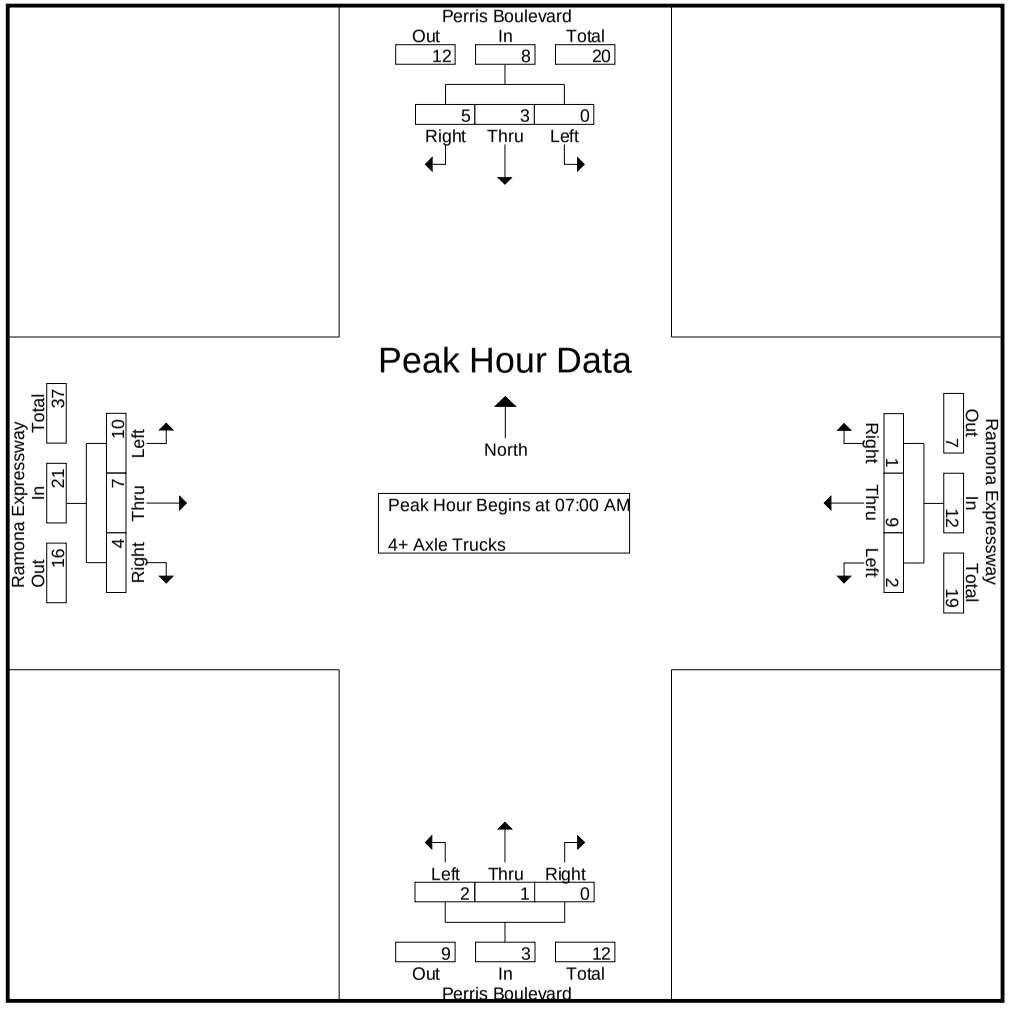
File Name : 22_PER_Perris_Ram AM
Site Code : 05120169
Start Date : 3/11/2020
Page No : 2



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E/W: Ramona Expressway
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File Name : 22_PER_Perris_Ram AM
Site Code : 05120169
Start Date : 3/11/2020
Page No : 3

	Perris Boulevard Southbound				Ramona Expressway Westbound				Perris Boulevard Northbound				Ramona Expressway Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:00 AM				07:00 AM				07:00 AM				07:00 AM				
+0 mins.	0	0	1	1	0	**3**	0	3	**1**	0	0	**1**	1	1	**2**	4	
+15 mins.	0	1	**2**	**3**	0	2	0	2	1	0	0	1	2	2	1	5	
+30 mins.	0	**2**	1	3	**1**	3	**1**	**5**	0	**1**	0	1	**6**	**3**	1	**10**	
+45 mins.	0	0	1	1	1	1	0	2	0	0	0	0	1	1	0	2	
Total Volume	0	3	5	8	2	9	1	12	2	1	0	3	10	7	4	21	
% App. Total	0	37.5	62.5		16.7	75	8.3		66.7	33.3	0		47.6	33.3	19		
PHF	.000	.375	.625	.667	.500	.750	.250	.600	.500	.250	.000	.750	.417	.583	.500	.525	

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City of Perris
N/S: Perris Boulevard
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Weather: Clear

File Name : 22_PER_Perris_Ram PM
Site Code : 05120169
Start Date : 3/11/2020
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Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Perris Boulevard Southbound					Ramona Expressway Westbound					Perris Boulevard Northbound					Ramona Expressway Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	53	90	43	21	186	34	182	18	6	234	58	84	26	12	168	53	227	40	11	320	50	908	958
04:15 PM	51	122	44	19	217	26	159	29	8	214	48	85	21	13	154	59	237	46	25	342	65	927	992
04:30 PM	43	156	46	7	245	27	168	35	4	230	48	106	29	13	183	60	240	63	26	363	50	1021	1071
04:45 PM	74	142	42	18	258	25	190	33	4	248	46	106	14	8	166	50	278	60	27	388	57	1060	1117
Total	221	510	175	65	906	112	699	115	22	926	200	381	90	46	671	222	982	209	89	1413	222	3916	4138
05:00 PM	78	133	42	21	253	25	187	26	2	238	52	79	33	14	164	57	279	55	24	391	61	1046	1107
05:15 PM	44	155	46	26	245	12	190	20	3	222	45	68	22	14	135	67	278	56	20	401	63	1003	1066
05:30 PM	50	106	36	18	192	29	199	26	5	254	38	90	30	14	158	60	291	47	25	398	62	1002	1064
05:45 PM	61	100	28	21	189	31	180	26	5	237	35	67	22	19	124	58	307	47	21	412	66	962	1028
Total	233	494	152	86	879	97	756	98	15	951	170	304	107	61	581	242	1155	205	90	1602	252	4013	4265
Grand Total	454	1004	327	151	1785	209	1455	213	37	1877	370	685	197	107	1252	464	2137	414	179	3015	474	7929	8403
Apprch %	25.4	56.2	18.3			11.1	77.5	11.3			29.6	54.7	15.7			15.4	70.9	13.7					
Total %	5.7	12.7	4.1		22.5	2.6	18.4	2.7		23.7	4.7	8.6	2.5		15.8	5.9	27	5.2		38	5.6	94.4	
Passenger Vehicles	449	984	306		1883	197	1396	201		1829	354	671	193		1323	443	2082	400		3100	0	0	8135
% Passenger Vehicles	98.9	98	93.6	95.4	97.3	94.3	95.9	94.4	94.6	95.6	95.7	98	98	98.1	97.4	95.5	97.4	96.6	97.8	97.1	0	0	96.8
Large 2 Axle Vehicles	2	18	10		33	9	23	4		36	11	8	4		25	8	28	12		51	0	0	145
% Large 2 Axle Vehicles	0.4	1.8	3.1	2	1.7	4.3	1.6	1.9	0	1.9	3	1.2	2	1.9	1.8	1.7	1.3	2.9	1.7	1.6	0	0	1.7
3 Axle Vehicles	2	1	1		4	1	9	1		11	2	4	0		6	7	8	0		15	0	0	36
% 3 Axle Vehicles	0.4	0.1	0.3	0	0.2	0.5	0.6	0.5	0	0.6	0.5	0.6	0	0	0.4	1.5	0.4	0	0	0.5	0	0	0.4
4+ Axle Trucks	1	1	10		16	2	27	7		38	3	2	0		5	6	19	2		28	0	0	87
% 4+ Axle Trucks	0.2	0.1	3.1	2.6	0.8	1	1.9	3.3	5.4	2	0.8	0.3	0	0	0.4	1.3	0.9	0.5	0.6	0.9	0	0	1

	Perris Boulevard Southbound				Ramona Expressway Westbound				Perris Boulevard Northbound				Ramona Expressway Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	43	**156**	**46**	245	**27**	168	**35**	230	48	**106**	29	**183**	60	240	**63**	363	1021
04:45 PM	74	142	42	**258**	25	**190**	33	**248**	46	106	14	166	50	278	60	388	**1060**
05:00 PM	**78**	133	42	253	25	187	26	238	**52**	79	**33**	164	57	**279**	55	391	1046
05:15 PM	44	155	46	245	12	190	20	222	45	68	22	135	**67**	278	56	**401**	1003
Total Volume	239	586	176	1001	89	735	114	938	191	359	98	648	234	1075	234	1543	4130
% App. Total	23.9	58.5	17.6		9.5	78.4	12.2		29.5	55.4	15.1		15.2	69.7	15.2		
PHF	.766	.939	.957	.970	.824	.967	.814	.946	.918	.847	.742	.885	.873	.963	.929	.962	.974

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Weather: Clear

File Name : 22_PER_Perris_Ram PM
Site Code : 05120169
Start Date : 3/11/2020
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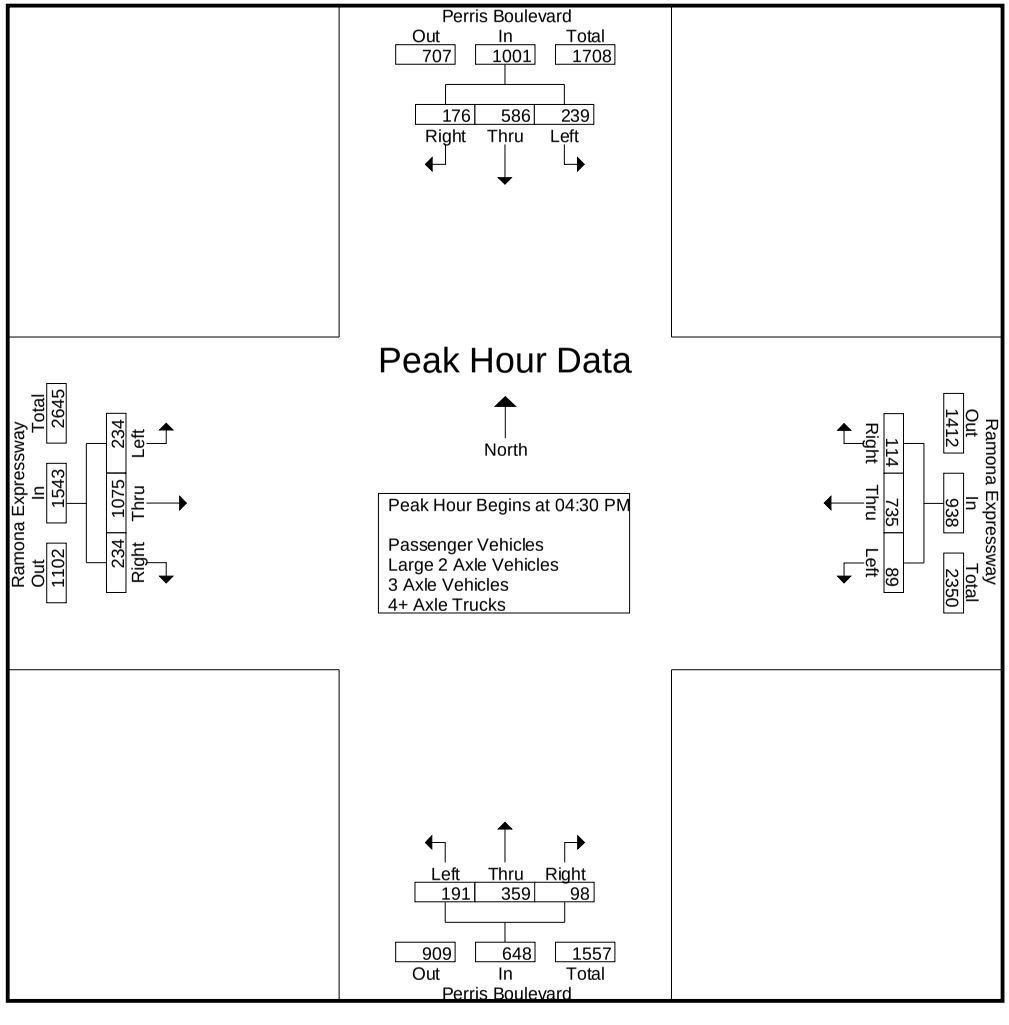

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Start Date : 3/11/2020
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	Perris Boulevard Southbound				Ramona Expressway Westbound				Perris Boulevard Northbound				Ramona Expressway Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:30 PM				04:45 PM				04:00 PM				05:00 PM				
+0 mins.	43	**156**	**46**	245	25	190	**33**	248	**58**	84	26	168	57	279	55	391	
+15 mins.	74	142	42	**258**	25	187	26	238	48	85	21	154	**67**	278	**56**	401	
+30 mins.	**78**	133	42	253	12	190	20	222	48	**106**	**29**	**183**	60	291	47	398	
+45 mins.	44	155	46	245	**29**	**199**	26	**254**	46	106	14	166	58	**307**	47	**412**	
Total Volume	239	586	176	1001	91	766	105	962	200	381	90	671	242	1155	205	1602	
% App. Total	23.9	58.5	17.6		9.5	79.6	10.9		29.8	56.8	13.4		15.1	72.1	12.8		
PHF	.766	.939	.957	.970	.784	.962	.795	.947	.862	.899	.776	.917	.903	.941	.915	.972	

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Groups Printed- Passenger Vehicles

	Perris Boulevard Southbound					Ramona Expressway Westbound					Perris Boulevard Northbound					Ramona Expressway Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	53	83	36	20	172	29	171	17	6	217	54	82	24	12	160	53	221	38	10	312	48	861	909
04:15 PM	50	119	41	18	210	24	150	28	8	202	46	83	21	13	150	53	234	45	24	332	63	894	957
04:30 PM	43	153	45	7	241	26	164	35	4	225	44	101	28	12	173	57	231	61	26	349	49	988	1037
04:45 PM	73	140	40	18	253	23	182	32	4	237	46	105	14	8	165	47	269	56	26	372	56	1027	1083
Total	219	495	162	63	876	102	667	112	22	881	190	371	87	45	648	210	955	200	86	1365	216	3770	3986
05:00 PM	76	133	39	19	248	25	178	23	1	226	50	77	33	14	160	56	274	53	24	383	58	1017	1075
05:15 PM	44	154	45	25	243	12	182	17	2	211	45	67	21	13	133	65	272	54	20	391	60	978	1038
05:30 PM	50	102	34	18	186	28	191	24	5	243	36	89	30	14	155	58	280	46	24	384	61	968	1029
05:45 PM	60	100	26	19	186	30	178	25	5	233	33	67	22	19	122	54	301	47	21	402	64	943	1007
Total	230	489	144	81	863	95	729	89	13	913	164	300	106	60	570	233	1127	200	89	1560	243	3906	4149
Grand Total	449	984	306	144	1739	197	1396	201	35	1794	354	671	193	105	1218	443	2082	400	175	2925	459	7676	8135
Apprch %	25.8	56.6	17.6			11	77.8	11.2			29.1	55.1	15.8			15.1	71.2	13.7					
Total %	5.8	12.8	4		22.7	2.6	18.2	2.6		23.4	4.6	8.7	2.5		15.9	5.8	27.1	5.2		38.1	5.6	94.4	

	Perris Boulevard Southbound				Ramona Expressway Westbound				Perris Boulevard Northbound				Ramona Expressway Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	43	153	**45**	241	**26**	164	**35**	225	44	101	28	**173**	57	231	**61**	349	988
04:45 PM	73	140	40	**253**	23	**182**	32	**237**	46	**105**	14	165	47	269	56	372	**1027**
05:00 PM	**76**	133	39	248	25	178	23	226	**50**	77	**33**	160	56	**274**	53	383	1017
05:15 PM	44	**154**	45	243	12	182	17	211	45	67	21	133	**65**	272	54	**391**	978
Total Volume	236	580	169	985	86	706	107	899	185	350	96	631	225	1046	224	1495	4010
% App. Total	24	58.9	17.2		9.6	78.5	11.9		29.3	55.5	15.2		15.1	70	15		
PHF	.776	.942	.939	.973	.827	.970	.764	.948	.925	.833	.727	.912	.865	.954	.918	.956	.976

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File Name : 22_PER_Perris_Ram PM
Site Code : 05120169
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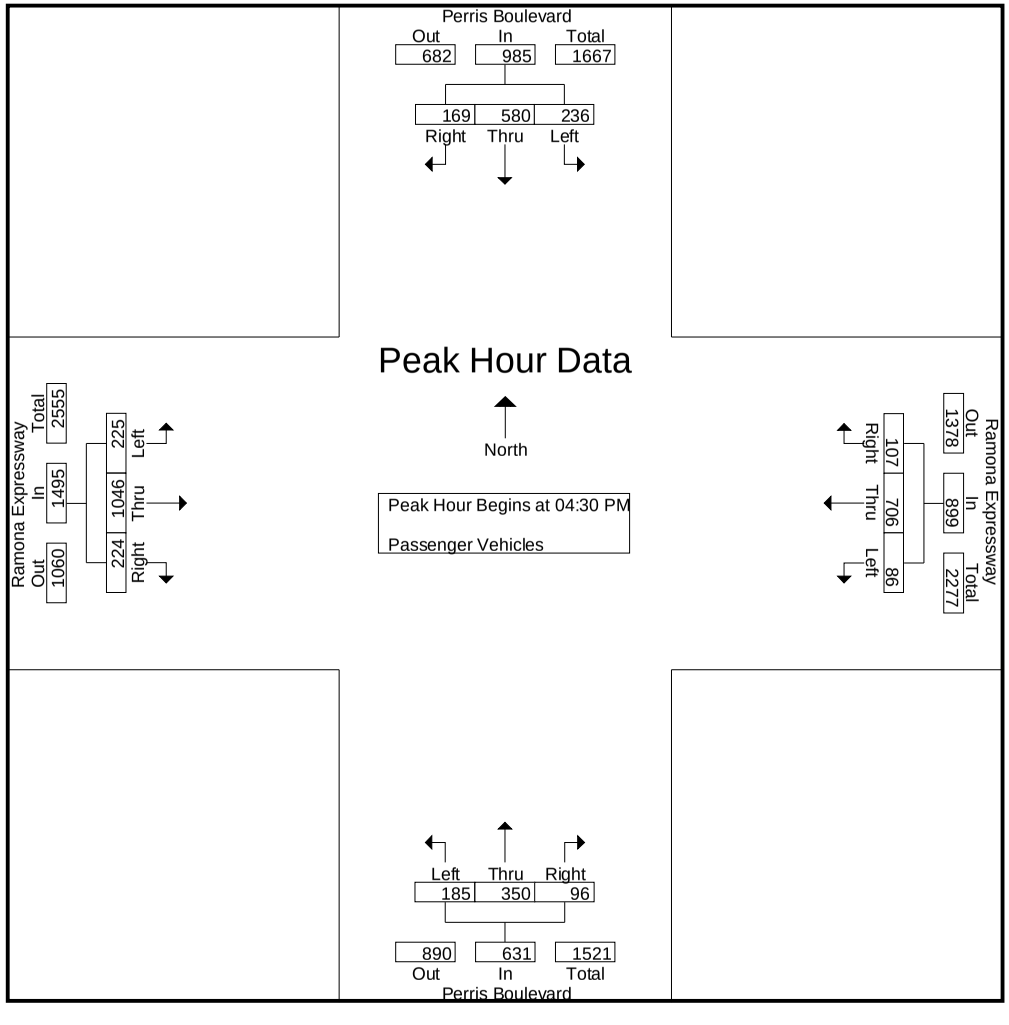

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City of Perris
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File Name : 22_PER_Perris_Ram PM
Site Code : 05120169
Start Date : 3/11/2020

	Perris Boulevard Southbound				Ramona Expressway Westbound				Perris Boulevard Northbound				Ramona Expressway Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:30 PM				04:30 PM				04:30 PM				04:30 PM				
+0 mins.	43	153	**45**	241	**26**	164	**35**	225	44	101	28	**173**	57	231	**61**	349	
+15 mins.	73	140	40	**253**	23	**182**	32	**237**	46	**105**	14	165	47	269	56	372	
+30 mins.	**76**	133	39	248	25	178	23	226	**50**	77	**33**	160	56	**274**	53	383	
+45 mins.	44	**154**	45	243	12	182	17	211	45	67	21	133	**65**	272	54	**391**	
Total Volume	236	580	169	985	86	706	107	899	185	350	96	631	225	1046	224	1495	
% App. Total	24	58.9	17.2		9.6	78.5	11.9		29.3	55.5	15.2		15.1	70	15		
PHF	.776	.942	.939	.973	.827	.970	.764	.948	.925	.833	.727	.912	.865	.954	.918	.956	

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Groups Printed- Large 2 Axle Vehicles

	Perris Boulevard Southbound					Ramona Expressway Westbound					Perris Boulevard Northbound					Ramona Expressway Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	0	7	3	0	10	3	2	1	0	6	3	1	2	0	6	0	2	2	1	4	1	26	27
04:15 PM	0	1	2	1	3	2	3	0	0	5	1	2	0	0	3	1	1	1	1	3	2	14	16
04:30 PM	0	3	1	0	4	1	0	0	0	1	3	3	1	1	7	2	6	2	0	10	1	22	23
04:45 PM	1	2	1	0	4	2	3	1	0	6	0	1	0	0	1	1	8	3	0	12	0	23	23
Total	1	13	7	1	21	8	8	2	0	18	7	7	3	1	17	4	17	8	2	29	4	85	89
05:00 PM	1	0	1	1	2	0	5	0	0	5	2	0	0	0	2	0	2	2	0	4	1	13	14
05:15 PM	0	1	0	0	1	0	6	1	0	7	0	0	1	1	1	1	2	1	0	4	1	13	14
05:30 PM	0	4	1	0	5	0	3	1	0	4	1	1	0	0	2	1	4	1	1	6	1	17	18
05:45 PM	0	0	1	1	1	1	1	0	0	2	1	0	0	0	1	2	3	0	0	5	1	9	10
Total	1	5	3	2	9	1	15	2	0	18	4	1	1	1	6	4	11	4	1	19	4	52	56
Grand Total	2	18	10	3	30	9	23	4	0	36	11	8	4	2	23	8	28	12	3	48	8	137	145
Apprch %	6.7	60	33.3			25	63.9	11.1			47.8	34.8	17.4			16.7	58.3	25					
Total %	1.5	13.1	7.3		21.9	6.6	16.8	2.9		26.3	8	5.8	2.9		16.8	5.8	20.4	8.8		35	5.5	94.5	

3.1-90

	Perris Boulevard Southbound				Ramona Expressway Westbound				Perris Boulevard Northbound				Ramona Expressway Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	**3**	**1**	**4**	1	0	0	1	**3**	**3**	**1**	**7**	**2**	6	2	10	22
04:45 PM	**1**	2	1	4	**2**	3	**1**	6	0	1	0	1	1	**8**	**3**	**12**	**23**
05:00 PM	1	0	1	2	0	5	0	5	2	0	0	2	0	2	2	4	13
05:15 PM	0	1	0	1	0	**6**	1	**7**	0	0	1	1	1	2	1	4	13
Total Volume	2	6	3	11	3	14	2	19	5	4	2	11	4	18	8	30	71
% App. Total	18.2	54.5	27.3		15.8	73.7	10.5		45.5	36.4	18.2		13.3	60	26.7		
PHF	.500	.500	.750	.688	.375	.583	.500	.679	.417	.333	.500	.393	.500	.563	.667	.625	.772

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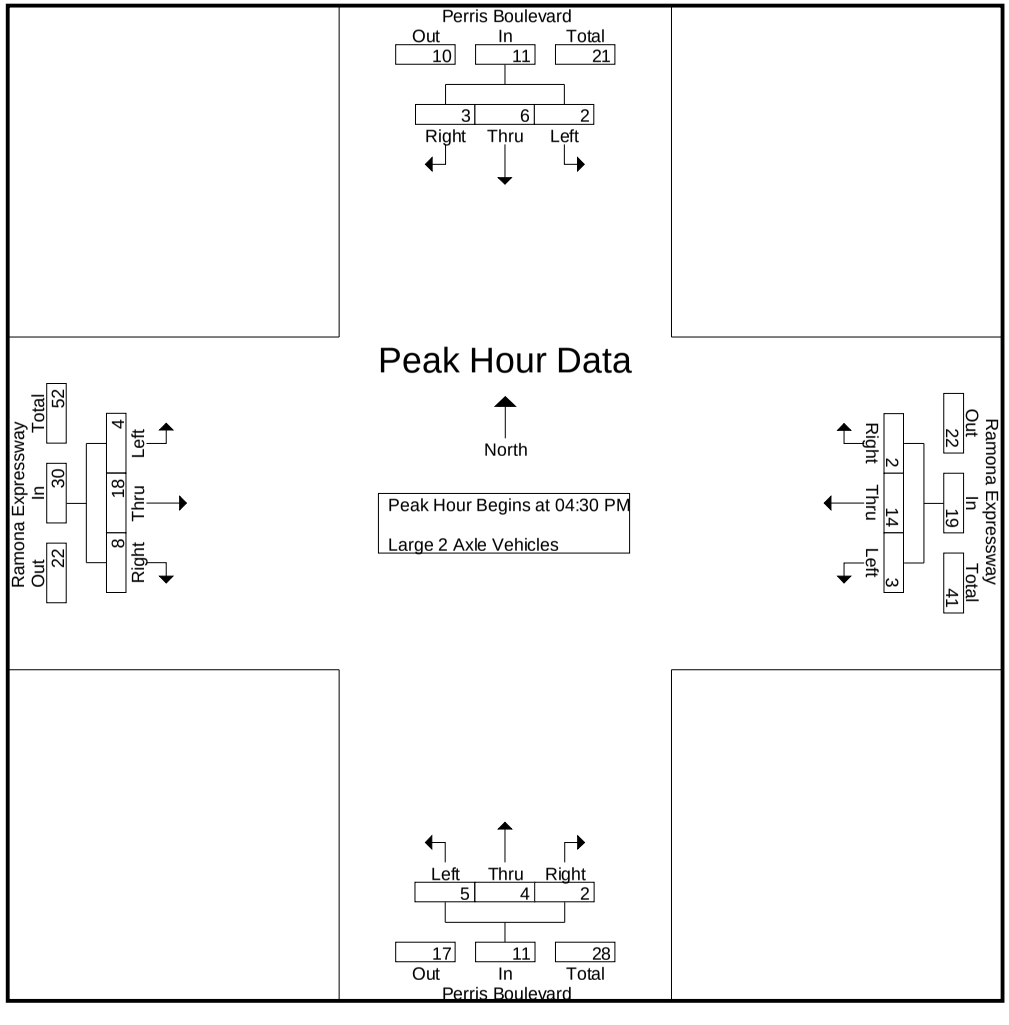

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	Perris Boulevard Southbound				Ramona Expressway Westbound				Perris Boulevard Northbound				Ramona Expressway Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:30 PM				04:30 PM				04:30 PM				04:30 PM				
+0 mins.	0	**3**	**1**	**4**	1	0	0	1	**3**	**3**	**1**	**7**	**2**	6	2	10	
+15 mins.	**1**	2	1	4	**2**	3	**1**	6	0	1	0	1	1	**8**	**3**	**12**	
+30 mins.	1	0	1	2	0	5	0	5	2	0	0	2	0	2	2	4	
+45 mins.	0	1	0	1	0	**6**	1	**7**	0	0	1	1	1	2	1	4	
Total Volume	2	6	3	11	3	14	2	19	5	4	2	11	4	18	8	30	
% App. Total	18.2	54.5	27.3		15.8	73.7	10.5		45.5	36.4	18.2		13.3	60	26.7		
PHF	.500	.500	.750	.688	.375	.583	.500	.679	.417	.333	.500	.393	.500	.563	.667	.625	

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File Name : 22_PER_Perris_Ram PM
Site Code : 05120169
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Groups Printed- 3 Axle Vehicles

	Perris Boulevard Southbound					Ramona Expressway Westbound					Perris Boulevard Northbound					Ramona Expressway Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	0	0	1	0	1	0	3	0	0	3	0	1	0	0	1	0	1	0	0	1	0	6	6
04:15 PM	0	1	0	0	1	0	0	0	0	0	1	0	0	0	1	4	0	0	0	4	0	6	6
04:30 PM	0	0	0	0	0	0	0	0	0	0	1	2	0	0	3	1	0	0	0	1	0	4	4
04:45 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	2	2
Total	0	1	1	0	2	0	4	0	0	4	2	3	0	0	5	5	2	0	0	7	0	18	18
05:00 PM	1	0	0	0	1	0	2	1	0	3	0	0	0	0	0	0	0	0	0	0	0	4	4
05:15 PM	0	0	0	0	0	0	1	0	0	1	0	1	0	0	1	1	2	0	0	3	0	5	5
05:30 PM	0	0	0	0	0	1	2	0	0	3	0	0	0	0	0	0	4	0	0	4	0	7	7
05:45 PM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	2	2
Total	2	0	0	0	2	1	5	1	0	7	0	1	0	0	1	2	6	0	0	8	0	18	18
Grand Total	2	1	1	0	4	1	9	1	0	11	2	4	0	0	6	7	8	0	0	15	0	36	36
Apprch %	50	25	25			9.1	81.8	9.1			33.3	66.7	0			46.7	53.3	0					
Total %	5.6	2.8	2.8		11.1	2.8	25	2.8		30.6	5.6	11.1	0		16.7	19.4	22.2	0		41.7	0	100	

3.1-93

	Perris Boulevard Southbound				Ramona Expressway Westbound				Perris Boulevard Northbound				Ramona Expressway Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	0	0	0	0	0	0	0	**1**	**2**	0	**3**	**1**	0	0	1	4
04:45 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
05:00 PM	**1**	0	0	**1**	0	**2**	**1**	**3**	0	0	0	0	0	0	0	0	4
05:15 PM	0	0	0	0	0	1	0	1	0	1	0	1	1	**2**	0	**3**	**5**
Total Volume	1	0	0	1	0	4	1	5	1	3	0	4	2	3	0	5	15
% App. Total	100	0	0		0	80	20		25	75	0		40	60	0		
PHF	.250	.000	.000	.250	.000	.500	.250	.417	.250	.375	.000	.333	.500	.375	.000	.417	.750

Counts Unlimited
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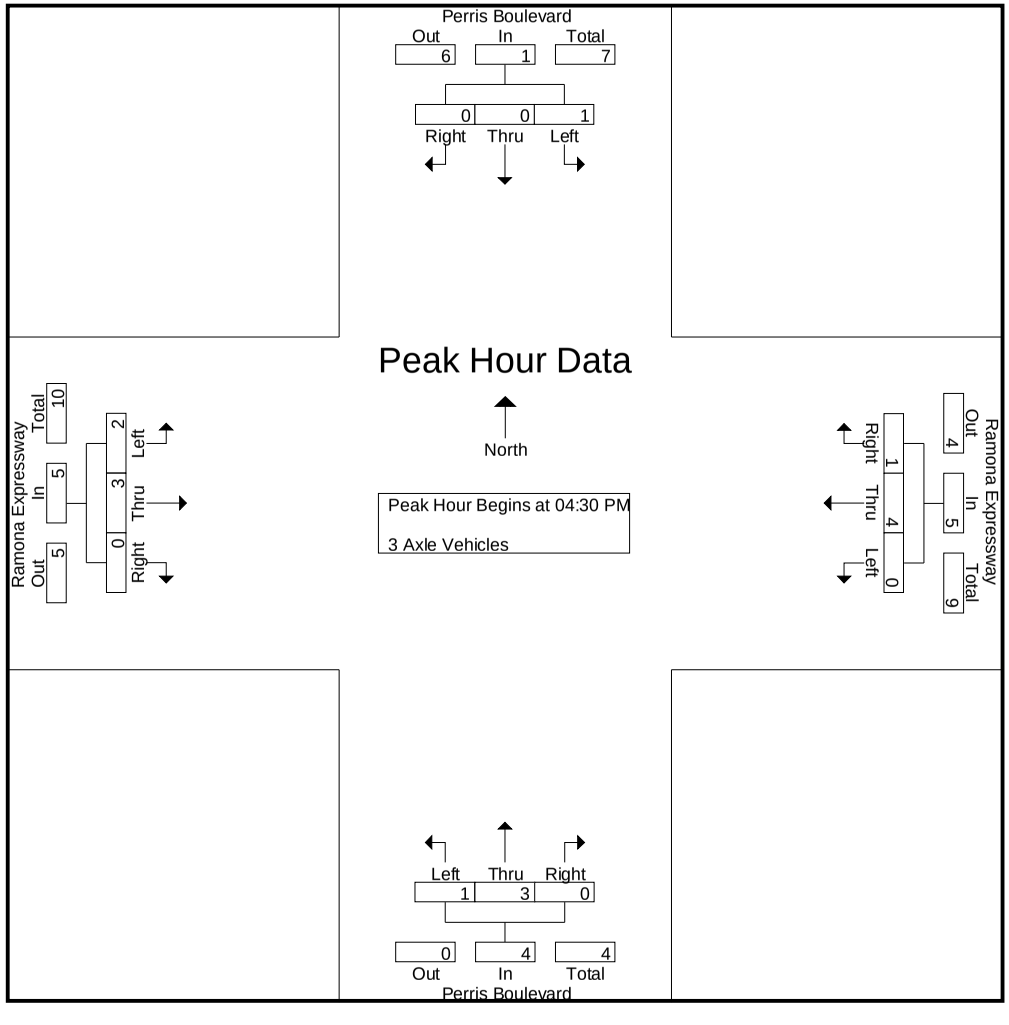
City of Perris
N/S: Perris Boulevard
E/W: Ramona Expressway
Weather: Clear

File Name : 22_PER_Perris_Ram PM
Site Code : 05120169
Start Date : 3/11/2020
Page No : 2



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File Name : 22_PER_Perris_Ram PM
Site Code : 05120169
Start Date : 3/11/2020
Page No : 3

	Perris Boulevard Southbound				Ramona Expressway Westbound				Perris Boulevard Northbound				Ramona Expressway Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:30 PM				04:30 PM				04:30 PM				04:30 PM				
+0 mins.	0	0	0	0	0	0	0	0	**1**	**2**	0	**3**	**1**	0	0	1	
+15 mins.	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	
+30 mins.	**1**	0	0	**1**	0	**2**	**1**	**3**	0	0	0	0	0	0	0	0	
+45 mins.	0	0	0	0	0	1	0	1	0	1	0	1	1	**2**	0	**3**	
Total Volume	1	0	0	1	0	4	1	5	1	3	0	4	2	3	0	5	
% App. Total	100	0	0		0	80	20		25	75	0		40	60	0		
PHF	.250	.000	.000	.250	.000	.500	.250	.417	.250	.375	.000	.333	.500	.375	.000	.417	

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City of Perris
N/S: Perris Boulevard
E/W: Ramona Expressway
Weather: Clear

File Name : 22_PER_Perris_Ram PM
Site Code : 05120169
Start Date : 3/11/2020
Page No : 1

Groups Printed- 4+ Axle Trucks

	Perris Boulevard Southbound					Ramona Expressway Westbound					Perris Boulevard Northbound					Ramona Expressway Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	0	0	3	1	3	2	6	0	0	8	1	0	0	0	1	0	3	0	0	3	1	15	16
04:15 PM	1	1	1	0	3	0	6	1	0	7	0	0	0	0	0	1	2	0	0	3	0	13	13
04:30 PM	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	3	0	0	3	0	7	7
04:45 PM	0	0	1	0	1	0	4	0	0	4	0	0	0	0	0	2	0	1	1	3	1	8	9
Total	1	1	5	1	7	2	20	1	0	23	1	0	0	0	1	3	8	1	1	12	2	43	45
05:00 PM	0	0	2	1	2	0	2	2	1	4	0	2	0	0	2	1	3	0	0	4	2	12	14
05:15 PM	0	0	1	1	1	0	1	2	1	3	0	0	0	0	0	0	2	1	0	3	2	7	9
05:30 PM	0	0	1	0	1	0	3	1	0	4	1	0	0	0	1	1	3	0	0	4	0	10	10
05:45 PM	0	0	1	1	1	0	1	1	0	2	1	0	0	0	1	1	3	0	0	4	1	8	9
Total	0	0	5	3	5	0	7	6	2	13	2	2	0	0	4	3	11	1	0	15	5	37	42
Grand Total	1	1	10	4	12	2	27	7	2	36	3	2	0	0	5	6	19	2	1	27	7	80	87
Apprch %	8.3	8.3	83.3			5.6	75	19.4			60	40	0			22.2	70.4	7.4					
Total %	1.2	1.2	12.5		15	2.5	33.8	8.8		45	3.8	2.5	0		6.2	7.5	23.8	2.5		33.8	8	92	

3.1-96

	Perris Boulevard Southbound				Ramona Expressway Westbound				Perris Boulevard Northbound				Ramona Expressway Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	0	0	0	0	**4**	0	**4**	0	0	0	0	0	**3**	0	3	7
04:45 PM	0	0	1	1	0	4	0	4	0	0	0	0	**2**	0	**1**	3	8
05:00 PM	0	0	**2**	**2**	0	2	**2**	4	0	**2**	0	**2**	1	3	0	**4**	**12**
05:15 PM	0	0	1	1	0	1	2	3	0	0	0	0	0	2	1	3	7
Total Volume	0	0	4	4	0	11	4	15	0	2	0	2	3	8	2	13	34
% App. Total	0	0	100		0	73.3	26.7		0	100	0		23.1	61.5	15.4		
PHF	.000	.000	.500	.500	.000	.688	.500	.938	.000	.250	.000	.250	.375	.667	.500	.813	.708

