

Initial Study/Mitigated Negative Declaration No. 2379

TENTATIVE TRACT MAP NO. 37904

Lead Agency:

City of Perris
Planning Division
135 N. "D" Street
Perris, California 92570

Prepared by:

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February 2023

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SECTION 1.0 INTRODUCTION

1.1 PURPOSE AND SCOPE

Pursuant to the California Environmental Quality Act (CEQA, California Public Resources Code, Sections 21000, et seq.) and the Guidelines for Implementation of the California Environmental Quality Act (State CEQA Guidelines, California Code of Regulations, Title 14, Sections 15000 et seq.), as amended, this Initial Study/Mitigated Negative Declaration (IS/MND) has been prepared to identify the potential environmental impacts associated with the develop of proposed Tentative Tract Map No. 37904 (proposed project) located at the northeast corner of Mountain Avenue and McPherson Road in the City of Perris. This IS/MND evaluates each of the environmental issues listed in Section 5.0 of this IS/MND. The objective of this IS/MND is to inform the City of Perris decision makers, representatives of other affected/responsible agencies, and other interested parties of the potential environmental effects that may be associated with the development and operation of the proposed project, and recommend mitigation measures, when required by CEQA, to reduce potentially significant environmental impacts.

Pursuant to the provisions of CEQA and the State CEQA Guidelines, the City of Perris is the Lead Agency and is charged with the responsibility of deciding whether or not to approve the proposed project.

1.2 FINDINGS OF THIS MITIGATED NEGATIVE DECLARATION

This IS/MND is based on an Environmental Checklist Form (Form), as suggested in Section 15063(d)(3) of the State CEQA Guidelines, as amended and provided in Section 5.0 of this MND. Section 5.0 includes a series of questions about the project for each of the listed environmental topics. The Form evaluates whether or not there would be significant environmental effects associated with the development of the project and provide mitigation measures, when required, to reduce impacts to a less than significant level. An explanation for each answer is also included in Section 5.0.

The IS/MND reviews the potential environmental effects of the proposed project for each of the following areas:

- 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

As identified through the analysis presented in this MND, the proposed project would have no impacts or a less than significant level impact with the following topics:

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

The project would have a less than significant level impact with the implementation of the recommended mitigation measures for the following topics:

- Biological Resources
- Cultural Resources
- Hazards/Hazardous Materials
- Noise
- Tribal Cultural Resources

1.3 CONTACT PERSON

The Lead Agency for the project is the City of Perris. Any questions about the preparation of the MND, its assumptions, or its conclusions should be referred to the following:

Douglas Fenn, Planning Consultant
City of Perris Planning Division
135 North "D" Street
Perris, California 92570
(951) 943-5003
dfenn@interwestern.com

SECTION 2.0 PROJECT DESCRIPTION

2.1 PROJECT LOCATION AND SETTING

The 40.62-acre project site is located at the northeast corner of Mountain Avenue and McPherson Road in the City of Perris within Riverside County (Figure 1). The project site is located within Section 1, Township 5 South, Range 4 West of the 7.5-minute Perris quadrangle, San Bernardino Baseline and Meridian (United States Geologic Service 1967). The site is vacant with evidence of non-project related disturbance and vegetated with a mixture of native and non-native plants. As further discussed in the Biological Resources section of the IS/MND, the project site is located within the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP). The site is not located within any designated MSHCP “Criteria Area” cells, and it is not within a “Core” or “Linkage” area. No Riparian/Riverine areas or vernal pools are located within or adjacent to the site or off-site impact areas. No sensitive, rare or endangered plant or animal species have been observed on the site.

The existing General Plan Land Use designation for the site is R-6,000 - Residential 6,000 and the existing zoning is R-6,000 (Residential 6,000-square-foot lot size). The proposed zoning for the project would be R-6,000-PDO (Planned Development Overlay) that would allow for an increase in housing density of up to 10 percent of 6,000 square feet. The area surrounding the site is currently dominated by vacant land and single-family detached housing and described below.

Direction from Project Site	Land Use
North	Unimproved David Jones Road with vacant land and several single-family residential properties beyond.
South	Mountain Avenue with the 1 st Perris Apostolic Church beyond.
East	McPherson Road with single family residential development beyond.
West	Very low density residential (Riverside County).

2.2 PROJECT DESCRIPTION

Identified as Tentative Tract Map (TTM) 37904, the project applicant is proposing the development of 185 single family age restricted (55 years old or older) detached residential units at the project site (Figure 2). The residential lots would range from a minimum size of 4,502 square feet to a maximum size of 9,972 square feet. The project includes construction of one story homes and includes Spanish, Craftsman and Tuscan architecture. As part of the project development, there would be three recreational areas constructed in Lots A, B, C and D (Figure 3). Lot F would remain an undeveloped natural area. A recreation center building would be constructed in Lot B. One detention basin for stormwater management that would include a dog park would be located within Lot A (Figure 3).

The project applicant is proposing to construct a total of 367,462 square feet of on-site and off-site street improvements, including half-width public roadway improvements along Mountain Avenue, McPherson Road, and David Jones Road and on-site paved surfaces as part of the project. The total area of the site, including the off-site street improvements is approximately 41.70 acres. The total area of development within the project area are summarized by type as follows.

- Total Building Area: 326,318 square feet
- Landscaping Area: 1,012,882 square feet
- Lot F (unimproved natural area): 109,955 square feet

Construction of the project is estimated to begin in the year 2024 and last approximately 39 months. Construction activities are expected to consist of site preparation, grading, building construction, paving, and architectural coating. The project site is expected to require the export of 10,000 cubic yards of earthwork material during the grading phase. The project area would be mass graded, and utilities installed by phase. The project would require 107,000 cubic yards of cut and 87,000 cubic yards of fill. From the remaining 20,000 cubic yards of excavated soils, the project site is expected to require the export of 10,000 cubic yards of earthwork material during the grading phase. The project is expected to be complete and operational in the year 2027.

As discussed in the IS, the project site is located within a high wildfire hazard area. As a result, a Fuel Modification Plan (FMP) has been prepared for the project that assessed both the on-site and off-site wildland fire hazard risks. Both short-term and long-term modification actions to minimize projected fire hazards and risks have been identified in the FMP. The FMP provides wildlife fuel treatments for the proposed development to reduce risks from wildfire summarized as follows.

- Fuel treatment zones broken down by zones within the development.
- Construction standards that will reduce risks from wildfire.
- Infrastructure elements that will reduce risks from wildfire.
- Recommendations for a homeowner education program.
- Mandated Covenants, Conditions and Restrictions that would include statements that identified roles and responsibilities for managing wildfire risks for the project.

The Air Quality and Greenhouse Gas Analysis and Noise Impact Study prepared for the project have identified the following design features (DFs) that were considered in their respective analyses.

Air Quality and Greenhouse Gas Analysis Construction Design Features

DF-1 The project will follow the standard South Coast Air Quality Management District (SCAQMD) rules and requirements with regards to fugitive dust control, which includes, but are not limited to the following:

1. All active construction areas shall be watered two times daily.
2. Speed on unpaved roads shall be reduced to less than 15 miles per hour (mph).
3. Any visible dirt deposition on any public roadway shall be swept or washed at the site access points within 30 minutes.
4. Any on-site stockpiles of debris, dirt or other dusty material shall be covered or watered twice daily.
5. All operations on any unpaved surface shall be suspended if winds exceed 15 mph.
6. Access points to the project area shall be washed or swept daily.
7. The construction sites shall be sandbagged for erosion control.
8. Nontoxic chemical soil stabilizers will be applied according to manufacturers' specifications to all inactive construction areas (previously graded areas inactive for 10 days or more).
9. All trucks hauling dirt, sand, soil, or other loose materials will be covered, and maintain at least two feet of freeboard space in accordance with the requirements of California Vehicle Code (CVC) section 23114.

10. Project access roads shall be paved or gravel-constructed at least 100 feet onto the site from the main road and use gravel aprons at truck exits.

11. Ground cover of disturbed areas will be replaced as quickly possible.

DF-2 Require all construction equipment to have Tier 4 low emission “clean diesel” engines (OEM or retrofit) that include diesel oxidation catalysts and diesel particulate filters that meet the latest CARB best available control technology.

DF-3 Construction equipment shall be maintained in proper tune.

DF-4 All construction vehicles shall be prohibited from excessive idling. Excessive idling is defined as five minutes or longer.

DF-5 Minimize the simultaneous operation of multiple construction equipment units.

DF-6 The use of heavy construction equipment and earthmoving activity should be suspended during Air Alerts when the Air Quality Index reaches the “Unhealthy” level.

DF-7 Establish an electricity supply to the construction site and use electric powered equipment instead of diesel-powered equipment or generators, where feasible.

DF-8 Establish staging areas for the construction equipment that are as distant as possible from adjacent sensitive receptors (residential land uses).

DF-9 Use haul trucks with on-road engines instead of off-road engines for on-site hauling.

DF-10 Utilize zero Volatile Organic Carbon (VOC) and low VOC paints and solvents, wherever possible.

DF-11 Prepare and implement a Construction Management Plan which will include the construction best practices and conditions of approval to be submitted to the City of Perris and followed by construction contractors and personnel.

Air Quality and Greenhouse Gas Analysis Operational Design Features:

DF-12 Comply with the mandatory requirements of Title 24 part 11 of the California Building Standards Code (CALGreen) and the Title 24 Part 6 Building Efficiency Standards, including net zero energy requirements.

DF-13 Implement water conservation strategies, including low flow fixtures and toilets, water-efficient irrigation systems, drought tolerant/native landscaping, and reduce the amount of turf.

DF-14 Comply with the mandatory requirements of CalRecycle’s residential recycling program and implement zero waste strategies.

DF-15 Provide the necessary infrastructure to support electric vehicle charging, as required by CALGreen.

DF-16 Use electric-powered landscaping equipment for landscape maintenance

DF-17 Utilize renewable energy sources, such as solar, to the maximum extent required under Title 24.

Noise Impact Study Construction Design Features

DF-1 Construction-related noise activities shall comply with the requirements set forth in the City of Perris Municipal Code Chapter 7.34 and Riverside County Ordinance No. 847:

1. It is 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 Lmax in residential zones in the city.
2. Riverside County Ordinance No. 847 indicates that construction noise is exempt from the noise ordinance, provided any of the following are satisfied:
 - Private construction projects located one-quarter of a mile or more from an inhabited dwelling.
 - Private construction projects located within one-quarter of a mile from an inhabited dwelling, provided that:
 - Construction does not occur between the hours of 6:00 PM and 6:00 AM during the months of June through September; and
 - Construction does not occur between the hours of 6:00 PM and 7:00 AM during the months of October through May.

DF-2 The project is not expected to require the use of substantial vibration inducing equipment or activities, such as pile drivers or blasting, during construction. If these activities end up being required, a follow-up noise and vibration assessment will be prepared prior to performing any such activities.

Noise Impact Study Operational Design Features

DF-3 A six-foot noise barrier wall will be provided to shield all habitable backyard areas facing exterior roadways and adjacent properties. The designed noise screening will only be accomplished if the barrier's weight is at least 3.5 pounds per square foot of face area without decorative cutouts or line-of-site openings between the shielded areas and the project site. All gaps (except for weep holes) should be filled with grout or caulking to avoid flanking.

Noise control barrier may be constructed using one, or any combination of the following materials:

- Masonry block;
- Stucco veneer over wood framing (or foam core), or 1-inch-thick tongue and groove wood of sufficient weight per square foot; and
- Transparent glass (3/8-inch-thick), acrylic, polycarbonate, or other transparent material with sufficient weight per square foot.

DF-4 All heating, ventilation and air conditioning (HVAC) equipment will be shielded from the line of sight of adjacent residential properties behind property line walls.

DF-5 The project will be required to incorporate building construction techniques that achieve the minimum interior noise standard of 45 decibel community noise equivalent level (dBA CNEL) for all residential units.

DF-6 For proper acoustical performance, all exterior windows, doors, and sliding glass doors shall have a positive seal and leaks/cracks must be kept to a minimum.

The following project design features that are considered standard building code requirements and best practices and are consistent with the City of Perris Climate Action Plan (CAP) will be included in the project design.

- Comply with the mandatory requirements of Title 24 part 11 of the California Building Standards Code (CALGreen) and the Title 24 Part 6 Building Efficiency Standards, including net zero energy requirements.
- Implement water conservation strategies, including low flow fixtures and toilets, water efficient irrigation systems, drought tolerant/native landscaping, and reduce the amount of turf.
- Comply with the mandatory requirements of CalRecycle's residential recycling program and implement zero waste strategies.
- Provide the necessary infrastructure to support electric vehicle charging, as required by CALGreen.
- Use electric powered landscaping equipment for landscape maintenance.
- Utilize renewable energy sources, such as solar, to the maximum extent required under Title 24

Implementing these design features will help reduce greenhouse gas emissions from construction and operation of the proposed project consistent with the City's CAP.

2.3 PROJECT APPROVALS

The following approvals and permits are required from the City of Perris to implement the proposed project:

- Adoption of a Mitigated Negative Declaration with the determination that the Mitigated Negative Declaration has been prepared in compliance with the requirements of CEQA as amended;
- Approval of Tentative Tract Map No, 37904 to allow the development of 185 single family age restricted (55 years old or older) detached residential units on approximately 41.70 gross acres;
- Approval of Planned Development Overlay 21-05038 to rezone the project site from R-6,000 – Single Family Residential Zone to R-6,000-PD – Single Family Residential Planned Development Overlay Zone; and
- Approval of Development Plan Review 21-00002 of the site plan and building elevations for the construction of 185 detached single family residences, a clubhouse, common open space including a dog park, a detention basin, and landscaping.

Other non-discretionary actions anticipated to be taken by the City at the staff level as part of the project include:

- Review and approval of all off-site infrastructure plans, including street and utility improvements pursuant to project conditions of approval;
- Review all on-site plans, including grading and on-site utilities; and
- Approval of a Preliminary Water Quality Management Plan (PWQMP) to mitigate post-construction runoff flows.

Approvals and permits that may be required by other agencies include:

- Coverage under the Adopted Order 2009-0009 DWQ, National Pollutant Discharge Elimination System (NPDES) permit issued by the Regional Water Quality Control Board (RWQCB)-Santa Ana

Region to ensure that construction site drainage velocities are equal to or less than the pre-construction conditions and downstream water quality is not worsened; and

- Approval of water and sewer improvement plans by the Eastern Municipal Water District.