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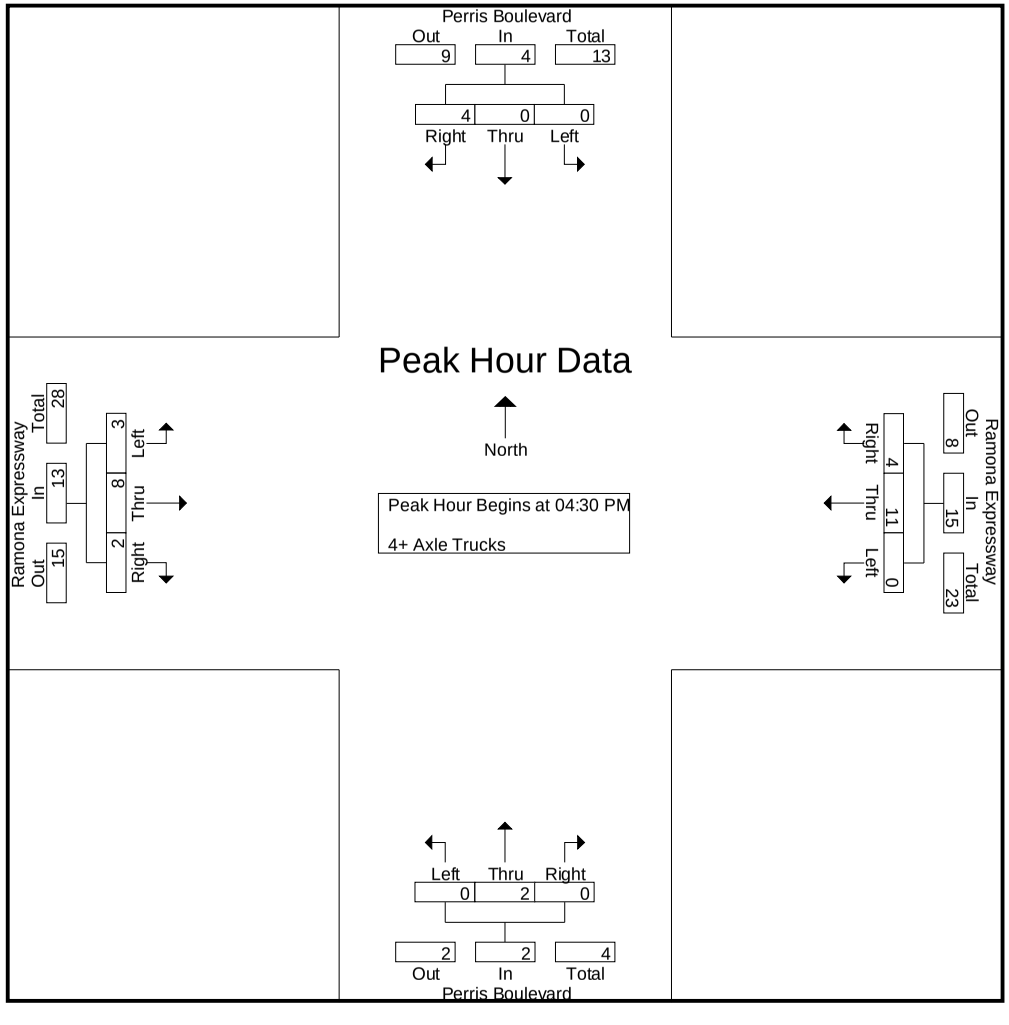
City of Perris
N/S: Perris Boulevard
E/W: Ramona Expressway
Weather: Clear

File Name : 22_PER_Perris_Ram PM
Site Code : 05120169
Start Date : 3/11/2020
Page No : 2



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Site Code : 05120169
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Page No : 3

	Perris Boulevard Southbound				Ramona Expressway Westbound				Perris Boulevard Northbound				Ramona Expressway Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:30 PM				04:30 PM				04:30 PM				04:30 PM				
+0 mins.	0	0	0	0	0	**4**	0	**4**	0	0	0	0	0	**3**	0	3	
+15 mins.	0	0	1	1	0	4	0	4	0	0	0	0	**2**	0	**1**	3	
+30 mins.	0	0	**2**	**2**	0	2	**2**	4	0	**2**	0	**2**	1	3	0	**4**	
+45 mins.	0	0	1	1	0	1	2	3	0	0	0	0	0	2	1	3	
Total Volume	0	0	4	4	0	11	4	15	0	2	0	2	3	8	2	13	
% App. Total	0	0	100		0	73.3	26.7		0	100	0		23.1	61.5	15.4		
PHF	.000	.000	.500	.500	.000	.688	.500	.938	.000	.250	.000	.250	.375	.667	.500	.813	

Location: Perris
N/S: Perris Boulevard
E/W: Ramona Expressway

Date: 3/11/2020
Day: Wednesday

PEDESTRIANS

	North Leg Perris Boulevard	East Leg Ramona Expressway	South Leg Perris Boulevard	West Leg Ramona Expressway	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
7:00 AM	3	0	1	0	4
7:15 AM	0	0	0	0	0
7:30 AM	0	0	1	0	1
7:45 AM	1	1	1	0	3
8:00 AM	0	0	1	0	1
8:15 AM	0	1	0	0	1
8:30 AM	0	0	0	1	1
8:45 AM	0	1	0	0	1
TOTAL VOLUMES:	4	3	4	1	12

	North Leg Perris Boulevard	East Leg Ramona Expressway	South Leg Perris Boulevard	West Leg Ramona Expressway	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
4:00 PM	0	2	1	1	4
4:15 PM	0	1	2	1	4
4:30 PM	2	1	2	0	5
4:45 PM	0	0	0	3	3
5:00 PM	0	0	0	0	0
5:15 PM	3	0	0	0	3
5:30 PM	2	1	0	2	5
5:45 PM	1	2	0	0	3
TOTAL VOLUMES:	8	7	5	7	27

Location: Perris
N/S: Perris Boulevard
E/W: Ramona Expressway

Date: 3/11/2020
Day: Wednesday

BICYCLES

	Southbound Perris Boulevard			Westbound Ramona Expressway			Northbound Perris Boulevard			Eastbound Ramona Expressway			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	1	0	1	0	0	0	0	0	0	0	0	2
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	1	0	0	0	0	0	0	0	1
TOTAL VOLUMES:	0	1	0	1	1	0	0	0	0	0	0	0	3

	Southbound Perris Boulevard			Westbound Ramona Expressway			Northbound Perris Boulevard			Eastbound Ramona Expressway			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	1	0	0	0	0	0	0	0	0	0	0	1
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	1	0	0	0	0	0	0	0	0	0	0	1

Counts Unlimited, Inc.

PO Box 1178
Corona, CA 92878
Phone: (951) 268-6268
email: counts@countsunlimited.com

City of Perris
Indian Avenue
N/ Ramona Expressway
24 Hour Directional Classification Count

PER002
Site Code: 051-18430

Northbound, Southbound

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
05/24/18	8	24	7	2	2	6	0	6	5	0	0	0	0	60
01:00	6	13	5	0	3	6	0	**17**	4	0	0	0	0	54
02:00	2	17	6	0	3	10	0	15	7	0	0	0	0	60
03:00	4	111	20	0	1	9	0	15	13	0	0	0	0	173
04:00	6	186	27	0	8	8	0	9	11	0	0	0	0	255
05:00	6	214	**61**	1	16	5	0	12	4	0	0	0	0	319
06:00	4	199	52	4	21	10	0	7	14	0	**9**	0	0	320
07:00	**15**	**255**	56	1	20	16	0	3	11	0	4	0	0	**381**
08:00	9	111	44	3	18	9	0	3	18	0	6	0	0	221
09:00	14	92	38	**7**	15	14	1	6	12	0	2	0	**1**	202
10:00	11	111	43	1	27	13	0	13	14	0	4	0	0	237
11:00	15	136	30	6	**31**	**19**	**4**	13	**31**	0	2	0	0	287
12 PM	11	143	41	2	**28**	15	1	**15**	**28**	0	**1**	0	0	285
13:00	14	272	57	3	19	13	0	11	17	0	0	0	0	406
14:00	16	**283**	74	1	21	11	0	10	18	0	0	0	0	434
15:00	**21**	204	62	**5**	21	23	0	7	5	0	0	0	0	348
16:00	16	282	**78**	2	22	**29**	**4**	10	10	**1**	0	0	0	**454**
17:00	19	230	66	1	20	15	2	8	6	0	0	0	**1**	368
18:00	17	148	29	0	12	12	0	7	6	0	1	0	0	232
19:00	9	90	25	0	9	8	0	7	5	0	0	0	0	153
20:00	6	62	16	1	6	7	0	3	8	0	0	0	0	109
21:00	6	59	4	0	4	8	0	2	7	0	0	0	0	90
22:00	15	81	14	0	7	9	0	1	6	0	0	0	0	133
23:00	8	90	16	1	6	4	0	2	5	0	1	0	0	133
Total	258	3413	871	41	340	279	12	202	265	1	30	0	2	5714
Percent	4.5%	59.7%	15.2%	0.7%	6.0%	4.9%	0.2%	3.5%	4.6%	0.0%	0.5%	0.0%	0.0%	
AM Peak	07:00	07:00	05:00	09:00	11:00	11:00	11:00	01:00	11:00		06:00		09:00	07:00
Vol.	15	255	61	7	31	19	4	17	31		9		1	381
PM Peak	15:00	14:00	16:00	15:00	12:00	16:00	16:00	12:00	12:00	16:00	12:00		17:00	16:00
Vol.	21	283	78	5	28	29	4	15	28	1	1		1	454
Grand Total	258	3413	871	41	340	279	12	202	265	1	30	0	2	5714
Percent	4.5%	59.7%	15.2%	0.7%	6.0%	4.9%	0.2%	3.5%	4.6%	0.0%	0.5%	0.0%	0.0%	

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City of Perris
Ramona Expressway
W/ Indian Avenue
24 Hour Directional Classification Count

PER001
Site Code: 051-18430

Eastbound, Westbound

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
05/24/18	12	461	70	8	14	19	0	3	15	0	1	0	1	604
01:00	15	271	47	2	9	25	0	2	31	0	1	0	0	403
02:00	14	320	63	5	16	26	1	14	33	0	2	1	0	495
03:00	16	590	139	7	34	38	0	22	31	1	1	0	0	879
04:00	16	1107	304	8	92	30	1	35	23	3	1	1	1	1622
05:00	30	1373	363	10	152	39	0	49	25	3	2	**2**	0	2048
06:00	34	1540	**412**	24	**173**	44	4	**51**	45	3	**10**	0	1	2341
07:00	35	**1739**	384	21	148	29	2	34	50	1	5	1	0	**2449**
08:00	28	1347	349	**28**	147	44	1	37	51	1	4	1	1	2039
09:00	32	1217	320	28	131	41	2	41	72	2	3	0	0	1889
10:00	**36**	1134	298	17	121	44	1	25	71	**4**	5	1	1	1758
11:00	34	1302	370	27	142	**54**	**7**	40	**101**	4	5	0	**3**	2089
12 PM	33	1324	347	14	136	**50**	3	34	**90**	2	1	0	3	2037
13:00	31	1645	367	**27**	127	45	2	**44**	85	1	2	0	1	2377
14:00	36	1764	388	21	130	49	2	37	70	**6**	**4**	1	**5**	2513
15:00	36	1787	**467**	20	**160**	36	1	38	56	3	4	1	1	**2610**
16:00	**42**	1774	440	19	142	50	**5**	31	57	2	1	**2**	2	2567
17:00	37	**1867**	424	14	120	36	4	30	30	4	1	1	0	2568
18:00	29	1587	331	16	94	41	1	40	40	1	2	0	3	2185
19:00	26	1465	315	11	93	27	0	18	34	4	2	1	0	1996
20:00	24	1185	234	2	64	27	1	16	38	0	0	0	0	1591
21:00	23	1091	167	2	63	35	1	11	33	0	0	1	0	1427
22:00	21	850	170	2	37	19	1	3	35	0	2	0	0	1140
23:00	17	592	94	2	25	26	1	2	21	0	2	0	1	783
Total	657	29332	6863	335	2370	874	41	657	1137	45	61	14	24	42410
Percent	1.5%	69.2%	16.2%	0.8%	5.6%	2.1%	0.1%	1.5%	2.7%	0.1%	0.1%	0.0%	0.1%	
AM Peak	10:00	07:00	06:00	08:00	06:00	11:00	11:00	06:00	11:00	10:00	06:00	05:00	11:00	07:00
Vol.	36	1739	412	28	173	54	7	51	101	4	10	2	3	2449
PM Peak	16:00	17:00	15:00	13:00	15:00	12:00	16:00	13:00	12:00	14:00	14:00	16:00	14:00	15:00
Vol.	42	1867	467	27	160	50	5	44	90	6	4	2	5	2610
Grand Total	657	29332	6863	335	2370	874	41	657	1137	45	61	14	24	42410
Percent	1.5%	69.2%	16.2%	0.8%	5.6%	2.1%	0.1%	1.5%	2.7%	0.1%	0.1%	0.0%	0.1%	

APPENDIX 3.2:

EXISTING (2021) CONDITIONS INTERSECTION OPERATIONS ANALYSIS WORKSHEETS

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Intersection	
Int Delay, s/veh	0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	3	413	21	0	123
Future Vol, veh/h	0	3	413	21	0	123
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	84	84	84	84	84	84
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	4	492	25	0	146

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	259	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	-	-
Pot Cap-1 Maneuver	0	746	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	746	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

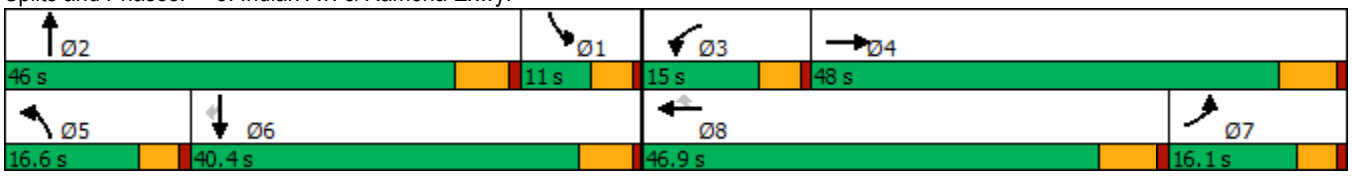
Approach	WB	NB	SB
HCM Control Delay, s	9.8	0	0
HCM LOS	A		

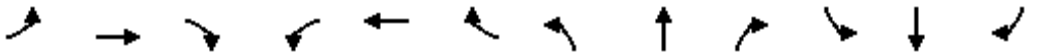
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	746	-
HCM Lane V/C Ratio	-	-	0.005	-
HCM Control Delay (s)	-	-	9.8	-
HCM Lane LOS	-	-	A	-
HCM 95th %tile Q(veh)	-	-	0	-

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	165	1025	58	1519	100	86	169	18	69	36
Future Volume (vph)	165	1025	58	1519	100	86	169	18	69	36
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Prot	NA	Perm
Protected Phases	7	4	3	8		5	2	1	6	
Permitted Phases					8					6
Detector Phase	7	4	3	8	8	5	2	1	6	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	46.2	9.6	40.2	40.2	9.6	43.8	9.6	34.8	34.8
Total Split (s)	16.1	48.0	15.0	46.9	46.9	16.6	46.0	11.0	40.4	40.4
Total Split (%)	13.4%	40.0%	12.5%	39.1%	39.1%	13.8%	38.3%	9.2%	33.7%	33.7%
Yellow Time (s)	3.6	5.2	3.6	5.2	5.2	3.6	4.8	3.6	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	4.6	6.2	6.2	4.6	5.8	4.6	5.8	5.8
Lead/Lag	Lag	Lag	Lead	Lead	Lead	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 89.5
Natural Cycle: 110
Control Type: Actuated-Uncoordinated

Splits and Phases: 3: Indian Av. & Ramona Exwy.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	165	1025	95	58	1519	100	86	169	29	18	69	36
Future Volume (veh/h)	165	1025	95	58	1519	100	86	169	29	18	69	36
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	168	1046	95	59	1550	73	88	172	19	18	70	30
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	206	2388	217	83	2104	653	114	438	48	82	473	211
Arrive On Green	0.11	0.49	0.49	0.05	0.41	0.41	0.06	0.13	0.13	0.05	0.13	0.13
Sat Flow, veh/h	1810	4840	439	1810	5187	1610	1810	3281	358	1810	3610	1610
Grp Volume(v), veh/h	168	747	394	59	1550	73	88	94	97	18	70	30
Grp Sat Flow(s),veh/h/ln	1810	1729	1821	1810	1729	1610	1810	1805	1834	1810	1805	1610
Q Serve(g_s), s	7.2	11.1	11.1	2.6	20.1	2.2	3.8	3.8	3.9	0.8	1.4	0.9
Cycle Q Clear(g_c), s	7.2	11.1	11.1	2.6	20.1	2.2	3.8	3.8	3.9	0.8	1.4	0.9
Prop In Lane	1.00		0.24	1.00		1.00	1.00		0.20	1.00		1.00
Lane Grp Cap(c), veh/h	206	1706	898	83	2104	653	114	241	245	82	473	211
V/C Ratio(X)	0.82	0.44	0.44	0.71	0.74	0.11	0.77	0.39	0.40	0.22	0.15	0.14
Avail Cap(c_a), veh/h	262	1818	957	237	2656	824	273	913	927	146	1571	701
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.4	13.0	13.0	37.4	20.0	14.7	36.7	31.5	31.5	36.6	30.6	14.8
Incr Delay (d2), s/veh	11.7	0.2	0.3	4.2	0.8	0.1	4.1	1.0	1.0	0.5	0.1	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.6	3.6	3.8	1.1	7.0	0.7	1.7	1.6	1.7	0.3	0.6	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.1	13.2	13.4	41.6	20.9	14.8	40.8	32.5	32.5	37.1	30.8	15.1
LnGrp LOS	D	B	B	D	C	B	D	C	C	D	C	B
Approach Vol, veh/h		1309			1682			279			118	
Approach Delay, s/veh		17.5			21.3			35.1			27.7	
Approach LOS		B			C			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.4	16.4	8.2	45.4	9.6	16.2	15.2	38.4
Change Period (Y+Rc), s	5.8	* 5.8	4.6	6.2	4.6	5.8	6.2	* 6.2
Max Green Setting (Gmax), s	6.4	* 40	10.4	41.8	12.0	34.6	11.5	* 41
Max Q Clear Time (g_c+I1), s	2.8	5.9	4.6	13.1	5.8	3.4	9.2	22.1
Green Ext Time (p_c), s	0.0	1.0	0.0	7.7	0.0	0.4	0.0	10.1

Intersection Summary	
HCM 6th Ctrl Delay	21.2
HCM 6th LOS	C

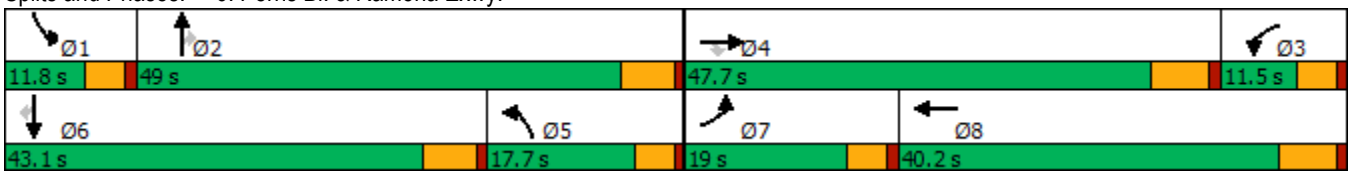
Notes

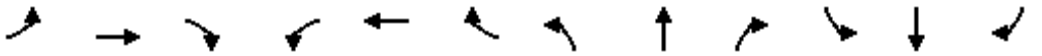
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	323	642	107	92	1176	287	763	91	99	323	191
Future Volume (vph)	323	642	107	92	1176	287	763	91	99	323	191
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8	5	2		1	6	
Permitted Phases			4					2			6
Detector Phase	7	4	4	3	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	36.2	36.2	9.6	34.2	9.6	38.8	38.8	9.6	41.8	41.8
Total Split (s)	19.0	47.7	47.7	11.5	40.2	17.7	49.0	49.0	11.8	43.1	43.1
Total Split (%)	15.8%	39.8%	39.8%	9.6%	33.5%	14.8%	40.8%	40.8%	9.8%	35.9%	35.9%
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	3.6	4.8	4.8	3.6	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	6.2	4.6	6.2	4.6	5.8	5.8	4.6	5.8	5.8
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 103.7
Natural Cycle: 100
Control Type: Actuated-Uncoordinated

Splits and Phases: 6: Perris Bl. & Ramona Exwy.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	323	642	107	92	1176	136	287	763	91	99	323	191
Future Volume (veh/h)	323	642	107	92	1176	136	287	763	91	99	323	191
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	330	655	64	94	1200	120	293	779	45	101	330	136
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	410	1036	320	758	1517	152	627	1010	450	180	501	224
Arrive On Green	0.12	0.20	0.20	0.22	0.32	0.32	0.18	0.28	0.28	0.05	0.14	0.14
Sat Flow, veh/h	3510	5187	1603	3510	4791	479	3510	3610	1608	3510	3610	1610
Grp Volume(v), veh/h	330	655	64	94	866	454	293	779	45	101	330	136
Grp Sat Flow(s),veh/h/ln	1755	1729	1603	1755	1729	1812	1755	1805	1608	1755	1805	1610
Q Serve(g_s), s	8.2	10.4	3.0	1.9	20.5	20.5	6.7	17.8	1.0	2.5	7.8	5.2
Cycle Q Clear(g_c), s	8.2	10.4	3.0	1.9	20.5	20.5	6.7	17.8	1.0	2.5	7.8	5.2
Prop In Lane	1.00		1.00	1.00		0.26	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	410	1036	320	758	1095	574	627	1010	450	180	501	224
V/C Ratio(X)	0.81	0.63	0.20	0.12	0.79	0.79	0.47	0.77	0.10	0.56	0.66	0.61
Avail Cap(c_a), veh/h	562	2394	740	758	1308	685	627	1735	773	281	1498	668
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.7	33.0	30.0	28.4	28.0	28.0	33.1	29.7	6.4	41.7	36.7	19.4
Incr Delay (d2), s/veh	4.2	0.6	0.3	0.0	2.8	5.3	0.2	1.3	0.1	1.0	1.5	2.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.6	4.1	1.1	0.8	8.1	8.9	2.7	7.3	0.7	1.1	3.4	2.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	42.9	33.6	30.3	28.4	30.8	33.3	33.3	31.0	6.5	42.7	38.2	22.1
LnGrp LOS	D	C	C	C	C	C	C	C	A	D	D	C
Approach Vol, veh/h		1049			1414			1117			567	
Approach Delay, s/veh		36.3			31.5			30.6			35.1	
Approach LOS		D			C			C			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.2	30.9	25.6	24.2	21.9	18.3	15.1	34.7
Change Period (Y+Rc), s	4.6	5.8	6.2	* 6.2	5.8	* 5.8	4.6	6.2
Max Green Setting (Gmax), s	7.2	43.2	6.9	* 42	13.1	* 37	14.4	34.0
Max Q Clear Time (g_c+I1), s	4.5	19.8	3.9	12.4	8.7	9.8	10.2	22.5
Green Ext Time (p_c), s	0.0	5.2	0.0	4.4	0.2	2.4	0.3	5.9

Intersection Summary	
HCM 6th Ctrl Delay	33.0
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	6	184	5	0	261
Future Vol, veh/h	0	6	184	5	0	261
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	7	207	6	0	293

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	107	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	-	-
Pot Cap-1 Maneuver	0	933	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	933	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

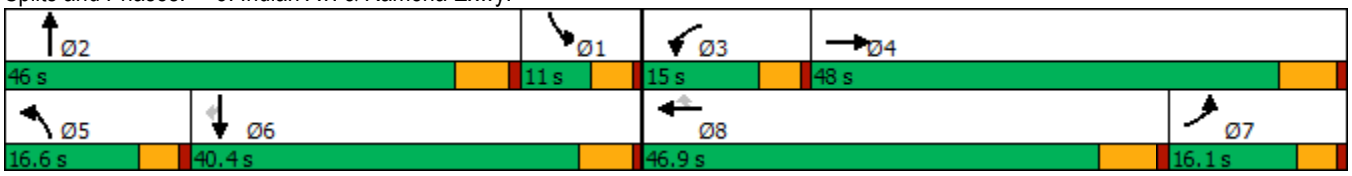
Approach	WB	NB	SB
HCM Control Delay, s	8.9	0	0
HCM LOS	A		

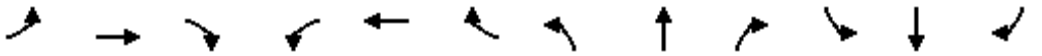
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	933	-
HCM Lane V/C Ratio	-	-	0.007	-
HCM Control Delay (s)	-	-	8.9	-
HCM Lane LOS	-	-	A	-
HCM 95th %tile Q(veh)	-	-	0	-

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	76	1545	115	1108	30	127	83	75	152	34
Future Volume (vph)	76	1545	115	1108	30	127	83	75	152	34
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Prot	NA	Perm
Protected Phases	7	4	3	8		5	2	1	6	
Permitted Phases					8					6
Detector Phase	7	4	3	8	8	5	2	1	6	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	46.2	9.6	40.2	40.2	9.6	43.8	9.6	34.8	34.8
Total Split (s)	16.1	48.0	15.0	46.9	46.9	16.6	46.0	11.0	40.4	40.4
Total Split (%)	13.4%	40.0%	12.5%	39.1%	39.1%	13.8%	38.3%	9.2%	33.7%	33.7%
Yellow Time (s)	3.6	5.2	3.6	5.2	5.2	3.6	4.8	3.6	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	4.6	6.2	6.2	4.6	5.8	4.6	5.8	5.8
Lead/Lag	Lag	Lag	Lead	Lead	Lead	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 96.5
Natural Cycle: 110
Control Type: Actuated-Uncoordinated

Splits and Phases: 3: Indian Av. & Ramona Exwy.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	76	1545	154	115	1108	30	127	83	35	75	152	34
Future Volume (veh/h)	76	1545	154	115	1108	30	127	83	35	75	152	34
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	78	1577	135	117	1131	9	130	85	16	77	155	6
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	323	2095	179	149	1630	506	164	387	71	137	458	204
Arrive On Green	0.18	0.43	0.43	0.08	0.31	0.31	0.09	0.13	0.13	0.08	0.13	0.13
Sat Flow, veh/h	1810	4867	416	1810	5187	1610	1810	3046	559	1810	3610	1610
Grp Volume(v), veh/h	78	1120	592	117	1131	9	130	49	52	77	155	6
Grp Sat Flow(s),veh/h/ln	1810	1729	1825	1810	1729	1610	1810	1805	1799	1810	1805	1610
Q Serve(g_s), s	2.9	21.5	21.5	5.0	15.1	0.3	5.5	1.9	2.0	3.2	3.1	0.2
Cycle Q Clear(g_c), s	2.9	21.5	21.5	5.0	15.1	0.3	5.5	1.9	2.0	3.2	3.1	0.2
Prop In Lane	1.00		0.23	1.00		1.00	1.00		0.31	1.00		1.00
Lane Grp Cap(c), veh/h	323	1489	786	149	1630	506	164	229	228	137	458	204
V/C Ratio(X)	0.24	0.75	0.75	0.78	0.69	0.02	0.79	0.22	0.23	0.56	0.34	0.03
Avail Cap(c_a), veh/h	323	1836	969	239	2681	832	276	922	919	147	1586	708
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.8	18.9	18.9	35.4	23.7	18.6	35.1	30.8	30.9	35.1	31.4	11.6
Incr Delay (d2), s/veh	0.1	1.4	2.7	3.4	0.5	0.0	3.2	0.5	0.5	2.1	0.4	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	7.5	8.2	2.2	5.5	0.1	2.5	0.8	0.9	1.4	1.3	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.9	20.3	21.6	38.9	24.2	18.6	38.3	31.3	31.4	37.2	31.8	11.7
LnGrp LOS	C	C	C	D	C	B	D	C	C	D	C	B
Approach Vol, veh/h		1790			1257			231			238	
Approach Delay, s/veh		21.0			25.5			35.2			33.0	
Approach LOS		C			C			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.8	15.8	11.1	40.1	11.8	15.8	20.3	30.9
Change Period (Y+Rc), s	5.8	* 5.8	4.6	6.2	4.6	5.8	6.2	* 6.2
Max Green Setting (Gmax), s	6.4	* 40	10.4	41.8	12.0	34.6	11.5	* 41
Max Q Clear Time (g_c+I1), s	5.2	4.0	7.0	23.5	7.5	5.1	4.9	17.1
Green Ext Time (p_c), s	0.0	0.5	0.0	10.4	0.1	0.9	0.0	7.7

Intersection Summary	
HCM 6th Ctrl Delay	24.4
HCM 6th LOS	C

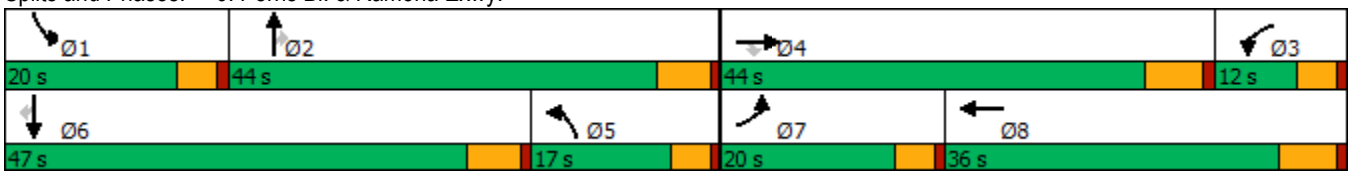
Notes

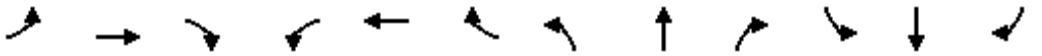
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	254	1149	252	94	790	201	379	102	248	607	191
Future Volume (vph)	254	1149	252	94	790	201	379	102	248	607	191
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8	5	2		1	6	
Permitted Phases			4					2			6
Detector Phase	7	4	4	3	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	36.2	36.2	9.6	34.2	9.6	38.8	38.8	9.6	41.8	41.8
Total Split (s)	20.0	44.0	44.0	12.0	36.0	17.0	44.0	44.0	20.0	47.0	47.0
Total Split (%)	16.7%	36.7%	36.7%	10.0%	30.0%	14.2%	36.7%	36.7%	16.7%	39.2%	39.2%
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	3.6	4.8	4.8	3.6	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	6.2	4.6	6.2	4.6	5.8	5.8	4.6	5.8	5.8
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 92.7
Natural Cycle: 100
Control Type: Actuated-Uncoordinated

Splits and Phases: 6: Perris Bl. & Ramona Exwy.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	254	1149	252	94	790	127	201	379	102	248	607	191
Future Volume (veh/h)	254	1149	252	94	790	127	201	379	102	248	607	191
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	262	1185	160	97	814	118	207	391	54	256	626	123
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	351	1686	522	190	1367	197	292	885	394	345	887	394
Arrive On Green	0.10	0.33	0.33	0.05	0.30	0.30	0.08	0.25	0.25	0.10	0.25	0.25
Sat Flow, veh/h	3510	5187	1607	3510	4576	659	3510	3610	1608	3510	3610	1604
Grp Volume(v), veh/h	262	1185	160	97	614	318	207	391	54	256	626	123
Grp Sat Flow(s),veh/h/ln	1755	1729	1607	1755	1729	1777	1755	1805	1608	1755	1805	1604
Q Serve(g_s), s	6.0	16.4	6.1	2.2	12.4	12.6	4.7	7.5	1.6	5.8	13.0	3.6
Cycle Q Clear(g_c), s	6.0	16.4	6.1	2.2	12.4	12.6	4.7	7.5	1.6	5.8	13.0	3.6
Prop In Lane	1.00		1.00	1.00		0.37	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	351	1686	522	190	1033	531	292	885	394	345	887	394
V/C Ratio(X)	0.75	0.70	0.31	0.51	0.59	0.60	0.71	0.44	0.14	0.74	0.71	0.31
Avail Cap(c_a), veh/h	658	2385	739	316	1253	644	529	1677	747	658	1809	804
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.0	24.3	20.8	37.8	24.6	24.6	36.7	26.3	13.1	36.1	28.3	12.4
Incr Delay (d2), s/veh	1.2	0.5	0.3	0.8	0.6	1.1	1.2	0.3	0.2	1.2	1.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	6.0	2.1	0.9	4.6	4.9	2.0	3.0	0.8	2.4	5.3	1.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	37.2	24.8	21.1	38.6	25.1	25.7	37.9	26.6	13.2	37.2	29.3	12.8
LnGrp LOS	D	C	C	D	C	C	D	C	B	D	C	B
Approach Vol, veh/h		1607			1029			652			1005	
Approach Delay, s/veh		26.5			26.6			29.1			29.3	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.7	26.0	10.7	32.9	12.6	26.0	12.8	30.8
Change Period (Y+Rc), s	4.6	5.8	6.2	* 6.2	5.8	* 5.8	4.6	6.2
Max Green Setting (Gmax), s	15.4	38.2	7.4	* 38	12.4	* 41	15.4	29.8
Max Q Clear Time (g_c+I1), s	7.8	9.5	4.2	18.4	6.7	15.0	8.0	14.6
Green Ext Time (p_c), s	0.3	2.6	0.0	8.0	0.2	4.4	0.3	4.8

Intersection Summary	
HCM 6th Ctrl Delay	27.6
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

APPENDIX 4.1:

POST-PROCESSING WORKSHEETS

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Project: Ramona-Indian Warehouse Project
Scenario: 2040

Job #: 13758
Analyst: RV
Date: 6/30/21

LOCATION: Indian & Ramona
FORECAST YEAR: 2040

INDIVIDUAL TURN VOLUME GROWTH REVIEW

		AM PEAK HOUR INPUT DATA				PM PEAK HOUR INPUT DATA			
APPROACH	TURNING MOVEMENT	EXISTING COUNT	FUTURE VOLUME	DIFF-ERENCE	% CHANGE	EXISTING COUNT	FUTURE VOLUME	DIFF-ERENCE	% CHANGE
NORTH BOUND	Left	1	131	130	13000%	1	252	251	25100%
	Through	2	127	125	6250%	2	249	247	12350%
	Right	1	51	50	5000%	1	200	199	19900%
	NB Total	4	309	305	7625%	4	701	697	17425%
SOUTH BOUND	Left	1	58	57	5700%	1	292	291	29100%
	Through	2	143	141	7050%	2	341	339	16950%
	Right	1	149	148	14800%	1	368	367	36700%
	SB Total	4	350	346	8650%	4	1,001	997	24925%
EAST BOUND	Left	1	195	194	19400%	1	236	235	23500%
	Through	2	703	701	35050%	2	1,698	1,696	84800%
	Right	1	192	191	19100%	1	220	219	21900%
	EB Total	4	1,090	1,086	27150%	4	2,154	2,150	53750%
WEST BOUND	Left	1	177	176	17600%	1	89	88	8800%
	Through	2	1,664	1,662	83100%	2	861	859	42950%
	Right	1	179	178	17800%	1	95	94	9400%
	WB Total	4	2,020	2,016	50400%	4	1,045	1,041	26025%
TOTAL ENTERING VOLUME		16	3,769	3753	23456%	16	4,901	4885	30531%

FORECAST PEAK HOUR TO ADT COMPARISON

		VOLUMES		PERCENT OF ADT		
		AM	PM	AM	PM	ADT
North Leg	Inbound	350	1,001			
North Leg	Outbound	501	580			
North Leg	**TOTAL**	**851**	**1,581**	**8%**	**14%**	**11,045**
South Leg	Inbound	309	701			
South Leg	Outbound	512	650			
South Leg	**TOTAL**	**821**	**1,351**	**6%**	**10%**	**13,392**
East Leg	Inbound	2,020	1,045			
East Leg	Outbound	812	2,190			
East Leg	**TOTAL**	**2,832**	**3,235**	**7%**	**8%**	**38,073**
West Leg	Inbound	1,090	2,154			
West Leg	Outbound	1,944	1,481			
West Leg	**TOTAL**	**3,034**	**3,635**	**8%**	**9%**	**40,338**
OVERALL TOTAL		***7,538***	***9,802***	**7%**	***10%***	***102,848***

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Project: Ramona-Indian Warehouse Project
Scenario: 2040

Job #: 13758
Analyst: RV
Date: 6/30/21

LOCATION: Perris & Ramona
FORECAST YEAR: 2040

INDIVIDUAL TURN VOLUME GROWTH REVIEW

		AM PEAK HOUR INPUT DATA				PM PEAK HOUR INPUT DATA			
APPROACH	TURNING MOVEMENT	EXISTING COUNT	FUTURE VOLUME	DIFF-ERENCE	% CHANGE	EXISTING COUNT	FUTURE VOLUME	DIFF-ERENCE	% CHANGE
NORTH BOUND	Left	1	304	303	30300%	1	195	194	19400%
	Through	2	760	758	37900%	2	649	647	32350%
	Right	1	116	115	11500%	1	246	245	24500%
	NB Total	4	1,180	1,176	29400%	4	1,090	1,086	27150%
SOUTH BOUND	Left	1	143	142	14200%	1	355	354	35400%
	Through	2	513	511	25550%	2	835	833	41650%
	Right	1	374	373	37300%	1	281	280	28000%
	SB Total	4	1,030	1,026	25650%	4	1,471	1,467	36675%
EAST BOUND	Left	1	277	276	27600%	1	412	411	41100%
	Through	2	381	379	18950%	2	1,409	1,407	70350%
	Right	1	152	151	15100%	1	368	367	36700%
	EB Total	4	810	806	20150%	4	2,189	2,185	54625%
WEST BOUND	Left	1	205	204	20400%	1	187	186	18600%
	Through	2	1,342	1,340	67000%	2	565	563	28150%
	Right	1	373	372	37200%	1	209	208	20800%
	WB Total	4	1,920	1,916	47900%	4	961	957	23925%
TOTAL ENTERING VOLUME		16	4,940	4924	30775%	16	5,711	5695	35594%