2.4 DOCUMENTS INCORPORATED BY REFERENCE

The following reports and/or studies are applicable to the development of the project and are hereby incorporated by reference:

- *Perris Comprehensive General Plan 2030*, City of Perris, originally approved on April 26, 2005.
- *City of Perris 2014-2021 Housing Element*, City of Perris, adopted August 17, 2013
- *General Plan Land Use Map*, updated January 03, 2013

These reports/studies are available for review at:

Public Service Counter

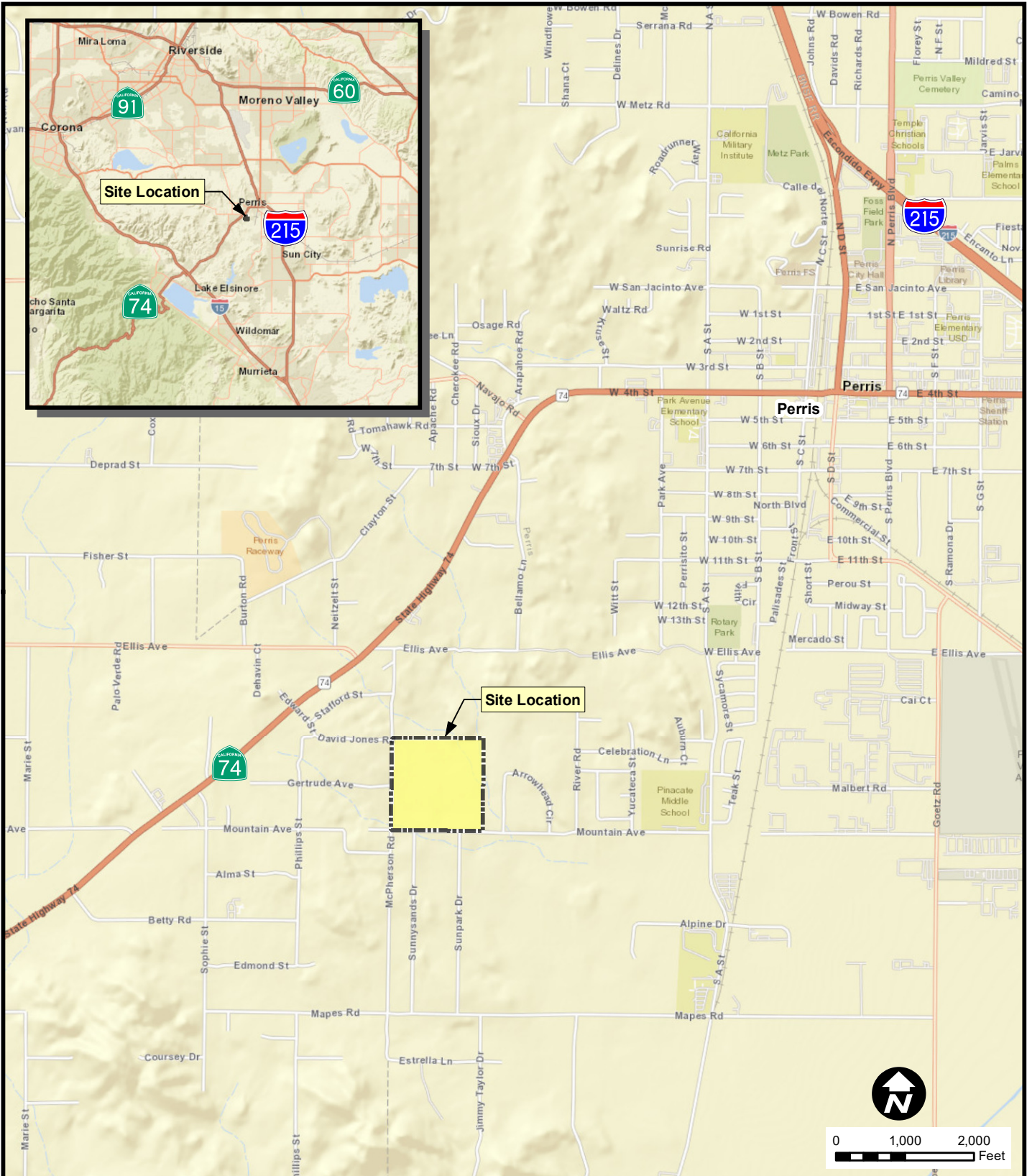
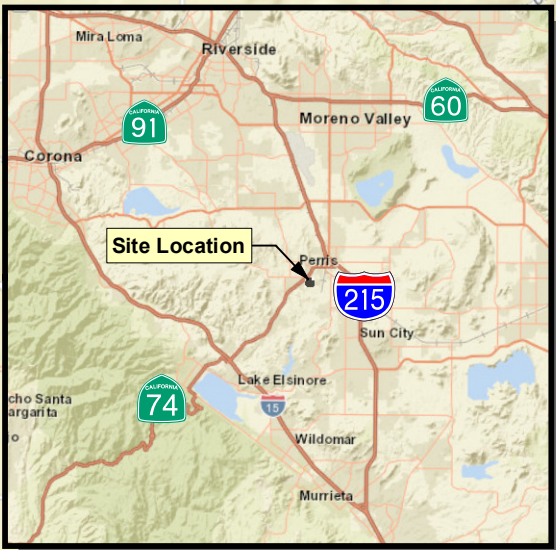
City of Perris Planning Division


135 North "D" Street

Perris, California 92570

(951) 943-5003

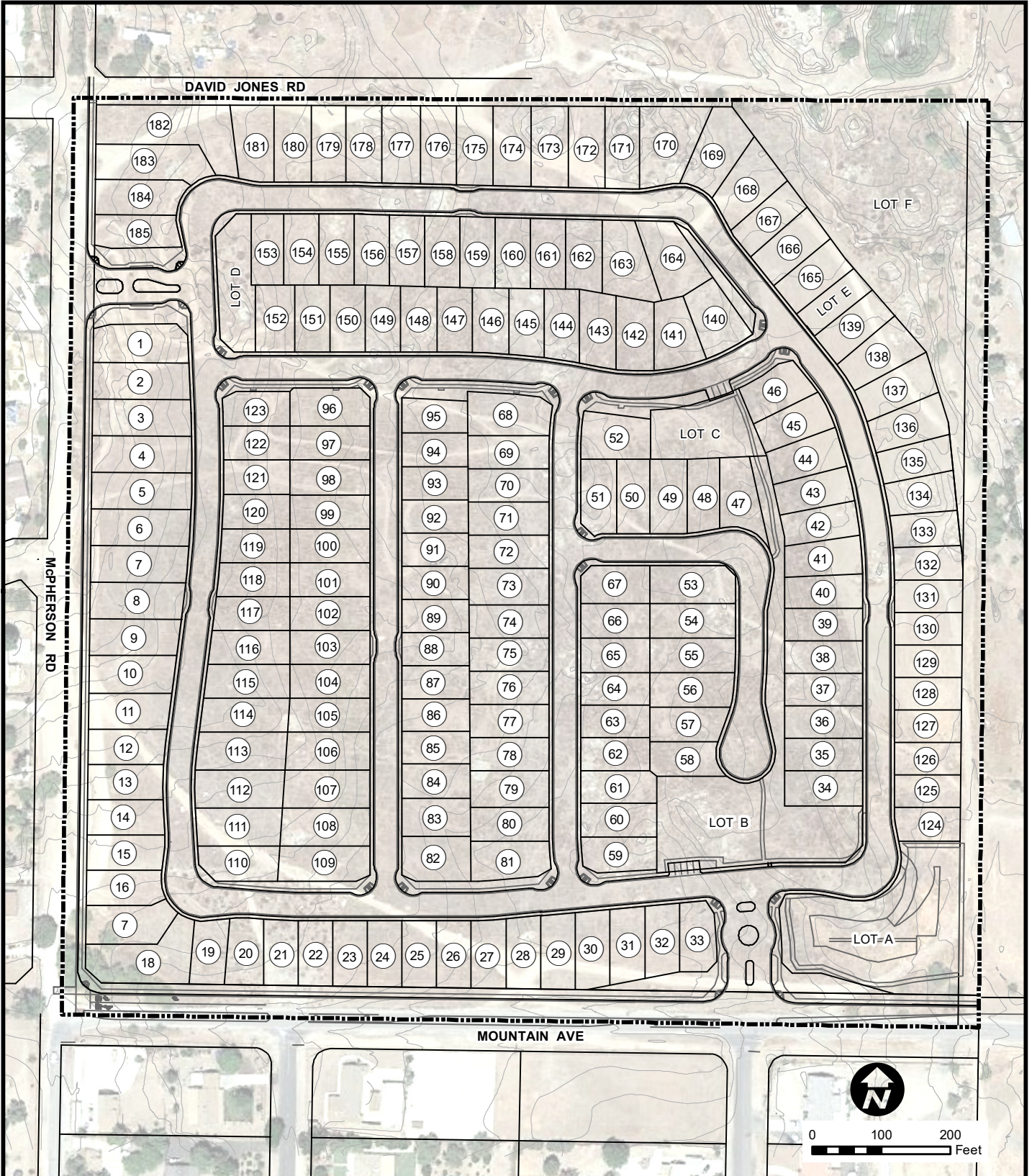
Hours: Monday – Thursday: 8:00 AM to 6:00 PM.



 Tentative Tract Boundary

CITY OF PERRIS
TENTATIVE TRACT 37904

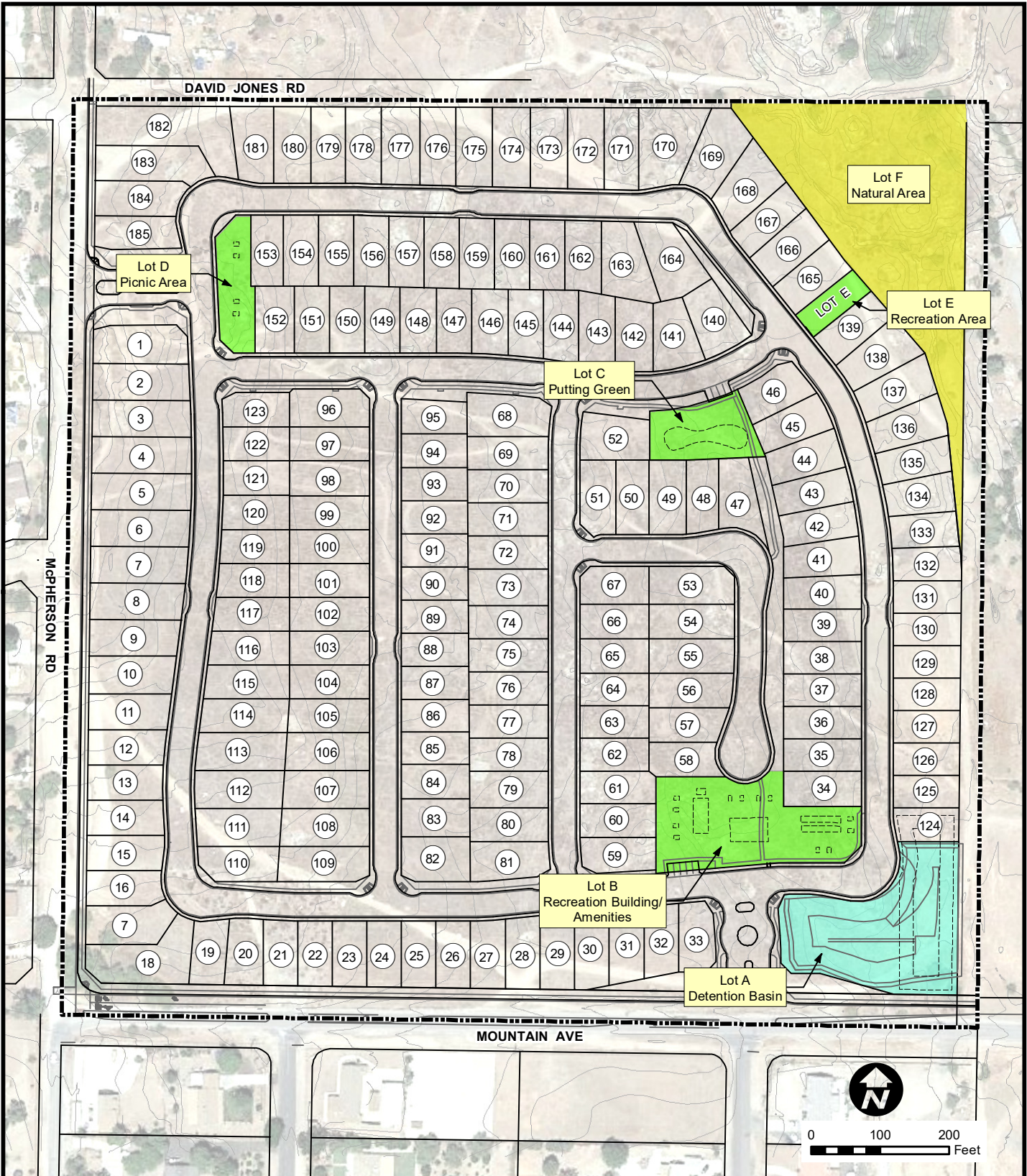
Figure 1
Regional Location



 Tentative Tract Boundary

CITY OF PERRIS
TENTATIVE TRACT 37904

Figure 2
Site Plan



CITY OF PERRIS
TENTATIVE TRACT 37904

Figure 3
**Recreation Areas/
Open Spaces**

SECTION 3.0 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.

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

SECTION 4.0 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.

Douglas Fenn

Signature of Lead Agency Representative

2/22/23

Date

Douglas Fenn, Planning Consultant

Printed Name

City of Perris

Agency

SECTION 5.0 INITIAL STUDY

This section contains the Environmental Checklist Form for the proposed project. The Form is marked with findings as to the environmental effects of the project.

This analysis has been undertaken, pursuant to the provisions of CEQA, as amended, to provide the City of Perris with the factual basis for determining, based on the information available, the form of environmental documentation the project warrants. The basis for each of the findings listed in the attached Form is explained in the Explanation of Checklist Responses following the checklist.