FORECAST PEAK HOUR TO ADT COMPARISON

		VOLUMES		PERCENT OF ADT		
		AM	PM	AM	PM	ADT
North Leg	Inbound	1,030	1,471			
North Leg	Outbound	1,410	1,270			
North Leg	**TOTAL**	**2,440**	**2,741**	**7%**	**8%**	**32,687**
South Leg	Inbound	1,180	1,090			
South Leg	Outbound	870	1,390			
South Leg	**TOTAL**	**2,050**	**2,480**	**8%**	**9%**	**26,493**
East Leg	Inbound	1,920	961			
East Leg	Outbound	640	2,010			
East Leg	**TOTAL**	**2,560**	**2,971**	**7%**	**8%**	**34,987**
West Leg	Inbound	810	2,189			
West Leg	Outbound	2,020	1,041			
West Leg	**TOTAL**	**2,830**	**3,230**	**7%**	**8%**	**38,073**
OVERALL TOTAL		***9,880***	***11,422***	***7%***	***9%***	***132,240***

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APPENDIX 5.1:

E+P CONDITIONS INTERSECTION OPERATIONS ANALYSIS WORKSHEETS

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Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	3	429	41	0	133
Future Vol, veh/h	0	3	429	41	0	133
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	84	84	84	84	84	84
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	4	511	49	0	158

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	280	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	-	-
Pot Cap-1 Maneuver	0	723	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	723	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	723	-
HCM Lane V/C Ratio	-	-	0.005	-
HCM Control Delay (s)	-	-	10	-
HCM Lane LOS	-	-	B	-
HCM 95th %tile Q(veh)	-	-	0	-

Intersection	
Int Delay, s/veh	0.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	6	463	14	10	123
Future Vol, veh/h	0	6	463	14	10	123
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	200	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	7	503	15	11	134

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	259	0	0	518	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	4.1	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	0	746	-	-	1058	-
Stage 1	0	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	746	-	-	1058	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

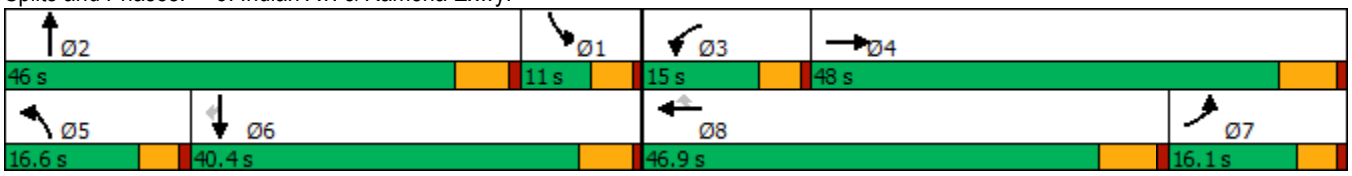
Approach	WB	NB	SB
HCM Control Delay, s	9.9	0	0.6
HCM LOS	A		

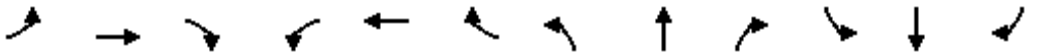
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	746	1058	-
HCM Lane V/C Ratio	-	-	0.009	0.01	-
HCM Control Delay (s)	-	-	9.9	8.4	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	0	0	-

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	185	1025	60	1531	118	86	175	18	69	36
Future Volume (vph)	185	1025	60	1531	118	86	175	18	69	36
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Prot	NA	Perm
Protected Phases	7	4	3	8		5	2	1	6	
Permitted Phases					8					6
Detector Phase	7	4	3	8	8	5	2	1	6	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	46.2	9.6	40.2	40.2	9.6	43.8	9.6	34.8	34.8
Total Split (s)	16.1	48.0	15.0	46.9	46.9	16.6	46.0	11.0	40.4	40.4
Total Split (%)	13.4%	40.0%	12.5%	39.1%	39.1%	13.8%	38.3%	9.2%	33.7%	33.7%
Yellow Time (s)	3.6	5.2	3.6	5.2	5.2	3.6	4.8	3.6	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	4.6	6.2	6.2	4.6	5.8	4.6	5.8	5.8
Lead/Lag	Lag	Lag	Lead	Lead	Lead	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 90.1
Natural Cycle: 110
Control Type: Actuated-Uncoordinated

Splits and Phases: 3: Indian Av. & Ramona Exwy.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	185	1025	95	60	1531	118	86	175	29	18	69	36
Future Volume (veh/h)	185	1025	95	60	1531	118	86	175	29	18	69	36
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	189	1046	95	61	1562	91	88	179	19	18	70	30
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	227	2433	221	83	2095	650	114	430	45	83	462	206
Arrive On Green	0.13	0.50	0.50	0.05	0.40	0.40	0.06	0.13	0.13	0.05	0.13	0.13
Sat Flow, veh/h	1810	4840	439	1810	5187	1610	1810	3295	346	1810	3610	1610
Grp Volume(v), veh/h	189	747	394	61	1562	91	88	97	101	18	70	30
Grp Sat Flow(s),veh/h/ln	1810	1729	1821	1810	1729	1610	1810	1805	1836	1810	1805	1610
Q Serve(g_s), s	8.3	11.2	11.2	2.7	20.9	2.9	3.9	4.0	4.1	0.8	1.4	0.9
Cycle Q Clear(g_c), s	8.3	11.2	11.2	2.7	20.9	2.9	3.9	4.0	4.1	0.8	1.4	0.9
Prop In Lane	1.00		0.24	1.00		1.00	1.00		0.19	1.00		1.00
Lane Grp Cap(c), veh/h	227	1738	915	83	2095	650	114	236	240	83	462	206
V/C Ratio(X)	0.83	0.43	0.43	0.73	0.75	0.14	0.77	0.41	0.42	0.22	0.15	0.15
Avail Cap(c_a), veh/h	256	1775	934	231	2592	805	267	891	906	142	1534	684
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.8	12.8	12.9	38.4	20.7	15.3	37.6	32.5	32.6	37.5	31.6	14.9
Incr Delay (d2), s/veh	17.0	0.2	0.3	4.6	0.9	0.1	4.1	1.1	1.2	0.5	0.2	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.4	3.6	3.8	1.2	7.4	1.0	1.8	1.8	1.8	0.3	0.6	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	51.8	13.0	13.2	43.0	21.7	15.4	41.7	33.7	33.7	37.9	31.7	15.2
LnGrp LOS	D	B	B	D	C	B	D	C	C	D	C	B
Approach Vol, veh/h		1330			1714			286			118	
Approach Delay, s/veh		18.6			22.1			36.2			28.5	
Approach LOS		B			C			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.5	16.4	8.3	47.1	9.7	16.2	16.4	39.1
Change Period (Y+Rc), s	5.8	* 5.8	4.6	6.2	4.6	5.8	6.2	* 6.2
Max Green Setting (Gmax), s	6.4	* 40	10.4	41.8	12.0	34.6	11.5	* 41
Max Q Clear Time (g_c+I1), s	2.8	6.1	4.7	13.2	5.9	3.4	10.3	22.9
Green Ext Time (p_c), s	0.0	1.1	0.0	7.7	0.0	0.4	0.0	10.0

Intersection Summary	
HCM 6th Ctrl Delay	22.1
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑↑	↱		↱
Traffic Vol, veh/h	0	1072	1705	10	0	3
Future Vol, veh/h	0	1072	1705	10	0	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	100	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	1165	1853	11	0	3

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	927
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	7.1
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.9
Pot Cap-1 Maneuver	0	-	-	-	0	235
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	235
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	20.5
HCM LOS			C

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	235
HCM Lane V/C Ratio	-	-	-	0.014
HCM Control Delay (s)	-	-	-	20.5
HCM Lane LOS	-	-	-	C
HCM 95th %tile Q(veh)	-	-	-	0

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	28	0	1221	613	34
Future Vol, veh/h	0	28	0	1221	613	34
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	30	0	1327	666	37

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	352	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	7.1	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.9	-	-	-	-
Pot Cap-1 Maneuver	0	555	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	555	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

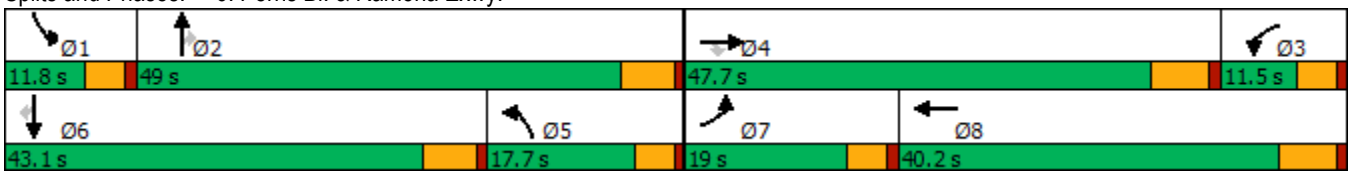
Approach	EB	NB	SB
HCM Control Delay, s	11.9	0	0
HCM LOS	B		

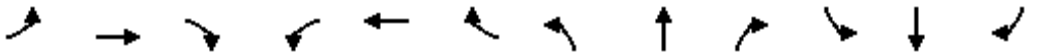
Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	555	-	-
HCM Lane V/C Ratio	-	0.055	-	-
HCM Control Delay (s)	-	11.9	-	-
HCM Lane LOS	-	B	-	-
HCM 95th %tile Q(veh)	-	0.2	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	323	642	107	92	1182	299	763	91	102	327	212
Future Volume (vph)	323	642	107	92	1182	299	763	91	102	327	212
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8	5	2		1	6	
Permitted Phases			4					2			6
Detector Phase	7	4	4	3	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	36.2	36.2	9.6	34.2	9.6	38.8	38.8	9.6	41.8	41.8
Total Split (s)	19.0	47.7	47.7	11.5	40.2	17.7	49.0	49.0	11.8	43.1	43.1
Total Split (%)	15.8%	39.8%	39.8%	9.6%	33.5%	14.8%	40.8%	40.8%	9.8%	35.9%	35.9%
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	3.6	4.8	4.8	3.6	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	6.2	4.6	6.2	4.6	5.8	5.8	4.6	5.8	5.8
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 103.9
Natural Cycle: 100
Control Type: Actuated-Uncoordinated

Splits and Phases: 6: Perris Bl. & Ramona Exwy.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	323	642	107	92	1182	136	299	763	91	102	327	212
Future Volume (veh/h)	323	642	107	92	1182	136	299	763	91	102	327	212
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	330	655	64	94	1206	120	305	779	45	104	334	157
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	409	1035	320	760	1521	151	621	1009	450	180	508	227
Arrive On Green	0.12	0.20	0.20	0.22	0.32	0.32	0.18	0.28	0.28	0.05	0.14	0.14
Sat Flow, veh/h	3510	5187	1603	3510	4793	477	3510	3610	1608	3510	3610	1610
Grp Volume(v), veh/h	330	655	64	94	870	456	305	779	45	104	334	157
Grp Sat Flow(s),veh/h/ln	1755	1729	1603	1755	1729	1812	1755	1805	1608	1755	1805	1610
Q Serve(g_s), s	8.3	10.4	3.0	1.9	20.7	20.7	7.1	17.9	1.0	2.6	7.9	6.1
Cycle Q Clear(g_c), s	8.3	10.4	3.0	1.9	20.7	20.7	7.1	17.9	1.0	2.6	7.9	6.1
Prop In Lane	1.00		1.00	1.00		0.26	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	409	1035	320	760	1097	575	621	1009	450	180	508	227
V/C Ratio(X)	0.81	0.63	0.20	0.12	0.79	0.79	0.49	0.77	0.10	0.58	0.66	0.69
Avail Cap(c_a), veh/h	561	2388	738	760	1304	684	621	1730	771	280	1494	666
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.8	33.1	30.1	28.4	28.1	28.1	33.4	29.8	6.4	41.8	36.7	19.6
Incr Delay (d2), s/veh	4.2	0.6	0.3	0.0	2.9	5.4	0.2	1.3	0.1	1.1	1.5	3.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.6	4.1	1.1	0.8	8.2	9.0	2.9	7.4	0.7	1.1	3.4	3.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	43.0	33.7	30.4	28.4	31.0	33.5	33.7	31.1	6.5	42.9	38.1	23.4
LnGrp LOS	D	C	C	C	C	C	C	C	A	D	D	C
Approach Vol, veh/h		1049			1420			1129			595	
Approach Delay, s/veh		36.4			31.6			30.8			35.1	
Approach LOS		D			C			C			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.2	31.0	25.7	24.2	21.7	18.5	15.1	34.8
Change Period (Y+Rc), s	4.6	5.8	6.2	* 6.2	5.8	* 5.8	4.6	6.2
Max Green Setting (Gmax), s	7.2	43.2	6.9	* 42	13.1	* 37	14.4	34.0
Max Q Clear Time (g_c+I1), s	4.6	19.9	3.9	12.4	9.1	9.9	10.3	22.7
Green Ext Time (p_c), s	0.0	5.2	0.0	4.4	0.2	2.5	0.3	5.9

Intersection Summary	
HCM 6th Ctrl Delay	33.1
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	6	210	28	0	271
Future Vol, veh/h	0	6	210	28	0	271
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	7	236	31	0	304

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	134	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	-	-
Pot Cap-1 Maneuver	0	897	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	897	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	897	-
HCM Lane V/C Ratio	-	-	0.008	-
HCM Control Delay (s)	-	-	9	-
HCM Lane LOS	-	-	A	-
HCM 95th %tile Q(veh)	-	-	0	-

Intersection	
Int Delay, s/veh	0.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	11	228	4	10	261
Future Vol, veh/h	0	11	228	4	10	261
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	200	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	12	248	4	11	284

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	126	0	0	252	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	4.1	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	0	907	-	-	1325	-
Stage 1	0	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	907	-	-	1325	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

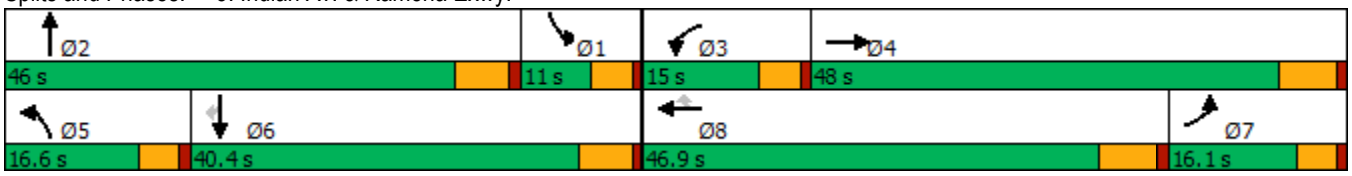
Approach	WB	NB	SB
HCM Control Delay, s	9	0	0.3
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	907	1325	-
HCM Lane V/C Ratio	-	-	0.013	0.008	-
HCM Control Delay (s)	-	-	9	7.7	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	0	0	-

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	93	1545	122	1129	54	127	85	75	152	34
Future Volume (vph)	93	1545	122	1129	54	127	85	75	152	34
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Prot	NA	Perm
Protected Phases	7	4	3	8		5	2	1	6	
Permitted Phases					8					6
Detector Phase	7	4	3	8	8	5	2	1	6	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	46.2	9.6	40.2	40.2	9.6	43.8	9.6	34.8	34.8
Total Split (s)	16.1	48.0	15.0	46.9	46.9	16.6	46.0	11.0	40.4	40.4
Total Split (%)	13.4%	40.0%	12.5%	39.1%	39.1%	13.8%	38.3%	9.2%	33.7%	33.7%
Yellow Time (s)	3.6	5.2	3.6	5.2	5.2	3.6	4.8	3.6	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	4.6	6.2	6.2	4.6	5.8	4.6	5.8	5.8
Lead/Lag	Lag	Lag	Lead	Lead	Lead	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 96.8
Natural Cycle: 110
Control Type: Actuated-Uncoordinated

Splits and Phases: 3: Indian Av. & Ramona Exwy.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	93	1545	154	122	1129	54	127	85	35	75	152	34
Future Volume (veh/h)	93	1545	154	122	1129	54	127	85	35	75	152	34
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	95	1577	135	124	1152	33	130	87	16	77	155	6
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	320	2088	179	157	1655	514	164	385	69	137	455	203
Arrive On Green	0.18	0.43	0.43	0.09	0.32	0.32	0.09	0.13	0.13	0.08	0.13	0.13
Sat Flow, veh/h	1810	4867	416	1810	5187	1610	1810	3058	549	1810	3610	1610
Grp Volume(v), veh/h	95	1120	592	124	1152	33	130	50	53	77	155	6
Grp Sat Flow(s),veh/h/ln	1810	1729	1825	1810	1729	1610	1810	1805	1801	1810	1805	1610
Q Serve(g_s), s	3.6	21.7	21.7	5.3	15.4	1.1	5.6	2.0	2.1	3.3	3.1	0.2
Cycle Q Clear(g_c), s	3.6	21.7	21.7	5.3	15.4	1.1	5.6	2.0	2.1	3.3	3.1	0.2
Prop In Lane	1.00		0.23	1.00		1.00	1.00		0.30	1.00		1.00
Lane Grp Cap(c), veh/h	320	1484	783	157	1655	514	164	228	227	137	455	203
V/C Ratio(X)	0.30	0.75	0.76	0.79	0.70	0.06	0.79	0.22	0.23	0.56	0.34	0.03
Avail Cap(c_a), veh/h	320	1822	962	237	2661	826	274	915	913	146	1575	702
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.4	19.1	19.1	35.5	23.6	18.8	35.3	31.2	31.2	35.4	31.7	11.9
Incr Delay (d2), s/veh	0.2	1.5	2.8	5.0	0.5	0.1	3.2	0.5	0.5	2.2	0.4	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	7.6	8.3	2.4	5.6	0.4	2.5	0.9	0.9	1.5	1.3	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	28.6	20.6	21.9	40.5	24.2	18.8	38.5	31.7	31.7	37.6	32.1	11.9
LnGrp LOS	C	C	C	D	C	B	D	C	C	D	C	B
Approach Vol, veh/h		1807			1309			233			238	
Approach Delay, s/veh		21.4			25.6			35.5			33.4	
Approach LOS		C			C			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.8	15.8	11.5	40.2	11.8	15.8	20.2	31.5
Change Period (Y+Rc), s	5.8	* 5.8	4.6	6.2	4.6	5.8	6.2	* 6.2
Max Green Setting (Gmax), s	6.4	* 40	10.4	41.8	12.0	34.6	11.5	* 41
Max Q Clear Time (g_c+I1), s	5.3	4.1	7.3	23.7	7.6	5.1	5.6	17.4
Green Ext Time (p_c), s	0.0	0.5	0.0	10.3	0.1	0.9	0.0	7.9

Intersection Summary	
HCM 6th Ctrl Delay	24.6
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑↑	↱		↱
Traffic Vol, veh/h	0	1655	1293	3	0	12
Future Vol, veh/h	0	1655	1293	3	0	12
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	100	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	1799	1405	3	0	13

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	703
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	7.1
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.9
Pot Cap-1 Maneuver	0	-	-	-	0	330
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	330
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	16.4
HCM LOS			C

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	330
HCM Lane V/C Ratio	-	-	-	0.04
HCM Control Delay (s)	-	-	-	16.4
HCM Lane LOS	-	-	-	C
HCM 95th %tile Q(veh)	-	-	-	0.1

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	48	0	760	1046	38
Future Vol, veh/h	0	48	0	760	1046	38
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	52	0	826	1137	41

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	589	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	7.1	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.9	-	-	-	-
Pot Cap-1 Maneuver	0	391	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	391	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

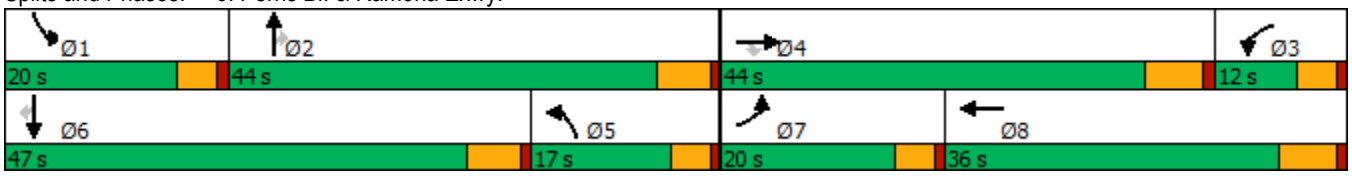
Approach	EB	NB	SB
HCM Control Delay, s	15.6	0	0
HCM LOS	C		

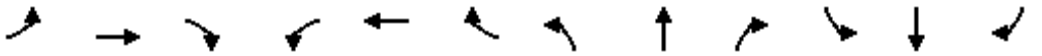
Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	391	-	-
HCM Lane V/C Ratio	-	0.133	-	-
HCM Control Delay (s)	-	15.6	-	-
HCM Lane LOS	-	C	-	-
HCM 95th %tile Q(veh)	-	0.5	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	254	1149	252	94	795	207	379	102	254	617	223
Future Volume (vph)	254	1149	252	94	795	207	379	102	254	617	223
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8	5	2		1	6	
Permitted Phases			4					2			6
Detector Phase	7	4	4	3	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	36.2	36.2	9.6	34.2	9.6	38.8	38.8	9.6	41.8	41.8
Total Split (s)	20.0	44.0	44.0	12.0	36.0	17.0	44.0	44.0	20.0	47.0	47.0
Total Split (%)	16.7%	36.7%	36.7%	10.0%	30.0%	14.2%	36.7%	36.7%	16.7%	39.2%	39.2%
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	3.6	4.8	4.8	3.6	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	6.2	4.6	6.2	4.6	5.8	5.8	4.6	5.8	5.8
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 93.5
Natural Cycle: 100
Control Type: Actuated-Uncoordinated

Splits and Phases: 6: Perris Bl. & Ramona Exwy.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	254	1149	252	94	795	127	207	379	102	254	617	223
Future Volume (veh/h)	254	1149	252	94	795	127	207	379	102	254	617	223
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	262	1185	160	97	820	118	213	391	54	262	636	156
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	350	1678	520	189	1360	194	297	897	400	350	900	400
Arrive On Green	0.10	0.32	0.32	0.05	0.30	0.30	0.08	0.25	0.25	0.10	0.25	0.25
Sat Flow, veh/h	3510	5187	1607	3510	4581	655	3510	3610	1608	3510	3610	1604
Grp Volume(v), veh/h	262	1185	160	97	618	320	213	391	54	262	636	156
Grp Sat Flow(s),veh/h/ln	1755	1729	1607	1755	1729	1778	1755	1805	1608	1755	1805	1604
Q Serve(g_s), s	6.0	16.6	6.2	2.2	12.7	12.8	4.9	7.6	1.6	6.0	13.3	4.7
Cycle Q Clear(g_c), s	6.0	16.6	6.2	2.2	12.7	12.8	4.9	7.6	1.6	6.0	13.3	4.7
Prop In Lane	1.00		1.00	1.00		0.37	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	350	1678	520	189	1026	528	297	897	400	350	900	400
V/C Ratio(X)	0.75	0.71	0.31	0.51	0.60	0.61	0.72	0.44	0.14	0.75	0.71	0.39
Avail Cap(c_a), veh/h	651	2359	731	313	1240	638	524	1659	739	651	1790	795
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.4	24.6	21.1	38.3	25.0	25.1	37.1	26.3	13.2	36.4	28.4	12.7
Incr Delay (d2), s/veh	1.2	0.6	0.3	0.8	0.6	1.1	1.2	0.3	0.2	1.2	1.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	6.1	2.2	0.9	4.8	5.0	2.0	3.1	0.8	2.5	5.4	2.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	37.6	25.2	21.5	39.1	25.6	26.2	38.3	26.6	13.3	37.6	29.5	13.3
LnGrp LOS	D	C	C	D	C	C	D	C	B	D	C	B
Approach Vol, veh/h		1607			1035			658			1054	
Approach Delay, s/veh		26.9			27.0			29.3			29.1	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.9	26.5	10.7	33.1	12.8	26.5	12.9	30.9
Change Period (Y+Rc), s	4.6	5.8	6.2	* 6.2	5.8	* 5.8	4.6	6.2
Max Green Setting (Gmax), s	15.4	38.2	7.4	* 38	12.4	* 41	15.4	29.8
Max Q Clear Time (g_c+I1), s	8.0	9.6	4.2	18.6	6.9	15.3	8.0	14.8
Green Ext Time (p_c), s	0.3	2.6	0.0	8.0	0.2	4.6	0.3	4.8

Intersection Summary	
HCM 6th Ctrl Delay	27.8
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

APPENDIX 6.1:

EAC (2023) CONDITIONS INTERSECTION OPERATIONS ANALYSIS WORKSHEETS

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Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔		↰	↑↑↱		↰	↑↑↱	
Traffic Vol, veh/h	5	0	2	0	0	3	5	652	22	0	258	15
Future Vol, veh/h	5	0	2	0	0	3	5	652	22	0	258	15
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	150	-	-	150	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	5	0	2	0	0	3	5	709	24	0	280	16

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	653	1031	148	871	1027	367	296	0	0	733	0	0
Stage 1	288	288	-	731	731	-	-	-	-	-	-	-
Stage 2	365	743	-	140	296	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	6.9	7.5	6.5	6.9	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	356	235	878	248	236	636	1277	-	-	881	-	-
Stage 1	701	677	-	384	430	-	-	-	-	-	-	-
Stage 2	632	425	-	854	672	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	353	234	878	247	235	636	1277	-	-	881	-	-
Mov Cap-2 Maneuver	353	234	-	247	235	-	-	-	-	-	-	-
Stage 1	698	677	-	382	428	-	-	-	-	-	-	-
Stage 2	626	423	-	852	672	-	-	-	-	-	-	-

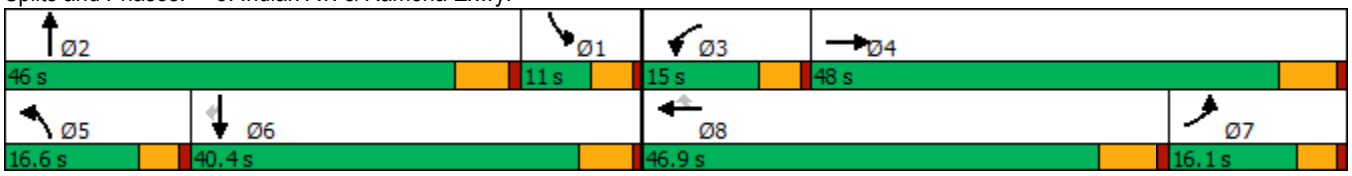
Approach	EB	WB	NB	SB
HCM Control Delay, s	13.6	10.7	0.1	0
HCM LOS	B	B		

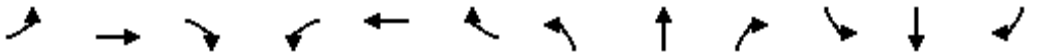
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1277	-	-	426	636	881	-	-
HCM Lane V/C Ratio	0.004	-	-	0.018	0.005	-	-	-
HCM Control Delay (s)	7.8	-	-	13.6	10.7	0	-	-
HCM Lane LOS	A	-	-	B	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0	0	-	-

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	335	1406	62	2476	156	108	188	20	99	141
Future Volume (vph)	335	1406	62	2476	156	108	188	20	99	141
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Prot	NA	Perm
Protected Phases	7	4	3	8		5	2	1	6	
Permitted Phases					8					6
Detector Phase	7	4	3	8	8	5	2	1	6	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	46.2	9.6	40.2	40.2	9.6	43.8	9.6	34.8	34.8
Total Split (s)	16.1	48.0	15.0	46.9	46.9	16.6	46.0	11.0	40.4	40.4
Total Split (%)	13.4%	40.0%	12.5%	39.1%	39.1%	13.8%	38.3%	9.2%	33.7%	33.7%
Yellow Time (s)	3.6	5.2	3.6	5.2	5.2	3.6	4.8	3.6	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	4.6	6.2	6.2	4.6	5.8	4.6	5.8	5.8
Lead/Lag	Lag	Lag	Lead	Lead	Lead	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 97.6
Natural Cycle: 120
Control Type: Actuated-Uncoordinated

Splits and Phases: 3: Indian Av. & Ramona Exwy.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	335	1406	121	62	2476	156	108	188	31	20	99	141
Future Volume (veh/h)	335	1406	121	62	2476	156	108	188	31	20	99	141
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	342	1435	121	63	2527	130	110	192	21	20	101	137
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	225	2611	220	82	2279	708	139	380	41	111	409	182
Arrive On Green	0.12	0.54	0.54	0.05	0.44	0.44	0.08	0.12	0.12	0.06	0.11	0.11
Sat Flow, veh/h	1810	4873	411	1810	5187	1610	1810	3284	355	1810	3610	1610
Grp Volume(v), veh/h	342	1018	538	63	2527	130	110	105	108	20	101	137
Grp Sat Flow(s),veh/h/ln	1810	1729	1826	1810	1729	1610	1810	1805	1834	1810	1805	1610
Q Serve(g_s), s	11.5	17.9	18.0	3.2	40.7	4.6	5.5	5.0	5.1	1.0	2.4	5.5
Cycle Q Clear(g_c), s	11.5	17.9	18.0	3.2	40.7	4.6	5.5	5.0	5.1	1.0	2.4	5.5
Prop In Lane	1.00		0.23	1.00		1.00	1.00		0.19	1.00		1.00
Lane Grp Cap(c), veh/h	225	1853	978	82	2279	708	139	209	212	111	409	182
V/C Ratio(X)	1.52	0.55	0.55	0.77	1.11	0.18	0.79	0.50	0.51	0.18	0.25	0.75
Avail Cap(c_a), veh/h	225	1853	978	203	2279	708	234	783	796	125	1349	601
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.6	14.1	14.2	43.7	26.0	15.8	42.0	38.4	38.5	41.2	37.5	20.3
Incr Delay (d2), s/veh	256.4	0.3	0.7	5.7	56.0	0.1	3.7	1.8	1.9	0.3	0.3	6.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	20.8	6.0	6.4	1.5	26.2	1.5	2.5	2.3	2.3	0.4	1.0	3.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	297.0	14.5	14.8	49.4	81.9	16.0	45.8	40.3	40.4	41.5	37.8	26.4
LnGrp LOS	F	B	B	D	F	B	D	D	D	D	D	C
Approach Vol, veh/h		1898			2720			323			258	
Approach Delay, s/veh		65.5			78.0			42.2			32.0	
Approach LOS		E			E			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.5	16.5	8.8	55.8	11.7	16.3	17.7	46.9
Change Period (Y+Rc), s	5.8	* 5.8	4.6	6.2	4.6	5.8	6.2	* 6.2
Max Green Setting (Gmax), s	6.4	* 40	10.4	41.8	12.0	34.6	11.5	* 41
Max Q Clear Time (g_c+I1), s	3.0	7.1	5.2	20.0	7.5	7.5	13.5	42.7
Green Ext Time (p_c), s	0.0	1.1	0.0	10.3	0.0	1.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	68.9
HCM 6th LOS	E

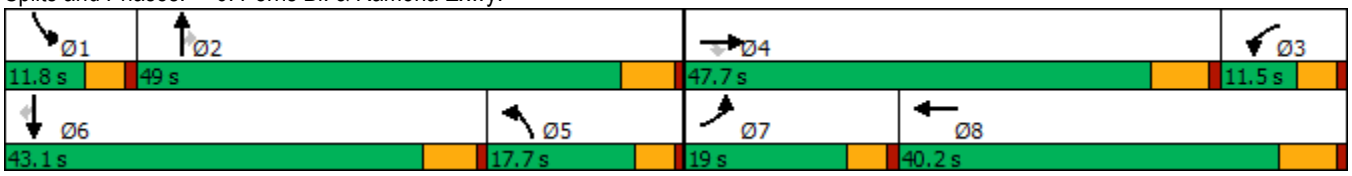
Notes

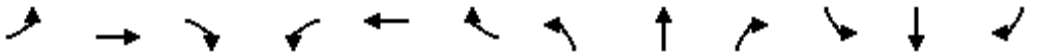
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	348	911	201	168	2101	369	850	119	143	395	218
Future Volume (vph)	348	911	201	168	2101	369	850	119	143	395	218
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8	5	2		1	6	
Permitted Phases			4					2			6
Detector Phase	7	4	4	3	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	36.2	36.2	9.6	34.2	9.6	38.8	38.8	9.6	41.8	41.8
Total Split (s)	19.0	47.7	47.7	11.5	40.2	17.7	49.0	49.0	11.8	43.1	43.1
Total Split (%)	15.8%	39.8%	39.8%	9.6%	33.5%	14.8%	40.8%	40.8%	9.8%	35.9%	35.9%
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	3.6	4.8	4.8	3.6	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	6.2	4.6	6.2	4.6	5.8	5.8	4.6	5.8	5.8
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 109.4
Natural Cycle: 120
Control Type: Actuated-Uncoordinated

Splits and Phases: 6: Perris Bl. & Ramona Exwy.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	348	911	201	168	2101	291	369	850	119	143	395	218
Future Volume (veh/h)	348	911	201	168	2101	291	369	850	119	143	395	218
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	355	930	160	171	2144	278	377	867	73	146	403	163
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	420	1293	400	630	1510	192	655	1063	474	208	563	251
Arrive On Green	0.12	0.25	0.25	0.18	0.32	0.32	0.19	0.29	0.29	0.06	0.16	0.16
Sat Flow, veh/h	3510	5187	1604	3510	4656	593	3510	3610	1609	3510	3610	1610
Grp Volume(v), veh/h	355	930	160	171	1582	840	377	867	73	146	403	163
Grp Sat Flow(s),veh/h/ln	1755	1729	1604	1755	1729	1791	1755	1805	1609	1755	1805	1610
Q Serve(g_s), s	10.4	17.2	8.7	4.4	34.0	34.0	10.3	23.4	2.1	4.3	11.1	7.4
Cycle Q Clear(g_c), s	10.4	17.2	8.7	4.4	34.0	34.0	10.3	23.4	2.1	4.3	11.1	7.4
Prop In Lane	1.00		1.00	1.00		0.33	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	420	1293	400	630	1122	581	655	1063	474	208	563	251
V/C Ratio(X)	0.85	0.72	0.40	0.27	1.41	1.45	0.58	0.82	0.15	0.70	0.72	0.65
Avail Cap(c_a), veh/h	482	2053	635	630	1122	581	655	1488	663	241	1284	573
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.2	36.0	32.8	37.1	35.4	35.4	38.9	34.3	9.3	48.4	42.0	22.8
Incr Delay (d2), s/veh	10.5	0.8	0.6	0.1	190.1	210.6	0.8	2.5	0.1	5.4	1.7	2.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.9	6.9	3.3	1.8	42.8	47.6	4.3	10.1	1.3	2.0	4.9	3.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	55.7	36.8	33.5	37.2	225.5	246.0	39.7	36.8	9.5	53.8	43.8	25.6
LnGrp LOS	E	D	C	D	F	F	D	D	A	D	D	C
Approach Vol, veh/h		1445			2593			1317			712	
Approach Delay, s/veh		41.0			219.7			36.1			41.7	
Approach LOS		D			F			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.8	36.7	25.0	32.3	25.4	22.1	17.1	40.2
Change Period (Y+Rc), s	4.6	5.8	6.2	* 6.2	5.8	* 5.8	4.6	6.2
Max Green Setting (Gmax), s	7.2	43.2	6.9	* 42	13.1	* 37	14.4	34.0
Max Q Clear Time (g_c+I1), s	6.3	25.4	6.4	19.2	12.3	13.1	12.4	36.0
Green Ext Time (p_c), s	0.0	5.5	0.0	6.5	0.1	2.9	0.2	0.0

Intersection Summary	
HCM 6th Ctrl Delay	116.4
HCM 6th LOS	F

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	14	0	5	0	0	6	2	730	5	0	513	5
Future Vol, veh/h	14	0	5	0	0	6	2	730	5	0	513	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	150	-	-	150	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	15	0	5	0	0	7	2	793	5	0	558	5

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	962	1363	282	1079	1363	399	563	0	0	798	0	0
Stage 1	561	561	-	800	800	-	-	-	-	-	-	-
Stage 2	401	802	-	279	563	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	6.9	7.5	6.5	6.9	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	213	149	721	175	149	606	1019	-	-	833	-	-
Stage 1	485	513	-	349	400	-	-	-	-	-	-	-
Stage 2	602	399	-	710	512	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	210	149	721	173	149	606	1019	-	-	833	-	-
Mov Cap-2 Maneuver	210	149	-	173	149	-	-	-	-	-	-	-
Stage 1	484	513	-	348	399	-	-	-	-	-	-	-
Stage 2	594	398	-	705	512	-	-	-	-	-	-	-

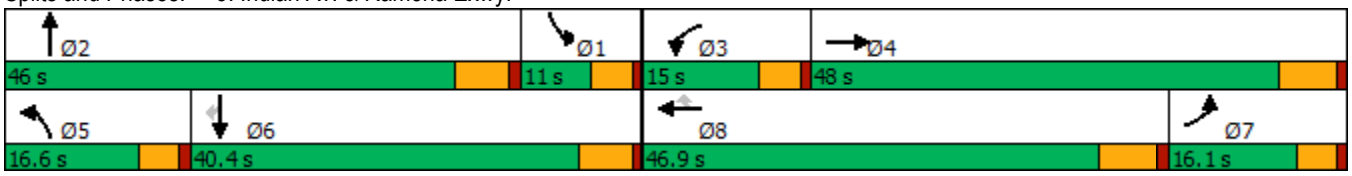
Approach	EB	WB	NB	SB
HCM Control Delay, s	20.2	11	0	0
HCM LOS	C	B		