ENVIRONMENTAL CHECKLIST FORM

City of Perris 135 North "D" Street, Perris, California 92570	
Project Title	Tentative Tract Map No. 37904
Lead Agency Name and Address	City of Perris 135 North "D" Street Perris, California 92570
Contact Person and Phone Number	Douglas Fenn, Planning Consultant, (951) 943-5003
Project Location	Northeast corner of McPherson Road and Mountain Avenue, Perris California (Figure 1)
Project Sponsor's Name and Address	Anthony Arnest Pacific Communities Builder, Inc. 1000 Dove Street, Suite 300 Newport Beach, California 92660
General Plan Designation	Residential 6,000
Zoning Designation	R-6,000
Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code section 21080.3.1? If so, is there a plan for consultation that includes, for example, the determination of significance of impacts to tribal cultural resources, procedures regarding confidentiality, etc.?	The City, as the lead agency, request consultation to Agua Caliente Band of Cahuilla Indians, Desert Cahuilla (Torres-Martinez), Luiseño Indians, Morongo Band of Mission Indians, Pechanga Band of Mission Indians, and Rincon Band of Luiseño Indians on October 3, 2022. A request for consultation from the Pechanga Band of Mission Indians was received on October 18, 2022. No other requests for consultation have been received.

5.1 AESTHETICS

Except as provided in Public Resources Code Section 21099, would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Create a new source of substantial light or glare that will adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

References: City of Perris 2004, City of Perris 2006

Explanation of Checklist Answers

1a. Less than Significant Impact.

The City of Perris encompasses approximately forty (40) square miles in northwestern Riverside County and is located midway between the San Jacinto and the Santa Ana Mountains. The City of Perris is bordered on the north by the March Air Reserve Base/Inland Port Airport and by the City of Moreno Valley, on the south by the unincorporated communities of Quail Valley and Sun City, on the southwest by the City of Canyon Lake, on the east by unincorporated areas of Riverside County, and on the west by the unincorporated community of Mead Valley and unincorporated Riverside County (City of Perris 2004).

Because the bulk of developable land within the City of Perris is located on the flat, broad basin, virtually all future building construction consistent with land use and development standards set forth in General Plan 2030 will obstruct views to the foothills from at least some vantage points. The City of Perris has identified a more narrowly defined scenic vista as a view through an opening, between a row of buildings or trees, or at the end of a vehicular right-of-way. As a result, east-west and north-south oriented roadway network and the streetscapes frame and preserve scenic vistas from public rights of way to the distant horizons and foothills. Due to the flatness of the basin, the view corridors extend for miles along current and planned roadways preserving scenic vistas from the broad basin to the surrounding foothills (City of Perris 2006). As a result, a less than significant impact would occur.

1b. No Impact.

Scenic highways are designated as such because the traverse areas of distinctive natural beauty. State Route 74 east of the City of Hemet is the closest officially designated State Scenic Highway to the City of Perris. The segments of State Route 74 from Hemet to the coast are eligible to be designated as a State Scenic Highway; although the official designation has not occurred. The proposed project site is located approximately three-tenths of a mile to the southeast of State Route 74. Existing rural residential

development located between the project site and State Route 74 would essentially screen views of the developed project from travelers using State Route 74.

Collections of rocks or singular rocks that are notable by virtue of unique formation, size, or character or notable stands of trees have not been identified within the City of Perris (City of Perris 2004). As stated earlier, the proposed project is located approximately three-tenths of a mile to the southeast of State Route 74. Existing rural residential development located between the project site and State Route 74 would essentially screen views of the developed project from travelers using State Route 74. Views of historic buildings located along State Route 74 would not be impacted by the proposed project. As a result, no impact would occur.

1c. Less than Significant Impact.

The proposed project would be located within an area that has been developed as rural residential developments and open space undeveloped lands. Development of the site as Single Family Zoning with an Planned Development Overlay that would allow for an increase in housing density would be consistent with and compatible with the existing rural residential development in the vicinity of the project area. The project would be required to meet and comply with all applicable City of Perris development standards for residential uses. As a result, a less than significant impact would occur.

1d. Less than Significant With Mitigation Incorporated

The residences and new streets associated with the project would require nighttime lighting, similar to what is provided in adjacent residential developments. Light standards associated with new streets would be deflected away from adjacent properties and focused downward. The increase in night lighting would not adversely affect nighttime views in the local area. Therefore, operational impacts would be less than significant.

During Project construction, nighttime lighting may be used within the construction staging areas to provide security for construction equipment. Due to the distance between the construction area and the nearby residences and motorists on McPherson Road and Mountain Avenue, such security lights may result in glare to residents and motorists. Implementation of **Mitigation Measure MM AES-1** would ensure that project-specific impacts to nighttime lighting would be less than significant.

Mitigation Measure AES-1:

Mitigation Measure AES-1 Prior to issuance of grading permits, the property owner/developer shall provide evidence to the City 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 or into the backyards of the adjacent roadways and nearby residential areas.

5.2 **AGRICULTURE AND FORESTRY RESOURCES**

<p>In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agricultural farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state’s inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:</p>	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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))?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Result in the loss of forest land or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

References: California Department of Conservation 2018

Explanation of Checklist Answers

2a. No Impact

Land is designated by the California Department of Conservation, Division of Land Resource Protection, Farmland Mapping and Monitoring Program (FMMP) as one of the following as it relates to agriculture: Prime Farmland, Farmland of Statewide Importance, Unique Farmland, Farmland of Local Importance, Grazing Land, Urban and Built-Up Land, and Other Land. A review of the Farmland Map for project area

has designated the project site “Farmland of Local Importance” (California Department of Conservation 2018). This designation has been defined by the California Department of Conservation as land that is of importance to the local economy. In Riverside County, these are lands that lack irrigation water and are planted to dryland crops of barley, oats, and wheat. Therefore, the proposed project would not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland) to a non-agricultural use, and no impact would occur.

2b. No Impact

The project site is not under a Williamson Act contract. No impact would occur.

2c. No Impact

As there are no forests or timberlands located within the City of Perris, the proposed project would not result in the rezoning of forest or timberland. Therefore, no impact would occur.

2d. No Impact

As there are no forests or timberlands located within the City of Perris, no loss of forest land or the conversion of forest land to non-forest land would occur. Therefore, no impact would occur.

2e. No Impact

As previously indicated, a review of the Farmland Map for the project area has designated the project site “Farmland of Local Importance” (California Department of Conservation 2018). This designation has been defined by the California Department of Conservation as land that is of importance to the local economy. Therefore, the proposed project would not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland) to a non-agricultural use, and no impact would occur.

5.3 AIR QUALITY

Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations. Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standard?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Reference: RK Engineering Group, Inc., 2022a (Appendix A), South Coast Air Quality Management 2022

Explanation of Checklist Answers

3a. Less than Significant Impact

The City of Perris is located within the South Coast Air Basin (SCAB) which is under the jurisdiction of the South Coast Air Quality Management District (SCAQMD). The SCAQMD has prepared Air Quality Management Plans (AQMPs) to establish programs to guide the SCAB into compliance with federal and state air quality standards. CEQA requires a discussion of any inconsistencies between a proposed project and applicable General Plans and Regional Plans (CEQA Guidelines Section 15125). The regional plan that applies to the proposed project includes the SCAQMD AQMP. Therefore, this section discusses any potential inconsistencies in the proposed project with the AQMP.

The purpose of this discussion is to set forth the issues regarding consistency with the assumptions and objectives of the AQMP and discuss whether the proposed project would interfere with the region’s ability to comply with Federal and State air quality standards. If the decision-makers determine that the proposed project is inconsistent, the lead agency may consider project modifications or inclusion of mitigation to eliminate the inconsistency.

The SCAQMD CEQA Handbook states that "New or amended General Plan Elements (including land use zoning and density amendments), Specific Plans, and significant projects must be analyzed for consistency with the AQMP." Strict consistency with all aspects of the plan is usually not required. A proposed project should be considered to be consistent with the AQMP if it furthers one or more policies and does not obstruct other policies.

The SCAQMD CEQA Handbook identifies two criteria for evaluating consistency of a proposed project against the AQMP as follows.

- Criterion 1: Whether the project will result in an increase in the frequency or severity of

existing air quality violations or cause or contribute to new violations or delay timely attainment of air quality standards or the interim emission reductions specified in the AQMP.

- Criterion 2: Whether the project will exceed the assumptions in the AQMP in 2016 or increments based on the year of project buildout and phase.

As discussed below, the results of the short-term construction emission levels and long-term operational emission levels show that the project would not result in significant impacts based on the SCAQMD regional and local thresholds of significance. Therefore, the proposed project would not contribute to the exceedance of an air pollutant concentration standard and is found to be consistent with the AQMP for the first criterion.

Consistency with the AQMP assumptions is determined by performing an analysis of the proposed project with the assumptions in the AQMP. The emphasis of this criterion is to ensure that the analyses conducted for the proposed project are based on the same forecasts as the AQMP. The 2016-2040 Regional Transportation/Sustainable Communities Strategy, prepared by the Southern California Association of Governments (SCAG), 2016, includes chapters on: the challenges in a changing region, creating a plan for our future, and the road to greater mobility and sustainable growth. These chapters currently respond directly to federal and state requirements placed on SCAG. Local governments are required to use these as the basis of their plans for purposes of consistency with applicable regional plans under CEQA.

The proposed zoning for the project would be R-6000-PDO (Planned Development Overlay) that would allow for an increase in housing density of up to 10 percent of 6,000 square feet which is consistent with the City of Perris General Plan. The proposed project is not expected to increase operational emissions from mobile sources and energy sources, compared to the previously approved use. As shown in the regional and localized emissions analysis conducted for the proposed project and discussed below, the project is below the SCAQMD thresholds of significant for cumulative impacts and will not exceed the Criterion 2 threshold. A less than significant impact would occur.

3b. Less than Significant Impact

An analysis of potential air quality impacts was completed for construction and operation of the proposed project (Appendix A, RK Engineering Group, Inc. 2022a). The Federal Clean Air Act (§ 7602) defines air pollution as any agent or combination of such agents, including any physical, chemical, biological, or radioactive substance which is emitted into or otherwise enters the ambient air. Household combustion devices, motor vehicles, industrial facilities and forest fires are common sources of air pollution.

Criteria air pollutants are defined as those pollutants for which the federal and state governments have established air quality standards for outdoor or ambient concentrations to protect public health and include the following.

- Carbon Monoxide (CO)
- Nitrogen Dioxide (NO₂)
- Ozone (O₃)
- Fine Particulate Matter (PM₁₀)
- Ultra-Fine Particulate Matter (PM_{2.5})

- Sulfur Dioxide (SO₂)
- Lead (Pb)
- Volatile Organic Compounds (VOCs)
- Toxic Air Contaminants (TACs)

Several pollutants listed above are not addressed in the analysis completed for this project. Lead is not included because neither construction nor operation of the project are anticipated to emit lead. Visibility-reducing particles are not explicitly addressed in this analysis because particulate matter is specifically addressed. The project is not expected to generate or be exposed to vinyl chloride because proposed project development and use do not utilize the chemical processes that create this pollutant and there are no such uses in the project vicinity. The proposed project is not expected to cause exposure to hydrogen sulfide because it would not generate hydrogen sulfide in any substantial quantity. SCAQMD rules that are applicable to the proposed project include, but are not limited to, those presented in Table 1.

Table 1 Applicable Rules

Rule/ Regulation	Title
402	Nuisance
403	Fugitive Dust
445	Restriction of Wood Burning Devices
1113	Sale, use, and manufacturing of architectural coatings
1143	Manufacture, sale and use of paint thinners and solvents
1186	Limits presence of fugitive dust on paved and unpaved roads

Construction Air Quality Emissions

The proposed project would generate temporary emissions of criteria pollutants during construction. The air quality technical report provided in Appendix A provides a summary of construction sources of project-related emissions that were analyzed for the proposed project (RKM Engineering Group, Inc. 2021). Table 2 shows the daily pounds per day (lbs/day) of construction emissions on a regional basis. As shown in this table, the project's daily regional construction emissions would be below the applicable SCAQMD thresholds of significance.

Table 2 Regional Construction Emissions – Unmitigated

Maximum Daily Emissions (lbs/day) ¹						
Activity	VOC	NO _x	CO	SO ₂	PM ₁₀	PM _{2.5}
Site Preparation	2.72	27.21	18.95	0.04	8.95	5.05
Grading	3.32	34.19	28.87	0.07	5.40	2.79
Building Construction	2.31	16.68	24.82	0.06	3.63	1.41
Paving	1.36	8.60	15.00	0.02	0.59	0.43
Architectural Coating	40.04	1.21	3.06	0.01	0.55	0.18
Maximum ¹	40.04	34.19	28.87	0.07	8.95	5.05
SCAQMD Threshold	75	100	550	150	150	55
Exceeds Threshold (?)	No	No	No	No	No	No

¹ Maximum daily emission during summer or winter; includes both on-site and off-site project emissions.

Operation-Related Air Quality Impacts

Once construction is complete, the project's daily operational emissions will be below the applicable SCAQMD regional air quality standards and thresholds of significance (Table 3). The project would not contribute substantially to an existing or projected air quality violation. Furthermore, by complying with the SCAQMD standards, the project would not contribute to a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable Federal or State ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors).

Table 3 Regional Operational Emissions

Maximum Daily Emissions (lbs/day) ¹						
Activity	VOC	NO _x	CO	SO ₂	PM ₁₀	PM _{2.5}
Mobile Sources	2.22	2.18	21.68	0.05	5.75	1.55
Energy Sources	0.15	1.32	0.56	0.01	0.11	0.11
Area Sources	8.14	3.24	16.59	0.02	0.33	0.33
Total	10.52	6.75	38.83	0.08	6.19	1.99
SCAQMD Threshold	55	55	550	150	150	55
Exceeds Threshold (?)	No	No	No	No	No	No

¹ Maximum daily emission during summer or winter; includes both on-site and off-site project emissions.

3c. Less than Significant Impact

Sensitive receptors are considered land uses or other types of population groups that are more sensitive to air pollution exposure. Sensitive population groups include children, the elderly, the acutely and chronically ill, and those with cardio-respiratory diseases. For CEQA purposes, the SCAQMD considers a sensitive receptor to be a location where a sensitive individual could remain for 24-hours or longer, such as residences, hospitals, and schools. The nearest sensitive land uses are considered the residential homes located adjacent to the project site to the north, south, east and west of the site. Sensitive receptors are located within 25 meters of the project site (RK Engineering Group, Inc, 2021). Implementing the proposed project could cause a significant impact to sensitive receptors. This potential impact will be reduced to a less than significant level with implementation of Construction Design Features identified earlier in the description of the project (RK Engineering Group, Inc. 2022a).

The project site is located in the SCAQMD Hemet/Elsinore General Forecast Area and the Perris Valley Source Receptor Area (SRA) 24. Sensitive receptors are considered residences, schools, daycare centers, playgrounds and medical facilities. The nearest sensitive land uses are considered the residential homes located adjacent to the project site to the north, south, northwest, and east of the site and the Mesquite Elementary School located to the west of the site. As such, sensitive receptors are located within 25 meters (approximately 80 feet) of the project site (RK Engineering Group, Inc.2022a).