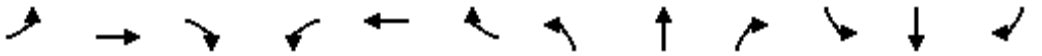
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1019	-	-	258	606	833	-	-
HCM Lane V/C Ratio	0.002	-	-	0.08	0.011	-	-	-
HCM Control Delay (s)	8.5	-	-	20.2	11	0	-	-
HCM Lane LOS	A	-	-	C	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.3	0	0	-	-

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	389	2648	122	1757	132	180	217	184	171	164
Future Volume (vph)	389	2648	122	1757	132	180	217	184	171	164
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Prot	NA	Perm
Protected Phases	7	4	3	8		5	2	1	6	
Permitted Phases					8					6
Detector Phase	7	4	3	8	8	5	2	1	6	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	46.2	9.6	40.2	40.2	9.6	43.8	9.6	34.8	34.8
Total Split (s)	16.1	48.0	15.0	46.9	46.9	16.6	46.0	11.0	40.4	40.4
Total Split (%)	13.4%	40.0%	12.5%	39.1%	39.1%	13.8%	38.3%	9.2%	33.7%	33.7%
Yellow Time (s)	3.6	5.2	3.6	5.2	5.2	3.6	4.8	3.6	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	4.6	6.2	6.2	4.6	5.8	4.6	5.8	5.8
Lead/Lag	Lag	Lag	Lead	Lead	Lead	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 100.1
Natural Cycle: 120
Control Type: Actuated-Uncoordinated

Splits and Phases: 3: Indian Av. & Ramona Exwy.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	389	2648	178	122	1757	132	180	217	39	184	171	164
Future Volume (veh/h)	389	2648	178	122	1757	132	180	217	39	184	171	164
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	397	2702	160	124	1793	113	184	221	20	188	174	138
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	221	2319	135	154	2118	658	217	357	32	194	384	171
Arrive On Green	0.12	0.46	0.46	0.09	0.41	0.41	0.12	0.11	0.11	0.11	0.11	0.11
Sat Flow, veh/h	1810	5014	292	1810	5187	1610	1810	3350	301	1810	3610	1610
Grp Volume(v), veh/h	397	1849	1013	124	1793	113	184	118	123	188	174	138
Grp Sat Flow(s),veh/h/ln	1810	1729	1847	1810	1729	1610	1810	1805	1846	1810	1805	1610
Q Serve(g_s), s	11.5	43.4	43.4	6.3	29.4	4.2	9.4	5.9	6.0	9.7	4.3	5.7
Cycle Q Clear(g_c), s	11.5	43.4	43.4	6.3	29.4	4.2	9.4	5.9	6.0	9.7	4.3	5.7
Prop In Lane	1.00		0.16	1.00		1.00	1.00		0.16	1.00		1.00
Lane Grp Cap(c), veh/h	221	1599	854	154	2118	658	217	192	196	194	384	171
V/C Ratio(X)	1.79	1.16	1.19	0.80	0.85	0.17	0.85	0.62	0.63	0.97	0.45	0.81
Avail Cap(c_a), veh/h	221	1599	854	200	2247	698	231	772	790	194	1330	593
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.2	25.3	25.3	42.2	25.1	17.7	40.5	40.1	40.2	41.8	39.4	21.3
Incr Delay (d2), s/veh	374.1	77.7	95.5	12.4	3.1	0.1	21.8	3.2	3.2	54.9	0.8	8.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	27.8	32.5	39.0	3.2	11.2	1.4	5.3	2.7	2.8	7.1	1.9	3.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	415.3	102.9	120.8	54.6	28.2	17.8	62.2	43.3	43.4	96.7	40.2	29.8
LnGrp LOS	F	F	F	D	C	B	E	D	D	F	D	C
Approach Vol, veh/h		3259			2030			425			500	
Approach Delay, s/veh		146.5			29.2			51.5			58.6	
Approach LOS		F			C			D			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.9	15.8	12.6	49.6	15.9	15.8	17.7	44.6
Change Period (Y+Rc), s	5.8	* 5.8	4.6	6.2	4.6	5.8	6.2	* 6.2
Max Green Setting (Gmax), s	6.4	* 40	10.4	41.8	12.0	34.6	11.5	* 41
Max Q Clear Time (g_c+I1), s	11.7	8.0	8.3	45.4	11.4	7.7	13.5	31.4
Green Ext Time (p_c), s	0.0	1.3	0.0	0.0	0.0	1.4	0.0	7.0

Intersection Summary	
HCM 6th Ctrl Delay	94.6
HCM 6th LOS	F

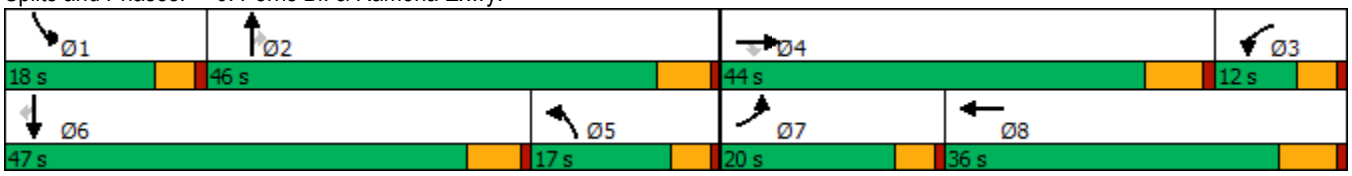
Notes

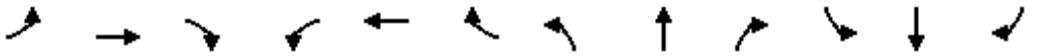
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	287	2228	355	141	1414	327	463	182	427	698	209
Future Volume (vph)	287	2228	355	141	1414	327	463	182	427	698	209
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8	5	2		1	6	
Permitted Phases			4					2			6
Detector Phase	7	4	4	3	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	36.2	36.2	9.6	34.2	9.6	38.8	38.8	9.6	41.8	41.8
Total Split (s)	20.0	44.0	44.0	12.0	36.0	17.0	46.0	46.0	18.0	47.0	47.0
Total Split (%)	16.7%	36.7%	36.7%	10.0%	30.0%	14.2%	38.3%	38.3%	15.0%	39.2%	39.2%
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	3.6	4.8	4.8	3.6	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	6.2	4.6	6.2	4.6	5.8	5.8	4.6	5.8	5.8
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 107.2
Natural Cycle: 120
Control Type: Actuated-Uncoordinated

Splits and Phases: 6: Perris Bl. & Ramona Exwy.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	287	2228	355	141	1414	225	327	463	182	427	698	209
Future Volume (veh/h)	287	2228	355	141	1414	225	327	463	182	427	698	209
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	296	2297	266	145	1458	219	337	477	137	440	720	141
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	363	1822	565	206	1462	219	397	916	408	437	918	408
Arrive On Green	0.10	0.35	0.35	0.06	0.32	0.32	0.11	0.25	0.25	0.12	0.25	0.25
Sat Flow, veh/h	3510	5187	1607	3510	4549	682	3510	3610	1608	3510	3610	1604
Grp Volume(v), veh/h	296	2297	266	145	1108	569	337	477	137	440	720	141
Grp Sat Flow(s),veh/h/ln	1755	1729	1607	1755	1729	1773	1755	1805	1608	1755	1805	1604
Q Serve(g_s), s	8.9	37.8	13.8	4.4	34.4	34.5	10.1	12.2	5.8	13.4	20.0	5.7
Cycle Q Clear(g_c), s	8.9	37.8	13.8	4.4	34.4	34.5	10.1	12.2	5.8	13.4	20.0	5.7
Prop In Lane	1.00		1.00	1.00		0.38	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	363	1822	565	206	1111	570	397	916	408	437	918	408
V/C Ratio(X)	0.82	1.26	0.47	0.71	1.00	1.00	0.85	0.52	0.34	1.01	0.78	0.35
Avail Cap(c_a), veh/h	502	1822	565	241	1111	570	404	1348	601	437	1382	614
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.2	34.9	27.1	49.7	36.5	36.5	46.8	34.5	19.5	47.1	37.4	17.6
Incr Delay (d2), s/veh	5.1	121.9	0.6	5.3	26.2	37.3	14.6	0.5	0.5	44.7	1.7	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.0	35.2	5.1	2.0	17.5	19.7	5.1	5.2	2.8	8.4	8.6	2.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	52.3	156.9	27.8	55.1	62.7	73.8	61.5	35.0	20.0	91.8	39.1	18.1
LnGrp LOS	D	F	C	E	E	E	E	C	C	F	D	B
Approach Vol, veh/h		2859			1822			951			1301	
Approach Delay, s/veh		134.0			65.5			42.2			54.7	
Approach LOS		F			E			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.0	33.1	12.5	44.0	18.0	33.2	15.7	40.8
Change Period (Y+Rc), s	4.6	5.8	6.2	* 6.2	5.8	* 5.8	4.6	6.2
Max Green Setting (Gmax), s	13.4	40.2	7.4	* 38	12.4	* 41	15.4	29.8
Max Q Clear Time (g_c+I1), s	15.4	14.2	6.4	39.8	12.1	22.0	10.9	36.5
Green Ext Time (p_c), s	0.0	3.4	0.0	0.0	0.0	4.8	0.2	0.0

Intersection Summary	
HCM 6th Ctrl Delay	88.5
HCM 6th LOS	F

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

APPENDIX 6.2:

EAPC (2023) CONDITIONS INTERSECTION OPERATIONS ANALYSIS WORKSHEETS

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Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	0	2	0	0	3	5	658	22	0	268	15
Future Vol, veh/h	5	0	2	0	0	3	5	658	22	0	268	15
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	150	-	-	150	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	5	0	2	0	0	3	5	715	24	0	291	16

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	667	1048	154	883	1044	370	307	0	0	739	0	0
Stage 1	299	299	-	737	737	-	-	-	-	-	-	-
Stage 2	368	749	-	146	307	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	6.9	7.5	6.5	6.9	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	348	230	871	243	231	633	1265	-	-	876	-	-
Stage 1	691	670	-	381	428	-	-	-	-	-	-	-
Stage 2	630	422	-	848	665	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	345	229	871	242	230	633	1265	-	-	876	-	-
Mov Cap-2 Maneuver	345	229	-	242	230	-	-	-	-	-	-	-
Stage 1	688	670	-	379	426	-	-	-	-	-	-	-
Stage 2	624	420	-	846	665	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	13.8	10.7	0.1	0
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1265	-	-	417	633	876	-	-
HCM Lane V/C Ratio	0.004	-	-	0.018	0.005	-	-	-
HCM Control Delay (s)	7.9	-	-	13.8	10.7	0	-	-
HCM Lane LOS	A	-	-	B	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0	0	-	-

Intersection	
Int Delay, s/veh	0.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	6	678	14	10	260
Future Vol, veh/h	0	6	678	14	10	260
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	150	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	7	737	15	11	283

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	376	0	0	752	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	4.1	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	0	627	-	-	867	-
Stage 1	0	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	627	-	-	867	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

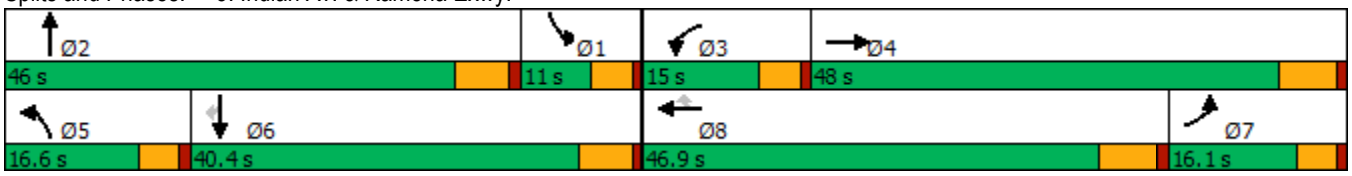
Approach	WB	NB	SB
HCM Control Delay, s	10.8	0	0.3
HCM LOS	B		

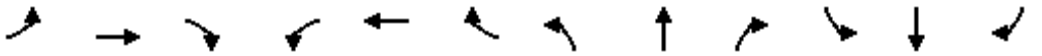
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	627	867	-
HCM Lane V/C Ratio	-	-	0.01	0.013	-
HCM Control Delay (s)	-	-	10.8	9.2	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	0	0	-

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	342	1406	64	2478	158	108	194	20	99	141
Future Volume (vph)	342	1406	64	2478	158	108	194	20	99	141
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Prot	NA	Perm
Protected Phases	7	4	3	8		5	2	1	6	
Permitted Phases					8					6
Detector Phase	7	4	3	8	8	5	2	1	6	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	46.2	9.6	40.2	40.2	9.6	43.8	9.6	34.8	34.8
Total Split (s)	16.1	48.0	15.0	46.9	46.9	16.6	46.0	11.0	40.4	40.4
Total Split (%)	13.4%	40.0%	12.5%	39.1%	39.1%	13.8%	38.3%	9.2%	33.7%	33.7%
Yellow Time (s)	3.6	5.2	3.6	5.2	5.2	3.6	4.8	3.6	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	4.6	6.2	6.2	4.6	5.8	4.6	5.8	5.8
Lead/Lag	Lag	Lag	Lead	Lead	Lead	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 97.6
Natural Cycle: 120
Control Type: Actuated-Uncoordinated

Splits and Phases: 3: Indian Av. & Ramona Exwy.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	342	1406	121	64	2478	158	108	194	31	20	99	141
Future Volume (veh/h)	342	1406	121	64	2478	158	108	194	31	20	99	141
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	349	1435	121	65	2529	132	110	198	21	20	101	137
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	225	2604	220	84	2279	708	139	382	40	111	409	182
Arrive On Green	0.12	0.53	0.53	0.05	0.44	0.44	0.08	0.12	0.12	0.06	0.11	0.11
Sat Flow, veh/h	1810	4873	411	1810	5187	1610	1810	3295	346	1810	3610	1610
Grp Volume(v), veh/h	349	1018	538	65	2529	132	110	107	112	20	101	137
Grp Sat Flow(s),veh/h/ln	1810	1729	1826	1810	1729	1610	1810	1805	1836	1810	1805	1610
Q Serve(g_s), s	11.5	18.0	18.0	3.3	40.7	4.6	5.5	5.2	5.3	1.0	2.4	5.5
Cycle Q Clear(g_c), s	11.5	18.0	18.0	3.3	40.7	4.6	5.5	5.2	5.3	1.0	2.4	5.5
Prop In Lane	1.00		0.23	1.00		1.00	1.00		0.19	1.00		1.00
Lane Grp Cap(c), veh/h	225	1848	975	84	2279	708	139	209	213	111	409	182
V/C Ratio(X)	1.55	0.55	0.55	0.77	1.11	0.19	0.79	0.51	0.52	0.18	0.25	0.75
Avail Cap(c_a), veh/h	225	1848	975	203	2279	708	234	783	797	125	1349	601
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.6	14.2	14.2	43.7	26.0	15.9	42.0	38.5	38.5	41.2	37.5	20.3
Incr Delay (d2), s/veh	269.8	0.4	0.7	5.5	56.3	0.1	3.7	2.0	2.0	0.3	0.3	6.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	21.6	6.0	6.4	1.5	26.3	1.6	2.5	2.3	2.4	0.4	1.0	3.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	310.3	14.6	14.9	49.2	82.3	16.0	45.8	40.5	40.6	41.5	37.8	26.4
LnGrp LOS	F	B	B	D	F	B	D	D	D	D	D	C
Approach Vol, veh/h		1905			2726			329			258	
Approach Delay, s/veh		68.9			78.3			42.3			32.0	
Approach LOS		E			E			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.5	16.5	8.9	55.7	11.7	16.3	17.7	46.9
Change Period (Y+Rc), s	5.8	* 5.8	4.6	6.2	4.6	5.8	6.2	* 6.2
Max Green Setting (Gmax), s	6.4	* 40	10.4	41.8	12.0	34.6	11.5	* 41
Max Q Clear Time (g_c+I1), s	3.0	7.3	5.3	20.0	7.5	7.5	13.5	42.7
Green Ext Time (p_c), s	0.0	1.2	0.0	10.3	0.0	1.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	70.3
HCM 6th LOS	E

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑↑	↱		↱
Traffic Vol, veh/h	0	1458	2696	10	0	3
Future Vol, veh/h	0	1458	2696	10	0	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	100	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	1585	2930	11	0	3

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	1465
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	7.1
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.9
Pot Cap-1 Maneuver	0	-	-	-	0	102
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	102
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	41.5
HCM LOS			E

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	102
HCM Lane V/C Ratio	-	-	-	0.032
HCM Control Delay (s)	-	-	-	41.5
HCM Lane LOS	-	-	-	E
HCM 95th %tile Q(veh)	-	-	-	0.1

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	3	0	1489	756	1
Future Vol, veh/h	0	3	0	1489	756	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	3	0	1618	822	1

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	412	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	7.1	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.9	-	-	-	-
Pot Cap-1 Maneuver	0	508	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	508	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

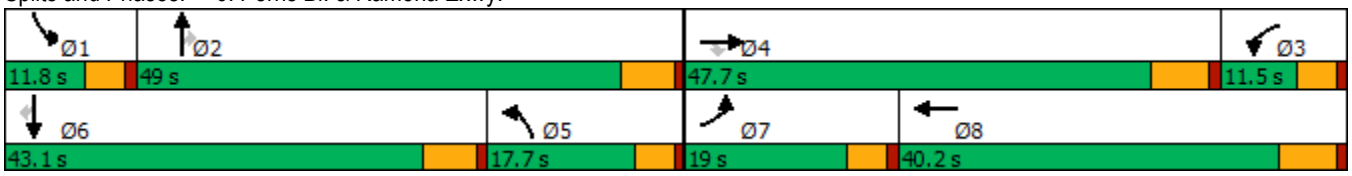
Approach	EB	NB	SB
HCM Control Delay, s	12.1	0	0
HCM LOS	B		

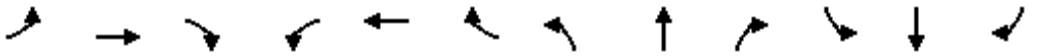
Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	508	-	-
HCM Lane V/C Ratio	-	0.006	-	-
HCM Control Delay (s)	-	12.1	-	-
HCM Lane LOS	-	B	-	-
HCM 95th %tile Q(veh)	-	0	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	348	911	201	168	2104	377	850	119	144	397	219
Future Volume (vph)	348	911	201	168	2104	377	850	119	144	397	219
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8	5	2		1	6	
Permitted Phases			4					2			6
Detector Phase	7	4	4	3	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	36.2	36.2	9.6	34.2	9.6	38.8	38.8	9.6	41.8	41.8
Total Split (s)	19.0	47.7	47.7	11.5	40.2	17.7	49.0	49.0	11.8	43.1	43.1
Total Split (%)	15.8%	39.8%	39.8%	9.6%	33.5%	14.8%	40.8%	40.8%	9.8%	35.9%	35.9%
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	3.6	4.8	4.8	3.6	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	6.2	4.6	6.2	4.6	5.8	5.8	4.6	5.8	5.8
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 109.4
Natural Cycle: 120
Control Type: Actuated-Uncoordinated

Splits and Phases: 6: Perris Bl. & Ramona Exwy.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	348	911	201	168	2104	291	377	850	119	144	397	219
Future Volume (veh/h)	348	911	201	168	2104	291	377	850	119	144	397	219
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	355	930	160	171	2147	278	385	867	73	147	405	164
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	420	1293	400	629	1510	192	654	1063	474	209	565	252
Arrive On Green	0.12	0.25	0.25	0.18	0.32	0.32	0.19	0.29	0.29	0.06	0.16	0.16
Sat Flow, veh/h	3510	5187	1604	3510	4657	592	3510	3610	1609	3510	3610	1610
Grp Volume(v), veh/h	355	930	160	171	1584	841	385	867	73	147	405	164
Grp Sat Flow(s),veh/h/ln	1755	1729	1604	1755	1729	1791	1755	1805	1609	1755	1805	1610
Q Serve(g_s), s	10.4	17.2	8.7	4.4	34.0	34.0	10.5	23.4	2.1	4.3	11.2	7.4
Cycle Q Clear(g_c), s	10.4	17.2	8.7	4.4	34.0	34.0	10.5	23.4	2.1	4.3	11.2	7.4
Prop In Lane	1.00		1.00	1.00		0.33	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	420	1293	400	629	1121	581	654	1063	474	209	565	252
V/C Ratio(X)	0.85	0.72	0.40	0.27	1.41	1.45	0.59	0.82	0.15	0.70	0.72	0.65
Avail Cap(c_a), veh/h	482	2052	635	629	1121	581	654	1487	663	241	1284	573
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.2	36.0	32.8	37.1	35.4	35.4	39.0	34.3	9.3	48.4	42.0	22.8
Incr Delay (d2), s/veh	10.5	0.8	0.6	0.1	191.1	211.7	1.0	2.5	0.1	5.5	1.7	2.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.9	6.9	3.3	1.8	42.9	47.8	4.4	10.1	1.3	2.0	4.9	3.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	55.7	36.8	33.5	37.2	226.5	247.1	40.0	36.9	9.5	54.0	43.7	25.6
LnGrp LOS	E	D	C	D	F	F	D	D	A	D	D	C
Approach Vol, veh/h		1445			2596			1325			716	
Approach Delay, s/veh		41.1			220.7			36.3			41.7	
Approach LOS		D			F			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.8	36.7	25.0	32.3	25.3	22.2	17.1	40.2
Change Period (Y+Rc), s	4.6	5.8	6.2	* 6.2	5.8	* 5.8	4.6	6.2
Max Green Setting (Gmax), s	7.2	43.2	6.9	* 42	13.1	* 37	14.4	34.0
Max Q Clear Time (g_c+I1), s	6.3	25.4	6.4	19.2	12.5	13.2	12.4	36.0
Green Ext Time (p_c), s	0.0	5.5	0.0	6.5	0.1	2.9	0.2	0.0

Intersection Summary	
HCM 6th Ctrl Delay	116.8
HCM 6th LOS	F

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	14	0	5	0	0	6	2	742	5	0	523	5
Future Vol, veh/h	14	0	5	0	0	6	2	742	5	0	523	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	150	-	-	150	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	15	0	5	0	0	7	2	807	5	0	568	5

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	979	1387	287	1098	1387	406	573	0	0	812	0	0
Stage 1	571	571	-	814	814	-	-	-	-	-	-	-
Stage 2	408	816	-	284	573	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	6.9	7.5	6.5	6.9	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	207	144	716	170	144	600	1010	-	-	823	-	-
Stage 1	478	508	-	342	394	-	-	-	-	-	-	-
Stage 2	596	393	-	705	507	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	205	144	716	168	144	600	1010	-	-	823	-	-
Mov Cap-2 Maneuver	205	144	-	168	144	-	-	-	-	-	-	-
Stage 1	477	508	-	341	393	-	-	-	-	-	-	-
Stage 2	588	392	-	700	507	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	20.6	11.1	0	0
HCM LOS	C	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1010	-	-	252	600	823	-	-
HCM Lane V/C Ratio	0.002	-	-	0.082	0.011	-	-	-
HCM Control Delay (s)	8.6	-	-	20.6	11.1	0	-	-
HCM Lane LOS	A	-	-	C	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.3	0	0	-	-

Intersection	
Int Delay, s/veh	0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	6	737	14	10	518
Future Vol, veh/h	0	6	737	14	10	518
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	150	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	7	801	15	11	563

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	408	0	0	816	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	4.1	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	0	598	-	-	820	-
Stage 1	0	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	598	-	-	820	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

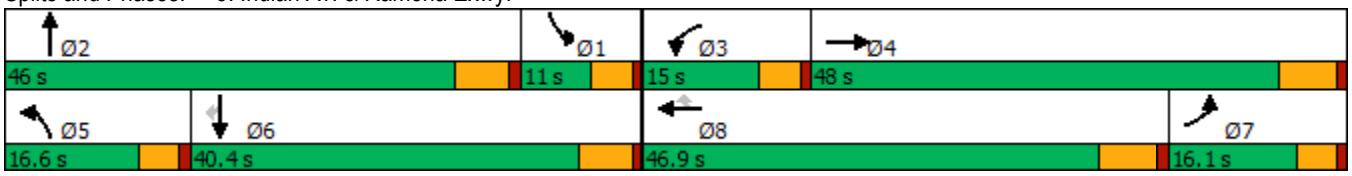
Approach	WB	NB	SB
HCM Control Delay, s	11.1	0	0.2
HCM LOS	B		

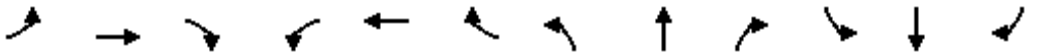
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	598	820	-
HCM Lane V/C Ratio	-	-	0.011	0.013	-
HCM Control Delay (s)	-	-	11.1	9.4	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	0	0	-

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	396	2648	124	1759	134	180	223	184	171	164
Future Volume (vph)	396	2648	124	1759	134	180	223	184	171	164
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Prot	NA	Perm
Protected Phases	7	4	3	8		5	2	1	6	
Permitted Phases					8					6
Detector Phase	7	4	3	8	8	5	2	1	6	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	46.2	9.6	40.2	40.2	9.6	43.8	9.6	34.8	34.8
Total Split (s)	16.1	48.0	15.0	46.9	46.9	16.6	46.0	11.0	40.4	40.4
Total Split (%)	13.4%	40.0%	12.5%	39.1%	39.1%	13.8%	38.3%	9.2%	33.7%	33.7%
Yellow Time (s)	3.6	5.2	3.6	5.2	5.2	3.6	4.8	3.6	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	4.6	6.2	6.2	4.6	5.8	4.6	5.8	5.8
Lead/Lag	Lag	Lag	Lead	Lead	Lead	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 100.1
Natural Cycle: 120
Control Type: Actuated-Uncoordinated

Splits and Phases: 3: Indian Av. & Ramona Exwy.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	396	2648	178	124	1759	134	180	223	39	184	171	164
Future Volume (veh/h)	396	2648	178	124	1759	134	180	223	39	184	171	164
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	404	2702	160	127	1795	115	184	228	20	188	174	138
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	221	2310	134	158	2119	658	217	358	31	194	384	171
Arrive On Green	0.12	0.46	0.46	0.09	0.41	0.41	0.12	0.11	0.11	0.11	0.11	0.11
Sat Flow, veh/h	1810	5014	292	1810	5187	1610	1810	3360	292	1810	3610	1610
Grp Volume(v), veh/h	404	1849	1013	127	1795	115	184	122	126	188	174	138
Grp Sat Flow(s),veh/h/ln	1810	1729	1847	1810	1729	1610	1810	1805	1847	1810	1805	1610
Q Serve(g_s), s	11.5	43.3	43.3	6.5	29.4	4.3	9.4	6.1	6.2	9.7	4.3	5.7
Cycle Q Clear(g_c), s	11.5	43.3	43.3	6.5	29.4	4.3	9.4	6.1	6.2	9.7	4.3	5.7
Prop In Lane	1.00		0.16	1.00		1.00	1.00		0.16	1.00		1.00
Lane Grp Cap(c), veh/h	221	1593	851	158	2119	658	217	192	197	194	384	171
V/C Ratio(X)	1.82	1.16	1.19	0.81	0.85	0.17	0.85	0.63	0.64	0.97	0.45	0.81
Avail Cap(c_a), veh/h	221	1593	851	200	2246	697	231	772	790	194	1329	593
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.2	25.3	25.3	42.1	25.1	17.7	40.5	40.2	40.3	41.8	39.4	21.3
Incr Delay (d2), s/veh	388.2	79.5	97.4	13.4	3.1	0.1	21.8	3.4	3.5	54.9	0.8	8.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	28.7	32.8	39.3	3.3	11.3	1.5	5.3	2.8	2.9	7.1	1.9	3.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	429.5	104.8	122.7	55.5	28.2	17.8	62.3	43.7	43.8	96.7	40.3	29.8
LnGrp LOS	F	F	F	E	C	B	E	D	D	F	D	C
Approach Vol, veh/h		3266			2037			432			500	
Approach Delay, s/veh		150.5			29.3			51.6			58.6	
Approach LOS		F			C			D			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.9	15.8	12.8	49.5	15.9	15.8	17.7	44.6
Change Period (Y+Rc), s	5.8	* 5.8	4.6	6.2	4.6	5.8	6.2	* 6.2
Max Green Setting (Gmax), s	6.4	* 40	10.4	41.8	12.0	34.6	11.5	* 41
Max Q Clear Time (g_c+I1), s	11.7	8.2	8.5	45.3	11.4	7.7	13.5	31.4
Green Ext Time (p_c), s	0.0	1.3	0.0	0.0	0.0	1.4	0.0	7.0

Intersection Summary	
HCM 6th Ctrl Delay	96.7
HCM 6th LOS	F

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑↑	↱		↱
Traffic Vol, veh/h	0	2871	2013	10	0	3
Future Vol, veh/h	0	2871	2013	10	0	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	100	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	3121	2188	11	0	3

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	1094
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	7.1
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.9
Pot Cap-1 Maneuver	0	-	-	-	0	182
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	182
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	25.1
HCM LOS			D

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	182
HCM Lane V/C Ratio	-	-	-	0.018
HCM Control Delay (s)	-	-	-	25.1
HCM Lane LOS	-	-	-	D
HCM 95th %tile Q(veh)	-	-	-	0.1

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	3	0	975	1334	1
Future Vol, veh/h	0	3	0	975	1334	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	3	0	1060	1450	1

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	726	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	7.1	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.9	-	-	-	-
Pot Cap-1 Maneuver	0	318	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	318	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

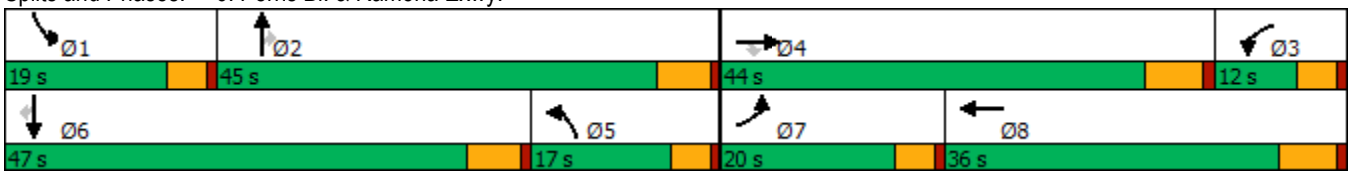
Approach	EB	NB	SB
HCM Control Delay, s	16.4	0	0
HCM LOS	C		

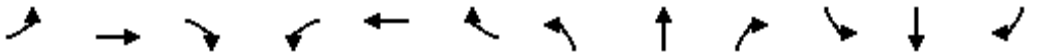
Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	318	-	-
HCM Lane V/C Ratio	-	0.01	-	-
HCM Control Delay (s)	-	16.4	-	-
HCM Lane LOS	-	C	-	-
HCM 95th %tile Q(veh)	-	0	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	287	2228	355	141	1417	335	463	182	428	700	210
Future Volume (vph)	287	2228	355	141	1417	335	463	182	428	700	210
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8	5	2		1	6	
Permitted Phases			4					2			6
Detector Phase	7	4	4	3	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	36.2	36.2	9.6	34.2	9.6	38.8	38.8	9.6	41.8	41.8
Total Split (s)	20.0	44.0	44.0	12.0	36.0	17.0	45.0	45.0	19.0	47.0	47.0
Total Split (%)	16.7%	36.7%	36.7%	10.0%	30.0%	14.2%	37.5%	37.5%	15.8%	39.2%	39.2%
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	3.6	4.8	4.8	3.6	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	6.2	4.6	6.2	4.6	5.8	5.8	4.6	5.8	5.8
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 107.3
Natural Cycle: 120
Control Type: Actuated-Uncoordinated

Splits and Phases: 6: Perris Bl. & Ramona Exwy.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	287	2228	355	141	1417	225	335	463	182	428	700	210
Future Volume (veh/h)	287	2228	355	141	1417	225	335	463	182	428	700	210
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	296	2297	266	145	1461	219	345	477	137	441	722	142
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	362	1815	563	205	1456	218	403	892	397	468	919	408
Arrive On Green	0.10	0.35	0.35	0.06	0.32	0.32	0.11	0.25	0.25	0.13	0.25	0.25
Sat Flow, veh/h	3510	5187	1607	3510	4550	681	3510	3610	1608	3510	3610	1604
Grp Volume(v), veh/h	296	2297	266	145	1110	570	345	477	137	441	722	142
Grp Sat Flow(s),veh/h/ln	1755	1729	1607	1755	1729	1774	1755	1805	1608	1755	1805	1604
Q Serve(g_s), s	8.9	37.8	13.9	4.4	34.6	34.6	10.4	12.4	5.9	13.4	20.1	5.7
Cycle Q Clear(g_c), s	8.9	37.8	13.9	4.4	34.6	34.6	10.4	12.4	5.9	13.4	20.1	5.7
Prop In Lane	1.00		1.00	1.00		0.38	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	362	1815	563	205	1107	568	403	892	397	468	919	408
V/C Ratio(X)	0.82	1.27	0.47	0.71	1.00	1.00	0.86	0.53	0.34	0.94	0.79	0.35
Avail Cap(c_a), veh/h	501	1815	563	241	1107	568	403	1310	584	468	1377	612
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.4	35.1	27.3	49.9	36.7	36.7	46.9	35.3	20.1	46.4	37.5	17.7
Incr Delay (d2), s/veh	5.2	124.0	0.6	5.4	27.7	38.8	15.7	0.5	0.5	27.3	1.8	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.0	35.5	5.1	2.0	17.8	20.0	5.3	5.3	2.8	7.4	8.7	2.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	52.6	159.1	28.0	55.4	64.4	75.6	62.6	35.8	20.6	73.7	39.3	18.2
LnGrp LOS	D	F	C	E	F	F	E	D	C	E	D	B
Approach Vol, veh/h		2859			1825			959			1305	
Approach Delay, s/veh		135.8			67.2			43.3			48.6	
Approach LOS		F			E			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	19.0	32.5	12.5	44.0	18.2	33.3	15.8	40.8
Change Period (Y+Rc), s	4.6	5.8	6.2	* 6.2	5.8	* 5.8	4.6	6.2
Max Green Setting (Gmax), s	14.4	39.2	7.4	* 38	12.4	* 41	15.4	29.8
Max Q Clear Time (g_c+I1), s	15.4	14.4	6.4	39.8	12.4	22.1	10.9	36.6
Green Ext Time (p_c), s	0.0	3.4	0.0	0.0	0.0	4.8	0.2	0.0

Intersection Summary	
HCM 6th Ctrl Delay	88.7
HCM 6th LOS	F

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

APPENDIX 6.3:

EAC (2023) CONDITIONS TRAFFIC SIGNAL WARRANT ANALYSIS WORKSHEETS

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Figure 4C-103 (CA). Traffic Signal Warrants Worksheet
(Average Traffic Estimate Form)

DIST	CO	RTE	PM	TRAFFIC CONDITIONS		EAC 2023
				CALC RV	DATE	06/30/21
Jurisdiction: City of Perris				CHK RV	DATE	06/30/21
Major Street: Indian Avenue				Critical Approach Speed (Major)		40 mph
Minor Street: Perry Street				Critical Approach Speed (Minor)		25 mph

Major Street Approach Lanes = **2** lane Minor Street Approach Lanes = **1** lane

Major Street Future ADT = **6,485** vpd Minor Street Future ADT = **245** vpd

Speed limit or critical speed on major street traffic > 64 km/h (40 mph); …….. [ ]

or **RURAL (R)**

In built up area of isolated community of < 10,000 population …….. [ ]

(Based on Estimated Average Daily Traffic - See Note)

URBAN	RURAL	Minimum Requirements EADT			
XX					
CONDITION A - Minimum Vehicular Volume					
Satisfied	Not Satisfied	Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
	XX				
Number of lanes for moving traffic on each approach					
Major Street	Minor Street	Urban	Rural	Urban	Rural
1	*1*	8,000	5,600	2,400	1,680
2 + **6,485**	*1* **245**	9,600	6,720	2,400	1,680
2 +	*2* +	9,600	6,720	3,200	2,240
1	*2* +	8,000	5,600	3,200	2,240
CONDITION B - Interruption of Continuous Traffic					
Satisfied	Not Satisfied	Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
	XX				
Number of lanes for moving traffic on each approach					
Major Street	Minor Street	Urban	Rural	Urban	Rural
1	*1*	12,000	8,400	1,200	850
2 + **6,485**	*1* **245**	14,400	10,080	1,200	850
2 +	*2* +	14,400	10,080	1,600	1,120
1	*2* +	12,000	8,400	1,600	1,120
Combination of CONDITIONS A + B					
Satisfied	Not Satisfied				
	XX				
No one condition satisfied, but following conditions fulfilled 80% of more …..	**A** 10% **B** 20%	2 CONDITIONS 80%		2 CONDITIONS 80%	

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

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APPENDIX 6.4:

EAPC (2023) CONDITIONS TRAFFIC SIGNAL WARRANT ANALYSIS WORKSHEETS

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Figure 4C-103 (CA). Traffic Signal Warrants Worksheet
(Average Traffic Estimate Form)

DIST	CO	RTE	PM	TRAFFIC CONDITIONS		EAPC 2023
				CALC RV	DATE	06/30/21
Jurisdiction: **City of Perris**				CHK RV	DATE	06/30/21
Major Street: **Indian Avenue**				Critical Approach Speed (Major)		40 mph
Minor Street: **Perry Street**				Critical Approach Speed (Minor)		25 mph

Major Street Approach Lanes = **2** lane Minor Street Approach Lanes = **1** lane

Major Street Future ADT = **6,660** vpd Minor Street Future ADT = **245** vpd

Speed limit or critical speed on major street traffic > 64 km/h (40 mph); …….. [ ]

or **RURAL (R)**

In built up area of isolated community of < 10,000 population …….. [ ]

(Based on Estimated Average Daily Traffic - See Note)