Localized Construction Air Quality Emissions

Table 4 shows daily pounds per day (lbs/day) of localized construction emissions. As shown in this table, the project’s daily localized construction emissions would be below the applicable SCAQMD thresholds of significance.

Table 4 Localized Construction Emissions

Maximum Daily Emissions (lbs/day)¹				
Activity	NOx	CO	PM₁₀	PM_{2.5}
On-site Emissions	32.38	27.72	8.75	5.00
SCAQMD Construction Threshold ²	270.0	1,577.0	13.0	8.0
Exceeds Threshold (?)	No	No	No	No

¹ Maximum daily emission during summer or winter; includes on-site project emissions only.

² Reference: 2006-2008 SCAQMD Mass Rate Localized Significant Thresholds for construction and operation Table C-1 through C-6; SRA 24, Perris Valley, disturbance area of 5 acres and receptor distance of 25 meters.

Localized Operation-Related Air Quality Impacts

Table 5 shows the localized operational emissions once construction has been completed. As shown in this table, the project’s daily localized operational emissions would be below the applicable SCAQMD thresholds of significance.

Table 5 Localized Operational Emissions

Maximum Daily Emissions (lbs/day) ¹				
Localized Significance Threshold Pollutants	NO _x (lbs/day)	CO (lbs/day)	PM ₁₀ (lbs/day)	PM _{2.5} (lbs/day)
On-site Emissions ²	4.68	18.24	0.7	0.5
SCAQMD Operation Threshold ³	27.0	1,577.0	4.0	2.0
Exceeds Threshold (?)	No	No	No	No

¹ Maximum daily emission in summer or winter.

² Mobile source emissions include on-site vehicle emissions only. It is estimated that approximately 5% of mobile emissions will occur on the project site.

³ Reference 2006-2008 SCAQMD Mass Rate Localized Significant Thresholds for construction and operation. SRA-24, Perris Valley, 5-acre site, receptor distance 25 meters.

Diesel Particulate Matter Toxic Air Contaminants

The greatest potential for toxic air contaminant emissions from the project would be related to diesel particulate matter (DPM) emissions associated with off-road diesel equipment used during construction. As shown in Tables 2 and 4, construction-based particulate matter (PM) emissions (including diesel exhaust emissions) do not exceed regional or local thresholds with the proposed Design Features. Given the short-term construction schedule, the proposed project's construction activity is not expected to be a long-term (i.e., 30 years) substantial source of toxic air contaminant emissions and corresponding individual cancer risk.

In September 2000, the CARB adopted the Diesel Risk Reduction Plan, which recommends several control measures to reduce the risks associated with DPM. The key elements of the Diesel Risk Reduction Plan are to clean up existing engines through engine retrofit emission control devices, to adopt stringent standards for new diesel engines, to lower the sulfur content of diesel fuel, and implement advanced technology emission control devices on diesel engines. The project is located adjacent to residential uses surrounding the project site, therefore, in order to ensure the level of DPM exposure is reduced as much as possible, the project shall implement the best available pollution control strategies to minimize potential health risks.

When completed, the project would consist of residential senior adult housing. This type of use does not include major sources of toxic air contaminants (TAC) emissions that would result in significant exposure of sensitive receptors to substantial pollutant concentrations. Therefore, the project operational impact is considered to be less than significant.

Asbestos

Based on the California Division of Mines and Geology General Location Guide for Ultramafic Rocks in California - Areas More Likely to Contain Naturally Occurring Asbestos, naturally occurring asbestos, found in serpentine and ultramafic rock, has not been shown to occur within in the vicinity of the project site

(RK Engineering Group, Inc. 2022). Therefore, the potential risk for naturally occurring asbestos (NOA) during project construction is small. However, in the event NOA is found on the site, the project will be required to comply with the National Emission Standard for Hazardous Air Pollutants (NESHAP) standards. An Asbestos NESHAP Notification Form would be required to be completed and submitted to the CARB immediately upon discovery of the contaminant. The project would be required to follow NESHAP standards for emissions control during site renovation, waste transport and waste disposal. A person certified in asbestos removal procedures would be required to supervise on-site activities.

CO Hotspot Emissions

A CO hot spot is a localized concentration of carbon monoxide (CO) that is above the state one-hour standard of 20 part per million (ppm) or the eight-hour standard of 9 ppm. At the time of the publishing of the 1993 CEQA Air Quality Handbook, the SCAB was designated nonattainment, and projects were required to perform hot spot analyses to ensure they did not exacerbate an existing problem. Since this time, the SCAB has achieved attainment status and the potential for hot spots caused by vehicular traffic congestion has been greatly reduced (RK Engineering Group, Inc. 2022a). The SCAQMD AQMP found that peak CO concentrations were primarily the result of unusual meteorological and topographical conditions, not traffic congestion. Additionally, the 2003 SCAQMD AQMP found that, at four of the busiest intersections in SCAB, there were no CO hot spots concentrations. Therefore, it is reasonable to conclude that the project would not significantly increase traffic congestion in the vicinity of the site that would lead to the formation of CO Hot Spots (RK Engineering Group, 2022a).

3d. Less than Significant Impact

Construction. Heavy-duty equipment in the project area during construction will emit odors; however, the construction activity would cease to occur after individual construction is completed. The project is required to comply with Rule 402 during construction, which states that a person shall not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property. No other sources of objectionable odors have been identified for the proposed project.

Operation. The project will be required to comply with standard building code requirements related to exhaust ventilation, as well as comply with SCAQMD Rule 402. Rule 402 requires that a person may not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property. Project related odors are not expected to meet the criteria of being a nuisance. A less than significant impact would occur.

5.4 BIOLOGICAL RESOURCES

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect, either directly or through habitat modification, on any species 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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Have a substantial adverse effect on federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

References: RCA Associates, Inc. 2021 (Appendix B)

Explanation of Checklist Answers

4a. Less than Significant Impact with Mitigation Incorporated

The project is located within the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) area. The final MSHCP was approved by the County Board of Supervisors on June 17, 2003. The federal and state permits were issued on June 22, 2004 and implementation of the MSHCP began on June 23, 2004. The MSHCP has identified that for APNs associated with the site, a habitat assessment would be required and should address at a minimum if potential habitat for burrowing owl (*Athene cunicularia*), a California Species of Special Concern, is present at the site. An assessment for potential burrowing owl habitat was conducted and completed on October 21, 2020 and is found as Appendix B. The project site was noted as moderately disturbed and vegetation was recorded as mixture of native and non-native vegetation. No sensitive species were observed at the site. No burrowing owl or habitat to support burrowing owl was observed at the site. There is relatively low potential for nesting birds to utilize the few trees and shrubs at the site. However, the potential for construction-related ground disturbance to

impact nesting birds can be reduced to a less than significant level with implementation of **Mitigation Measure BIO-1**. Although no burrowing owl or habitat to support burrowing owl was observed during the reconnaissance survey, potential impacts to this sensitive raptor would be mitigated with implementation of **Mitigation Measure BIO-2**.

4b. Less than Significant Impact

During the reconnaissance, a drainage channel was noted on the northeastern portion of the site. This area has been identified by the project applicant as a Natural Area/Lot F and is not part of the site development (Figure 3). The design of the lots adjacent to the Natural Area/Lot F includes Best Management Practices to prevent accidental discharge into this area that will be discussed further in Section 5.10. No riparian or riverine habitat was noted at the site. A less than significant impact would occur.

4c. No Impact

No wetlands were observed during the reconnaissance of the project site. No impact would occur.

4d. No Impact

While the site is undeveloped, it is located in a developed area of the City. No documented terrestrial migration corridors were noted in the immediate vicinity of the site (RCA Associates 2021). Based on the developed nature of adjacent areas to the site, the project area does not provide any wildlife corridors for use by wildlife for migration, movement or dispersal (RCA Associates 2021). No impact would occur.

4e. Less than Significant Impact

City of Perris Ordinance Number 1123 has established a local development mitigation fee to fund the preservation of natural ecosystems in accordance with the MSHCP. The City of Perris General Plan has policies for the protection of biological species summarized as follows.

- Preserve areas with significant biotic communities.
- Comply with state and federal regulations for the protection and preservation of sensitive biological resources.
- Require biological surveys as part of the development review process.
- Compliance with state and/or federal regulations related to potential aquatic resources.
- Compliance with the MSHCP.
- Review development and construction projects within the City in accordance with conservation criteria procedures and mitigation requirements identified in the MSHCP.

The project applicant will be required to pay applicable MSHCP fees pursuant to Ordinance No. 1123 and would subsequently not conflict with the MSHCP. The project site is outside the fee The habitat assessment of the site was completed to ensure that the proposed project would be consistent with the MSHCP (Appendix B). A less than significant impact would occur.

4f. Less than Significant Impact

As the project is located within the MSHCP area, it would be subject to fees to off-set impacts to MSHCP covered plants and wildlife. Payment of fees pursuant to City of Perris Ordinance No. 1123 and implementation of **Mitigation Measures BIO-1 and BIO-2** would mitigate impacts to covered plants and a less than significant impact would occur.

Mitigation Measures BIO-1 and BIO-2

Mitigation Measure BIO-1. Vegetation removal activities shall be conducted outside of the nesting bird season (typically February 15th to August 31st). If grading and clearing activities must occur during the nesting season, a nesting bird survey shall be conducted by a qualified biologist within seven days prior to the start of any ground disturbing activities to determine if any nesting birds occur within the project site. If nesting birds are not found within the project site, no further actions will be required. If nesting birds are observed, a buffer zone between construction activities and the nesting bird shall be established by a qualified biologist. The buffer zone shall be determined by the type of nesting bird. A typical buffer zone will be 250 feet for nesting passerine birds (songbirds) and 500 feet for nesting raptors.

Mitigation Measure BIO-2. A pre-construction survey for resident burrowing owls shall be conducted by a qualified biologist within 30 days prior to commencement of grading and construction activities within those portions of the project site containing suitable burrowing owl habitat. 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 shall 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 the 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 Division 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 avoidance 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 of the nesting season.

5.5 CULTURAL RESOURCES

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Disturb any human remains, including those interred outside of formal cemeteries?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

References: Paleo Solutions, Inc., 2021a (Appendix C-1), Tetra Tech, Inc., 2022 (Appendix C-2)

Explanation of Checklist Answers

5a. No Impact

Two separate investigations of potential cultural resources associated with the project site are found as Appendix C-1 and Appendix C-2. The 2021 cultural resource study conducted for the project included a record search conducted via the Eastern Information Center (EIC), Department of Anthropology, University of California at Riverside, of the California Historical Resources Information System of the Project area and a 0.5-mile record search radius extending from the project area (defined as the project property of 40.4 acres) boundary (Paleo Solutions, Inc. 2021). The results of the record search did not identify any previously recorded resources within the project area. The 2021 EIC search identified six previously documented resources within 0.5 mile of the project area, including one prehistoric site with unknown constituents, one multicomponent site containing prehistoric milling slicks and historic-age refuse, and four historic-age roads. No resources were identified within the Project area.

Based on a request by the City of Perris, Tetra Tech, Inc.’s Principal Archaeologist requested an expanded record search for the project of an additional 0.5-mile radius beyond the initial 0.5-mile EIC record search, for a total of a 1-mile radius (both record searches combined) beyond the project boundary. The record search was conducted on October 13, 2022, via the EIC. As part of this records search, the EIC database of survey reports and overviews was consulted, as well as documented cultural resources, cultural landscapes, and ethnic resources. Additionally, the search included a review of the following publications and lists: California Office of Historic Preservation Historic Properties Directory, NRHP, California Office of Historic Preservation Archaeological Determinations of Eligibility, California Inventory of Historical Resources/CRHR, California Points of Historical Interest, and California Historical Landmarks.

This EIC records search identified thirteen previously conducted reports within the expanded 0.5-mile radius (Tetra Tech, Inc. 2022). These previous investigations were conducted between 1977 and 2015 and consist of architectural and archaeological field studies and reporting. Thirty-six previously recorded cultural resources were identified within the expanded 0.5-mile radius (0.5 to 1 mile from the project area) and include: one recorded location with unknow site type, 32 built environment resources (28 buildings (residential), one railway line, one ditch, and two road segments), three prehistoric sites (all are

recorded as bedrock milling stations with no other artifacts observed), and one multicomponent site (prehistoric bedrock milling station, historic refuse scatter). None of the previously recorded resources have been formally evaluated for the National Register of Historic Places or California Register of Historical Resources. No cultural resources were identified within the project area. The 2021 cultural resource study conducted for the project included a record search and pedestrian field survey with negative results. No buildings, structures, features, or sites were identified as a result of the cultural resource pedestrian survey.

Based on a request by the City of Perris, Tetra Tech, Inc's Principal Archaeologist conducted a review of historic property records such as federal land patents through the Bureau of Land Management's (BLM) General Land Office (GLO) Records, title searches, and historic aerial imagery and maps for information regarding potential historic significance of the project property (Tetra Tech, Inc., 2022). A search of federal land patents through the BLM's General Land Office Records website identified one early patent holder, the Southern Pacific Railroad Company, for Section 1, of Township 5 South and Range 4 West (T5S, R4W), by the State of California in 1894 under the title authority of the July 27, 1866: Grant-RR-Atlantic and Pacific Act:14 Stat. 292. Review of the 1880 GLO plat map did not identify any buildings, features, or illustrated labels within the project area. Review of historic era USGS 7.5-minute topographic maps of Perris, CA (c. 1953, 1961, 1965, 1969, and 1975) did not identify any illustrated buildings, structures, or features within the project area. Based on the historic aerial imagery (c. 1938, 1949, 1953, 1961, 1966, 1967, 1978) the project area appears as primarily undeveloped land to current time. No potential historic era buildings, structures, or features were observed on aerial imagery within the project area (Tetra Tech, Inc. 2022).

In addition, a title search was conducted for the project area. No ownership information prior to 1963 was available. The title research conducted for the project property identified the following information:

- Henry Upton and Sons, a partnership, composed of Henry Upton, Myron Upton, and Mural Upton granted a deed on January 18, 1963, to Robert T. O'Donnell and Delta O'Donnell (husband and wife), as to an undivided half interest; and Myron Upton and Lilius Upton (husband and wife), as tenants in common, as to an undivided half interest of the southeast quarter of property in: Section 1, T5S, R4W, consisting of 163 acres, and lots 1 and 2, and the south half of the northeast quarter of Section 1, T5S, R4W consisting of 154.61 acres (Deed number 6253). Hence, the title indicates that Henry Upton and Sons were the owners of the property (Project area) prior to 1963. No title information was available regarding when the property was acquired by Upton and Sons. On November 19th, 1963, Delta O'Donnell and Lilius Upton released claim to the property (Quitclaim Deed #122547). Based on the 1930 census records, Myron Upton is listed as a 21-year-old white male, born in 1909 in Missouri, married to Lilius E. Upton, and worked as a manager at a poultry farm. In 1936, a Mural Upton is registered as a U.S. voter (Republican) living in Perris, California, as a rancher. No other information was available (i.e., ancestry.com, online archive newspapers, City of Perris government website, etc.) for Myron, Mural, and Henry Upton, or Henry Upton and Sons; or Robert T. O'Donnell and Delta O'Donnell.
- On August 5th, 1964, Robert T. O'Donnell and Myron Upton granted the northeast quarter of Section 1, T5S, R4W, Lots 1 and 2 to Gnral Lands, Inc. (a California corporation, as an undivided three-fourths interest and Michael Krug and Teress Krug (husband and wife), as joint tenants as to an undivided quarter interest (Grant Deed #112609). No information from readily available

sources (i.e., ancestry.com, online archive newspapers, City of Perris government website, etc.) was available for Michael Krug and Teress Krug.

- On October 27th, 1964, Michael Krug and Teress Krug granted the southwest quarter of the northeast quarter (contain Lots 1 and 2) of Section 1, T5S, R4W, reserving a 30-foot easement along the easterly boundary for road purposes, to Masaru Kamatani and Fujiye Kamatani (husband and wife), as joint tenants (Joint Tenancy Grant Deed #129758). Based on 1940s US census records, a F. [Fujiye] Kamatani was listed as a 40-year-old Japanese American, born in California, and married to husband Masaru Kamatani, and lived with their three children, son Jack (18 years old), daughter Marion (17 years old), and Mary (15 years old) in Tustin, Orange County, California. Masaru Kamatani is listed as a 40-year-old Japanese American and had an occupation as a truck farmer. No other information was available regarding Fujiye. Masaru Kamatani arrived in Seattle, Washington, from Takamatsu-City, Japan in 1917. No other information was available (i.e., ancestry.com, online archive newspapers, City of Perris government website, etc.) regarding the Kamatani's.
- On September 7, 1979, Masaru Kamatani and Fujiye Kamatani granted the southwest quarter of the northeast quarter (contain Lots 1 and 2) of Section 1, T5S, R4W, reserving a 30 foot easement along the easterly boundary for road purposes, to Arthur D. Boston and Barbara M. Boston (husband and wife) as joint tenants, as to an undivided one-third interest; Joseph P. Saline, Junior, and Margo A. Saline (husband and wife) as joint tenants, as to an undivided on-third interest; and Richard P. Trueba (a single man), as to the undivided on third interest.

No building, structures, or features were identified within the project area. Research conducted on the background of the previous owners of the project property revealed little information that could be linked definitely to the owners and little information from readily available sources did not reveal substantive or significant information on the owners of the project area or use of the project area. Based on the 2021 cultural resource study for the project, and archival research conducted by Tetra Tech, Inc. (2022), the project property does not appear to exert any historical significance. No impact would occur.

5b. Less than Significant with Mitigation Incorporated

The presence of six cultural resources within one-half mile plus thirty-six previously recorded cultural resources within the expanded 0.5-mile radius (0.5 to 1 mile from the Project area, including two sites that contain prehistoric archaeological materials (Paleo Solutions, Inc., 2021), one additional recorded location with unknow site type, 32 built environment resources (28 buildings (residential), one railway line, one ditch, and two road segments), three prehistoric sites (all are recorded as bedrock milling stations with no other artifacts observed), and one multicomponent site (prehistoric bedrock milling station, historic refuse scatter) (Tetra Tech, Inc. 2022).indicates that there is a potential for buried archaeological resources to exist within the project area. Bedrock outcrops like those found within the project area, were commonly used by Native Americans as milling stations for processing acorns, seeds, and other vegetal resources (Paleo Solutions, Inc. 2021a). Although no milling features were observed on the exposed outcrops during the field survey, milling features can be buried over time by natural alluvial processes. It is possible that buried milling features, such as milling slicks and mortars, as well as subsurface prehistoric artifacts, may be present within the project area. With incorporation of **Mitigation Measure CUL-1**, impacts to archaeological resources would be reduced to a less than significant level.

5c. Less than Significant with Mitigation Incorporated

As indicated in Section 5a, the project site has been historically vacant and is not anticipated to have any human remains, including those interred outside of formal cemeteries (Paleo Solutions, Inc. 2021a). In the unlikely event that human remains are discovered during construction, incorporation of **Mitigation Measure CUL-2** would reduce potential human remains impacts to a less than significant level.

Mitigation Measures CUL-1 and CUL-2

Mitigation Measure CUL-1. Prior to the issuance of grading permits, the project proponent/developer 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 proponent/developer 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 proponent/developer 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 archaeological 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, Native American or otherwise, discovered 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 undertaken 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 CUL-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 placement. 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 warranted, monitoring activities can be discontinued following notification to the City of Perris Planning Division.

A report of findings, including an itemized inventory of artifacts, shall be prepared upon completion of the tasks outlined above. The report shall include all data outlined by the Office of Historic Preservation guidelines, including a conclusion 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.

Mitigation Measure CUL-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 shall immediately stop all activities within 100 feet of the find. The project proponent 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), and California PRC 5097.98.

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 with any Luiseño tribal representative(s) at the site, the NAHC’s identification of the MLD will stand. The MLD shall be granted access to inspect the site of the discovery of Native American human remains and may recommend to the project proponent 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 proponent 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 will be proprietary and not disclosed to the general public. The locations will be documented by the consulting archaeologist in conjunction with the various stakeholders and a report of findings will be filed with the Eastern Information Center (EIC).

5.6 ENERGY

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources during project construction or operation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

References: RK Engineering Group, Inc. 2022a (Appendix C)

Explanation of Checklist Answers

6a. Less than Significant Impact

The following project design features are considered standard building code requirements and best practices that will be included in the project design to reduce energy needs.

- Comply with the mandatory requirements of Title 24 part 11 of the California Building Standards Code (CALGreen) and the Title 24 Part 6 Building Efficiency Standards, including net zero energy requirements.
- Implement water conservation strategies, including low flow fixtures and toilets, water efficient irrigation systems, drought tolerant/native landscaping, and reduce the amount of turf.
- Comply with the mandatory requirements of CalRecycle’s residential recycling program and

implement zero waste strategies.

- Provide the necessary infrastructure to support electric vehicle charging, as required by the CALGreen Code.
- Use electric powered landscaping equipment for landscape maintenance.
- Utilize renewable energy sources, such as solar, to the maximum extent required under Title 24.

Incorporation of these best practices would reduce impacts associated with energy use to a less than significant level.

6b. Less than Significant Impact

The project would be required by the City of Perris to comply with all applicable CALGreen Code energy conservation measures, including California Code of Regulations Title 24, part 6, California Energy Code. The project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency requirements. A less than significant impact would occur.

5.7 GEOLOGY AND SOILS

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ii) Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iv) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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 onsite or offsite landslide, lateral spreading, subsidence, liquefaction, or collapse?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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 waste water?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

References: City of Perris 2016b, United States Geological Survey 2022, Geo Tek, Inc. 2020b (Appendix D), Paleo Solutions, Inc. 2021b (Appendix E)

Explanation of Checklist Answers

7a(i) Less than Significant

There are no mapped Alquist-Priolo Zones within the City of Perris (City of Perris 2016b). In addition, there are no County of Riverside-designated special status study fault zones (City or Perris 2016b). The closest active fault zone to the site is the Elsinore-Temecula fault that is located approximately 11 miles to the southwest, the Murrieta Hot Springs fault located approximately 15 miles to the southwest and the San Jacinto-San Jacinto Valley fault located 14 miles to the northeast (United States Geological Survey 2022). Although seismic activity is known to exist throughout Southern California, there is no known faults through or near the site. A less than significant impact from rupture of an unknown fault would occur.

7a(ii) Less than Significant Impact

While there are no known faults directly within the City of Perris or the project site, there known active faults within the region that may contribute to ground shaking if a seismic event were to occur. Strong ground shaking can be expected if a moderate or severe seismic event in the region would occur. The project will be constructed to current California Building Codes (CBC), that require structures to be designed to meet or exceed seismic safety standards identified in the CBC. As a result, impacts would be less than significant.

7a(iii) Less than Significant

Liquefaction occurs when shallow, fine to medium-grained sediments saturated with water are subject to strong seismic ground shaking. Liquefaction generally occurs when the underlying groundwater is 50 feet or less from the surface (City of Perris 2016b). The project site is located in City of Perris Planning Area 7 and is in an area that is generally not subject to liquefaction in the event of a regional seismic event (City of Perris 2016b). Impacts from liquefaction would be less than significant.

7a(iv) Less than Significant

Slope instability due to slope height and steepness, shear strength and orientation of weak layers in the underlying geological units and pore water pressure can contribute to slope failure or landslide (City of Perris 2016b). Steep slopes with a 30 percent or higher gradient can also become unstable and fail. The project site is not located in an area generally identified within the City of Perris planning area that could be susceptible to seismically induced landslides and rock fall. Impact from landslides would be less than significant.

7b. Less than Significant

Once operational, the site would be developed with residential dwellings, streets and supporting infrastructure. There would not be significant soil erosion impacts once construction has been completed. During construction of the project, potential short term erosional impacts to soils within the site would be minimized through compliance with standard BMPs identified in the required New Point Discharge Elimination System (NPDES) permit as well as a Stormwater Pollution Prevention Plan (SWPPP). A less than significant impact from soil erosion would occur.

7c. Less than Significant

As discussed in Sections 7a.iii and 7a.iv, liquefaction and landslides will not significantly impact the project. A less than significant impact would occur.

7d. No Impact

No expansive soils have been identified at the site (Geo Tek, Inc. 2020b) The project would not be constructed on expansive soils that would be a substantial risk to property and no impact would occur.

7e. No Impact

The project will be required to connect into the closest sewer connection managed by Eastern Municipal Water District at the intersection of West Ellis Avenue and South B Street located one mile to the northeast. The use of septic tanks will not be necessary. No impact would occur.

7f. No Impact

The project area was evaluated based on an analysis of existing paleontological data, including a geologic map review, literature search, and institutional records search (Paleo Solutions, Inc. 2021b). The technical study can be found as Appendix D. Using the analysis of existing data, the geologic unit was evaluated on

its potential for producing significant paleontological resources. Due to the very low paleontological potential of the Cretaceous-age quartz diorite that is located throughout the entirety of the Project area, further paleontological mitigation is not recommended. No impact would occur.

5.8 GREENHOUSE GAS EMISSIONS

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

References: RK Engineering Group, Inc., 2022a (Appendix A), City of Perris 2016a

Explanation of Checklist Answers

8a. Less than Significant Impact

Global climate change is the change in the average weather of the earth that is measured by such things as alterations in temperature, wind patterns, storms, and precipitation. Current data shows that the recent period of warming is occurring more rapidly than past geological events. The consequences of global climate change include more frequent and severe weather, worsening air pollution by increasing ground level ozone, higher rates of plant and animal extinction, more acidic and oxygen depleted oceans, strain on food and water resources, and threats to densely populated coastal and low-lying areas from sea level rise (R. K Engineering Group, Inc. 2021).

For GHG emissions, there is not, at this time, one established, universally agreed-upon “threshold of significance” by which to measure an impact (RK Engineering Group, Inc. 2022a). While the CARB published some draft thresholds in 2008, they were never adopted, and the CARB recommended that local air districts and lead agencies adopt their own thresholds for GHG impacts.

The SCAQMD has been evaluating GHG significance thresholds since April 2008. In December 2008, the SCAQMD adopted an interim 10,000 metric tons CO₂e (MTCO₂e) per year screening level threshold for stationary source/industrial projects for which the SCAQMD is the lead agency. The SCAQMD has continued to consider adoption of significance thresholds for residential and general development projects. The SCAQMD’s most recent proposal issued in September 2012 describes the following five-tiered approach for determining GHG Significance Thresholds from various uses.

- **Tier 1** – If a project is exempt from CEQA, project-level and cumulative GHG emissions are less than significant.
- **Tier 2** – If the project complies with a GHG emissions reduction plan or mitigation program that avoids or substantially reduces GHG emissions in the project’s geographic area (i.e., city or county), project-level and cumulative GHG emissions are less than significant. For projects that

are not exempt or where no qualifying GHG reduction plans are directly applicable, SCAQMD requires an assessment based on the following tiers.

- Tier 3** – Consists of screening values that are intended to capture 90 percent of the GHG emissions from projects. If a project’s emissions are under the screening thresholds, then the project is less than significant. SCAQMD has presented two options that lead agencies could choose for screening values. Option #1 sets the thresholds for residential projects to 3,500 MTCO₂e/year, commercial projects to 1,400 MTCO₂e/year), and the mixed use to 3,000 MTCO₂e/year. Option #2 sets a single numerical threshold for all non-industrial projects of 3,000 MTCO₂e/year. The current staff recommendation is to use option #2 but allows lead agencies to choose option #1 if they prefer. Regardless of which option a lead agency chooses to follow, it is recommended that the same option is consistently used for all projects. Table 6 shows the screening levels described in option #2, which has been used previously in the City of Perris

Table 6 SCAQMD Tier 3 GHG Screening Values

Land Use	Screening Value
Industrial Projects	10,000 MECO ₂ e/yr
Residential/Commercial Projects	3,000 MTCO ₂ e/yr

yr: year

Tier 4 – includes three performance standard compliance options to demonstrate that a project is not significant for GHG emissions. SCAQMD had identified efficiency thresholds for this tier (Table 7).

- Compliance Option 1** consists of achieving a target percentage reduction in emission compared to the business as usual (BAU) methodology. The project proponent would need to incorporate design features into the project and/or implement GHG mitigation measures to demonstrate a 30 percent reduction in GHG emissions below BAU that is consistent with the current applicable goals of AB 32 in the State of the California.
- Compliance Option 2** consists of early compliance with AB 32 through early implementation of CARB’s Scoping Plan Measures. This option is intended for projects in sectors subject to the Scoping Plan Measures.
- Compliance Option 3** consists of establishing efficiency-based performance standards at the plan level (program-level projects such as general plans) and project level. Efficiency standards are based on the amount of GHG emissions (MTCO₂e/year) per Service Population (SP). SP is defined as the sum of the residential and employment populations provided by a project.