URBAN / RURAL	Minimum Requirements EADT			
XX	Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
CONDITION A - Minimum Vehicular Volume	Urban	Rural	Urban	Rural
Satisfied / Not Satisfied: XX				
Number of lanes for moving traffic on each approach				
Major Street / Minor Street				
1 / *1*	8,000	5,600	2,400	1,680
2 + **6,660** / *1* **245**	9,600	6,720	2,400	1,680
2 + / *2* +	9,600	6,720	3,200	2,240
1 / *2* +	8,000	5,600	3,200	2,240
CONDITION B - Interruption of Continuous Traffic	Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Satisfied / Not Satisfied: XX				
Number of lanes for moving traffic on each approach				
Major Street / Minor Street	Urban	Rural	Urban	Rural
1 / *1*	12,000	8,400	1,200	850
2 + **6,660** / *1* **245**	14,400	10,080	1,200	850
2 + / *2* +	14,400	10,080	1,600	1,120
1 / *2* +	12,000	8,400	1,600	1,120
Combination of CONDITIONS A + B				
Satisfied / Not Satisfied: XX	2 CONDITIONS 80%		2 CONDITIONS 80%	
No one condition satisfied, but following conditions fulfilled 80% of more ….. A: 10% B: 20%				

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

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APPENDIX 6.5:

EAPC (2023) CONDITIONS INTERSECTION OPERATIONS ANALYSIS WORKSHEETS WITH IMPROVEMENTS

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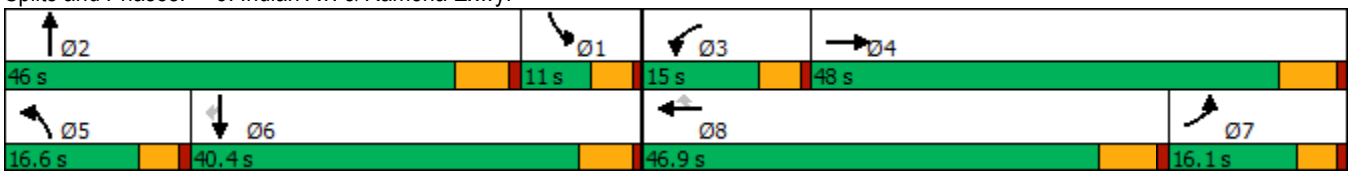
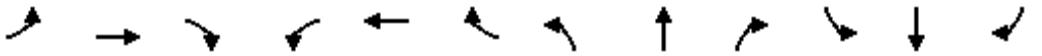
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	342	1406	64	2478	158	108	194	20	99	141
Future Volume (vph)	342	1406	64	2478	158	108	194	20	99	141
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Prot	NA	Perm
Protected Phases	7	4	3	8		5	2	1	6	
Permitted Phases					8					6
Detector Phase	7	4	3	8	8	5	2	1	6	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	46.2	9.6	40.2	40.2	9.6	43.8	9.6	34.8	34.8
Total Split (s)	16.1	48.0	15.0	46.9	46.9	16.6	46.0	11.0	40.4	40.4
Total Split (%)	13.4%	40.0%	12.5%	39.1%	39.1%	13.8%	38.3%	9.2%	33.7%	33.7%
Yellow Time (s)	3.6	5.2	3.6	5.2	5.2	3.6	4.8	3.6	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	4.6	6.2	6.2	4.6	5.8	4.6	5.8	5.8
Lead/Lag	Lag	Lag	Lead	Lead	Lead	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 97.6
Natural Cycle: 120
Control Type: Actuated-Uncoordinated

Splits and Phases: 3: Indian Av. & Ramona Exwy.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	342	1406	121	64	2478	158	108	194	31	20	99	141
Future Volume (veh/h)	342	1406	121	64	2478	158	108	194	31	20	99	141
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	349	1435	121	65	2529	132	110	198	21	20	101	137
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	419	2594	219	84	2293	712	139	384	40	111	411	183
Arrive On Green	0.12	0.53	0.53	0.05	0.44	0.44	0.08	0.12	0.12	0.06	0.11	0.11
Sat Flow, veh/h	3510	4873	411	1810	5187	1610	1810	3295	346	1810	3610	1610
Grp Volume(v), veh/h	349	1018	538	65	2529	132	110	107	112	20	101	137
Grp Sat Flow(s),veh/h/ln	1755	1729	1826	1810	1729	1610	1810	1805	1836	1810	1805	1610
Q Serve(g_s), s	9.0	18.0	18.0	3.3	40.7	4.6	5.5	5.1	5.3	1.0	2.3	5.4
Cycle Q Clear(g_c), s	9.0	18.0	18.0	3.3	40.7	4.6	5.5	5.1	5.3	1.0	2.3	5.4
Prop In Lane	1.00		0.23	1.00		1.00	1.00		0.19	1.00		1.00
Lane Grp Cap(c), veh/h	419	1841	972	84	2293	712	139	210	214	111	411	183
V/C Ratio(X)	0.83	0.55	0.55	0.77	1.10	0.19	0.79	0.51	0.52	0.18	0.25	0.75
Avail Cap(c_a), veh/h	438	1841	972	204	2293	712	236	788	801	126	1357	605
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.6	14.3	14.3	43.4	25.7	15.6	41.8	38.2	38.3	41.0	37.2	20.4
Incr Delay (d2), s/veh	11.6	0.4	0.7	5.5	53.6	0.1	3.7	1.9	2.0	0.3	0.3	5.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.3	6.0	6.4	1.5	25.8	1.5	2.5	2.3	2.4	0.4	1.0	3.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	51.2	14.6	15.0	48.9	79.3	15.7	45.5	40.1	40.2	41.3	37.5	26.3
LnGrp LOS	D	B	B	D	F	B	D	D	D	D	D	C
Approach Vol, veh/h		1905			2726			329			258	
Approach Delay, s/veh		21.4			75.5			42.0			31.9	
Approach LOS		C			E			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.5	16.5	8.9	55.2	11.7	16.3	17.2	46.9
Change Period (Y+Rc), s	5.8	* 5.8	4.6	6.2	4.6	5.8	6.2	* 6.2
Max Green Setting (Gmax), s	6.4	* 40	10.4	41.8	12.0	34.6	11.5	* 41
Max Q Clear Time (g_c+I1), s	3.0	7.3	5.3	20.0	7.5	7.4	11.0	42.7
Green Ext Time (p_c), s	0.0	1.2	0.0	10.3	0.0	1.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	51.5
HCM 6th LOS	D

Notes

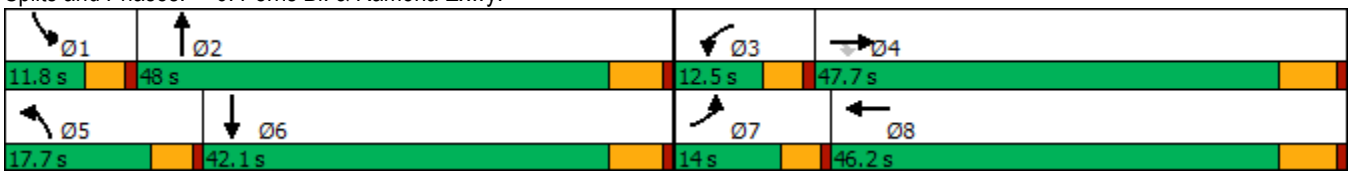
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

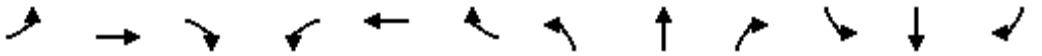
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	348	911	201	168	2104	377	850	144	397
Future Volume (vph)	348	911	201	168	2104	377	850	144	397
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Prot	NA
Protected Phases	7	4		3	8	5	2	1	6
Permitted Phases			4						
Detector Phase	7	4	4	3	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	36.2	36.2	9.6	34.2	9.6	38.8	9.6	41.8
Total Split (s)	14.0	47.7	47.7	12.5	46.2	17.7	48.0	11.8	42.1
Total Split (%)	11.7%	39.8%	39.8%	10.4%	38.5%	14.8%	40.0%	9.8%	35.1%
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	3.6	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	6.2	4.6	6.2	4.6	5.8	4.6	5.8
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 106.7
Natural Cycle: 120
Control Type: Actuated-Uncoordinated

Splits and Phases: 6: Perris Bl. & Ramona Exwy.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	348	911	201	168	2104	291	377	850	119	144	397	219
Future Volume (veh/h)	348	911	201	168	2104	291	377	850	119	144	397	219
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	355	930	160	171	2147	278	385	867	73	147	405	164
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	325	2179	675	236	1838	234	447	1187	100	211	649	250
Arrive On Green	0.09	0.42	0.42	0.07	0.39	0.39	0.13	0.24	0.24	0.06	0.18	0.18
Sat Flow, veh/h	3510	5187	1607	3510	4657	592	3510	4875	409	3510	3682	1421
Grp Volume(v), veh/h	355	930	160	171	1584	841	385	614	326	147	379	190
Grp Sat Flow(s),veh/h/ln	1755	1729	1607	1755	1729	1791	1755	1729	1826	1755	1729	1644
Q Serve(g_s), s	9.4	12.8	6.5	4.8	40.0	40.0	10.9	16.6	16.7	4.2	10.3	10.9
Cycle Q Clear(g_c), s	9.4	12.8	6.5	4.8	40.0	40.0	10.9	16.6	16.7	4.2	10.3	10.9
Prop In Lane	1.00		1.00	1.00		0.33	1.00		0.22	1.00		0.86
Lane Grp Cap(c), veh/h	325	2179	675	236	1364	707	447	842	445	211	609	290
V/C Ratio(X)	1.09	0.43	0.24	0.72	1.16	1.19	0.86	0.73	0.73	0.70	0.62	0.66
Avail Cap(c_a), veh/h	325	2179	675	274	1364	707	454	1439	760	249	1238	589
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.0	20.8	18.9	46.4	30.7	30.7	43.3	35.3	35.3	46.7	38.6	38.9
Incr Delay (d2), s/veh	76.3	0.1	0.2	5.9	80.8	99.4	14.6	1.2	2.4	4.7	1.0	2.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.4	4.8	2.3	2.2	30.3	35.0	5.4	6.8	7.3	1.9	4.3	4.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	122.3	20.9	19.1	52.3	111.5	130.1	57.9	36.5	37.7	51.4	39.7	41.4
LnGrp LOS	F	C	B	D	F	F	E	D	D	D	D	D
Approach Vol, veh/h		1445			2596			1325			716	
Approach Delay, s/veh		45.6			113.6			43.0			42.5	
Approach LOS		D			F			D			D	

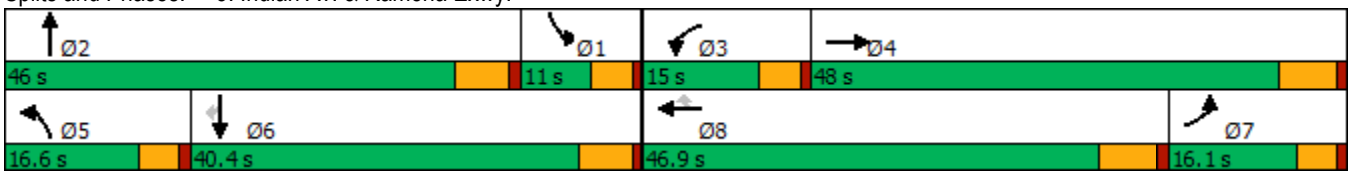
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.7	30.5	11.4	48.8	17.5	23.7	14.0	46.2
Change Period (Y+Rc), s	4.6	5.8	4.6	6.2	4.6	5.8	4.6	6.2
Max Green Setting (Gmax), s	7.2	42.2	7.9	41.5	13.1	36.3	9.4	40.0
Max Q Clear Time (g_c+I1), s	6.2	18.7	6.8	14.8	12.9	12.9	11.4	42.0
Green Ext Time (p_c), s	0.0	5.9	0.0	6.9	0.0	3.4	0.0	0.0

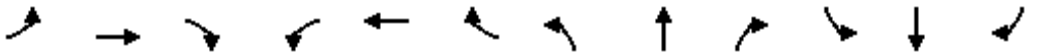
Intersection Summary	
HCM 6th Ctrl Delay	73.7
HCM 6th LOS	E

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	396	2648	124	1759	134	180	223	184	171	164
Future Volume (vph)	396	2648	124	1759	134	180	223	184	171	164
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Prot	NA	Perm
Protected Phases	7	4	3	8		5	2	1	6	
Permitted Phases					8					6
Detector Phase	7	4	3	8	8	5	2	1	6	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	46.2	9.6	40.2	40.2	9.6	43.8	9.6	34.8	34.8
Total Split (s)	16.1	48.0	15.0	46.9	46.9	16.6	46.0	11.0	40.4	40.4
Total Split (%)	13.4%	40.0%	12.5%	39.1%	39.1%	13.8%	38.3%	9.2%	33.7%	33.7%
Yellow Time (s)	3.6	5.2	3.6	5.2	5.2	3.6	4.8	3.6	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	4.6	6.2	6.2	4.6	5.8	4.6	5.8	5.8
Lead/Lag	Lag	Lag	Lead	Lead	Lead	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 100.1
Natural Cycle: 120
Control Type: Actuated-Uncoordinated

Splits and Phases: 3: Indian Av. & Ramona Exwy.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	396	2648	178	124	1759	134	180	223	39	184	171	164
Future Volume (veh/h)	396	2648	178	124	1759	134	180	223	39	184	171	164
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	404	2702	160	127	1795	115	184	228	20	188	174	138
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	430	2310	134	158	2119	658	217	358	31	194	384	171
Arrive On Green	0.12	0.46	0.46	0.09	0.41	0.41	0.12	0.11	0.11	0.11	0.11	0.11
Sat Flow, veh/h	3510	5014	292	1810	5187	1610	1810	3360	292	1810	3610	1610
Grp Volume(v), veh/h	404	1849	1013	127	1795	115	184	122	126	188	174	138
Grp Sat Flow(s),veh/h/ln	1755	1729	1847	1810	1729	1610	1810	1805	1847	1810	1805	1610
Q Serve(g_s), s	10.7	43.3	43.3	6.5	29.4	4.3	9.4	6.1	6.2	9.7	4.3	5.7
Cycle Q Clear(g_c), s	10.7	43.3	43.3	6.5	29.4	4.3	9.4	6.1	6.2	9.7	4.3	5.7
Prop In Lane	1.00		0.16	1.00		1.00	1.00		0.16	1.00		1.00
Lane Grp Cap(c), veh/h	430	1593	851	158	2119	658	217	192	197	194	384	171
V/C Ratio(X)	0.94	1.16	1.19	0.81	0.85	0.17	0.85	0.63	0.64	0.97	0.45	0.81
Avail Cap(c_a), veh/h	430	1593	851	200	2246	697	231	772	790	194	1329	593
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.9	25.3	25.3	42.1	25.1	17.7	40.5	40.2	40.3	41.8	39.4	21.3
Incr Delay (d2), s/veh	28.5	79.5	97.4	13.4	3.1	0.1	21.8	3.4	3.5	54.9	0.8	8.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.1	32.8	39.3	3.3	11.3	1.5	5.3	2.8	2.9	7.1	1.9	3.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	69.4	104.8	122.7	55.5	28.2	17.8	62.3	43.7	43.8	96.7	40.3	29.8
LnGrp LOS	E	F	F	E	C	B	E	D	D	F	D	C
Approach Vol, veh/h		3266			2037			432			500	
Approach Delay, s/veh		106.0			29.3			51.6			58.6	
Approach LOS		F			C			D			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.9	15.8	12.8	49.5	15.9	15.8	17.7	44.6
Change Period (Y+Rc), s	5.8	* 5.8	4.6	6.2	4.6	5.8	6.2	* 6.2
Max Green Setting (Gmax), s	6.4	* 40	10.4	41.8	12.0	34.6	11.5	* 41
Max Q Clear Time (g_c+I1), s	11.7	8.2	8.5	45.3	11.4	7.7	12.7	31.4
Green Ext Time (p_c), s	0.0	1.3	0.0	0.0	0.0	1.4	0.0	7.0

Intersection Summary	
HCM 6th Ctrl Delay	73.4
HCM 6th LOS	E

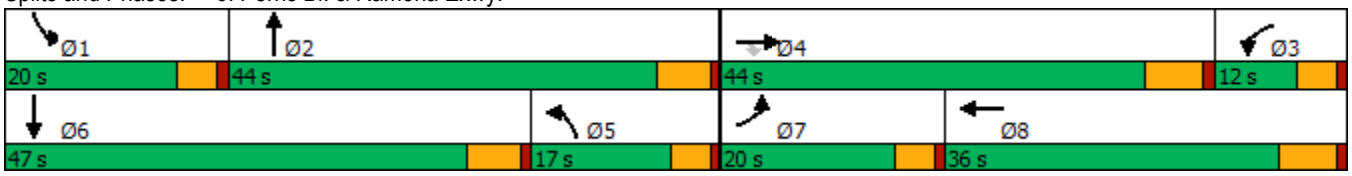
Notes

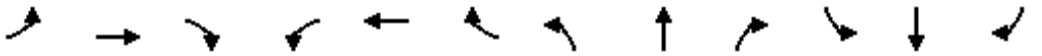
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	287	2228	355	141	1417	335	463	428	700
Future Volume (vph)	287	2228	355	141	1417	335	463	428	700
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Prot	NA
Protected Phases	7	4		3	8	5	2	1	6
Permitted Phases			4						
Detector Phase	7	4	4	3	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	36.2	36.2	9.6	34.2	9.6	38.8	9.6	41.8
Total Split (s)	20.0	44.0	44.0	12.0	36.0	17.0	44.0	20.0	47.0
Total Split (%)	16.7%	36.7%	36.7%	10.0%	30.0%	14.2%	36.7%	16.7%	39.2%
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	3.6	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	6.2	4.6	6.2	4.6	5.8	4.6	5.8
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 104.9
Natural Cycle: 120
Control Type: Actuated-Uncoordinated

Splits and Phases: 6: Perris Bl. & Ramona Exwy.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	287	2228	355	141	1417	225	335	463	182	428	700	210
Future Volume (veh/h)	287	2228	355	141	1417	225	335	463	182	428	700	210
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	296	2297	266	145	1461	219	345	477	137	441	722	142
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	365	1881	583	207	1515	227	407	874	243	502	1012	197
Arrive On Green	0.10	0.36	0.36	0.06	0.33	0.33	0.12	0.22	0.22	0.14	0.23	0.23
Sat Flow, veh/h	3510	5187	1608	3510	4550	681	3510	4032	1122	3510	4355	847
Grp Volume(v), veh/h	296	2297	266	145	1110	570	345	407	207	441	572	292
Grp Sat Flow(s),veh/h/ln	1755	1729	1608	1755	1729	1774	1755	1729	1696	1755	1729	1744
Q Serve(g_s), s	8.6	37.8	13.2	4.2	32.9	32.9	10.0	10.9	11.4	12.8	15.9	16.1
Cycle Q Clear(g_c), s	8.6	37.8	13.2	4.2	32.9	32.9	10.0	10.9	11.4	12.8	15.9	16.1
Prop In Lane	1.00		1.00	1.00		0.38	1.00		0.66	1.00		0.49
Lane Grp Cap(c), veh/h	365	1881	583	207	1151	591	407	749	368	502	803	405
V/C Ratio(X)	0.81	1.22	0.46	0.70	0.96	0.97	0.85	0.54	0.56	0.88	0.71	0.72
Avail Cap(c_a), veh/h	519	1881	583	249	1151	591	418	1267	622	519	1367	689
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.7	33.2	25.4	48.1	34.2	34.2	45.2	36.3	36.4	43.8	36.8	36.9
Incr Delay (d2), s/veh	4.2	104.6	0.6	4.5	18.4	28.4	14.0	0.6	1.4	14.8	1.2	2.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.8	32.6	4.8	1.9	15.6	17.7	5.0	4.5	4.6	6.4	6.5	6.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	49.9	137.9	25.9	52.6	52.6	62.6	59.2	36.9	37.8	58.6	38.0	39.3
LnGrp LOS	D	F	C	D	D	E	E	D	D	E	D	D
Approach Vol, veh/h		2859			1825			959			1305	
Approach Delay, s/veh		118.3			55.7			45.1			45.3	
Approach LOS		F			E			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	19.5	28.4	12.4	44.0	17.9	30.0	15.4	40.9
Change Period (Y+Rc), s	4.6	5.8	6.2	* 6.2	5.8	* 5.8	4.6	6.2
Max Green Setting (Gmax), s	15.4	38.2	7.4	* 38	12.4	* 41	15.4	29.8
Max Q Clear Time (g_c+I1), s	14.8	13.4	6.2	39.8	12.0	18.1	10.6	34.9
Green Ext Time (p_c), s	0.1	3.7	0.0	0.0	0.0	5.4	0.2	0.0

Intersection Summary	
HCM 6th Ctrl Delay	78.1
HCM 6th LOS	E

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

APPENDIX 7.1:

EAC (2025) CONDITIONS INTERSECTION OPERATIONS ANALYSIS WORKSHEETS

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Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	0	2	0	0	3	5	683	23	0	274	15
Future Vol, veh/h	5	0	2	0	0	3	5	683	23	0	274	15
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	150	-	-	150	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	5	0	2	0	0	3	5	742	25	0	298	16

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	687	1083	157	914	1079	384	314	0	0	767	0	0
Stage 1	306	306	-	765	765	-	-	-	-	-	-	-
Stage 2	381	777	-	149	314	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	6.9	7.5	6.5	6.9	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	337	219	867	231	220	620	1258	-	-	856	-	-
Stage 1	684	665	-	366	415	-	-	-	-	-	-	-
Stage 2	619	410	-	844	660	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	334	218	867	230	219	620	1258	-	-	856	-	-
Mov Cap-2 Maneuver	334	218	-	230	219	-	-	-	-	-	-	-
Stage 1	681	665	-	365	413	-	-	-	-	-	-	-
Stage 2	613	408	-	842	660	-	-	-	-	-	-	-

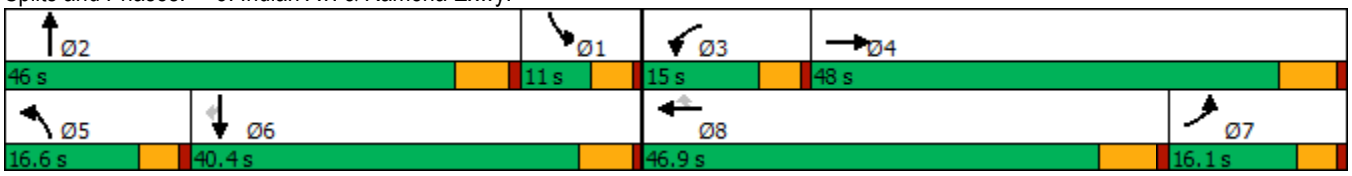
Approach	EB	WB	NB	SB
HCM Control Delay, s	14.1	10.8	0.1	0
HCM LOS	B	B		

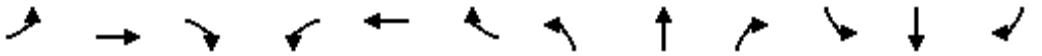
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1258	-	-	405	620	856	-	-
HCM Lane V/C Ratio	0.004	-	-	0.019	0.005	-	-	-
HCM Control Delay (s)	7.9	-	-	14.1	10.8	0	-	-
HCM Lane LOS	A	-	-	B	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0	0	-	-

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	345	1545	72	2615	168	114	199	29	104	144
Future Volume (vph)	345	1545	72	2615	168	114	199	29	104	144
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Prot	NA	Perm
Protected Phases	7	4	3	8		5	2	1	6	
Permitted Phases					8					6
Detector Phase	7	4	3	8	8	5	2	1	6	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	46.2	9.6	40.2	40.2	9.6	43.8	9.6	34.8	34.8
Total Split (s)	16.1	48.0	15.0	46.9	46.9	16.6	46.0	11.0	40.4	40.4
Total Split (%)	13.4%	40.0%	12.5%	39.1%	39.1%	13.8%	38.3%	9.2%	33.7%	33.7%
Yellow Time (s)	3.6	5.2	3.6	5.2	5.2	3.6	4.8	3.6	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	4.6	6.2	6.2	4.6	5.8	4.6	5.8	5.8
Lead/Lag	Lag	Lag	Lead	Lead	Lead	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 97.9
Natural Cycle: 120
Control Type: Actuated-Uncoordinated

Splits and Phases: 3: Indian Av. & Ramona Exwy.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	345	1545	127	72	2615	168	114	199	43	29	104	144
Future Volume (veh/h)	345	1545	127	72	2615	168	114	199	43	29	104	144
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	352	1577	128	73	2668	142	116	203	33	30	106	140
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	224	2573	209	95	2270	705	146	359	57	118	407	182
Arrive On Green	0.12	0.53	0.53	0.05	0.44	0.44	0.08	0.12	0.12	0.07	0.11	0.11
Sat Flow, veh/h	1810	4890	397	1810	5187	1610	1810	3114	498	1810	3610	1610
Grp Volume(v), veh/h	352	1115	590	73	2668	142	116	116	120	30	106	140
Grp Sat Flow(s),veh/h/ln	1810	1729	1828	1810	1729	1610	1810	1805	1807	1810	1805	1610
Q Serve(g_s), s	11.5	21.0	21.0	3.7	40.7	5.1	5.9	5.7	5.8	1.5	2.5	5.6
Cycle Q Clear(g_c), s	11.5	21.0	21.0	3.7	40.7	5.1	5.9	5.7	5.8	1.5	2.5	5.6
Prop In Lane	1.00		0.22	1.00		1.00	1.00		0.28	1.00		1.00
Lane Grp Cap(c), veh/h	224	1820	962	95	2270	705	146	208	208	118	407	182
V/C Ratio(X)	1.57	0.61	0.61	0.77	1.18	0.20	0.79	0.56	0.57	0.25	0.26	0.77
Avail Cap(c_a), veh/h	224	1820	962	202	2270	705	233	780	781	125	1343	599
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.8	15.4	15.4	43.5	26.2	16.1	42.0	38.9	39.0	41.3	37.7	20.5
Incr Delay (d2), s/veh	278.4	0.6	1.2	4.9	83.9	0.1	3.7	2.3	2.5	0.4	0.3	6.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	22.1	7.1	7.7	1.7	32.1	1.7	2.7	2.6	2.6	0.6	1.1	3.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	319.1	16.0	16.6	48.5	110.0	16.3	45.7	41.2	41.5	41.7	38.0	27.2
LnGrp LOS	F	B	B	D	F	B	D	D	D	D	D	C
Approach Vol, veh/h		2057			2883			352			276	
Approach Delay, s/veh		68.0			103.9			42.8			33.0	
Approach LOS		E			F			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.9	16.5	9.5	55.1	12.1	16.3	17.7	46.9
Change Period (Y+Rc), s	5.8	* 5.8	4.6	6.2	4.6	5.8	6.2	* 6.2
Max Green Setting (Gmax), s	6.4	* 40	10.4	41.8	12.0	34.6	11.5	* 41
Max Q Clear Time (g_c+I1), s	3.5	7.8	5.7	23.0	7.9	7.6	13.5	42.7
Green Ext Time (p_c), s	0.0	1.3	0.0	10.5	0.0	1.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	83.3
HCM 6th LOS	F

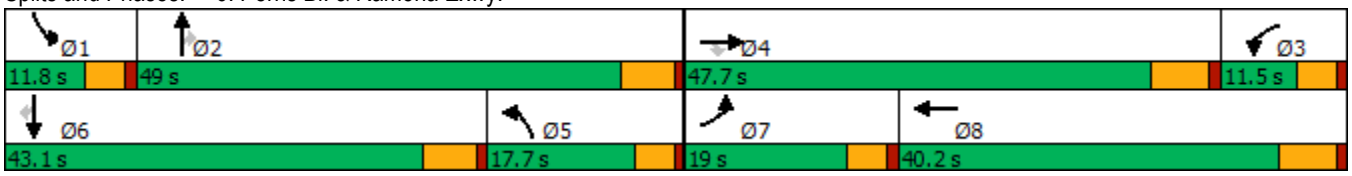
Notes

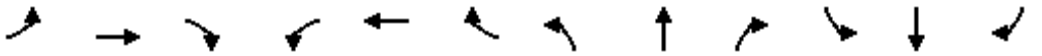
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	385	952	207	206	2224	387	904	149	166	417	235
Future Volume (vph)	385	952	207	206	2224	387	904	149	166	417	235
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8	5	2		1	6	
Permitted Phases			4					2			6
Detector Phase	7	4	4	3	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	36.2	36.2	9.6	34.2	9.6	38.8	38.8	9.6	41.8	41.8
Total Split (s)	19.0	47.7	47.7	11.5	40.2	17.7	49.0	49.0	11.8	43.1	43.1
Total Split (%)	15.8%	39.8%	39.8%	9.6%	33.5%	14.8%	40.8%	40.8%	9.8%	35.9%	35.9%
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	3.6	4.8	4.8	3.6	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	6.2	4.6	6.2	4.6	5.8	5.8	4.6	5.8	5.8
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 112.7
Natural Cycle: 120
Control Type: Actuated-Uncoordinated

Splits and Phases: 6: Perris Bl. & Ramona Exwy.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	385	952	207	206	2224	311	387	904	149	166	417	235
Future Volume (veh/h)	385	952	207	206	2224	311	387	904	149	166	417	235
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	393	971	166	210	2269	298	395	922	104	169	426	181
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	450	1311	406	594	1434	184	699	1105	492	228	582	260
Arrive On Green	0.13	0.25	0.25	0.17	0.31	0.31	0.20	0.31	0.31	0.07	0.16	0.16
Sat Flow, veh/h	3510	5187	1604	3510	4652	596	3510	3610	1609	3510	3610	1610
Grp Volume(v), veh/h	393	971	166	210	1672	895	395	922	104	169	426	181
Grp Sat Flow(s),veh/h/ln	1755	1729	1604	1755	1729	1790	1755	1805	1609	1755	1805	1610
Q Serve(g_s), s	12.1	19.0	9.5	5.8	34.0	34.0	11.2	26.2	3.2	5.2	12.4	8.6
Cycle Q Clear(g_c), s	12.1	19.0	9.5	5.8	34.0	34.0	11.2	26.2	3.2	5.2	12.4	8.6
Prop In Lane	1.00		1.00	1.00		0.33	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	450	1311	406	594	1066	552	699	1105	492	228	582	260
V/C Ratio(X)	0.87	0.74	0.41	0.35	1.57	1.62	0.57	0.83	0.21	0.74	0.73	0.70
Avail Cap(c_a), veh/h	458	1952	604	594	1066	552	699	1414	630	229	1221	545
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.2	37.9	34.3	40.5	38.1	38.1	39.9	35.7	10.2	50.6	44.0	23.6
Incr Delay (d2), s/veh	15.8	0.8	0.7	0.1	260.1	288.1	0.7	3.6	0.2	10.6	1.8	3.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.1	7.7	3.6	2.4	51.9	58.1	4.7	11.5	1.9	2.6	5.5	4.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	63.0	38.7	35.0	40.6	298.3	326.3	40.5	39.2	10.4	61.3	45.8	27.0
LnGrp LOS	E	D	C	D	F	F	D	D	B	E	D	C
Approach Vol, veh/h		1530			2777			1421			776	
Approach Delay, s/veh		44.5			287.8			37.5			44.8	
Approach LOS		D			F			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.8	39.5	24.9	34.1	27.7	23.6	18.7	40.2
Change Period (Y+Rc), s	4.6	5.8	6.2	* 6.2	5.8	* 5.8	4.6	6.2
Max Green Setting (Gmax), s	7.2	43.2	6.9	* 42	13.1	* 37	14.4	34.0
Max Q Clear Time (g_c+I1), s	7.2	28.2	7.8	21.0	13.2	14.4	14.1	36.0
Green Ext Time (p_c), s	0.0	5.5	0.0	6.7	0.0	3.1	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	146.9
HCM 6th LOS	F

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	14	0	5	0	0	6	2	746	6	0	534	5
Future Vol, veh/h	14	0	5	0	0	6	2	746	6	0	534	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	150	-	-	150	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	15	0	5	0	0	7	2	811	7	0	580	5

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	993	1405	293	1109	1404	409	585	0	0	818	0	0
Stage 1	583	583	-	819	819	-	-	-	-	-	-	-
Stage 2	410	822	-	290	585	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	6.9	7.5	6.5	6.9	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	203	141	709	167	141	597	1000	-	-	819	-	-
Stage 1	470	502	-	340	392	-	-	-	-	-	-	-
Stage 2	595	391	-	699	501	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	201	141	709	165	141	597	1000	-	-	819	-	-
Mov Cap-2 Maneuver	201	141	-	165	141	-	-	-	-	-	-	-
Stage 1	469	502	-	339	391	-	-	-	-	-	-	-
Stage 2	587	390	-	694	501	-	-	-	-	-	-	-

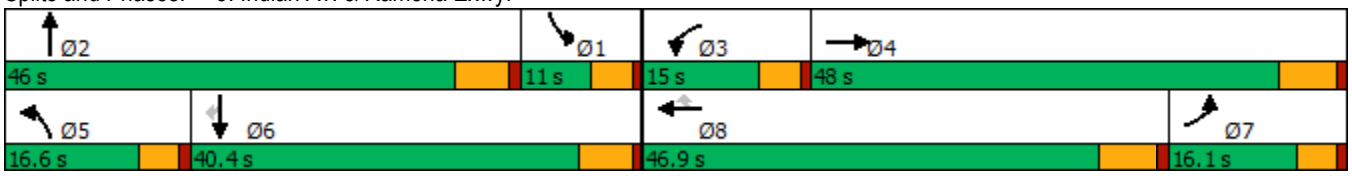
Approach	EB	WB	NB	SB
HCM Control Delay, s	20.8	11.1	0	0
HCM LOS	C	B		

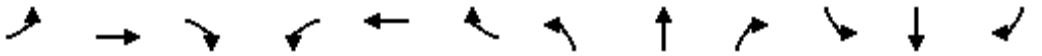
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1000	-	-	248	597	819	-	-
HCM Lane V/C Ratio	0.002	-	-	0.083	0.011	-	-	-
HCM Control Delay (s)	8.6	-	-	20.8	11.1	0	-	-
HCM Lane LOS	A	-	-	C	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.3	0	0	-	-

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	394	2785	135	1875	138	188	222	192	181	166
Future Volume (vph)	394	2785	135	1875	138	188	222	192	181	166
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Prot	NA	Perm
Protected Phases	7	4	3	8		5	2	1	6	
Permitted Phases					8					6
Detector Phase	7	4	3	8	8	5	2	1	6	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	46.2	9.6	40.2	40.2	9.6	43.8	9.6	34.8	34.8
Total Split (s)	16.1	48.0	15.0	46.9	46.9	16.6	46.0	11.0	40.4	40.4
Total Split (%)	13.4%	40.0%	12.5%	39.1%	39.1%	13.8%	38.3%	9.2%	33.7%	33.7%
Yellow Time (s)	3.6	5.2	3.6	5.2	5.2	3.6	4.8	3.6	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	4.6	6.2	6.2	4.6	5.8	4.6	5.8	5.8
Lead/Lag	Lag	Lag	Lead	Lead	Lead	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 100.2
Natural Cycle: 120
Control Type: Actuated-Uncoordinated

Splits and Phases: 3: Indian Av. & Ramona Exwy.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	394	2785	188	135	1875	138	188	222	46	192	181	166
Future Volume (veh/h)	394	2785	188	135	1875	138	188	222	46	192	181	166
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	402	2842	170	138	1913	119	192	227	27	196	185	140
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	217	2291	134	169	2147	667	225	339	40	202	376	168
Arrive On Green	0.12	0.46	0.46	0.09	0.41	0.41	0.12	0.10	0.10	0.11	0.10	0.10
Sat Flow, veh/h	1810	5011	294	1810	5187	1610	1810	3253	383	1810	3610	1610
Grp Volume(v), veh/h	402	1944	1068	138	1913	119	192	125	129	196	185	140
Grp Sat Flow(s),veh/h/ln	1810	1729	1847	1810	1729	1610	1810	1805	1831	1810	1805	1610
Q Serve(g_s), s	11.5	43.8	43.8	7.2	32.8	4.5	10.0	6.4	6.5	10.3	4.6	5.9
Cycle Q Clear(g_c), s	11.5	43.8	43.8	7.2	32.8	4.5	10.0	6.4	6.5	10.3	4.6	5.9
Prop In Lane	1.00		0.16	1.00		1.00	1.00		0.21	1.00		1.00
Lane Grp Cap(c), veh/h	217	1581	844	169	2147	667	225	188	191	202	376	168
V/C Ratio(X)	1.85	1.23	1.27	0.82	0.89	0.18	0.86	0.66	0.68	0.97	0.49	0.83
Avail Cap(c_a), veh/h	217	1581	844	196	2201	683	226	757	768	202	1303	581
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.2	26.0	26.0	42.7	26.1	17.8	41.2	41.3	41.4	42.4	40.5	22.2
Incr Delay (d2), s/veh	400.9	109.2	128.7	17.7	4.9	0.1	24.7	4.0	4.1	54.5	1.0	10.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	29.0	39.5	46.8	3.9	12.9	1.5	5.8	3.0	3.1	7.5	2.1	3.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	443.1	135.2	154.7	60.3	31.0	17.9	65.9	45.3	45.5	96.9	41.5	32.5
LnGrp LOS	F	F	F	E	C	B	E	D	D	F	D	C
Approach Vol, veh/h		3414			2170			446			521	
Approach Delay, s/veh		177.6			32.2			54.2			59.9	
Approach LOS		F			C			D			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.5	15.8	13.6	50.0	16.5	15.8	17.7	45.9
Change Period (Y+Rc), s	5.8	* 5.8	4.6	6.2	4.6	5.8	6.2	* 6.2
Max Green Setting (Gmax), s	6.4	* 40	10.4	41.8	12.0	34.6	11.5	* 41
Max Q Clear Time (g_c+I1), s	12.3	8.5	9.2	45.8	12.0	7.9	13.5	34.8
Green Ext Time (p_c), s	0.0	1.4	0.0	0.0	0.0	1.5	0.0	4.9