Table 7 SCAQMD Tier 4 Efficiency Thresholds

Project Type	Efficiency Thresholds	
	Target Year 2020	Target Year 2035
Plan (Program) Level	6.6 MTCO ₂ e/yr/SP	4.1 MTCO ₂ e/yr/SP
Program Level	4.8 MTCO ₂ e/yr/SP	MTCO ₂ e/yr/SP

Tier 5 – involves implementing off-site mitigation or the purchasing of offsets to reduce GHG emissions to less than the proposed screening level. The project proponent would be required to provide offsets for the life of the project, which is defined as 30 years.

The thresholds identified above have not been adopted by the SCAQMD nor 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. In the absence of other thresholds of significance promulgated by the SCAQMD, the City of Perris has been using the SCAQMD's 10,000 MTCO₂e threshold for industrial projects and the draft thresholds for non-industrial projects the purpose of evaluating the GHG impacts associated with proposed general development projects. By complying with the SCAQMD GHG thresholds of significance, the project is considered to be in compliance with the applicable State GHG legislation. Other lead agencies through the SCAB have also been using these adopted and draft thresholds.

Greenhouse Gas Emissions-Construction

Greenhouse gas emissions have been estimated for on-site and off-site construction activity using CalEEMod. Table 8 shows the construction greenhouse gas emissions, including equipment and worker vehicle emissions for all phases of construction. Construction emissions are averaged over 30 years and added to the long-term operational emissions, pursuant to SCAQMD recommendations.

Table 8 Construction Greenhouse Gas Emissions

Activity	Emissions (MTCO ₂ e) ¹		
	On-site	Off-site	Total
Site Preparation	50.59	2.25	52.84
Grading	206.10	40.54	246.64
Building Construction	758.16	1,010.74	1,768.90
Paving	55.50	3.20	58.70
Architectural Coating	7.03	9.39	16.42
Total	1,077.38	1,066.12	2,143.50
Amortized over 30 years²	35.91	35.54	71.45

¹ MTCO₂e = metric tons of carbon dioxide equivalents (includes carbon dioxide, methane, nitrous oxide, and/or hydrofluorocarbon).

² The emissions are amortized over 30 years and added to the operational emissions, pursuant to SCAQMD recommendations.

Because impacts from construction activities occur over a relatively short-term period of time, they contribute a relatively small portion of the overall lifetime project GHG emissions. By itself, the construction activities from this project are less than significant when compared to the thresholds recommended by SCAQMD. However, SCAQMD recommends that construction emissions be amortized over a 30-year project lifetime and added to the overall project operational emissions. In doing so,

construction GHG emissions are included in the overall contribution of the project, as further discussed in the following section.

Greenhouse Gas Emissions - Operation

Greenhouse gas emissions are estimated for on-site and off-site operational activity using CalEEMod. Greenhouse gas emissions from mobile sources, area sources and energy sources are shown in Table 9.

Table 9 Operational Greenhouse Gas Emissions

Emission Source	GHG Emissions (MTCO₂e)¹
Mobile Source	716.29
Energy Source	566.50
Area Source	47.89
Water	59.43
Waste	109.07
Construction (30-year average)	71.45
Total Annual Emissions	1,570.63
SCAQMD Tier 3 Screening Threshold ²	3,500
Exceed Tier 3 Threshold?	No

¹ MTCO₂e = metric tons of carbon dioxide equivalents

² Per South Coast Air Quality Management District (SCAQMD) Draft Guidance Document - Interim CEQA Greenhouse Gas (GHG) Significance Threshold, October 2008

As shown in Table 9, the project GHG emissions are expected to be below the SCAQMD's Tier 3 threshold of 3,500 MTCO₂e for residential projects. As a result, a less than significant impact would occur.

8b. Less than Significant Impact

The City of Perris has developed a Climate Action Plan (CAP) to address global climate change through the reduction of harmful greenhouse gas (GHG) emissions at the community level, and as part of California's mandated statewide GHG emissions reduction goals identified California's Global Warming Solutions Act of 2006 (Assembly Bill 32) (City of Perris 2016a). The City of Perris has developed multiple sustainable strategies to decrease carbon emissions on a local level while adapting to a changing climate. The City of Perris has adopted an individual CAP and adopted several sustainable actions aimed to reduce GHG emissions and are summarized below.

- Green Building Policy. Adopted as Resolution 4195, this policy requires sustainable development of municipal buildings and facilities.
- Urban Forestry. Zoning Code entitled "Urban Forestry" has been added to the Perris Municipal Code for planting and maintaining trees within the City.

- Alternative Fuel for the City Fleet. Twenty-five percent of the City's fleet of vehicles is powered by an alternative fuel source.
- Perris Downtown Specific Plan. In 2011, the City adopted a revised Downtown Specific Plan to encourage a mixed-use development and walkability.
- Historic Preservation and Building Reuse. The City refurbished and restored four historic buildings in the downtown area.
- Waste Recycling and Biodigester. The City promotes a variety of ways to recycle and reduce waste on construction sites. In 2011, the City partnered with CR&R to construct a Green Energy Facility with an anaerobic digester to remove 320,000 tons of household organic waste and convert it to high quality biogas that does not produce GHG emissions.

Standard building code requirements and best management practices that are consistent with the City of Perris CAP have been incorporated as design features as identified earlier in the project description. Implementing these design features will help reduce GHG emissions from construction and operation of the proposed project consistent with the City's CAP. As a result, a less than significant impact would occur.

5.9 HAZARDS/HAZARDOUS MATERIALS

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter-mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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, will the project result in a safety hazard or excessive noise for people working or residing in the project area?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

References: Geo Tek, Inc. 2020a, Appendix F, Riverside County Airport Land Use Commission 2021, Appendix G, City of Perris 2016b, Firewise 2000, LLC 2021 Appendix H

Explanation of Checklist Answers

9a. Less than Significant Impact

The project site is vacant and undeveloped. The Phase I Environmental Site Assessment (ESA) completed for the project site noted that there was no visual indications of spills, leaks or stains observed (GeoTek 2020). No known hazardous materials were observed. During construction, hazardous materials such as fuels and oils will be used at the site. These materials will be transported to the site in Department of Transportation-approved conveyances. Hazardous materials may be transported within the site during construction. As specified in the SWPPP, spill kits will be present to manage any accidental hazardous material spills. Other BMPs will be installed as part of construction to contain accidental hazardous material releases. Once developed, residences owners will use potentially hazardous cleaning materials.

As these materials would be relatively small volumes, they are not likely to create a significant hazardous material impact to the public or environment. A less than significant impact would occur.

9b. Less than Significant Impact

During construction, there is the potential for accidental release of hazardous materials. The SWPPP will identify BMPs such as spill kits and proper storage to manage accidental hazardous materials releases. Once developed, residences are likely to use hazardous materials such as household cleaning products. As indicated earlier, use of hazardous materials during construction or by residences once the project is developed is not likely to result in creating a significant hazard to the public. A less than significant impact would occur.

9c. No Impact

The closest school to the site, Pinacate Middle School, 1990 South A Street Perris, California 92570, is more than one-half mile to the southeast. Construction equipment would be permitted, and emissions would be controlled using standard BMPs. During operation, emissions from small quantity use of hazardous materials by residences would cause a less than significant impact. No impact from hazardous materials during construction or operation of the project would cause an impact the closest school to the site.

9d. No Impact.

The Phase I ESA found no Recognizable Environmental Conditions associated with the site. The site and properties adjacent to the site have not been identified as having environmental concerns. No significant hazards associated with the site were identified in the Phase I ESA (Geo Tek 2020a). No impact would occur.

9e. Less than Significant with Mitigations Incorporated

The site is located in the Compatibility Zone E of the Perris Valley Airport Influence Area and is also within Compatibility Zone E of March Air Reserve Base/Inland Port Airport Influence Area where residential development is not restricted (Riverside County Airport Land Use Commission 2021). The Federal Aviation Administration (FAA) determined that the based on the elevation of the site plus maximum proposed building heights would not exceed obstruction standards and would not be a hazard to air navigation (Riverside County Land Use Commission 2021). Land uses that have the potential to attract wildlife such as birds can increase the potential for Bird Aircraft Strike (BASH), The FAA recommends the use of steep-sided riprap lined narrow linearly shaped water detention basins within 5,000 to 10,000 feet of an Airport Operation Area to control potential BASH impacts to aircraft. The nearest portion of the project would be within 7,440 feet from a Perris Valley Airport runway. The project has been designed to use detention basin which could provide forage and shelter for wildlife that could cause BASH impacts and would be located within 10,000 feet to the Perris Valley Airport. The basin has been designed for a 48-hour draw down of any accumulated water and will be constructed adjacent to the site entrance road to reduce attraction to wildlife. The proposed project was determined by the Riverside County Airport Land Use Commission to be consistent with the 2010/2011 Perris Valley Airport Land Use Compatibility Plan and the 2014 March Air Reserve Base/Inland Port Airport Land Use Compatibility Plan (Riverside County Airport Land Use Commission 2021). Potential impacts to the Perris Valley Airport or March Air Reserve Base/Inland Port Airport would be mitigated with incorporation of **Mitigation Measures HAZ-1 through Mitigation Measure HAZ-3.**

9f. Less than Significant Impact

The City of Perris participates in the Riverside County Multi-Agency Multi-Hazard Functional Plan (MFHP) that identifies requirements for emergency access and standards for emergency response. The project will be required to provide suitable site access for emergency vehicles including fire, police and paramedics in compliance with the Riverside County MFHP. A less than significant impact would occur.

9g. Less than Significant

The project is located within a high fire hazard area (Firewise 2000, LLC 2021) (Appendix H). A Fuel Modification Plan (FMP) has been prepared for the project that assessed both the on-site and off-site wildland fire hazard risks. Both short-term and long-term modification actions to minimize projected fire hazards and risks have been identified in the FMP. The FMP provides wildlife fuel treatments for the proposed development to reduce risks from wildfire summarized as follows.

- Fuel treatment zones broken down by zones within the development;
- Construction standards that will reduce risks from wildfire;
- Infrastructure elements that will reduce risks from wildfire;
- Recommendations for a homeowner education program; and
- Mandated Covenants, Conditions and Restrictions that would include statements that identified roles and responsibilities for managing wildfire risks for the project.

With incorporation of the FMP, impacts from wildfire hazards would be reduced to a less than significant impact.

Mitigation Measures HAZ-1 through HAZ-3

Mitigation Measure HAZ-1. Any new outdoor lighting that is installed shall be hooded or shielded so as to prevent either the spillage of lumens or reflection into the sky. Outdoor lighting shall be downward facing.

Mitigation Measure HAZ-2. The following uses/activities are not included in the proposed project and shall be prohibited at this site.

- 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.
- 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.
- 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.
- Any use which would generate electrical interference that may be detrimental to the operation of aircraft and/or aircraft instrumentation
- Any use which results in a hazard to flight, including physical (e.g., tall objects), visual, and electronic forms of interference with the safety of aircraft operations.

- Any proposed stormwater basins or facilities shall be designed and maintained to provide for a maximum 48-hour detention period following the design storm and remain totally dry between rainfalls. Vegetation in and around the stormwater basins that would provide food or cover for birds would be incompatible with airport operations and shall not be utilized in project landscaping. Trees shall be spaced so as to prevent large expanses of contiguous canopy, when mature. Landscaping in and around the stormwater basin(s) shall not include trees or shrubs that produce seeds, fruits, or berries. Stormwater basins shall be consistent with the 2018 "Wildlife Hazard Management at Riverside County Airports" policies.
- Landscaping in the detention basin, if not rip-rap, should be in accordance with the guidance provided in ALUC "LANDSCAPING NEAR AIRPORTS" brochure, and the "AIRPORTS, WILDLIFE AND STORMWATER MANAGEMENT" brochure available at RCALUC.ORG which list acceptable plants from Riverside County Landscaping Guide or other alternative landscaping as may be recommended by a qualified wildlife hazard biologist.
- A notice sign shall be permanently affixed to the stormwater basin with the following language: "There is an airport nearby. This stormwater basin is designed to hold stormwater for only 48-hours and not attract birds. Proper maintenance is necessary to avoid bird strikes". The sign will also include the name, telephone number or other contact information of the person or entity responsible to monitor the stormwater basin.

Mitigation Measure HAZ-3. A "Notice of Airport in Vicinity" shall be provided to all prospective purchasers and occupants of the property.

5.10 HYDROLOGY AND WATER QUALITY

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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;	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iii) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iv) Impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) In flood hazard, tsunami or seiche zones, risk release of pollutants due to project inundation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

References: KWC Engineers 2021a (Appendix J), Eastern Municipal Water District 2021a

Explanation of Checklist Answers

10a. Less than Significant Impact

The site has a gently sloping terrain from the northwest to the southeast. Surface drainage is to the east-southeast. During construction, BMPs identified in SWPPP prepared for the project will be used to control on-site stormwater from being discharged off site. Once the project has been developed, the onsite drainage system will consist of multiple catch basins, an underground storm drain system, and a combined water quality/stormwater detention basin. The detention basin located in the southeastern side of the site would capture and treat site-generated surface water runoff. The construction and maintenance of the detention basin would reduce potential water quality impacts to a less than significant level.

10b. Less than Significant Impact

Water is supplied to the region including the project area by Eastern Municipal Water District (EMWD). During construction, water from a metered fire hydrant will be used for dust suppression and other construction-related needs. The project would increase the amount of impervious surface that would prevent stormwater from percolating into the local groundwater system. The project design includes the detention basin that specifically will capture and treat site-generated surface water and allow percolation of the treated water into the local groundwater. The project also includes landscaped green belts and the Mountain Avenue Wash area will remain a natural area. These areas will also allow surface water to percolate into the local groundwater system. Water to the project would be provided by EMWD. Half of the water used by EMWD for their service area is imported by Metropolitan Water District (Eastern Municipal Water District 2021a). EMWD uses a mixture of groundwater and imported water and has established that it can meet water demands through 2045 during normal and dry conditions (Eastern Municipal Water District 2021). The project would have a less than significant impact to groundwater supplies and groundwater recharge.

10c.

10c(i) Less than Significant Impact

During construction especially during grading operations, sediments from erosion have the potential to be generated and potentially be discharged off site. The SWPPP prepared for the project would identify BMPs and Best Available Technology Economically Achievable (BAT) measures to reduce and eliminate stormwater pollutants that may include sediments generated during construction of the project. Once the project was completed, project surface water flow would be directed to the detention pond where any sediments or pollutants would be treated. Implementation of BMPs and BAT measures would reduce potential erosion sediments impacts to a less than significant level.