Intersection Summary	
HCM 6th Ctrl Delay	111.7
HCM 6th LOS	F

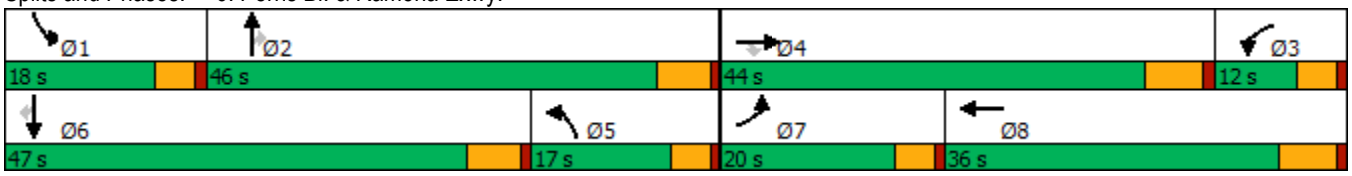
Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	312	2302	372	171	1501	340	490	202	452	742	242
Future Volume (vph)	312	2302	372	171	1501	340	490	202	452	742	242
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8	5	2		1	6	
Permitted Phases			4					2			6
Detector Phase	7	4	4	3	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	36.2	36.2	9.6	34.2	9.6	38.8	38.8	9.6	41.8	41.8
Total Split (s)	20.0	44.0	44.0	12.0	36.0	17.0	46.0	46.0	18.0	47.0	47.0
Total Split (%)	16.7%	36.7%	36.7%	10.0%	30.0%	14.2%	38.3%	38.3%	15.0%	39.2%	39.2%
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	3.6	4.8	4.8	3.6	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	6.2	4.6	6.2	4.6	5.8	5.8	4.6	5.8	5.8
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 109.5
Natural Cycle: 120
Control Type: Actuated-Uncoordinated

Splits and Phases: 6: Perris Bl. & Ramona Exwy.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	312	2302	372	171	1501	241	340	490	202	452	742	242
Future Volume (veh/h)	312	2302	372	171	1501	241	340	490	202	452	742	242
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	322	2373	284	176	1547	235	351	505	157	466	765	175
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	386	1766	547	234	1416	215	392	963	429	424	957	425
Arrive On Green	0.11	0.34	0.34	0.07	0.31	0.31	0.11	0.27	0.27	0.12	0.26	0.26
Sat Flow, veh/h	3510	5187	1607	3510	4542	688	3510	3610	1608	3510	3610	1605
Grp Volume(v), veh/h	322	2373	284	176	1177	605	351	505	157	466	765	175
Grp Sat Flow(s),veh/h/ln	1755	1729	1607	1755	1729	1772	1755	1805	1608	1755	1805	1605
Q Serve(g_s), s	10.0	37.8	15.7	5.5	34.6	34.6	11.0	13.2	6.7	13.4	21.9	7.2
Cycle Q Clear(g_c), s	10.0	37.8	15.7	5.5	34.6	34.6	11.0	13.2	6.7	13.4	21.9	7.2
Prop In Lane	1.00		1.00	1.00		0.39	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	386	1766	547	234	1078	552	392	963	429	424	957	425
V/C Ratio(X)	0.84	1.34	0.52	0.75	1.09	1.10	0.90	0.52	0.37	1.10	0.80	0.41
Avail Cap(c_a), veh/h	487	1766	547	234	1078	552	392	1307	582	424	1340	596
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.4	36.6	29.3	50.9	38.2	38.2	48.7	34.7	19.2	48.8	38.1	17.6
Incr Delay (d2), s/veh	8.0	158.5	0.9	11.5	56.0	66.9	21.7	0.4	0.5	73.5	2.4	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.6	40.7	5.8	2.7	22.0	24.3	5.8	5.6	3.2	10.0	9.6	3.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	56.5	195.1	30.2	62.4	94.2	105.1	70.3	35.1	19.7	122.3	40.4	18.2
LnGrp LOS	E	F	C	E	F	F	E	D	B	F	D	B
Approach Vol, veh/h		2979			1958			1013			1406	
Approach Delay, s/veh		164.4			94.7			44.9			64.8	
Approach LOS		F			F			D			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.0	35.4	13.6	44.0	18.2	35.2	16.8	40.8
Change Period (Y+Rc), s	4.6	5.8	6.2	* 6.2	5.8	* 5.8	4.6	6.2
Max Green Setting (Gmax), s	13.4	40.2	7.4	* 38	12.4	* 41	15.4	29.8
Max Q Clear Time (g_c+I1), s	15.4	15.2	7.5	39.8	13.0	23.9	12.0	36.6
Green Ext Time (p_c), s	0.0	3.6	0.0	0.0	0.0	5.0	0.2	0.0

Intersection Summary	
HCM 6th Ctrl Delay	110.4
HCM 6th LOS	F

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

APPENDIX 7.2:

EAPC (2025) CONDITIONS INTERSECTION OPERATIONS ANALYSIS WORKSHEETS

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Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔		↰	↑↑↱		↰	↑↑↱	
Traffic Vol, veh/h	5	0	2	0	0	3	5	699	43	0	284	15
Future Vol, veh/h	5	0	2	0	0	3	5	699	43	0	284	15
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	150	-	-	150	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	5	0	2	0	0	3	5	760	47	0	309	16

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	707	1134	163	949	1119	404	325	0	0	807	0	0
Stage 1	317	317	-	794	794	-	-	-	-	-	-	-
Stage 2	390	817	-	155	325	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	6.9	7.5	6.5	6.9	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	326	204	859	218	209	602	1246	-	-	827	-	-
Stage 1	674	658	-	352	403	-	-	-	-	-	-	-
Stage 2	611	393	-	838	653	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	323	203	859	217	208	602	1246	-	-	827	-	-
Mov Cap-2 Maneuver	323	203	-	217	208	-	-	-	-	-	-	-
Stage 1	671	658	-	351	401	-	-	-	-	-	-	-
Stage 2	605	391	-	836	653	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	14.3	11	0.1	0
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1246	-	-	393	602	827	-	-
HCM Lane V/C Ratio	0.004	-	-	0.019	0.005	-	-	-
HCM Control Delay (s)	7.9	-	-	14.3	11	0	-	-
HCM Lane LOS	A	-	-	B	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0	0	-	-

Intersection	
Int Delay, s/veh	0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	6	741	14	10	276
Future Vol, veh/h	0	6	741	14	10	276
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	150	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	7	805	15	11	300

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	410	0	0	820	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	4.1	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	0	596	-	-	818	-
Stage 1	0	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	596	-	-	818	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

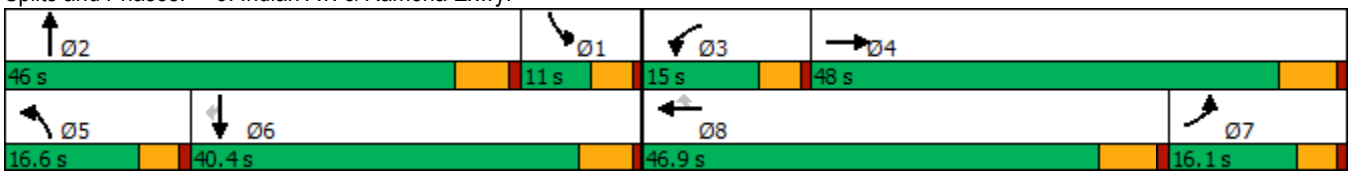
Approach	WB	NB	SB
HCM Control Delay, s	11.1	0	0.3
HCM LOS	B		

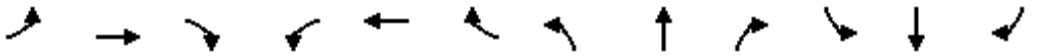
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	596	818	-
HCM Lane V/C Ratio	-	-	0.011	0.013	-
HCM Control Delay (s)	-	-	11.1	9.5	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	0	0	-

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	365	1545	74	2627	186	114	205	29	104	144
Future Volume (vph)	365	1545	74	2627	186	114	205	29	104	144
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Prot	NA	Perm
Protected Phases	7	4	3	8		5	2	1	6	
Permitted Phases					8					6
Detector Phase	7	4	3	8	8	5	2	1	6	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	46.2	9.6	40.2	40.2	9.6	43.8	9.6	34.8	34.8
Total Split (s)	16.1	48.0	15.0	46.9	46.9	16.6	46.0	11.0	40.4	40.4
Total Split (%)	13.4%	40.0%	12.5%	39.1%	39.1%	13.8%	38.3%	9.2%	33.7%	33.7%
Yellow Time (s)	3.6	5.2	3.6	5.2	5.2	3.6	4.8	3.6	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	4.6	6.2	6.2	4.6	5.8	4.6	5.8	5.8
Lead/Lag	Lag	Lag	Lead	Lead	Lead	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 97.9
Natural Cycle: 120
Control Type: Actuated-Uncoordinated

Splits and Phases: 3: Indian Av. & Ramona Exwy.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	365	1545	127	74	2627	186	114	205	43	29	104	144
Future Volume (veh/h)	365	1545	127	74	2627	186	114	205	43	29	104	144
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	372	1577	128	76	2681	161	116	209	33	30	106	140
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	224	2563	208	98	2270	705	146	361	56	118	407	182
Arrive On Green	0.12	0.52	0.52	0.05	0.44	0.44	0.08	0.12	0.12	0.07	0.11	0.11
Sat Flow, veh/h	1810	4890	397	1810	5187	1610	1810	3128	486	1810	3610	1610
Grp Volume(v), veh/h	372	1115	590	76	2681	161	116	119	123	30	106	140
Grp Sat Flow(s),veh/h/ln	1810	1729	1828	1810	1729	1610	1810	1805	1809	1810	1805	1610
Q Serve(g_s), s	11.5	21.1	21.1	3.9	40.7	5.8	5.9	5.8	6.0	1.5	2.5	5.6
Cycle Q Clear(g_c), s	11.5	21.1	21.1	3.9	40.7	5.8	5.9	5.8	6.0	1.5	2.5	5.6
Prop In Lane	1.00		0.22	1.00		1.00	1.00		0.27	1.00		1.00
Lane Grp Cap(c), veh/h	224	1812	958	98	2270	705	146	208	209	118	407	182
V/C Ratio(X)	1.66	0.62	0.62	0.77	1.18	0.23	0.79	0.57	0.59	0.25	0.26	0.77
Avail Cap(c_a), veh/h	224	1812	958	202	2270	705	233	780	782	125	1343	599
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.8	15.5	15.5	43.4	26.2	16.3	42.0	39.0	39.0	41.3	37.7	20.5
Incr Delay (d2), s/veh	317.1	0.6	1.2	4.8	86.4	0.2	3.7	2.5	2.6	0.4	0.3	6.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	24.5	7.2	7.7	1.8	32.6	2.0	2.7	2.6	2.7	0.6	1.1	3.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	357.9	16.2	16.7	48.2	112.5	16.5	45.7	41.4	41.7	41.7	38.0	27.2
LnGrp LOS	F	B	B	D	F	B	D	D	D	D	D	C
Approach Vol, veh/h		2077			2918			358			276	
Approach Delay, s/veh		77.5			105.5			42.9			33.0	
Approach LOS		E			F			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.9	16.5	9.7	54.9	12.1	16.3	17.7	46.9
Change Period (Y+Rc), s	5.8	* 5.8	4.6	6.2	4.6	5.8	6.2	* 6.2
Max Green Setting (Gmax), s	6.4	* 40	10.4	41.8	12.0	34.6	11.5	* 41
Max Q Clear Time (g_c+I1), s	3.5	8.0	5.9	23.1	7.9	7.6	13.5	42.7
Green Ext Time (p_c), s	0.0	1.3	0.0	10.5	0.0	1.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	87.7
HCM 6th LOS	F

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑↑	↱		↱
Traffic Vol, veh/h	0	1617	2883	10	0	3
Future Vol, veh/h	0	1617	2883	10	0	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	100	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	1758	3134	11	0	3

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	1567
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	7.1
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.9
Pot Cap-1 Maneuver	0	-	-	-	0	87
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	87
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	48
HCM LOS			E

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	87
HCM Lane V/C Ratio	-	-	-	0.037
HCM Control Delay (s)	-	-	-	48
HCM Lane LOS	-	-	-	E
HCM 95th %tile Q(veh)	-	-	-	0.1

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	28	0	1599	818	34
Future Vol, veh/h	0	28	0	1599	818	34
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	30	0	1738	889	37

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	463	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	7.1	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.9	-	-	-	-
Pot Cap-1 Maneuver	0	471	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	471	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

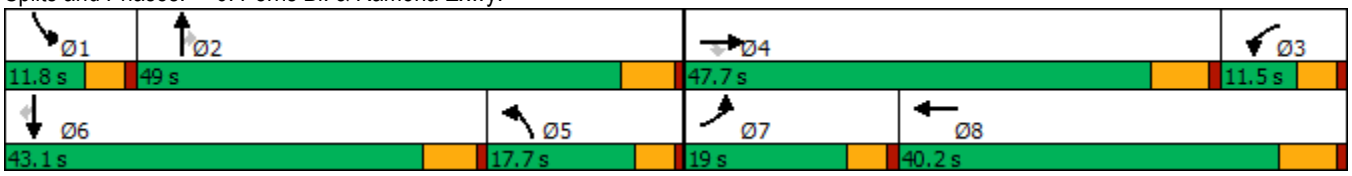
Approach	EB	NB	SB
HCM Control Delay, s	13.2	0	0
HCM LOS	B		

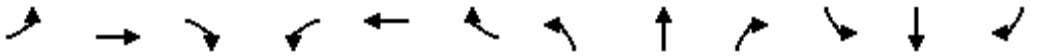
Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	471	-	-
HCM Lane V/C Ratio	-	0.065	-	-
HCM Control Delay (s)	-	13.2	-	-
HCM Lane LOS	-	B	-	-
HCM 95th %tile Q(veh)	-	0.2	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	385	952	207	206	2230	399	904	149	169	421	256
Future Volume (vph)	385	952	207	206	2230	399	904	149	169	421	256
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8	5	2		1	6	
Permitted Phases			4					2			6
Detector Phase	7	4	4	3	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	36.2	36.2	9.6	34.2	9.6	38.8	38.8	9.6	41.8	41.8
Total Split (s)	19.0	47.7	47.7	11.5	40.2	17.7	49.0	49.0	11.8	43.1	43.1
Total Split (%)	15.8%	39.8%	39.8%	9.6%	33.5%	14.8%	40.8%	40.8%	9.8%	35.9%	35.9%
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	3.6	4.8	4.8	3.6	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	6.2	4.6	6.2	4.6	5.8	5.8	4.6	5.8	5.8
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 112.7
Natural Cycle: 120
Control Type: Actuated-Uncoordinated

Splits and Phases: 6: Perris Bl. & Ramona Exwy.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	385	952	207	206	2230	311	399	904	149	169	421	256
Future Volume (veh/h)	385	952	207	206	2230	311	399	904	149	169	421	256
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	393	971	166	210	2276	298	407	922	104	172	430	202
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	450	1311	406	594	1435	183	693	1105	492	229	588	262
Arrive On Green	0.13	0.25	0.25	0.17	0.31	0.31	0.20	0.31	0.31	0.07	0.16	0.16
Sat Flow, veh/h	3510	5187	1604	3510	4654	594	3510	3610	1609	3510	3610	1610
Grp Volume(v), veh/h	393	971	166	210	1676	898	407	922	104	172	430	202
Grp Sat Flow(s),veh/h/ln	1755	1729	1604	1755	1729	1790	1755	1805	1609	1755	1805	1610
Q Serve(g_s), s	12.1	19.0	9.5	5.8	34.0	34.0	11.6	26.3	3.2	5.3	12.5	9.7
Cycle Q Clear(g_c), s	12.1	19.0	9.5	5.8	34.0	34.0	11.6	26.3	3.2	5.3	12.5	9.7
Prop In Lane	1.00		1.00	1.00		0.33	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	450	1311	406	594	1066	552	693	1105	492	229	588	262
V/C Ratio(X)	0.87	0.74	0.41	0.35	1.57	1.63	0.59	0.83	0.21	0.75	0.73	0.77
Avail Cap(c_a), veh/h	458	1952	604	594	1066	552	693	1414	630	229	1221	544
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.2	37.9	34.3	40.5	38.2	38.2	40.2	35.7	10.2	50.7	43.9	23.8
Incr Delay (d2), s/veh	15.8	0.8	0.7	0.1	262.1	290.5	0.9	3.6	0.2	11.6	1.8	4.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.1	7.7	3.6	2.4	52.2	58.4	4.9	11.5	1.9	2.6	5.5	3.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	63.0	38.7	35.0	40.6	300.3	328.6	41.1	39.2	10.4	62.3	45.6	28.5
LnGrp LOS	E	D	D	D	F	F	D	D	B	E	D	C
Approach Vol, veh/h		1530			2784			1433			804	
Approach Delay, s/veh		44.6			289.8			37.7			44.9	
Approach LOS		D			F			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.8	39.6	24.9	34.1	27.6	23.8	18.8	40.2
Change Period (Y+Rc), s	4.6	5.8	6.2	* 6.2	5.8	* 5.8	4.6	6.2
Max Green Setting (Gmax), s	7.2	43.2	6.9	* 42	13.1	* 37	14.4	34.0
Max Q Clear Time (g_c+I1), s	7.3	28.3	7.8	21.0	13.6	14.5	14.1	36.0
Green Ext Time (p_c), s	0.0	5.5	0.0	6.7	0.0	3.2	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	147.3
HCM 6th LOS	F

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔		↰	↑↑↱		↰	↑↑↱	
Traffic Vol, veh/h	14	0	5	0	0	6	2	772	29	0	544	5
Future Vol, veh/h	14	0	5	0	0	6	2	772	29	0	544	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	150	-	-	150	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	15	0	5	0	0	7	2	839	32	0	591	5

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1018	1469	298	1155	1455	436	596	0	0	871	0	0
Stage 1	594	594	-	859	859	-	-	-	-	-	-	-
Stage 2	424	875	-	296	596	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	6.9	7.5	6.5	6.9	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	194	129	704	154	131	574	990	-	-	783	-	-
Stage 1	463	496	-	322	376	-	-	-	-	-	-	-
Stage 2	584	370	-	694	495	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	191	129	704	153	131	574	990	-	-	783	-	-
Mov Cap-2 Maneuver	191	129	-	153	131	-	-	-	-	-	-	-
Stage 1	462	496	-	321	375	-	-	-	-	-	-	-
Stage 2	576	369	-	689	495	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	21.7	11.3	0	0
HCM LOS	C	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	990	-	-	236	574	783	-	-
HCM Lane V/C Ratio	0.002	-	-	0.088	0.011	-	-	-
HCM Control Delay (s)	8.6	-	-	21.7	11.3	0	-	-
HCM Lane LOS	A	-	-	C	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.3	0	0	-	-

Intersection	
Int Delay, s/veh	0.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	11	792	4	10	539
Future Vol, veh/h	0	11	792	4	10	539
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	150	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	12	861	4	11	586

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	433	0	0	865	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	4.1	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	0	576	-	-	787	-
Stage 1	0	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	576	-	-	787	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

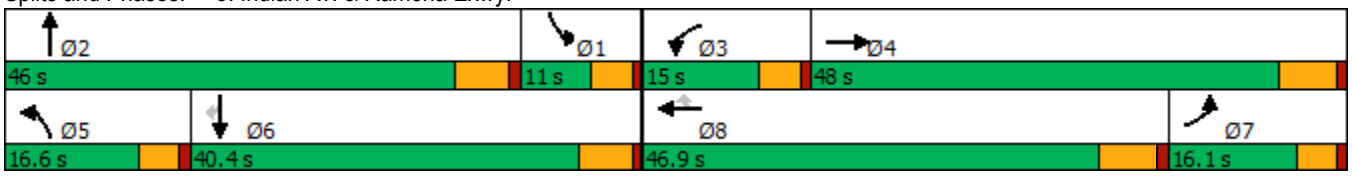
Approach	WB	NB	SB
HCM Control Delay, s	11.4	0	0.2
HCM LOS	B		

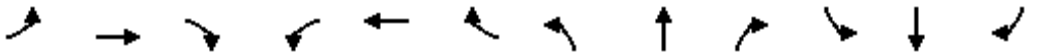
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	576	787	-
HCM Lane V/C Ratio	-	-	0.021	0.014	-
HCM Control Delay (s)	-	-	11.4	9.6	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	411	2785	142	1896	162	188	224	192	181	166
Future Volume (vph)	411	2785	142	1896	162	188	224	192	181	166
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Prot	NA	Perm
Protected Phases	7	4	3	8		5	2	1	6	
Permitted Phases					8					6
Detector Phase	7	4	3	8	8	5	2	1	6	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	46.2	9.6	40.2	40.2	9.6	43.8	9.6	34.8	34.8
Total Split (s)	16.1	48.0	15.0	46.9	46.9	16.6	46.0	11.0	40.4	40.4
Total Split (%)	13.4%	40.0%	12.5%	39.1%	39.1%	13.8%	38.3%	9.2%	33.7%	33.7%
Yellow Time (s)	3.6	5.2	3.6	5.2	5.2	3.6	4.8	3.6	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	4.6	6.2	6.2	4.6	5.8	4.6	5.8	5.8
Lead/Lag	Lag	Lag	Lead	Lead	Lead	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 100.2
Natural Cycle: 120
Control Type: Actuated-Uncoordinated

Splits and Phases: 3: Indian Av. & Ramona Exwy.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	411	2785	188	142	1896	162	188	224	46	192	181	166
Future Volume (veh/h)	411	2785	188	142	1896	162	188	224	46	192	181	166
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	419	2842	170	145	1935	143	192	229	27	196	185	140
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	217	2274	133	176	2153	668	224	339	40	202	376	168
Arrive On Green	0.12	0.45	0.45	0.10	0.41	0.41	0.12	0.10	0.10	0.11	0.10	0.10
Sat Flow, veh/h	1810	5011	294	1810	5187	1610	1810	3257	380	1810	3610	1610
Grp Volume(v), veh/h	419	1944	1068	145	1935	143	192	126	130	196	185	140
Grp Sat Flow(s),veh/h/ln	1810	1729	1847	1810	1729	1610	1810	1805	1832	1810	1805	1610
Q Serve(g_s), s	11.5	43.6	43.6	7.6	33.5	5.5	10.0	6.5	6.6	10.4	4.7	6.0
Cycle Q Clear(g_c), s	11.5	43.6	43.6	7.6	33.5	5.5	10.0	6.5	6.6	10.4	4.7	6.0
Prop In Lane	1.00		0.16	1.00		1.00	1.00		0.21	1.00		1.00
Lane Grp Cap(c), veh/h	217	1569	838	176	2153	668	224	188	191	202	376	168
V/C Ratio(X)	1.94	1.24	1.27	0.82	0.90	0.21	0.86	0.67	0.68	0.97	0.49	0.84
Avail Cap(c_a), veh/h	217	1569	838	196	2197	682	226	755	766	202	1300	580
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.3	26.2	26.2	42.5	26.2	18.0	41.2	41.5	41.5	42.5	40.7	22.3
Incr Delay (d2), s/veh	437.3	113.1	132.7	19.7	5.4	0.2	24.8	4.1	4.3	54.5	1.0	10.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	31.2	40.1	47.4	4.2	13.3	1.9	5.8	3.0	3.1	7.5	2.1	3.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	479.6	139.3	158.9	62.3	31.6	18.2	66.1	45.6	45.8	97.1	41.7	32.7
LnGrp LOS	F	F	F	E	C	B	E	D	D	F	D	C
Approach Vol, veh/h		3431			2223			448			521	
Approach Delay, s/veh		187.0			32.8			54.4			60.1	
Approach LOS		F			C			D			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.5	15.8	14.0	49.8	16.5	15.8	17.7	46.1
Change Period (Y+Rc), s	5.8	* 5.8	4.6	6.2	4.6	5.8	6.2	* 6.2
Max Green Setting (Gmax), s	6.4	* 40	10.4	41.8	12.0	34.6	11.5	* 41
Max Q Clear Time (g_c+I1), s	12.4	8.6	9.6	45.6	12.0	8.0	13.5	35.5
Green Ext Time (p_c), s	0.0	1.4	0.0	0.0	0.0	1.5	0.0	4.4

Intersection Summary	
HCM 6th Ctrl Delay	116.3
HCM 6th LOS	F

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑↑	↱		↱
Traffic Vol, veh/h	0	3024	2188	3	0	12
Future Vol, veh/h	0	3024	2188	3	0	12
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	100	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	3287	2378	3	0	13

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	1189
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	7.1
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.9
Pot Cap-1 Maneuver	0	-	-	-	0	157
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	157
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	30
HCM LOS			D

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	157
HCM Lane V/C Ratio	-	-	-	0.083
HCM Control Delay (s)	-	-	-	30
HCM Lane LOS	-	-	-	D
HCM 95th %tile Q(veh)	-	-	-	0.3

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	48	0	1042	1437	38
Future Vol, veh/h	0	48	0	1042	1437	38
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	52	0	1133	1562	41

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	802	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	7.1	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.9	-	-	-	-
Pot Cap-1 Maneuver	0	284	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	284	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

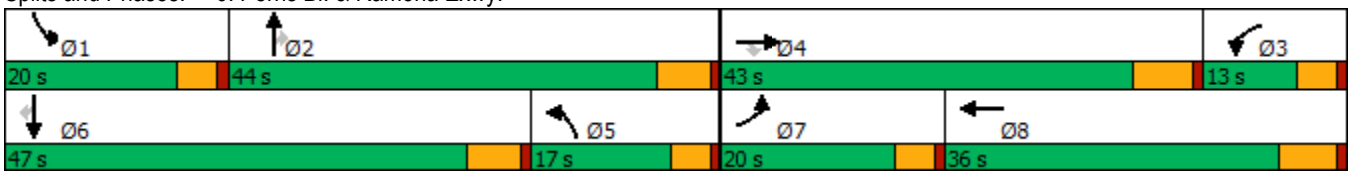
Approach	EB	NB	SB
HCM Control Delay, s	20.5	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	284	-	-
HCM Lane V/C Ratio	-	0.184	-	-
HCM Control Delay (s)	-	20.5	-	-
HCM Lane LOS	-	C	-	-
HCM 95th %tile Q(veh)	-	0.7	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	312	2302	372	171	1506	346	490	202	458	752	274
Future Volume (vph)	312	2302	372	171	1506	346	490	202	458	752	274
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8	5	2		1	6	
Permitted Phases			4					2			6
Detector Phase	7	4	4	3	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	36.2	36.2	9.6	34.2	9.6	38.8	38.8	9.6	41.8	41.8
Total Split (s)	20.0	43.0	43.0	13.0	36.0	17.0	44.0	44.0	20.0	47.0	47.0
Total Split (%)	16.7%	35.8%	35.8%	10.8%	30.0%	14.2%	36.7%	36.7%	16.7%	39.2%	39.2%
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	3.6	4.8	4.8	3.6	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	6.2	4.6	6.2	4.6	5.8	5.8	4.6	5.8	5.8
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 109.8
Natural Cycle: 120
Control Type: Actuated-Uncoordinated

Splits and Phases: 6: Perris Bl. & Ramona Exwy.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	312	2302	372	171	1506	241	346	490	202	458	752	274
Future Volume (veh/h)	312	2302	372	171	1506	241	346	490	202	458	752	274
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	322	2373	284	176	1553	235	357	505	157	472	775	208
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	386	1731	536	236	1388	210	395	912	406	490	971	432
Arrive On Green	0.11	0.33	0.33	0.07	0.31	0.31	0.11	0.25	0.25	0.14	0.27	0.27
Sat Flow, veh/h	3510	5187	1607	3510	4545	686	3510	3610	1608	3510	3610	1605
Grp Volume(v), veh/h	322	2373	284	176	1181	607	357	505	157	472	775	208
Grp Sat Flow(s),veh/h/ln	1755	1729	1607	1755	1729	1773	1755	1805	1608	1755	1805	1605
Q Serve(g_s), s	9.9	36.8	15.8	5.4	33.7	33.7	11.1	13.4	6.8	14.7	22.0	8.7
Cycle Q Clear(g_c), s	9.9	36.8	15.8	5.4	33.7	33.7	11.1	13.4	6.8	14.7	22.0	8.7
Prop In Lane	1.00		1.00	1.00		0.39	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	386	1731	536	236	1056	542	395	912	406	490	971	432
V/C Ratio(X)	0.83	1.37	0.53	0.74	1.12	1.12	0.90	0.55	0.39	0.96	0.80	0.48
Avail Cap(c_a), veh/h	490	1731	536	267	1056	542	395	1250	557	490	1348	599
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.1	36.7	29.7	50.5	38.3	38.3	48.4	35.8	19.9	47.2	37.5	17.6
Incr Delay (d2), s/veh	7.8	170.8	1.0	7.7	65.9	76.6	23.2	0.5	0.6	31.1	2.4	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.6	41.8	5.9	2.6	23.0	25.2	6.0	5.7	3.3	8.3	9.6	4.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	55.9	207.5	30.7	58.2	104.2	114.9	71.5	36.3	20.5	78.2	39.9	18.4
LnGrp LOS	E	F	C	E	F	F	E	D	C	E	D	B
Approach Vol, veh/h		2979			1964			1019			1455	
Approach Delay, s/veh		174.3			103.4			46.2			49.3	
Approach LOS		F			F			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	20.0	33.7	13.6	43.0	18.2	35.5	16.7	39.9
Change Period (Y+Rc), s	4.6	5.8	6.2	* 6.2	5.8	* 5.8	4.6	6.2
Max Green Setting (Gmax), s	15.4	38.2	8.4	* 37	12.4	* 41	15.4	29.8
Max Q Clear Time (g_c+I1), s	16.7	15.4	7.4	38.8	13.1	24.0	11.9	35.7
Green Ext Time (p_c), s	0.0	3.6	0.0	0.0	0.0	5.2	0.2	0.0

Intersection Summary	
HCM 6th Ctrl Delay	113.4
HCM 6th LOS	F

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

APPENDIX 7.3:

EAC (2025) CONDITIONS TRAFFIC SIGNAL WARRANT ANALYSIS WORKSHEETS

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Figure 4C-103 (CA). Traffic Signal Warrants Worksheet
(Average Traffic Estimate Form)

DIST	CO	RTE	PM	TRAFFIC CONDITIONS		EAC 2025
				CALC RV	DATE	06/30/21
Jurisdiction: **City of Perris**				CHK RV	DATE	06/30/21
Major Street: **Indian Avenue**				Critical Approach Speed (Major)		40 mph
Minor Street: **Perry Street**				Critical Approach Speed (Minor)		25 mph

Major Street Approach Lanes = **2** lane Minor Street Approach Lanes = **1** lane

Major Street Future ADT = **6,905** vpd Minor Street Future ADT = **245** vpd

Speed limit or critical speed on major street traffic > 64 km/h (40 mph); …….. [ ]

or **RURAL (R)**

In built up area of isolated community of < 10,000 population …….. [ ]

(Based on Estimated Average Daily Traffic - See Note)

URBAN / RURAL	Minimum Requirements EADT			
CONDITION A - Minimum Vehicular Volume	Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Satisfied: XX / Not Satisfied: XX	Urban	Rural	Urban	Rural
Number of lanes for moving traffic on each approach: Major Street / Minor Street				
1 / *1*	8,000	5,600	2,400	1,680
2 + **6,905** / *1* **245**	9,600	6,720	2,400	1,680
2 + / *2* +	9,600	6,720	3,200	2,240
1 / *2* +	8,000	5,600	3,200	2,240
CONDITION B - Interruption of Continuous Traffic	Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Satisfied / Not Satisfied: XX	Urban	Rural	Urban	Rural
Number of lanes for moving traffic on each approach: Major Street / Minor Street				
1 / *1*	12,000	8,400	1,200	850
2 + **6,905** / *1* **245**	14,400	10,080	1,200	850
2 + / *2* +	14,400	10,080	1,600	1,120
1 / *2* +	12,000	8,400	1,600	1,120
Combination of CONDITIONS A + B				
Satisfied / Not Satisfied: XX	2 CONDITIONS 80%		2 CONDITIONS 80%	
No one condition satisfied, but following conditions fulfilled 80% of more ….. A: 10% / B: 20%				

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

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APPENDIX 7.4:

EAPC (2025) CONDITIONS TRAFFIC SIGNAL WARRANT ANALYSIS WORKSHEETS

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Figure 4C-103 (CA). Traffic Signal Warrants Worksheet
(Average Traffic Estimate Form)

DIST	CO	RTE	PM	TRAFFIC CONDITIONS	EAPC 2025
				CALC RV	DATE 06/30/21
Jurisdiction: **City of Perris**				CHK RV	DATE 06/30/21
Major Street: **Indian Avenue**				Critical Approach Speed (Major)	40 mph
Minor Street: **Perry Street**				Critical Approach Speed (Minor)	25 mph

Major Street Approach Lanes = **2** lane Minor Street Approach Lanes = **1** lane

Major Street Future ADT = **7,430** vpd Minor Street Future ADT = **245** vpd

Speed limit or critical speed on major street traffic > 64 km/h (40 mph); …….. [ ]

or **RURAL (R)**

In built up area of isolated community of < 10,000 population …….. [ ]

(Based on Estimated Average Daily Traffic - See Note)

URBAN: XX RURAL:

CONDITION A - Minimum Vehicular Volume

Satisfied: Not Satisfied: **XX**

Number of lanes for moving traffic on each approach

Major Street	Minor Street	Minimum Requirements EADT: Vehicles Per Day on Major Street (Total of Both Approaches) Urban	Rural	Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only) Urban	Rural
1	1	8,000	5,600	2,400	1,680
2 + **7,430**	1 **245**	9,600	6,720	2,400	1,680
2 +	2 +	9,600	6,720	3,200	2,240
1	2 +	8,000	5,600	3,200	2,240

CONDITION B - Interruption of Continuous Traffic

Satisfied: Not Satisfied: **XX**

Number of lanes for moving traffic on each approach

Major Street	Minor Street	Vehicles Per Day on Major Street (Total of Both Approaches) Urban	Rural	Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only) Urban	Rural
1	1	12,000	8,400	1,200	850
2 + **7,430**	1 **245**	14,400	10,080	1,200	850
2 +	2 +	14,400	10,080	1,600	1,120
1	2 +	12,000	8,400	1,600	1,120

Combination of CONDITIONS A + B

Satisfied: Not Satisfied: **XX**

No one condition satisfied, but following conditions fulfilled 80% of more ….. **A** 10% **B** 20%

2 CONDITIONS 80% 2 CONDITIONS 80%

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

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APPENDIX 7.5:

EAPC (2025) CONDITIONS INTERSECTION OPERATIONS ANALYSIS WORKSHEETS WITH IMPROVEMENTS

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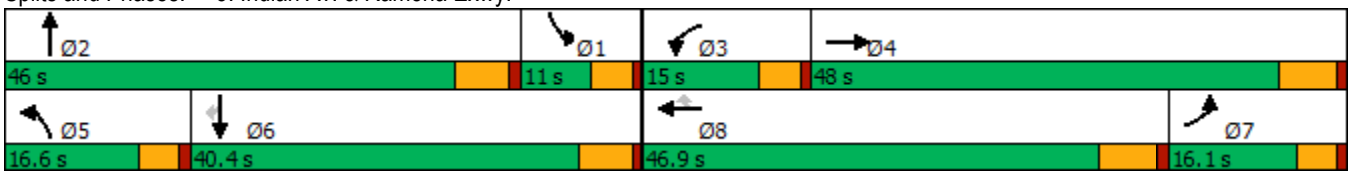
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	365	1545	74	2627	186	114	205	29	104	144
Future Volume (vph)	365	1545	74	2627	186	114	205	29	104	144
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Prot	NA	Perm
Protected Phases	7	4	3	8		5	2	1	6	
Permitted Phases					8					6
Detector Phase	7	4	3	8	8	5	2	1	6	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	46.2	9.6	40.2	40.2	9.6	43.8	9.6	34.8	34.8
Total Split (s)	16.1	48.0	15.0	46.9	46.9	16.6	46.0	11.0	40.4	40.4
Total Split (%)	13.4%	40.0%	12.5%	39.1%	39.1%	13.8%	38.3%	9.2%	33.7%	33.7%
Yellow Time (s)	3.6	5.2	3.6	5.2	5.2	3.6	4.8	3.6	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	4.6	6.2	6.2	4.6	5.8	4.6	5.8	5.8
Lead/Lag	Lag	Lag	Lead	Lead	Lead	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 97.9
Natural Cycle: 120
Control Type: Actuated-Uncoordinated