10c(ii) Less than Significant Impact

The on-site detention basin has been designed to accommodate a 100-year storm flow from the site to reduce flooding to the project as well as off site. Once constructed, the detention basin would attenuate potential peak conditions associated with a 100-year storm event (KWC Engineers 2021a). A less than significant impact from flooding would occur.

10c(iii) Less than Significant Impact

As discussed in Section 10c(ii), the project will include a detention basin that would detain stormwater generated by a 100-year event that would reduce potential flooding impacts. As detailed earlier, the detention basin would also treat surface waters discharged from the project area once developed. As a result, project-generated would have a less than significant impact to the existing capacity of stormwater management facilities downstream from the project. The construction and maintenance of the detention basin would reduce potential water quality impacts to a less than significant level.

10c(iv) Less than Significant Impact

As indicated in Section 10c(ii), the on-site detention basin has been designed to accommodate a 100-year storm flow from the site to reduce flooding to the project as well as off site. Once constructed, the detention basin would attenuate potential peak conditions associated with a 100-year storm event (KWC Engineers 2021). A less than significant impact from flooding would occur.

10d. Less than Significant Impact

A seiche occurs when a wave oscillates in lakes, bays, or gulfs as a result of seismic disturbances. There are no bodies of water adjacent to or in close proximity to the site that could impact the project as a result of a seiche. The project is more than 31 miles northeast of the Pacific Ocean and approximately 1,500-feet above mean sea level. Due to the distance and elevation of the site, the project would not be impacted by a tsunami. A portion of Mountain Avenue Wash is located within the site boundaries and has been identified by FEMA as a Zone X floodplain (KWC Engineers 2021a). The Zone X designation for this floodplain refers to areas of 1 percent annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile. There are no Base Flood Elevations (BFEs) and/or velocities provided for Zone X floodplains. The project has been designed to avoid impacts to the portion of Mountain Avenue Wash located within the site boundaries and will be constructed outside the limits of the Mountain Avenue Wash 100-year flood plain. As a result, a less than significant impact from flooding hazards would occur.

10e. Less than Significant Impact

As discussed in earlier In Section 10, the project applicant will be required to prepare a project specific SWPP and use BMPs and BATs to control sediments and hazards that are potentially generated during construction of the project. These measures will reduce surface water quality impacts. The project will be constructed to direct surface water flow into the on-site detention basin that would capture and treat surface water runoff. The project would cause a less than significant impact to surface water or ground water quality and would not conflict with water quality control measures mandated by the state.

5.11 LAND USE AND PLANNING

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Cause a significant environmental impact due to a conflict with any land use plan, policy or regulation adopted for the purpose of avoiding or mitigating an environmental impact?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

References: City of Perris 2013a, City of Perris 2022

Explanation of Checklist Answers

11a. No Impact

The project site is an infill site surrounded by residential development on the south, east and west sides of the project. To the north, lands are undeveloped but have been identified by the City of Perris as a residential land use and zoned R-10,000. The project would not divide an established community and no impact would occur.

11b. No Impact

The existing General Plan Land Use designation for the site is R-6,000 - Residential 6,000 (Figure 4) and zoning is R-6000 (Residential 6,000 square foot lot size) (Figure 5). The proposed zoning for the project

would be R-6000-PDO (Planned Development Overlay) that would allow for an increase in housing density of up to 10 percent of 6,000 square feet. Table 11 provides an evaluation of the project's consistency with applicable plans, policy or regulations from the City of Perris General Plan that address potential impacts from new developments. Based on that evaluation, zoning the project as R-6000-PDO the project complies with the General Plan. No impacts with City of Perris land use plans, policy or regulation would occur.

Table 10 Consistency Analysis of Relevant City of Perris General Plan Policies and the Proposed Project

General Plan Element	Policy Description	Consistency with Proposed Project?	Statement of Consistency
2014-2021 Housing Element Adopted August 27, 2013			
	Policy 1.4, Locate higher density residential development in close proximity to public transportation, services and recreation.	Not Applicable (NA)	The proposed project is a single-family residential development and not a high-density residential development.
	Policy 1.5 Promote construction of units consistent with the new construction needs identified in the Regional Housing Needs Assessment (RHNA).	Yes	The project would assist the City of Perris in striving to obtain the objectives of the RHNA for the 2014 to 2021 planning period.
	Policy 3.4 Ensure that water and sewer providers are aware of the City's intentions for residential development throughout the city.	Yes	The Eastern Municipal Water District has provided will-serve documentation for water and wastewater treatment for the project.
	Policy 5.3 Encourage compatible design of new residential units to minimize the impact of intensified reuse of residential land on existing residential development.	Yes	The proposed project would be construction of new homes on lands that are currently undeveloped but are planned for residential uses.
	Policy 6.1 Comply with all adopted federal and state actions to promote energy conservation.	Yes	The project would be constructed in compliance with energy conservation measures including California Code of Regulations Title 24, part 6, California Energy Code and the CALGreen Code.
Land Use Element Adopted August 30, 2016			
	Policy I.A: Promote variety in dwelling types, densities, and locations to satisfy changing demands as the community evolves and matures.	Yes	The proposed project is a 55 plus community residential development targeting mature homeowners.
	Policy II.A Require new development to pay its full fair share of infrastructure costs.	Yes	The project applicant has committed to provide developer impact fees to mitigate costs for project related public services

General Plan Element	Policy Description	Consistency with Proposed Project?	Statement of Consistency
			and project related infrastructure improvements.
	Policy II.B Require new development to include school facilities or pay school impact fees where appropriate.	Yes	The project applicant will pay developer school impact fees.
	Policy V.A Restrict development in area at high risk of damage due to disasters.	Yes	The project has incorporated measures to reduce risks from natural disasters such as wildfire and earthquake.
Circulation Element-City Council Adopted June 14, 2005. City Council Amendment August 26, 2022			
	Policy I.A Design and develop transportation system to respond to concentrations of population and employment activities, as designated by the Land Use Element and in accordance with the designated Transportation System, Exhibit 4.2 Future Roadway Network.	Yes	The proposed project is consistent with the land use designation for the site and will include necessary improvements to McPherson Road on the western side of the project as well as project site improvements in accordance with the long-range plans for development.
	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.	Yes	The proposed project includes improvements to McPherson Road along the western side of the project site consistent with the Circulation.
	Policy III.A Implement a transportation system that accommodates and is integrated with new and existing development and is consistent with financing capabilities.	Yes	The proposed project is consistent with the City of Perris General Plan land use designation. The project includes improvements to McPherson Road along the western side of the project site.
Conservation Element Adopted February 18, 2008			
	Policy II.A Comply with state and federal regulations to ensure protection and preservation of significant biological resources.	Yes	The proposed project is consistent with the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) and will pay applicable fees in compliance with the City's Ordinance Number 1123 to offset incremental impacts to biological

General Plan Element	Policy Description	Consistency with Proposed Project?	Statement of Consistency
			resources from project development. Appropriate mitigation measures have been identified in Section 5.4 of the Initial Study to ensure impacts to nesting birds and/or burrowing owls are reduced to a less than significant level.
	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.	Yes	The proposed project site is located within the Mead Valley Plan Area of the MSHCP. The project would not impact core habitat parcels identified in the Mead Valley Plan Area and is consistent with the MSHCP.
	Policy IV.A Comply with State and Federal regulations and ensure preservation of the significant historical, archaeological, and paleontological resources.	Yes	There are no historic properties identified within the project area and appropriate mitigation has been identified in Section 5.5 of the Initial Study. These mitigation measures ensure that impacts to archeological, tribal cultural, and paleontological resources will be less than significant.
	Policy V.A Coordinate land-planning efforts with local water purveyors	Yes	While land planning is the responsibility of the City of Perris Planning Department, the project applicant has received a will-serve letter for the project from the Eastern Municipal Water District (EMWD) dated February 11, 2021. The EMWD has indicated they have sufficient supply to meet the water needs of the project.
	Policy VI.A Comply with requirements of the National Pollutant Discharge Elimination System (NPDES)	Yes	The project applicant is required to prepare a Stormwater Pollution Prevention Plan (SWPPP) to reduce impacts to water quality during construction of the project.

General Plan Element	Policy Description	Consistency with Proposed Project?	Statement of Consistency
	Policy VII.A Preserve significant hillsides and rock outcroppings in the planning area.	NA	There are no identified significant hillsides and rock outcrops within the project site.
	Policy VIII.A Adopt and maintain development regulations that encourage water and resources conservation	Yes	While the administration of development regulations is the responsibility of the City, the project has incorporated best practices to encourage water conservation and resource recycling.
	Policy VIII.B Adopt and maintain development regulations that encourage recycling and reduced waste generation by construction projects.	Yes	While administration of development regulations is the responsibility of the City, the project will comply with the CALGreen Code as well as City Municipal codes that requires diversion of 50 percent construction and demolition related debris (Chapter 7.44.050) and the preparation and submittal of a waste management plan (Chapter 7.44.060).
	Policy VIII.C Adopt and maintain development regulations which encourage increase energy efficiency in buildings, and the design of durable buildings that are efficient and economical to own and operate. Encourage green building development by establishing density bonuses, expedited permitting, and possible tax deduction incentives to be made available for developers who meet LEED building standards for new and refurbish developments (U.S. Green Council's Leadership in Energy and Environmental Design green building programs).	Yes	While administration of development regulations is the responsibility of the City, the project will comply with Title 24 part 11 of the California Building Standards Code (CALGreen) and the Title 24 Part 6 Building Efficiency Standards.
	Policy IX.A Encourage land uses and new development that support alternatives to the single occupant vehicle.	NA	While designating land uses is the responsibility of the City, development of the site a residential development is consistent with the current

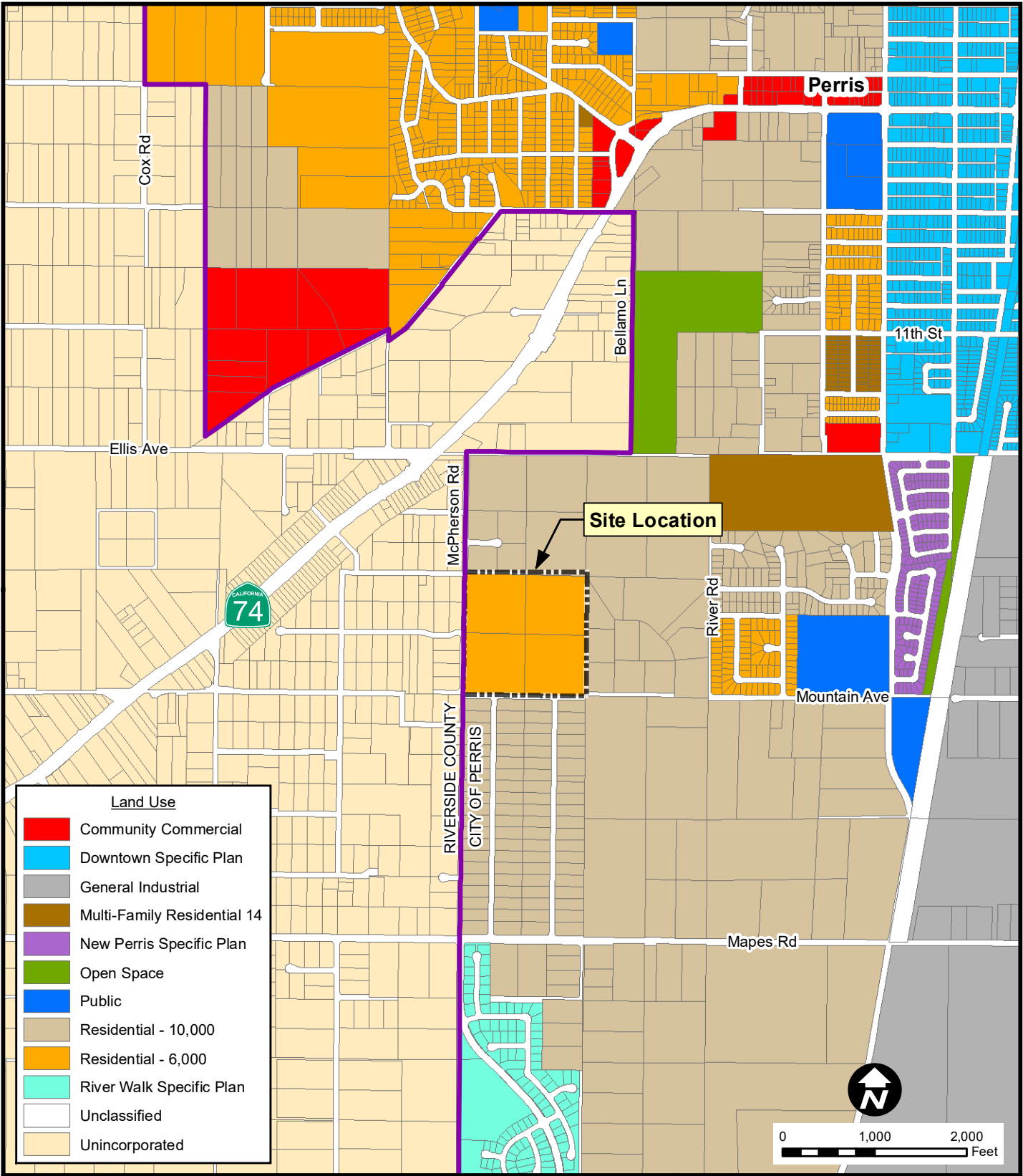
General Plan Element	Policy Description	Consistency with Proposed Project?	Statement of Consistency
			land use designation for the site.
	Policy X.A Establish density bonuses, expedited permitting, and possible tax deduction incentives to be made available for developers who exceed current Title 24 requirements for new development.	NA	While establish density bonuses, expedited permitting and tax deduction incentives is the responsibility of the City, project will comply with Title 24 part 11 of the California Building Standards Code (CALGreen) and the Title 24 Part 6 Building Efficiency Standards.
	Policy X.B Encourage the use of trees within project design to lessen energy needs, reduce the urban heat island effect, and improve air quality throughout the region.	Yes	The project will include landscaping that will incorporate trees. and portion of the project site will be preserved as an open space natural area.
Noise Element Adopted August 30, 2016			
	Policy I.A The State of California Noise/Land Use Compatibility Criteria shall be used in determining land use computability for new development.	Yes	A noise impact study was prepared for the proposed project and that used land use compatibility criteria specified by the State of California and City of Perris.
	Policy IV. A Reduce or avoid the existing and potential future impacts from air traffic on new sensitive noise land uses in areas where air traffic noise is 60 dBA CNEL or higher	Yes	The noise impact study prepared for the proposed project determined that the project site is located outside the 60 dB day-night level noise contour limit to the closest airport (Perris Valley Airport).
Safety Element Revised 2021			
	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.	Yes	The project includes on-site and off-site street improvements. Project related roads have been designed to ensure adequate evacuation and emergency vehicle access to the site.
	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.	Yes	The proposed development will include supporting infrastructure and cost sharing infrastructure improvements.