Splits and Phases: 3: Indian Av. & Ramona Exwy.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	365	1545	127	74	2627	186	114	205	43	29	104	144
Future Volume (veh/h)	365	1545	127	74	2627	186	114	205	43	29	104	144
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	372	1577	128	76	2681	161	116	209	33	30	106	140
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	434	2563	208	98	2270	705	146	361	56	118	407	182
Arrive On Green	0.12	0.52	0.52	0.05	0.44	0.44	0.08	0.12	0.12	0.07	0.11	0.11
Sat Flow, veh/h	3510	4890	397	1810	5187	1610	1810	3128	486	1810	3610	1610
Grp Volume(v), veh/h	372	1115	590	76	2681	161	116	119	123	30	106	140
Grp Sat Flow(s),veh/h/ln	1755	1729	1828	1810	1729	1610	1810	1805	1809	1810	1805	1610
Q Serve(g_s), s	9.7	21.1	21.1	3.9	40.7	5.8	5.9	5.8	6.0	1.5	2.5	5.6
Cycle Q Clear(g_c), s	9.7	21.1	21.1	3.9	40.7	5.8	5.9	5.8	6.0	1.5	2.5	5.6
Prop In Lane	1.00		0.22	1.00		1.00	1.00		0.27	1.00		1.00
Lane Grp Cap(c), veh/h	434	1812	958	98	2270	705	146	208	209	118	407	182
V/C Ratio(X)	0.86	0.62	0.62	0.77	1.18	0.23	0.79	0.57	0.59	0.25	0.26	0.77
Avail Cap(c_a), veh/h	434	1812	958	202	2270	705	233	780	782	125	1343	599
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.9	15.5	15.5	43.4	26.2	16.3	42.0	39.0	39.0	41.3	37.7	20.5
Incr Delay (d2), s/veh	14.9	0.6	1.2	4.8	86.4	0.2	3.7	2.5	2.6	0.4	0.3	6.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.2	0.3	0.1	18.2	0.0	0.1	0.1	0.2	0.0	0.0	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	54.8	16.2	16.7	48.2	112.5	16.5	45.7	41.4	41.7	41.7	38.0	27.2
LnGrp LOS	D	B	B	D	F	B	D	D	D	D	D	C
Approach Vol, veh/h		2077			2918			358			276	
Approach Delay, s/veh		23.3			105.5			42.9			33.0	
Approach LOS		C			F			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.9	16.5	9.7	54.9	12.1	16.3	17.7	46.9
Change Period (Y+Rc), s	5.8	* 5.8	4.6	6.2	4.6	5.8	6.2	* 6.2
Max Green Setting (Gmax), s	6.4	* 40	10.4	41.8	12.0	34.6	11.5	* 41
Max Q Clear Time (g_c+I1), s	3.5	8.0	5.9	23.1	7.9	7.6	11.7	42.7
Green Ext Time (p_c), s	0.0	1.3	0.0	10.5	0.0	1.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	67.6
HCM 6th LOS	E

Notes

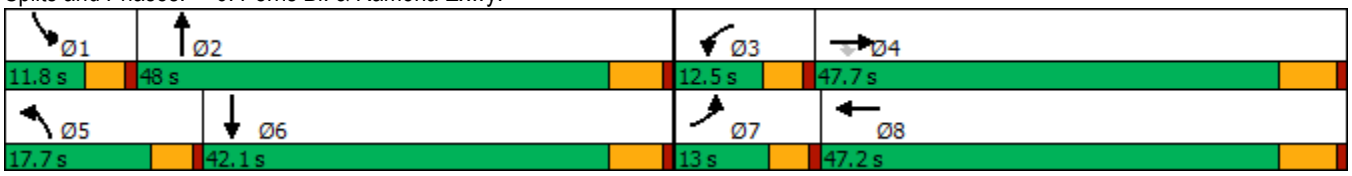
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

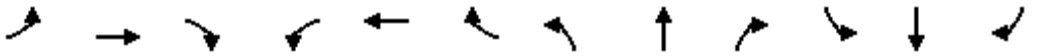
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	385	952	207	206	2230	399	904	169	421
Future Volume (vph)	385	952	207	206	2230	399	904	169	421
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Prot	NA
Protected Phases	7	4		3	8	5	2	1	6
Permitted Phases			4						
Detector Phase	7	4	4	3	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	36.2	36.2	9.6	34.2	9.6	38.8	9.6	41.8
Total Split (s)	13.0	47.7	47.7	12.5	47.2	17.7	48.0	11.8	42.1
Total Split (%)	10.8%	39.8%	39.8%	10.4%	39.3%	14.8%	40.0%	9.8%	35.1%
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	3.6	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	6.2	4.6	6.2	4.6	5.8	4.6	5.8
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 106.6
Natural Cycle: 120
Control Type: Actuated-Uncoordinated

Splits and Phases: 6: Perris Bl. & Ramona Exwy.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	385	952	207	206	2230	311	399	904	149	169	421	256
Future Volume (veh/h)	385	952	207	206	2230	311	399	904	149	169	421	256
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	393	971	166	210	2276	298	407	922	104	172	430	202
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	294	2288	645	275	1963	250	458	1268	143	237	726	308
Arrive On Green	0.08	0.40	0.40	0.08	0.40	0.40	0.13	0.25	0.25	0.07	0.19	0.19
Sat Flow, veh/h	3619	5700	1607	3619	4953	631	3619	5032	566	3619	3800	1610
Grp Volume(v), veh/h	393	971	166	210	1731	843	407	695	331	172	430	202
Grp Sat Flow(s),veh/h/ln	1810	1900	1607	1810	1900	1784	1810	1900	1797	1810	1900	1610
Q Serve(g_s), s	8.4	12.7	7.1	5.9	41.0	41.0	11.4	17.3	17.4	4.8	10.7	12.0
Cycle Q Clear(g_c), s	8.4	12.7	7.1	5.9	41.0	41.0	11.4	17.3	17.4	4.8	10.7	12.0
Prop In Lane	1.00		1.00	1.00		0.35	1.00		0.31	1.00		1.00
Lane Grp Cap(c), veh/h	294	2288	645	275	1506	707	458	958	453	237	726	308
V/C Ratio(X)	1.34	0.42	0.26	0.76	1.15	1.19	0.89	0.73	0.73	0.72	0.59	0.66
Avail Cap(c_a), veh/h	294	2288	645	276	1506	707	458	1550	733	252	1333	565
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.5	22.3	20.7	46.9	31.2	31.2	44.5	35.4	35.5	47.4	38.2	38.7
Incr Delay (d2), s/veh	173.2	0.1	0.2	10.7	75.5	100.1	18.2	1.1	2.3	7.8	0.8	2.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.3	9.3	7.7	3.4	37.4	40.0	7.0	10.1	9.8	2.7	6.3	6.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	220.7	22.5	20.9	57.6	106.8	131.3	62.7	36.5	37.7	55.2	39.0	41.1
LnGrp LOS	F	C	C	E	F	F	E	D	D	E	D	D
Approach Vol, veh/h		1530			2784			1433			804	
Approach Delay, s/veh		73.2			110.5			44.2			43.0	
Approach LOS		E			F			D			D	

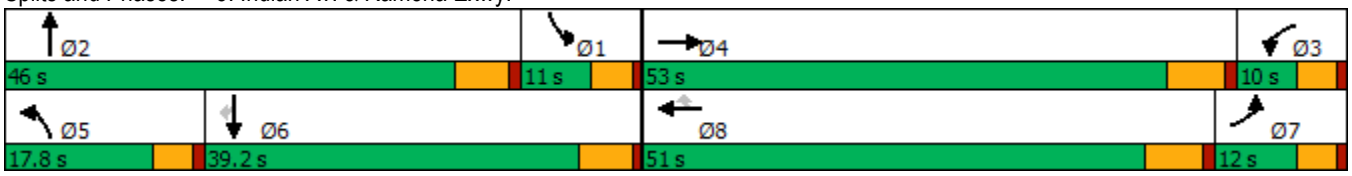
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.4	31.9	12.5	47.7	17.7	25.6	13.0	47.2
Change Period (Y+Rc), s	4.6	5.8	4.6	6.2	4.6	5.8	4.6	6.2
Max Green Setting (Gmax), s	7.2	42.2	7.9	41.5	13.1	36.3	8.4	41.0
Max Q Clear Time (g_c+I1), s	6.8	19.4	7.9	14.7	13.4	14.0	10.4	43.0
Green Ext Time (p_c), s	0.0	6.5	0.0	7.3	0.0	3.8	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	79.0
HCM 6th LOS	E

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	411	2785	142	1896	162	188	224	192	181	166
Future Volume (vph)	411	2785	142	1896	162	188	224	192	181	166
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Prot	NA	Perm
Protected Phases	7	4	3	8		5	2	1	6	
Permitted Phases					8					6
Detector Phase	7	4	3	8	8	5	2	1	6	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	46.2	9.6	40.2	40.2	9.6	43.8	9.6	34.8	34.8
Total Split (s)	12.0	53.0	10.0	51.0	51.0	17.8	46.0	11.0	39.2	39.2
Total Split (%)	10.0%	44.2%	8.3%	42.5%	42.5%	14.8%	38.3%	9.2%	32.7%	32.7%
Yellow Time (s)	3.6	5.2	3.6	5.2	5.2	3.6	4.8	3.6	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	4.6	6.2	6.2	4.6	5.8	4.6	5.8	5.8
Lead/Lag	Lag	Lead	Lag	Lead	Lead	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 101.2
Natural Cycle: 120
Control Type: Actuated-Uncoordinated

Splits and Phases: 3: Indian Av. & Ramona Exwy.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	411	2785	188	142	1896	162	188	224	46	192	181	166
Future Volume (veh/h)	411	2785	188	142	1896	162	188	224	46	192	181	166
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	419	2842	170	145	1935	143	192	229	27	196	185	140
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	368	2462	144	103	2298	713	225	342	40	203	379	169
Arrive On Green	0.10	0.49	0.49	0.06	0.44	0.44	0.12	0.10	0.10	0.11	0.10	0.10
Sat Flow, veh/h	3510	5011	294	1810	5187	1610	1810	3257	380	1810	3610	1610
Grp Volume(v), veh/h	419	1944	1068	145	1935	143	192	126	130	196	185	140
Grp Sat Flow(s),veh/h/ln	1755	1729	1847	1810	1729	1610	1810	1805	1832	1810	1805	1610
Q Serve(g_s), s	10.0	46.8	46.8	5.4	31.6	5.2	9.9	6.4	6.5	10.3	4.6	6.2
Cycle Q Clear(g_c), s	10.0	46.8	46.8	5.4	31.6	5.2	9.9	6.4	6.5	10.3	4.6	6.2
Prop In Lane	1.00		0.16	1.00		1.00	1.00		0.21	1.00		1.00
Lane Grp Cap(c), veh/h	368	1699	907	103	2298	713	225	189	192	203	379	169
V/C Ratio(X)	1.14	1.14	1.18	1.41	0.84	0.20	0.85	0.66	0.68	0.97	0.49	0.83
Avail Cap(c_a), veh/h	368	1699	907	103	2439	757	251	762	773	203	1266	565
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.6	24.2	24.2	44.9	23.6	16.2	40.8	41.0	41.1	42.1	40.2	24.2
Incr Delay (d2), s/veh	89.9	72.4	91.2	233.9	2.7	0.1	20.1	4.0	4.1	53.5	1.0	9.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.7	33.3	40.3	9.0	11.8	1.7	5.5	3.0	3.1	7.4	2.0	3.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	132.5	96.7	115.4	278.8	26.3	16.4	61.0	45.0	45.2	95.7	41.2	34.0
LnGrp LOS	F	F	F	F	C	B	E	D	D	F	D	C
Approach Vol, veh/h		3431			2223			448			521	
Approach Delay, s/veh		106.9			42.1			51.9			59.8	
Approach LOS		F			D			D			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.5	15.8	10.0	53.0	16.5	15.8	14.6	48.4
Change Period (Y+Rc), s	5.8	* 5.8	4.6	6.2	4.6	5.8	4.6	6.2
Max Green Setting (Gmax), s	6.4	* 40	5.4	46.8	13.2	33.4	7.4	44.8
Max Q Clear Time (g_c+I1), s	12.3	8.5	7.4	48.8	11.9	8.2	12.0	33.6
Green Ext Time (p_c), s	0.0	1.4	0.0	0.0	0.0	1.5	0.0	8.6

Intersection Summary	
HCM 6th Ctrl Delay	77.7
HCM 6th LOS	E

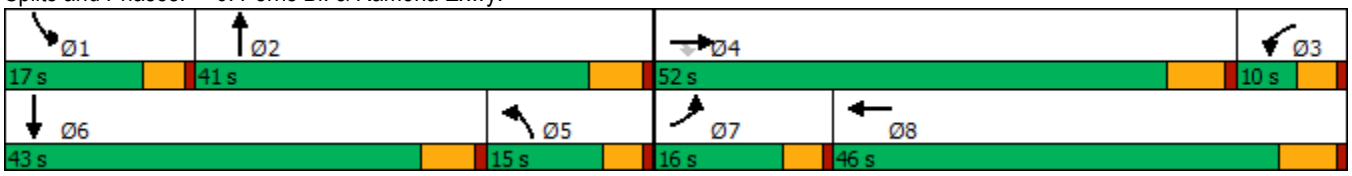
Notes

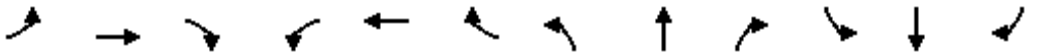
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	312	2302	372	171	1506	346	490	458	752
Future Volume (vph)	312	2302	372	171	1506	346	490	458	752
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Prot	NA
Protected Phases	7	4		3	8	5	2	1	6
Permitted Phases			4						
Detector Phase	7	4	4	3	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	36.2	36.2	9.6	34.2	9.6	38.8	9.6	41.8
Total Split (s)	16.0	52.0	52.0	10.0	46.0	15.0	41.0	17.0	43.0
Total Split (%)	13.3%	43.3%	43.3%	8.3%	38.3%	12.5%	34.2%	14.2%	35.8%
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	3.6	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	6.2	4.6	6.2	4.6	5.8	4.6	5.8
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 112.9
Natural Cycle: 120
Control Type: Actuated-Uncoordinated

Splits and Phases: 6: Perris Bl. & Ramona Exwy.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	312	2302	372	171	1506	241	346	490	202	458	752	274
Future Volume (veh/h)	312	2302	372	171	1506	241	346	490	202	458	752	274
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	322	2373	284	176	1553	235	357	505	157	472	775	208
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	352	2089	647	167	1654	250	321	950	286	383	1008	268
Arrive On Green	0.10	0.40	0.40	0.05	0.36	0.36	0.09	0.24	0.24	0.11	0.25	0.25
Sat Flow, veh/h	3510	5187	1608	3510	4545	686	3510	3950	1192	3510	4075	1083
Grp Volume(v), veh/h	322	2373	284	176	1181	607	357	440	222	472	657	326
Grp Sat Flow(s),veh/h/ln	1755	1729	1608	1755	1729	1773	1755	1729	1684	1755	1729	1700
Q Serve(g_s), s	10.3	45.8	14.6	5.4	37.5	37.7	10.4	12.6	13.1	12.4	20.1	20.3
Cycle Q Clear(g_c), s	10.3	45.8	14.6	5.4	37.5	37.7	10.4	12.6	13.1	12.4	20.1	20.3
Prop In Lane	1.00		1.00	1.00		0.39	1.00		0.71	1.00		0.64
Lane Grp Cap(c), veh/h	352	2089	647	167	1259	645	321	831	405	383	856	421
V/C Ratio(X)	0.92	1.14	0.44	1.06	0.94	0.94	1.11	0.53	0.55	1.23	0.77	0.78
Avail Cap(c_a), veh/h	352	2089	647	167	1259	645	321	1070	521	383	1131	556
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.7	34.0	24.6	54.2	34.9	35.0	51.7	37.6	37.8	50.7	39.8	39.9
Incr Delay (d2), s/veh	27.2	67.8	0.5	85.3	13.2	22.1	83.9	0.5	1.2	125.7	2.3	5.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.7	30.7	5.3	4.3	16.9	19.0	8.2	5.2	5.3	12.0	8.5	8.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	77.9	101.7	25.1	139.5	48.2	57.1	135.6	38.1	39.0	176.4	42.1	44.8
LnGrp LOS	E	F	C	F	D	E	F	D	D	F	D	D
Approach Vol, veh/h		2979			1964			1019			1455	
Approach Delay, s/veh		91.9			59.1			72.5			86.3	
Approach LOS		F			E			E			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.0	33.1	11.6	52.0	16.2	33.9	16.0	47.6
Change Period (Y+Rc), s	4.6	5.8	6.2	* 6.2	5.8	* 5.8	4.6	6.2
Max Green Setting (Gmax), s	12.4	35.2	5.4	* 46	10.4	* 37	11.4	39.8
Max Q Clear Time (g_c+I1), s	14.4	15.1	7.4	47.8	12.4	22.3	12.3	39.7
Green Ext Time (p_c), s	0.0	3.8	0.0	0.0	0.0	5.3	0.0	0.1

Intersection Summary	
HCM 6th Ctrl Delay	79.4
HCM 6th LOS	E

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

APPENDIX 8.1:

HORIZON YEAR (2040) WITHOUT PROJECT CONDITIONS INTERSECTION OPERATIONS ANALYSIS WORKSHEETS

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Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔		↰	↑↑↱		↰	↑↑↱	
Traffic Vol, veh/h	5	0	2	0	0	4	5	494	24	0	359	16
Future Vol, veh/h	5	0	2	0	0	4	5	494	24	0	359	16
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	150	-	-	150	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	5	0	2	0	0	4	5	537	26	0	390	17

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	678	972	204	755	967	282	407	0	0	563	0	0
Stage 1	399	399	-	560	560	-	-	-	-	-	-	-
Stage 2	279	573	-	195	407	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	6.9	7.5	6.5	6.9	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	342	254	809	301	256	721	1163	-	-	1019	-	-
Stage 1	604	606	-	485	514	-	-	-	-	-	-	-
Stage 2	710	507	-	794	601	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	339	253	809	299	255	721	1163	-	-	1019	-	-
Mov Cap-2 Maneuver	339	253	-	299	255	-	-	-	-	-	-	-
Stage 1	602	606	-	483	512	-	-	-	-	-	-	-
Stage 2	703	505	-	792	601	-	-	-	-	-	-	-

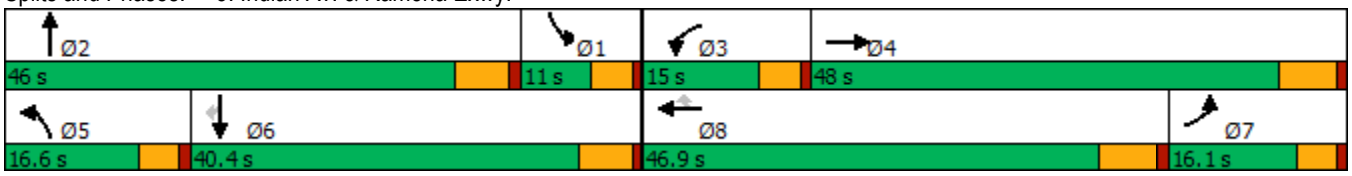
Approach	EB	WB	NB	SB
HCM Control Delay, s	14	10	0.1	0
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1163	-	-	406	721	1019	-	-
HCM Lane V/C Ratio	0.005	-	-	0.019	0.006	-	-	-
HCM Control Delay (s)	8.1	-	-	14	10	0	-	-
HCM Lane LOS	A	-	-	B	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0	0	-	-

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	175	1236	178	1766	164	131	184	69	143	149
Future Volume (vph)	175	1236	178	1766	164	131	184	69	143	149
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Prot	NA	Perm
Protected Phases	7	4	3	8		5	2	1	6	
Permitted Phases					8					6
Detector Phase	7	4	3	8	8	5	2	1	6	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	46.2	9.6	40.2	40.2	9.6	43.8	9.6	34.8	34.8
Total Split (s)	16.1	48.0	15.0	46.9	46.9	16.6	46.0	11.0	40.4	40.4
Total Split (%)	13.4%	40.0%	12.5%	39.1%	39.1%	13.8%	38.3%	9.2%	33.7%	33.7%
Yellow Time (s)	3.6	5.2	3.6	5.2	5.2	3.6	4.8	3.6	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	4.6	6.2	6.2	4.6	5.8	4.6	5.8	5.8
Lead/Lag	Lag	Lag	Lead	Lead	Lead	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 98.7
Natural Cycle: 120
Control Type: Actuated-Uncoordinated

Splits and Phases: 3: Indian Av. & Ramona Exwy.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	175	1236	192	178	1766	164	131	184	62	69	143	149
Future Volume (veh/h)	175	1236	192	178	1766	164	131	184	62	69	143	149
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	179	1261	194	182	1802	138	134	188	52	70	146	145
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	213	1996	307	209	2179	677	167	334	90	138	420	188
Arrive On Green	0.12	0.44	0.44	0.12	0.42	0.42	0.09	0.12	0.12	0.08	0.12	0.12
Sat Flow, veh/h	1810	4534	698	1810	5187	1610	1810	2809	756	1810	3610	1610
Grp Volume(v), veh/h	179	962	493	182	1802	138	134	119	121	70	146	145
Grp Sat Flow(s),veh/h/ln	1810	1729	1774	1810	1729	1610	1810	1805	1759	1810	1805	1610
Q Serve(g_s), s	8.7	19.4	19.4	8.9	27.8	4.9	6.5	5.6	5.9	3.3	3.4	5.6
Cycle Q Clear(g_c), s	8.7	19.4	19.4	8.9	27.8	4.9	6.5	5.6	5.9	3.3	3.4	5.6
Prop In Lane	1.00		0.39	1.00		1.00	1.00		0.43	1.00		1.00
Lane Grp Cap(c), veh/h	213	1522	781	209	2179	677	167	215	209	138	420	188
V/C Ratio(X)	0.84	0.63	0.63	0.87	0.83	0.20	0.80	0.55	0.58	0.51	0.35	0.77
Avail Cap(c_a), veh/h	231	1607	824	209	2346	728	241	806	786	138	1388	619
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.8	19.5	19.5	39.1	23.2	16.5	40.1	37.4	37.5	39.9	36.6	19.8
Incr Delay (d2), s/veh	20.1	0.7	1.5	29.2	2.4	0.1	7.5	2.2	2.5	1.3	0.5	6.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.8	6.9	7.3	5.4	10.3	1.6	3.1	2.5	2.6	1.5	1.5	3.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	58.9	20.3	21.0	68.4	25.6	16.7	47.5	39.6	40.0	41.2	37.1	26.4
LnGrp LOS	E	C	C	E	C	B	D	D	D	D	D	C
Approach Vol, veh/h		1634			2122			374			361	
Approach Delay, s/veh		24.7			28.7			42.6			33.6	
Approach LOS		C			C			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.7	16.5	15.0	45.8	12.9	16.3	16.8	44.0
Change Period (Y+Rc), s	5.8	* 5.8	4.6	6.2	4.6	5.8	6.2	* 6.2
Max Green Setting (Gmax), s	6.4	* 40	10.4	41.8	12.0	34.6	11.5	* 41
Max Q Clear Time (g_c+I1), s	5.3	7.9	10.9	21.4	8.5	7.6	10.7	29.8
Green Ext Time (p_c), s	0.0	1.3	0.0	9.2	0.0	1.3	0.0	8.0

Intersection Summary	
HCM 6th Ctrl Delay	28.8
HCM 6th LOS	C

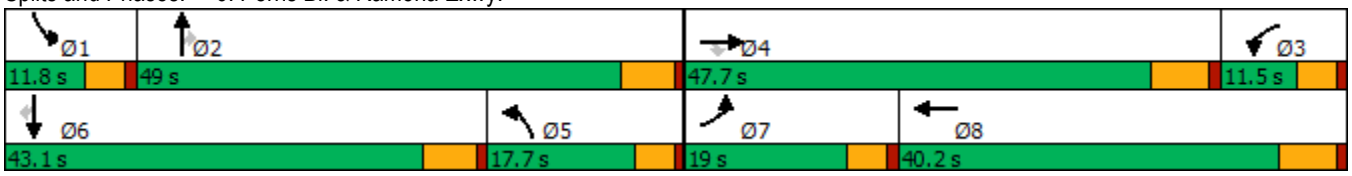
Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	379	833	154	205	1379	321	886	116	185	509	353
Future Volume (vph)	379	833	154	205	1379	321	886	116	185	509	353
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8	5	2		1	6	
Permitted Phases			4					2			6
Detector Phase	7	4	4	3	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	36.2	36.2	9.6	34.2	9.6	38.8	38.8	9.6	41.8	41.8
Total Split (s)	19.0	47.7	47.7	11.5	40.2	17.7	49.0	49.0	11.8	43.1	43.1
Total Split (%)	15.8%	39.8%	39.8%	9.6%	33.5%	14.8%	40.8%	40.8%	9.8%	35.9%	35.9%
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	3.6	4.8	4.8	3.6	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	6.2	4.6	6.2	4.6	5.8	5.8	4.6	5.8	5.8
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 111.2
Natural Cycle: 120
Control Type: Actuated-Uncoordinated

Splits and Phases: 6: Perris Bl. & Ramona Exwy.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	379	833	154	205	1379	386	321	886	116	185	509	353
Future Volume (veh/h)	379	833	154	205	1379	386	321	886	116	185	509	353
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	387	850	112	209	1407	375	328	904	70	189	519	301
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	446	1183	366	687	1270	337	571	1088	485	232	699	312
Arrive On Green	0.13	0.23	0.23	0.20	0.31	0.31	0.16	0.30	0.30	0.07	0.19	0.19
Sat Flow, veh/h	3510	5187	1604	3510	4077	1082	3510	3610	1609	3510	3610	1610
Grp Volume(v), veh/h	387	850	112	209	1193	589	328	904	70	189	519	301
Grp Sat Flow(s),veh/h/ln	1755	1729	1604	1755	1729	1700	1755	1805	1609	1755	1805	1610
Q Serve(g_s), s	11.8	16.5	6.3	5.6	34.0	34.0	9.4	25.5	2.0	5.8	14.8	14.7
Cycle Q Clear(g_c), s	11.8	16.5	6.3	5.6	34.0	34.0	9.4	25.5	2.0	5.8	14.8	14.7
Prop In Lane	1.00		1.00	1.00		0.64	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	446	1183	366	687	1077	530	571	1088	485	232	699	312
V/C Ratio(X)	0.87	0.72	0.31	0.30	1.11	1.11	0.57	0.83	0.14	0.82	0.74	0.97
Avail Cap(c_a), veh/h	463	1972	610	687	1077	530	571	1429	637	232	1234	550
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.7	38.9	35.0	37.5	37.6	37.6	42.2	35.5	8.8	50.3	41.5	22.9
Incr Delay (d2), s/veh	14.8	0.8	0.5	0.1	61.7	73.9	0.9	3.3	0.1	18.6	1.6	20.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.8	6.7	2.4	2.3	22.6	24.0	4.0	11.1	1.3	3.1	6.5	6.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	61.6	39.7	35.4	37.6	99.3	111.4	43.1	38.9	8.9	69.0	43.0	43.3
LnGrp LOS	E	D	D	D	F	F	D	D	A	E	D	D
Approach Vol, veh/h		1349			1991			1302			1009	
Approach Delay, s/veh		45.6			96.4			38.3			48.0	
Approach LOS		D			F			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.8	38.7	27.6	31.1	23.6	26.9	18.5	40.2
Change Period (Y+Rc), s	4.6	5.8	6.2	* 6.2	5.8	* 5.8	4.6	6.2
Max Green Setting (Gmax), s	7.2	43.2	6.9	* 42	13.1	* 37	14.4	34.0
Max Q Clear Time (g_c+I1), s	7.8	27.5	7.6	18.5	11.4	16.8	13.8	36.0
Green Ext Time (p_c), s	0.0	5.4	0.0	5.8	0.1	4.1	0.1	0.0

Intersection Summary	
HCM 6th Ctrl Delay	62.3
HCM 6th LOS	E

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	15	0	5	0	0	6	2	542	6	0	1002	5
Future Vol, veh/h	15	0	5	0	0	6	2	542	6	0	1002	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	150	-	-	150	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	16	0	5	0	0	7	2	589	7	0	1089	5

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1391	1692	547	1142	1691	298	1094	0	0	596	0	0
Stage 1	1092	1092	-	597	597	-	-	-	-	-	-	-
Stage 2	299	600	-	545	1094	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	6.9	7.5	6.5	6.9	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	103	94	486	158	94	704	645	-	-	990	-	-
Stage 1	232	293	-	461	495	-	-	-	-	-	-	-
Stage 2	691	493	-	495	292	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	102	94	486	156	94	704	645	-	-	990	-	-
Mov Cap-2 Maneuver	102	94	-	156	94	-	-	-	-	-	-	-
Stage 1	231	293	-	460	494	-	-	-	-	-	-	-
Stage 2	682	492	-	489	292	-	-	-	-	-	-	-

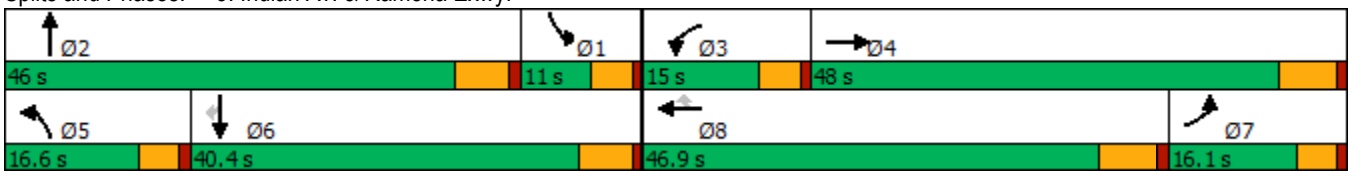
Approach	EB	WB	NB	SB
HCM Control Delay, s	39.1	10.2	0	0
HCM LOS	E	B		

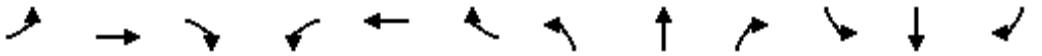
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	645	-	-	127	704	990	-	-
HCM Lane V/C Ratio	0.003	-	-	0.171	0.009	-	-	-
HCM Control Delay (s)	10.6	-	-	39.1	10.2	0	-	-
HCM Lane LOS	B	-	-	E	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.6	0	0	-	-

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	219	1819	140	1320	84	252	247	298	341	368
Future Volume (vph)	219	1819	140	1320	84	252	247	298	341	368
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Prot	NA	Perm
Protected Phases	7	4	3	8		5	2	1	6	
Permitted Phases					8					6
Detector Phase	7	4	3	8	8	5	2	1	6	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	46.2	9.6	40.2	40.2	9.6	43.8	9.6	34.8	34.8
Total Split (s)	16.1	48.0	15.0	46.9	46.9	16.6	46.0	11.0	40.4	40.4
Total Split (%)	13.4%	40.0%	12.5%	39.1%	39.1%	13.8%	38.3%	9.2%	33.7%	33.7%
Yellow Time (s)	3.6	5.2	3.6	5.2	5.2	3.6	4.8	3.6	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	4.6	6.2	6.2	4.6	5.8	4.6	5.8	5.8
Lead/Lag	Lag	Lag	Lead	Lead	Lead	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 106.3
Natural Cycle: 120
Control Type: Actuated-Uncoordinated

Splits and Phases: 3: Indian Av. & Ramona Exwy.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	219	1819	220	140	1320	84	252	247	206	298	341	368
Future Volume (veh/h)	219	1819	220	140	1320	84	252	247	206	298	341	368
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	223	1856	202	143	1347	64	257	252	190	304	348	347
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	296	1972	213	173	1719	534	217	341	248	172	570	254
Arrive On Green	0.16	0.41	0.41	0.10	0.33	0.33	0.12	0.17	0.17	0.09	0.16	0.16
Sat Flow, veh/h	1810	4751	514	1810	5187	1610	1810	1995	1449	1810	3610	1610
Grp Volume(v), veh/h	223	1348	710	143	1347	64	257	227	215	304	348	347
Grp Sat Flow(s),veh/h/ln	1810	1729	1807	1810	1729	1610	1810	1805	1639	1810	1805	1610
Q Serve(g_s), s	11.8	37.4	38.0	7.8	23.5	2.8	12.0	12.0	12.5	9.5	9.0	10.5
Cycle Q Clear(g_c), s	11.8	37.4	38.0	7.8	23.5	2.8	12.0	12.0	12.5	9.5	9.0	10.5
Prop In Lane	1.00		0.28	1.00		1.00	1.00		0.88	1.00		1.00
Lane Grp Cap(c), veh/h	296	1435	750	173	1719	534	217	308	280	172	570	254
V/C Ratio(X)	0.75	0.94	0.95	0.82	0.78	0.12	1.19	0.74	0.77	1.77	0.61	1.36
Avail Cap(c_a), veh/h	296	1442	754	188	2106	654	217	724	657	172	1246	556
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.0	28.1	28.3	44.5	30.3	23.3	44.1	39.4	39.7	45.4	39.3	18.6
Incr Delay (d2), s/veh	9.4	12.1	20.8	21.5	1.6	0.1	120.6	3.4	4.4	369.6	1.1	174.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.7	16.2	19.0	4.4	9.3	1.0	12.5	5.4	5.2	21.8	4.0	15.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	49.4	40.2	49.1	66.0	31.9	23.4	164.7	42.8	44.1	414.9	40.4	192.8
LnGrp LOS	D	D	D	E	C	C	F	D	D	F	D	F
Approach Vol, veh/h		2281			1554			699			999	
Approach Delay, s/veh		43.8			34.7			88.0			207.3	
Approach LOS		D			C			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.3	22.9	14.2	47.8	16.6	21.6	22.6	39.4
Change Period (Y+Rc), s	5.8	* 5.8	4.6	6.2	4.6	5.8	6.2	* 6.2
Max Green Setting (Gmax), s	6.4	* 40	10.4	41.8	12.0	34.6	11.5	* 41
Max Q Clear Time (g_c+I1), s	11.5	14.5	9.8	40.0	14.0	12.5	13.8	25.5
Green Ext Time (p_c), s	0.0	2.6	0.0	1.6	0.0	3.3	0.0	7.7

Intersection Summary	
HCM 6th Ctrl Delay	76.4
HCM 6th LOS	E

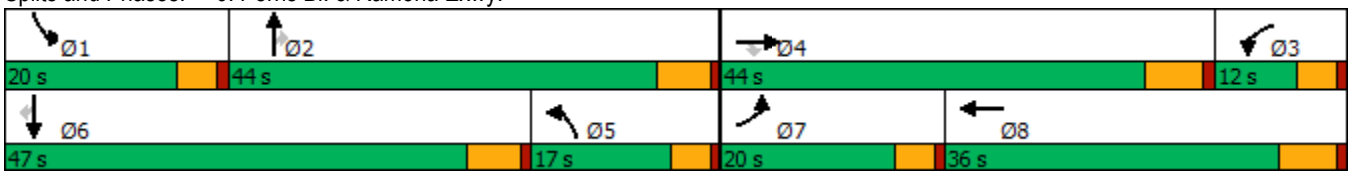
Notes

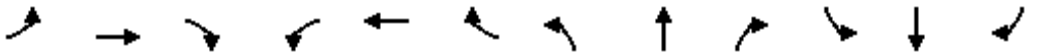
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	430	1510	384	187	993	227	649	246	373	825	249
Future Volume (vph)	430	1510	384	187	993	227	649	246	373	825	249
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8	5	2		1	6	
Permitted Phases			4					2			6
Detector Phase	7	4	4	3	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	36.2	36.2	9.6	34.2	9.6	38.8	38.8	9.6	41.8	41.8
Total Split (s)	20.0	44.0	44.0	12.0	36.0	17.0	44.0	44.0	20.0	47.0	47.0
Total Split (%)	16.7%	36.7%	36.7%	10.0%	30.0%	14.2%	36.7%	36.7%	16.7%	39.2%	39.2%
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	3.6	4.8	4.8	3.6	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	6.2	4.6	6.2	4.6	5.8	5.8	4.6	5.8	5.8
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 111.1
Natural Cycle: 110
Control Type: Actuated-Uncoordinated

Splits and Phases: 6: Perris Bl. & Ramona Exwy.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	430	1510	384	187	993	263	227	649	246	373	825	249
Future Volume (veh/h)	430	1510	384	187	993	263	227	649	246	373	825	249
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	443	1557	296	193	1024	258	234	669	203	385	851	183
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	496	1750	542	239	1150	289	298	932	415	447	1045	465
Arrive On Green	0.14	0.34	0.34	0.07	0.28	0.28	0.08	0.26	0.26	0.13	0.29	0.29
Sat Flow, veh/h	3510	5187	1607	3510	4126	1038	3510	3610	1608	3510	3610	1605
Grp Volume(v), veh/h	443	1557	296	193	858	424	234	669	203	385	851	183
Grp Sat Flow(s),veh/h/ln	1755	1729	1607	1755	1729	1706	1755	1805	1608	1755	1805	1605
Q Serve(g_s), s	13.5	31.0	16.3	5.9	25.9	26.0	7.1	18.4	8.9	11.7	23.9	6.6
Cycle Q Clear(g_c), s	13.5	31.0	16.3	5.9	25.9	26.0	7.1	18.4	8.9	11.7	23.9	6.6
Prop In Lane	1.00		1.00	1.00		0.61	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	496	1750	542	239	964	475	298	932	415	447	1045	465
V/C Ratio(X)	0.89	0.89	0.55	0.81	0.89	0.89	0.79	0.72	0.49	0.86	0.81	0.39
Avail Cap(c_a), veh/h	496	1800	558	239	964	475	400	1266	564	496	1366	607
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.9	34.2	29.3	50.1	37.7	37.7	48.9	36.8	19.8	46.6	36.0	13.8
Incr Delay (d2), s/veh	17.7	5.8	1.0	17.3	10.4	18.7	5.0	1.3	0.9	12.3	3.0	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.8	13.0	6.1	3.1	11.7	12.6	3.2	7.9	3.2	5.7	10.4	3.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	63.6	40.0	30.4	67.4	48.1	56.4	53.9	38.1	20.7	58.9	39.0	14.3
LnGrp LOS	E	D	C	E	D	E	D	D	C	E	D	B
Approach Vol, veh/h		2296			1475			1106			1419	
Approach Delay, s/veh		43.3			53.0			38.2			41.2	
Approach LOS		D			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.5	33.9	13.6	42.9	15.0	37.3	20.0	36.5
Change Period (Y+Rc), s	4.6	5.8	6.2	* 6.2	5.8	* 5.8	4.6	6.2
Max Green Setting (Gmax), s	15.4	38.2	7.4	* 38	12.4	* 41	15.4	29.8
Max Q Clear Time (g_c+I1), s	13.7	20.4	7.9	33.0	9.1	25.9	15.5	28.0
Green Ext Time (p_c), s	0.2	4.6	0.0	3.8	0.1	5.4	0.0	1.3

Intersection Summary	
HCM 6th Ctrl Delay	44.2
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

APPENDIX 8.2:

HORIZON YEAR (2040) WITH PROJECT CONDITIONS INTERSECTION OPERATIONS ANALYSIS WORKSHEETS

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Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	0	2	0	0	4	5	510	44	0	369	16
Future Vol, veh/h	5	0	2	0	0	4	5	510	44	0	369	16
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	150	-	-	150	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	5	0	2	0	0	4	5	554	48	0	401	17

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	697	1022	209	789	1006	301	418	0	0	602	0	0
Stage 1	410	410	-	588	588	-	-	-	-	-	-	-
Stage 2	287	612	-	201	418	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	6.9	7.5	6.5	6.9	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	331	238	803	285	243	701	1152	-	-	985	-	-
Stage 1	595	599	-	467	499	-	-	-	-	-	-	-
Stage 2	702	487	-	788	594	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	328	237	803	283	242	701	1152	-	-	985	-	-
Mov Cap-2 Maneuver	328	237	-	283	242	-	-	-	-	-	-	-
Stage 1	593	599	-	465	497	-	-	-	-	-	-	-
Stage 2	695	485	-	786	594	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	14.3	10.2	0.1	0
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1152	-	-	395	701	985	-	-
HCM Lane V/C Ratio	0.005	-	-	0.019	0.006	-	-	-
HCM Control Delay (s)	8.1	-	-	14.3	10.2	0	-	-
HCM Lane LOS	A	-	-	B	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0	0	-	-

Intersection	
Int Delay, s/veh	0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	6	553	14	10	361
Future Vol, veh/h	0	6	553	14	10	361
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	150	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	7	601	15	11	392

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	308	0	0	616	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	4.1	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	0	694	-	-	974	-
Stage 1	0	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	694	-	-	974	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

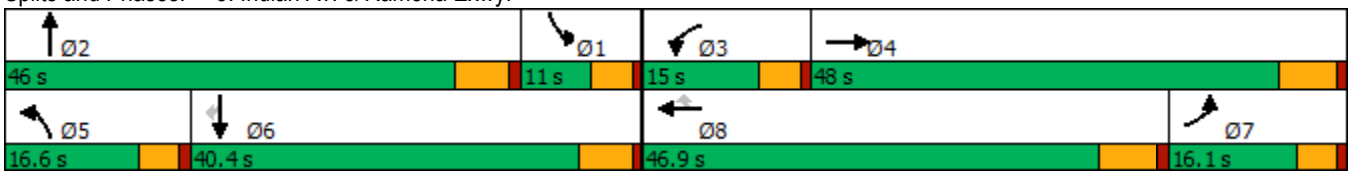
Approach	WB	NB	SB
HCM Control Delay, s	10.2	0	0.2
HCM LOS	B		

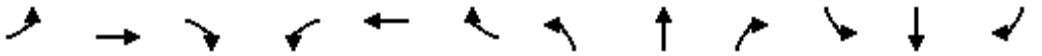
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	694	974	-
HCM Lane V/C Ratio	-	-	0.009	0.011	-
HCM Control Delay (s)	-	-	10.2	8.7	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	0	0	-

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	195	1236	180	1778	182	131	190	69	143	149
Future Volume (vph)	195	1236	180	1778	182	131	190	69	143	149
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Prot	NA	Perm
Protected Phases	7	4	3	8		5	2	1	6	
Permitted Phases					8					6
Detector Phase	7	4	3	8	8	5	2	1	6	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	46.2	9.6	40.2	40.2	9.6	43.8	9.6	34.8	34.8
Total Split (s)	16.1	48.0	15.0	46.9	46.9	16.6	46.0	11.0	40.4	40.4
Total Split (%)	13.4%	40.0%	12.5%	39.1%	39.1%	13.8%	38.3%	9.2%	33.7%	33.7%
Yellow Time (s)	3.6	5.2	3.6	5.2	5.2	3.6	4.8	3.6	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	4.6	6.2	6.2	4.6	5.8	4.6	5.8	5.8
Lead/Lag	Lag	Lag	Lead	Lead	Lead	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 98.7
Natural Cycle: 120
Control Type: Actuated-Uncoordinated

Splits and Phases: 3: Indian Av. & Ramona Exwy.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	195	1236	192	180	1778	182	131	190	62	69	143	149
Future Volume (veh/h)	195	1236	192	180	1778	182	131	190	62	69	143	149
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	199	1261	194	184	1814	157	134	194	52	70	146	145
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	228	2029	312	206	2168	673	166	332	87	138	414	185
Arrive On Green	0.13	0.45	0.45	0.11	0.42	0.42	0.09	0.12	0.12	0.08	0.11	0.11
Sat Flow, veh/h	1810	4534	698	1810	5187	1610	1810	2829	739	1810	3610	1610
Grp Volume(v), veh/h	199	962	493	184	1814	157	134	122	124	70	146	145
Grp Sat Flow(s),veh/h/ln	1810	1729	1774	1810	1729	1610	1810	1805	1763	1810	1805	1610
Q Serve(g_s), s	9.9	19.4	19.4	9.2	28.6	5.7	6.6	5.8	6.1	3.4	3.4	5.7
Cycle Q Clear(g_c), s	9.9	19.4	19.4	9.2	28.6	5.7	6.6	5.8	6.1	3.4	3.4	5.7
Prop In Lane	1.00		0.39	1.00		1.00	1.00		0.42	1.00		1.00
Lane Grp Cap(c), veh/h	228	1548	794	206	2168	673	166	212	207	138	414	185
V/C Ratio(X)	0.87	0.62	0.62	0.89	0.84	0.23	0.81	0.58	0.60	0.51	0.35	0.78
Avail Cap(c_a), veh/h	228	1582	811	206	2310	717	238	794	775	138	1367	610
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.2	19.3	19.3	39.9	23.8	17.1	40.7	38.2	38.3	40.6	37.3	19.8
Incr Delay (d2), s/veh	28.1	0.7	1.4	34.3	2.7	0.2	8.1	2.5	2.8	1.3	0.5	7.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.9	7.0	7.3	5.8	10.7	1.9	3.2	2.6	2.7	1.5	1.5	3.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	67.3	20.0	20.7	74.3	26.5	17.3	48.8	40.6	41.1	41.8	37.8	27.0
LnGrp LOS	E	C	C	E	C	B	D	D	D	D	D	C
Approach Vol, veh/h		1654			2155			380			361	
Approach Delay, s/veh		25.9			29.9			43.7			34.2	
Approach LOS		C			C			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.8	16.5	15.0	47.1	13.0	16.3	17.7	44.4
Change Period (Y+Rc), s	5.8	* 5.8	4.6	6.2	4.6	5.8	6.2	* 6.2
Max Green Setting (Gmax), s	6.4	* 40	10.4	41.8	12.0	34.6	11.5	* 41
Max Q Clear Time (g_c+I1), s	5.4	8.1	11.2	21.4	8.6	7.7	11.9	30.6
Green Ext Time (p_c), s	0.0	1.3	0.0	9.2	0.0	1.3	0.0	7.6

Intersection Summary	
HCM 6th Ctrl Delay	30.0
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑↑	↱		↱
Traffic Vol, veh/h	0	1367	2137	10	0	3
Future Vol, veh/h	0	1367	2137	10	0	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	100	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	1486	2323	11	0	3

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	1162
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	7.1
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.9
Pot Cap-1 Maneuver	0	-	-	-	0	164
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	164
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	27.4
HCM LOS			D

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	164
HCM Lane V/C Ratio	-	-	-	0.02
HCM Control Delay (s)	-	-	-	27.4
HCM Lane LOS	-	-	-	D
HCM 95th %tile Q(veh)	-	-	-	0.1

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	28	0	1651	1047	34
Future Vol, veh/h	0	28	0	1651	1047	34
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	30	0	1795	1138	37

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	588	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	7.1	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.9	-	-	-	-
Pot Cap-1 Maneuver	0	391	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	391	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

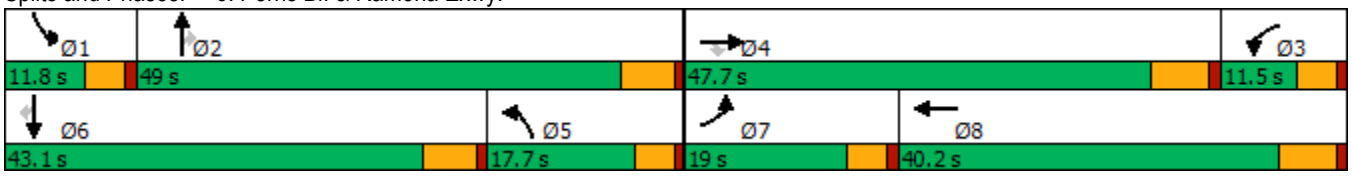
Approach	EB	NB	SB
HCM Control Delay, s	15	0	0
HCM LOS	C		

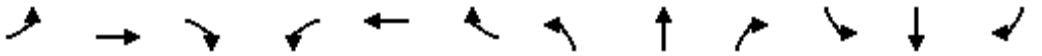
Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	391	-	-
HCM Lane V/C Ratio	-	0.078	-	-
HCM Control Delay (s)	-	15	-	-
HCM Lane LOS	-	C	-	-
HCM 95th %tile Q(veh)	-	0.3	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	379	833	154	205	1385	333	886	116	188	513	374
Future Volume (vph)	379	833	154	205	1385	333	886	116	188	513	374
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8	5	2		1	6	
Permitted Phases			4					2			6
Detector Phase	7	4	4	3	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	36.2	36.2	9.6	34.2	9.6	38.8	38.8	9.6	41.8	41.8
Total Split (s)	19.0	47.7	47.7	11.5	40.2	17.7	49.0	49.0	11.8	43.1	43.1
Total Split (%)	15.8%	39.8%	39.8%	9.6%	33.5%	14.8%	40.8%	40.8%	9.8%	35.9%	35.9%
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	3.6	4.8	4.8	3.6	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	6.2	4.6	6.2	4.6	5.8	5.8	4.6	5.8	5.8
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 111.2
Natural Cycle: 120
Control Type: Actuated-Uncoordinated

Splits and Phases: 6: Perris Bl. & Ramona Exwy.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	379	833	154	205	1385	386	333	886	116	188	513	374
Future Volume (veh/h)	379	833	154	205	1385	386	333	886	116	188	513	374
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	387	850	112	209	1413	375	340	904	70	192	523	323
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	446	1183	366	687	1271	336	539	1088	485	232	732	326
Arrive On Green	0.13	0.23	0.23	0.20	0.31	0.31	0.15	0.30	0.30	0.07	0.20	0.20
Sat Flow, veh/h	3510	5187	1604	3510	4081	1078	3510	3610	1609	3510	3610	1610
Grp Volume(v), veh/h	387	850	112	209	1196	592	340	904	70	192	523	323
Grp Sat Flow(s),veh/h/ln	1755	1729	1604	1755	1729	1701	1755	1805	1609	1755	1805	1610
Q Serve(g_s), s	11.8	16.5	6.3	5.6	34.0	34.0	9.9	25.5	2.0	5.9	14.7	15.7
Cycle Q Clear(g_c), s	11.8	16.5	6.3	5.6	34.0	34.0	9.9	25.5	2.0	5.9	14.7	15.7
Prop In Lane	1.00		1.00	1.00		0.63	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	446	1183	366	687	1077	530	539	1088	485	232	732	326
V/C Ratio(X)	0.87	0.72	0.31	0.30	1.11	1.12	0.63	0.83	0.14	0.83	0.71	0.99
Avail Cap(c_a), veh/h	463	1972	610	687	1077	530	539	1429	637	232	1234	550
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.7	38.9	35.0	37.5	37.6	37.6	43.3	35.5	8.8	50.4	40.6	22.6
Incr Delay (d2), s/veh	14.8	0.8	0.5	0.1	63.1	75.2	1.8	3.3	0.1	20.4	1.3	27.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.8	6.7	2.4	2.3	22.8	24.2	4.3	11.1	1.3	3.2	6.4	8.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	61.6	39.7	35.4	37.6	100.7	112.8	45.1	38.9	8.9	70.8	41.9	49.7
LnGrp LOS	E	D	D	D	F	F	D	D	A	E	D	D
Approach Vol, veh/h		1349			1997			1314			1038	
Approach Delay, s/veh		45.6			97.6			38.9			49.7	
Approach LOS		D			F			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.8	38.7	27.6	31.1	22.6	27.9	18.5	40.2
Change Period (Y+Rc), s	4.6	5.8	6.2	* 6.2	5.8	* 5.8	4.6	6.2
Max Green Setting (Gmax), s	7.2	43.2	6.9	* 42	13.1	* 37	14.4	34.0
Max Q Clear Time (g_c+I1), s	7.9	27.5	7.6	18.5	11.9	17.7	13.8	36.0
Green Ext Time (p_c), s	0.0	5.4	0.0	5.8	0.1	4.2	0.1	0.0

Intersection Summary	
HCM 6th Ctrl Delay	63.0
HCM 6th LOS	E

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	15	0	5	0	0	6	2	568	29	0	1012	5
Future Vol, veh/h	15	0	5	0	0	6	2	568	29	0	1012	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	150	-	-	150	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	16	0	5	0	0	7	2	617	32	0	1100	5

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1416	1756	553	1187	1742	325	1105	0	0	649	0	0
Stage 1	1103	1103	-	637	637	-	-	-	-	-	-	-
Stage 2	313	653	-	550	1105	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	6.9	7.5	6.5	6.9	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	99	86	482	146	88	677	639	-	-	947	-	-
Stage 1	229	290	-	437	475	-	-	-	-	-	-	-
Stage 2	678	467	-	492	289	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	98	86	482	144	88	677	639	-	-	947	-	-
Mov Cap-2 Maneuver	98	86	-	144	88	-	-	-	-	-	-	-
Stage 1	228	290	-	436	474	-	-	-	-	-	-	-
Stage 2	669	466	-	486	289	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	40.8	10.4	0	0
HCM LOS	E	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	639	-	-	122	677	947	-	-
HCM Lane V/C Ratio	0.003	-	-	0.178	0.01	-	-	-
HCM Control Delay (s)	10.7	-	-	40.8	10.4	0	-	-
HCM Lane LOS	B	-	-	E	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.6	0	0	-	-

Intersection	
Int Delay, s/veh	0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	11	589	4	10	1007
Future Vol, veh/h	0	11	589	4	10	1007
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	150	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	12	640	4	11	1095

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	322	0	0	644	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	4.1	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	0	680	-	-	951	-
Stage 1	0	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	680	-	-	951	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

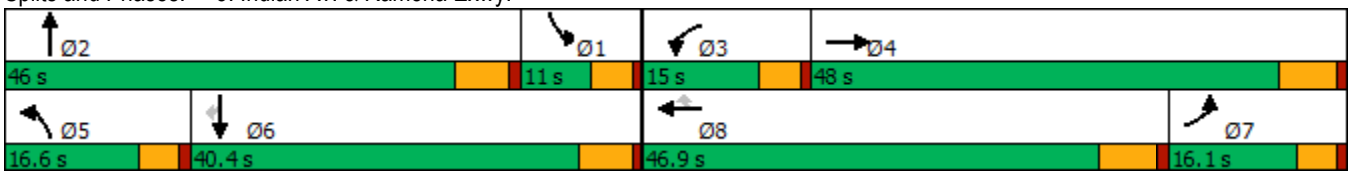
Approach	WB	NB	SB
HCM Control Delay, s	10.4	0	0.1
HCM LOS	B		

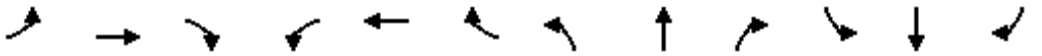
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	680	951	-
HCM Lane V/C Ratio	-	-	0.018	0.011	-
HCM Control Delay (s)	-	-	10.4	8.8	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	236	1819	147	1341	108	252	249	298	341	368
Future Volume (vph)	236	1819	147	1341	108	252	249	298	341	368
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Prot	NA	Perm
Protected Phases	7	4	3	8		5	2	1	6	
Permitted Phases					8					6
Detector Phase	7	4	3	8	8	5	2	1	6	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	46.2	9.6	40.2	40.2	9.6	43.8	9.6	34.8	34.8
Total Split (s)	16.1	48.0	15.0	46.9	46.9	16.6	46.0	11.0	40.4	40.4
Total Split (%)	13.4%	40.0%	12.5%	39.1%	39.1%	13.8%	38.3%	9.2%	33.7%	33.7%
Yellow Time (s)	3.6	5.2	3.6	5.2	5.2	3.6	4.8	3.6	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	4.6	6.2	6.2	4.6	5.8	4.6	5.8	5.8
Lead/Lag	Lag	Lag	Lead	Lead	Lead	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 106.4
Natural Cycle: 120
Control Type: Actuated-Uncoordinated

Splits and Phases: 3: Indian Av. & Ramona Exwy.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	236	1819	220	147	1341	108	252	249	206	298	341	368
Future Volume (veh/h)	236	1819	220	147	1341	108	252	249	206	298	341	368
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	241	1856	202	150	1368	88	257	254	190	304	348	347
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	293	1962	212	180	1737	539	215	343	247	170	571	255
Arrive On Green	0.16	0.41	0.41	0.10	0.33	0.33	0.12	0.17	0.17	0.09	0.16	0.16
Sat Flow, veh/h	1810	4751	514	1810	5187	1610	1810	2002	1443	1810	3610	1610
Grp Volume(v), veh/h	241	1348	710	150	1368	88	257	228	216	304	348	347
Grp Sat Flow(s),veh/h/ln	1810	1729	1807	1810	1729	1610	1810	1805	1640	1810	1805	1610
Q Serve(g_s), s	13.0	37.8	38.3	8.2	24.0	3.9	12.0	12.1	12.7	9.5	9.1	10.6
Cycle Q Clear(g_c), s	13.0	37.8	38.3	8.2	24.0	3.9	12.0	12.1	12.7	9.5	9.1	10.6
Prop In Lane	1.00		0.28	1.00		1.00	1.00		0.88	1.00		1.00
Lane Grp Cap(c), veh/h	293	1428	746	180	1737	539	215	309	281	170	571	255
V/C Ratio(X)	0.82	0.94	0.95	0.83	0.79	0.16	1.19	0.74	0.77	1.79	0.61	1.36
Avail Cap(c_a), veh/h	293	1433	749	187	2093	650	215	720	654	170	1239	552
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.9	28.5	28.6	44.6	30.3	23.6	44.4	39.6	39.9	45.7	39.6	18.8
Incr Delay (d2), s/veh	15.9	12.7	21.8	23.9	1.7	0.1	123.5	3.4	4.4	377.0	1.1	173.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.8	16.5	19.3	4.7	9.5	1.4	12.6	5.5	5.3	21.9	4.0	15.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	56.8	41.2	50.4	68.4	32.0	23.7	167.9	43.1	44.3	422.7	40.6	192.8
LnGrp LOS	E	D	D	E	C	C	F	D	D	F	D	F
Approach Vol, veh/h		2299			1606			701			999	
Approach Delay, s/veh		45.7			35.0			89.2			209.7	
Approach LOS		D			C			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.3	23.1	14.7	47.8	16.6	21.7	22.5	40.0
Change Period (Y+Rc), s	5.8	* 5.8	4.6	6.2	4.6	5.8	6.2	* 6.2
Max Green Setting (Gmax), s	6.4	* 40	10.4	41.8	12.0	34.6	11.5	* 41
Max Q Clear Time (g_c+I1), s	11.5	14.7	10.2	40.3	14.0	12.6	15.0	26.0
Green Ext Time (p_c), s	0.0	2.6	0.0	1.3	0.0	3.3	0.0	7.7

Intersection Summary	
HCM 6th Ctrl Delay	77.3
HCM 6th LOS	E

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑↑	↱		↱
Traffic Vol, veh/h	0	2323	1584	3	0	12
Future Vol, veh/h	0	2323	1584	3	0	12
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	100	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	2525	1722	3	0	13

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	861
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	7.1
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.9
Pot Cap-1 Maneuver	0	-	-	-	0	260
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	260
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	19.6
HCM LOS			C

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	260
HCM Lane V/C Ratio	-	-	-	0.05
HCM Control Delay (s)	-	-	-	19.6
HCM Lane LOS	-	-	-	C
HCM 95th %tile Q(veh)	-	-	-	0.2

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	48	0	1342	1447	38
Future Vol, veh/h	0	48	0	1342	1447	38
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	52	0	1459	1573	41

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	807	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	7.1	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.9	-	-	-	-
Pot Cap-1 Maneuver	0	282	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	282	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

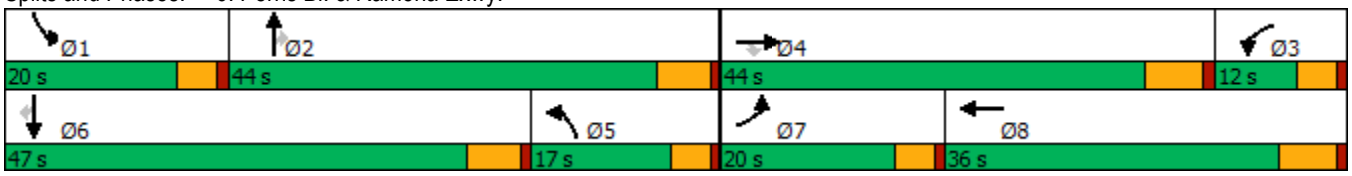
Approach	EB	NB	SB
HCM Control Delay, s	20.6	0	0
HCM LOS	C		

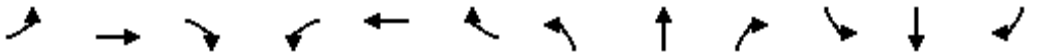
Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	282	-	-
HCM Lane V/C Ratio	-	0.185	-	-
HCM Control Delay (s)	-	20.6	-	-
HCM Lane LOS	-	C	-	-
HCM 95th %tile Q(veh)	-	0.7	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	430	1510	384	187	998	233	649	246	379	835	281
Future Volume (vph)	430	1510	384	187	998	233	649	246	379	835	281
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8	5	2		1	6	
Permitted Phases			4					2			6
Detector Phase	7	4	4	3	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	36.2	36.2	9.6	34.2	9.6	38.8	38.8	9.6	41.8	41.8
Total Split (s)	20.0	44.0	44.0	12.0	36.0	17.0	44.0	44.0	20.0	47.0	47.0
Total Split (%)	16.7%	36.7%	36.7%	10.0%	30.0%	14.2%	36.7%	36.7%	16.7%	39.2%	39.2%
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	3.6	4.8	4.8	3.6	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	6.2	4.6	6.2	4.6	5.8	5.8	4.6	5.8	5.8
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 111.5
Natural Cycle: 110
Control Type: Actuated-Uncoordinated

Splits and Phases: 6: Perris Bl. & Ramona Exwy.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	430	1510	384	187	998	263	233	649	246	379	835	281
Future Volume (veh/h)	430	1510	384	187	998	263	233	649	246	379	835	281
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	443	1557	296	193	1029	258	240	669	203	391	861	216
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	492	1741	539	237	1146	287	303	941	419	452	1054	469
Arrive On Green	0.14	0.34	0.34	0.07	0.28	0.28	0.09	0.26	0.26	0.13	0.29	0.29
Sat Flow, veh/h	3510	5187	1607	3510	4131	1034	3510	3610	1608	3510	3610	1605
Grp Volume(v), veh/h	443	1557	296	193	861	426	240	669	203	391	861	216
Grp Sat Flow(s),veh/h/ln	1755	1729	1607	1755	1729	1707	1755	1805	1608	1755	1805	1605
Q Serve(g_s), s	13.6	31.3	16.5	6.0	26.3	26.4	7.4	18.5	8.9	12.0	24.3	8.1
Cycle Q Clear(g_c), s	13.6	31.3	16.5	6.0	26.3	26.4	7.4	18.5	8.9	12.0	24.3	8.1
Prop In Lane	1.00		1.00	1.00		0.61	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	492	1741	539	237	959	473	303	941	419	452	1054	469
V/C Ratio(X)	0.90	0.89	0.55	0.82	0.90	0.90	0.79	0.71	0.48	0.87	0.82	0.46
Avail Cap(c_a), veh/h	492	1786	553	237	959	473	396	1256	560	492	1355	602
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.4	34.6	29.7	50.5	38.2	38.2	49.2	36.8	19.9	46.9	36.1	14.2
Incr Delay (d2), s/veh	18.9	6.2	1.1	18.2	11.2	19.9	5.8	1.2	0.9	13.1	3.1	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.0	13.2	6.1	3.1	12.0	13.0	3.4	8.0	3.2	5.9	10.7	4.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	65.3	40.8	30.8	68.8	49.3	58.1	55.0	38.1	20.8	60.0	39.3	14.9
LnGrp LOS	E	D	C	E	D	E	D	D	C	E	D	B
Approach Vol, veh/h		2296			1480			1112			1468	
Approach Delay, s/veh		44.2			54.4			38.6			41.2	
Approach LOS		D			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.7	34.4	13.6	43.0	15.3	37.9	20.0	36.6
Change Period (Y+Rc), s	4.6	5.8	6.2	* 6.2	5.8	* 5.8	4.6	6.2
Max Green Setting (Gmax), s	15.4	38.2	7.4	* 38	12.4	* 41	15.4	29.8
Max Q Clear Time (g_c+I1), s	14.0	20.5	8.0	33.3	9.4	26.3	15.6	28.4
Green Ext Time (p_c), s	0.1	4.5	0.0	3.6	0.1	5.5	0.0	1.0

Intersection Summary	
HCM 6th Ctrl Delay	44.9
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

APPENDIX 8.3:

HORIZON YEAR (2040) WITHOUT PROJECT CONDITIONS TRAFFIC SIGNAL WARRANT ANALYSIS WORKSHEETS

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Figure 4C-103 (CA). Traffic Signal Warrants Worksheet
(Average Traffic Estimate Form)

DIST	CO	RTE	PM				
				TRAFFIC CONDITIONS		**2040 NP**	
				CALC	RV	DATE	06/30/21
Jurisdiction:	**City of Perris**			CHK	RV	DATE	06/30/21
Major Street:	**Indian Avenue**			Critical Approach Speed (Major)		40	mph
Minor Street:	**Perry Street**			Critical Approach Speed (Minor)		25	mph

Major Street Approach Lanes = **2** lane Minor Street Approach Lanes = **1** lane

Major Street Future ADT = **11,243** vpd Minor Street Future ADT = **258** vpd

Speed limit or critical speed on major street traffic > 64 km/h (40 mph); …….. [ ]

or **RURAL (R)**

In built up area of isolated community of < 10,000 population …….. [ ]

(Based on Estimated Average Daily Traffic - See Note)

URBAN	RURAL	Minimum Requirements EADT			
XX					
CONDITION A - Minimum Vehicular Volume					
Satisfied	Not Satisfied	Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
	XX				
Number of lanes for moving traffic on each approach					
Major Street	Minor Street	Urban	Rural	Urban	Rural
1	*1*	8,000	5,600	2,400	1,680
2 + **11,243**	*1* **258**	9,600 *	6,720	2,400	1,680
2 +	*2* +	9,600	6,720	3,200	2,240
1	*2* +	8,000	5,600	3,200	2,240
CONDITION B - Interruption of Continuous Traffic					
Satisfied	Not Satisfied	Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
	XX				
Number of lanes for moving traffic on each approach					
Major Street	Minor Street	Urban	Rural	Urban	Rural
1	*1*	12,000	8,400	1,200	850
2 + **11,243**	*1* **258**	14,400	10,080	1,200	850
2 +	*2* +	14,400	10,080	1,600	1,120
1	*2* +	12,000	8,400	1,600	1,120
Combination of CONDITIONS A + B					
Satisfied	Not Satisfied	2 CONDITIONS 80%		2 CONDITIONS 80%	
	XX				
No one condition satisfied, but following conditions fulfilled 80% of more …..	A 11% B 21%				

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

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APPENDIX 8.4:

HORIZON YEAR (2040) WITH PROJECT CONDITIONS TRAFFIC SIGNAL WARRANT ANALYSIS WORKSHEETS

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Figure 4C-103 (CA). Traffic Signal Warrants Worksheet (Average Traffic Estimate Form)

DIST	CO	RTE	PM	TRAFFIC CONDITIONS		2040 WP
				CALC RV	DATE	06/30/21
Jurisdiction: City of Perris				CHK RV	DATE	06/30/21
Major Street: Indian Avenue				Critical Approach Speed (Major)		40 mph
Minor Street: Perry Street				Critical Approach Speed (Minor)		25 mph

Major Street Approach Lanes = **2** lane Minor Street Approach Lanes = **1** lane

Major Street Future ADT = **11,768** vpd Minor Street Future ADT = **258** vpd

Speed limit or critical speed on major street traffic > 64 km/h (40 mph); …….. [ ]

or **RURAL (R)**

In built up area of isolated community of < 10,000 population …….. [ ]

(Based on Estimated Average Daily Traffic - See Note)

URBAN / RURAL	Number of lanes for moving traffic on each approach		Minimum Requirements EADT			
			Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
	Major Street	Minor Street	Urban	Rural	Urban	Rural
CONDITION A - Minimum Vehicular Volume						
Satisfied / Not Satisfied (XX)						
	1	*1*	8,000	5,600	2,400	1,680
	2 + **11,768**	*1* **258**	9,600 *	6,720	2,400	1,680
	2 +	*2* +	9,600	6,720	3,200	2,240
	1	*2* +	8,000	5,600	3,200	2,240
CONDITION B - Interruption of Continuous Traffic						
Satisfied / Not Satisfied (XX)						
	1	*1*	12,000	8,400	1,200	850
	2 + **11,768**	*1* **258**	14,400	10,080	1,200	850
	2 +	*2* +	14,400	10,080	1,600	1,120
	1	*2* +	12,000	8,400	1,600	1,120
Combination of CONDITIONS A + B						
Satisfied / Not Satisfied (XX)						
No one condition satisfied, but following conditions fulfilled 80% of more …..	**A** 11%	**B** 21%	2 CONDITIONS 80%		2 CONDITIONS 80%	

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

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APPENDIX 8.5:

HORIZON YEAR (2040) WITH PROJECT CONDITIONS INTERSECTION OPERATIONS ANALYSIS WORKSHEETS WITH IMPROVEMENTS

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Lane Group	EBL	EBT	WBT	NBL	NBT	SBT	Ø1
Lane Configurations							
Traffic Volume (vph)	5	0	0	5	510	369	
Future Volume (vph)	5	0	0	5	510	369	
Turn Type	Perm	NA	NA	Prot	NA	NA	
Protected Phases		4	8	5	2	6	1
Permitted Phases	4						
Detector Phase	4	4	8	5	2	6	
Switch Phase							
Minimum Initial (s)	10.0	10.0	10.0	5.0	10.0	10.0	5.0
Minimum Split (s)	23.6	23.6	23.6	9.6	23.1	23.1	9.6
Total Split (s)	23.6	23.6	23.6	10.0	26.8	26.4	9.6
Total Split (%)	39.3%	39.3%	39.3%	16.7%	44.7%	44.0%	16%
Yellow Time (s)	3.6	3.6	3.6	3.6	4.1	4.1	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)		4.6	4.6	4.6	5.1	5.1	
Lead/Lag				Lead	Lag	Lag	Lead
Lead-Lag Optimize?				Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None

Intersection Summary
Cycle Length: 60
Actuated Cycle Length: 23.2
Natural Cycle: 60
Control Type: Actuated-Uncoordinated

Splits and Phases: 1: Indian Av. & Driveway/Perry St.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	0	2	0	0	4	5	510	44	0	369	16
Future Volume (veh/h)	5	0	2	0	0	4	5	510	44	0	369	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	5	0	2	0	0	4	5	554	48	0	401	17
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	273	0	11	0	0	47	12	2020	175	7	1435	61
Arrive On Green	0.03	0.00	0.03	0.00	0.00	0.03	0.01	0.59	0.59	0.00	0.40	0.40
Sat Flow, veh/h	971	0	388	0	0	1610	1810	3448	298	1810	3619	153
Grp Volume(v), veh/h	7	0	0	0	0	4	5	305	297	0	210	208
Grp Sat Flow(s),veh/h/ln	1359	0	0	0	0	1610	1810	1900	1846	1810	1900	1872
Q Serve(g_s), s	0.1	0.0	0.0	0.0	0.0	0.1	0.1	2.0	2.0	0.0	1.9	1.9
Cycle Q Clear(g_c), s	0.2	0.0	0.0	0.0	0.0	0.1	0.1	2.0	2.0	0.0	1.9	1.9
Prop In Lane	0.71		0.29	0.00		1.00	1.00		0.16	1.00		0.08
Lane Grp Cap(c), veh/h	285	0	0	0	0	47	12	1113	1082	7	753	742
V/C Ratio(X)	0.02	0.00	0.00	0.00	0.00	0.08	0.40	0.27	0.27	0.00	0.28	0.28
Avail Cap(c_a), veh/h	1358	0	0	0	0	1214	388	1636	1590	359	1606	1582
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	0.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	12.0	0.0	0.0	0.0	0.0	11.9	12.5	2.6	2.6	0.0	5.2	5.2
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.8	7.7	0.1	0.1	0.0	0.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	12.0	0.0	0.0	0.0	0.0	12.7	20.2	2.7	2.7	0.0	5.4	5.4
LnGrp LOS	B	A	A	A	A	B	C	A	A	A	A	A
Approach Vol, veh/h		7			4			607			418	
Approach Delay, s/veh		12.0			12.7			2.9			5.4	
Approach LOS		B			B			A			A	

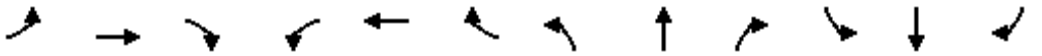
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	0.0	19.9		5.3	4.8	15.1		5.3				
Change Period (Y+Rc), s	4.6	5.1		4.6	4.6	5.1		4.6				
Max Green Setting (Gmax), s	5.0	21.7		19.0	5.4	21.3		19.0				
Max Q Clear Time (g_c+I1), s	0.0	4.0		2.2	2.1	3.9		2.1				
Green Ext Time (p_c), s	0.0	3.2		0.0	0.0	2.1		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		4.0	
HCM 6th LOS		A	

Lane Group	EBL	EBT	WBT	NBL	NBT	SBT	Ø1
Lane Configurations							
Traffic Volume (vph)	15	0	0	2	568	1012	
Future Volume (vph)	15	0	0	2	568	1012	
Turn Type	Perm	NA	NA	Prot	NA	NA	
Protected Phases		4	8	5	2	6	1
Permitted Phases	4						
Detector Phase	4	4	8	5	2	6	
Switch Phase							
Minimum Initial (s)	10.0	10.0	10.0	5.0	10.0	10.0	5.0
Minimum Split (s)	23.6	23.6	23.6	9.6	22.1	22.1	9.6
Total Split (s)	23.6	23.6	23.6	11.0	26.4	25.4	10.0
Total Split (%)	39.3%	39.3%	39.3%	18.3%	44.0%	42.3%	17%
Yellow Time (s)	3.6	3.6	3.6	3.6	4.1	4.1	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)		4.6	4.6	4.6	5.1	5.1	
Lead/Lag				Lead	Lag	Lag	Lead
Lead-Lag Optimize?				Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None

Intersection Summary
Cycle Length: 60
Actuated Cycle Length: 26.2
Natural Cycle: 60
Control Type: Actuated-Uncoordinated

Splits and Phases: 1: Indian Av. & Driveway/Perry St.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	15	0	5	0	0	6	2	568	29	0	1012	5
Future Volume (veh/h)	15	0	5	0	0	6	2	568	29	0	1012	5
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	16	0	5	0	0	7	2	617	32	0	1100	5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	281	0	23	0	0	112	6	2191	114	6	1731	8
Arrive On Green	0.07	0.00	0.07	0.00	0.00	0.07	0.00	0.61	0.61	0.00	0.46	0.46
Sat Flow, veh/h	1054	0	329	0	0	1610	1810	3581	186	1810	3780	17
Grp Volume(v), veh/h	21	0	0	0	0	7	2	327	322	0	553	552
Grp Sat Flow(s),veh/h/ln	1384	0	0	0	0	1610	1810	1900	1867	1810	1900	1897
Q Serve(g_s), s	0.4	0.0	0.0	0.0	0.0	0.1	0.0	2.5	2.5	0.0	6.8	6.8
Cycle Q Clear(g_c), s	0.5	0.0	0.0	0.0	0.0	0.1	0.0	2.5	2.5	0.0	6.8	6.8
Prop In Lane	0.76		0.24	0.00		1.00	1.00		0.10	1.00		0.01
Lane Grp Cap(c), veh/h	304	0	0	0	0	112	6	1163	1142	6	870	869
V/C Ratio(X)	0.07	0.00	0.00	0.00	0.00	0.06	0.34	0.28	0.28	0.00	0.64	0.64
Avail Cap(c_a), veh/h	1120	0	0	0	0	1005	381	1330	1307	321	1268	1266
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	0.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	13.5	0.0	0.0	0.0	0.0	13.2	15.1	2.8	2.8	0.0	6.3	6.3
Incr Delay (d2), s/veh	0.1	0.0	0.0	0.0	0.0	0.2	11.8	0.1	0.1	0.0	0.8	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.6	0.0	0.0	0.0	0.0	13.5	27.0	2.9	2.9	0.0	7.1	7.1
LnGrp LOS	B	A	A	A	A	B	C	A	A	A	A	A
Approach Vol, veh/h		21			7			651			1105	
Approach Delay, s/veh		13.6			13.5			3.0			7.1	
Approach LOS		B			B			A			A	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	0.0	23.7		6.7	4.7	19.0		6.7				
Change Period (Y+Rc), s	4.6	5.1		4.6	4.6	5.1		4.6				
Max Green Setting (Gmax), s	5.4	21.3		19.0	6.4	20.3		19.0				
Max Q Clear Time (g_c+I1), s	0.0	4.5		2.5	2.0	8.8		2.1				
Green Ext Time (p_c), s	0.0	3.4		0.0	0.0	5.2		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		5.7	
HCM 6th LOS		A	