General Plan Element	Policy Description	Consistency with Proposed Project?	Statement of Consistency
	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.	Yes	The proposed development will have two points of access to the site.
	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.	Yes	A portion of Mountain Avenue Wash is located within the site boundaries and has been identified by the Federal Emergency Management Agency (FEMA) as a Zone X or a 500-year floodplain. This area is part of the natural area located in the northeastern portion of the site that will remain undeveloped.
	Policy S-4.3 Require new development projects and major remodels to control stormwater runoff on site.	Yes	The project has been designed to direct surface water flow into an on-site detention basin that would capture and treat surface water runoff.
	Policy S-4.4 Require flood mitigation plans for all proposed projects in the 100-year floodplain (Flood Zone A and Flood Zone AE).	Yes	A portion of Mountain Avenue Wash identified as having a minimal risk for flooding is located within the site boundaries and will remain undeveloped as a natural area.
	Policy S-5.3 Promote new development and redevelopment in areas of the City outside the Very High Fire Severity Zone (VHFHSZ) and allow for the transfer of development rights into lower-risk areas, if feasible.	Yes	Promoting new development and redevelopment of the City outside the VHFHSZ is the responsibility of the City. The proposed project is not located in a VHFHSZ as map by the California Department of Forestry and Fire Protection's Fire and Resources Assessment Program.
	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.	Yes	The proposed development will have two points of ingress/egress associated with the site.

General Plan Element	Policy Description	Consistency with Proposed Project?	Statement of Consistency
	Policy S-5.10 Ensure that existing and new developments have adequate water supplies and conveyance capacity to meet daily demands and firefighting requirements.	Yes	The EMWD has confirmed that it has the capability to provide water to the project that would be used as a potable water source for the residences as well as firefighting demands.
	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 (ARB).	Yes	The project has been reviewed by the Airport Land Use Commission (ALUC) and determined to be in a zone for both MARB/AIP and Perris Valley Airport where residential development is not restricted. Mitigation measures identified in Section 5.9 reduce impacts to both MARB/IPA and Perris Valley Airport to a less than significant level.
	Policy S-6.3 Effectively coordinate with March Air Reserve Base and Perris Valley Airport on development within its influence areas.	Yes	The project has been reviewed by the Airport Land Use Commission (ALUC) and determined to be in a zone for both MARB/IPA and Perris Valley Airport where residential development is not restricted. Mitigation measures identified in Section 5.9 reduce impacts to both MARB/IPA and Perris Valley Airport to a less than significant level.
	Policy S-7.1 Require all developments to provide adequate protection from damage associated with seismic incidents.	Yes	While requiring all developments to provide adequate protection from damage associated with seismic incidents is the responsibility of the City, the project will be constructed to current California Building Codes (CBC) that require structures to be designed to meet or exceed seismic safety standards as identified in the CBC.
	Policy S-7.2 Require geological and geotechnical investigations by State-licensed professionals in areas with potential for seismic and geological	Yes	The geotechnical study of the project site was certified by a geologist and a professional

General Plan Element	Policy Description	Consistency with Proposed Project?	Statement of Consistency
	hazards as part of the environmental and development review and approval process.		engineered both registered in the State of California.
Open Space Element Adopted March 14, 2006			
	Policy I.B		
	Policy III. Conserve and protect significant land forms.	Yes	While there are no identified significant hillsides and rock outcrops, a portion of the project site will be preserved as an open space natural area.
Healthy Community Element Adopted June 9, 2015			
	<p>Policy HC 6.3 Promote measures that will be effective in reducing emissions during construction activities.</p> <ul style="list-style-type: none"> • Perris will ensure the 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. Best Available Control Measures will be incorporated to reduce construction emissions to below daily emission standards established by the SCAQMD • Project components will be required to prepare and implement a Construction Management Plan which will be determined on a project by project basis, and should be specific to the pollutant for which the daily threshold is exceeded. 	Yes	The Air Quality and GHG Impact Analysis that was prepared for the proposed project evaluated project construction and operational emissions to thresholds adopted by the SCAQMD. Based on SCAQMD thresholds, the project would not exceed any SCAQMD air emission thresholds during construction or the operational life of the project. The project applicant would prepare a Construction Management Plan as required by the City.
Environmental Justice Element Adopted January 25, 2022			
	Goal 3.1 Policy: Continue to ensure new development is compatible with the	Yes	The project is consistent with existing land use and zoning

General Plan Element	Policy Description	Consistency with Proposed Project?	Statement of Consistency
	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.		designation for the site and adjacent areas to the site.
	Goal 3.1 Policy: Support identification, clean-up and remediation of local toxic sites through the development review process.	Yes	While identifying clean up and remediation of toxic sites and remediation of local toxic sites is the responsibility of the City, no toxic waste sites were identified at the project site during the Phase I Environmental Site Assessment completed for the project.
	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.	Yes	The project development includes infrastructure for pedestrian use and bike riders that is consistent with the City's Active Transportation plan. In addition, the project applicant will provide in-lieu fees.



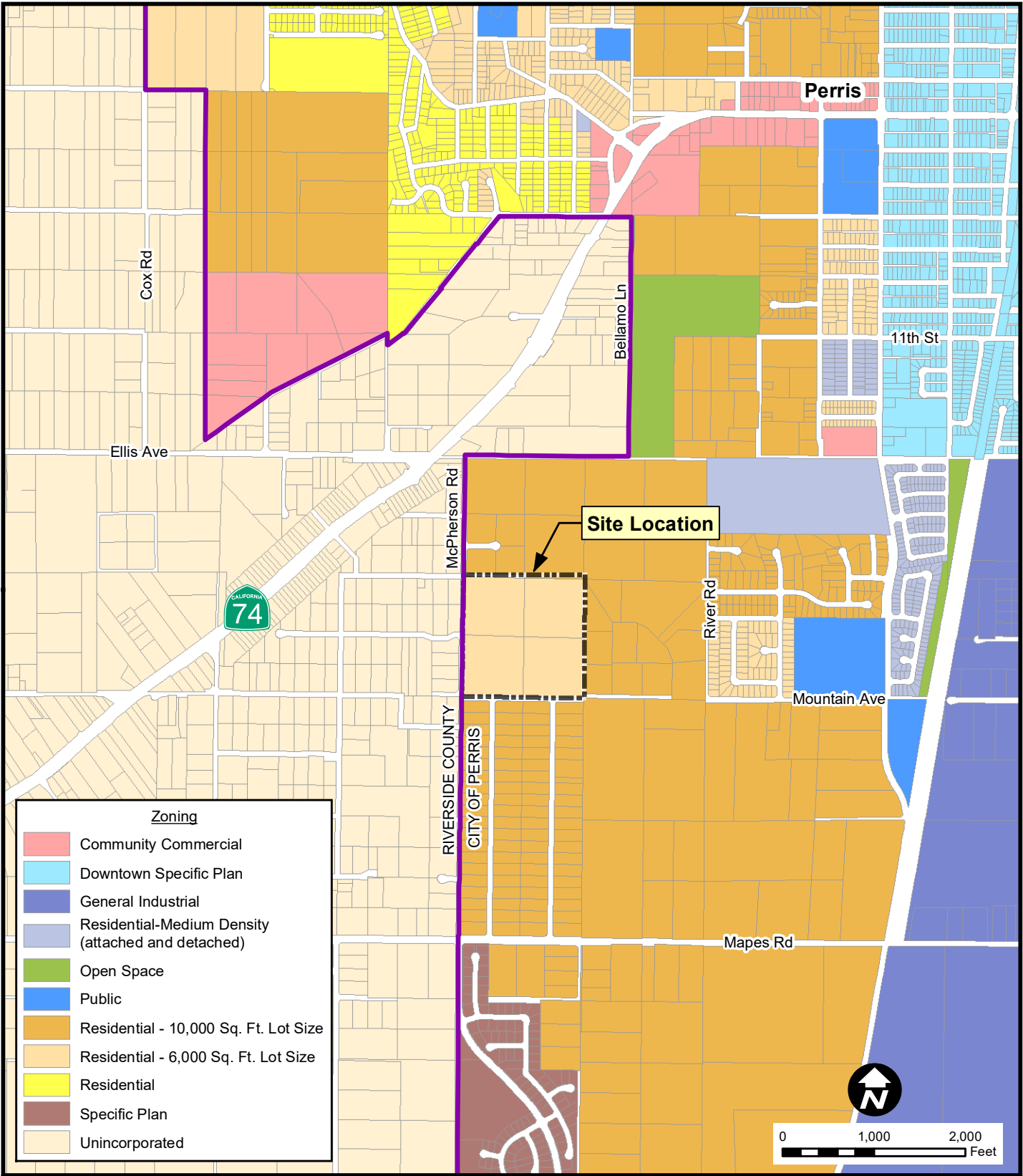
Land Use	
	Community Commercial
	Downtown Specific Plan
	General Industrial
	Multi-Family Residential 14
	New Perris Specific Plan
	Open Space
	Public
	Residential - 10,000
	Residential - 6,000
	River Walk Specific Plan
	Unclassified
	Unincorporated

	Tentative Tract Boundary
	City Boundary

CITY OF PERRIS
TENTATIVE TRACT 37904

Figure 4
Land Use

Source:
City of Perris General Plan Map, January 2013.



CITY OF PERRIS
TENTATIVE TRACT 37904

Figure 5
Zoning

Source:
Southern California Association of Governments,
2019 Annual Land Use for the SCAG Region,
updated Feb. 2021.

5.12 MINERAL RESOURCES

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

References: Riverside General Plan, 2015, City of Perris 2005

Explanation of Checklist Answers

12a. No Impact

The project site is located within Mineral Resource Zone Three (MRZ3) where the presence of any significant minerals have not been determined. As adjacent areas to the site are either developed as residences or zoned for residential development, it is unlikely that mining operations on the site is feasible. As there are no known mineral resources on the site, no mineral resource impacts would occur.

12b. No Impact

The City of Perris has not identified any locally important mineral resource recovery sites within the city (City of Perris 2005). As a result, no impacts to locally important mineral resources would occur.

5.13 NOISE

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) For a project 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, will the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

References: RK Engineering, Inc. 2022b, Appendix J

Explanation of Checklist Answers

13a. Less Than Significant With Mitigation Incorporated

Sound is a disturbance created by a moving or vibrating source and is capable of being detected by the hearing organs. Sound may be thought of as mechanical energy of a moving object transmitted by pressure waves through a medium to a human ear. For traffic, or stationary noise, the medium of concern is air. Noise is defined as sound that is loud, unpleasant, unexpected, or unwanted.

Because decibels are on a logarithmic scale, sound pressure levels (SPL) cannot be added or subtracted by simple plus or minus addition. When two (2) sounds of equal SPL are combined, they will produce an SPL 3 dB greater than the original single SPL. In other words, sound energy must be doubled to produce a 3 dB increase. If two (2) sounds differ by approximately 10 dB the higher sound level is the predominant sound.

In general, the healthy human ear is most sensitive to sounds between 1,000 Hz and 5,000 Hz, (A-weighted scale) and it perceives a sound within that range as being more intense than a sound with a higher or lower frequency with the same magnitude. For purposes of this report as well as with most environmental documents, the A-scale weighting is typically reported in terms of A-weighted decibel (dBA). Typically, the human ear can barely perceive the change in noise level of 3 dB. A change in 5 dB is readily perceptible, and a change in 10 dB is perceived as being twice or half as loud. As previously discussed, a doubling of sound energy results in a 3 dB increase in sound, which means that a doubling of sound energy (e.g. doubling the volume of traffic on a highway), would result in a barely perceptible change in sound level.

As sound propagates from a source it spreads geometrically. Sound from a small, localized source (i.e., a point source) radiates uniformly outward as it travels away from the source in a spherical pattern. The sound level attenuates at a rate of 6 dB per doubling of distance. The movement of vehicles down a roadway makes the source of the sound appear to propagate from a line (i.e., line source) rather than a point source. This line source results in the noise propagating from a roadway in a cylindrical spreading versus a spherical spreading that results from a point source. The sound level attenuates for a line source at a rate of 3 dB per doubling of distance.

As noise propagates from the source, it is affected by the ground and atmosphere. Noise models use hard site (reflective surfaces) and soft site (absorptive surfaces) to help calculate predicted noise levels. Hard site conditions assume no excessive ground absorption between the noise source and the receiver. Soft site conditions such as grass, soft dirt or landscaping attenuate noise at an additional rate of 1.5 dB per doubling of distance. When added to the geometric spreading, the excess ground attenuation results in an overall noise attenuation of 3 dB per doubling of distance for a line source and 6.0 dB per doubling of distance for a point source.

Construction Noise

Temporary construction noise and vibration impacts have been assessed from the project site to the surrounding adjacent land uses. The degree of construction noise will vary depending on the type of construction activity taking place and the location of the activity relative to the surrounding properties.

The City of Perris Municipal Code Section 7.34.060 specifies the following requirements for construction noise:

It is 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 Lmax in residential zones in the city.

The project site is located adjacent to properties within the unincorporated County of Riverside. To ensure the project does not cause a noise violation in the County of Riverside, the County's noise standards are included in this analysis.

County of Riverside Ordinance No. 847 indicates that construction noise is exempt from the noise ordinance, provided any of the following are satisfied:

- Private construction projects located one-quarter (1/4) of a mile or more from an inhabited dwelling.
- Private construction projects located within one-quarter (1/4) of a mile from an inhabited dwelling, provided that:
 - Construction does not occur between the hours of 6:00 PM and 6:00 AM during the months of June through September; and
 - Construction does not occur between the hours of 6:00 PM and 7:00 AM during the months of October through May.

This assessment analyzes potential noise impacts during all expected phases of construction, including; site preparation, grading, building construction, paving, and architectural coating.

Noise levels have been calculated based on an average distance of equipment to the nearest adjacent property. The project's estimated construction noise levels have been calculated using the Federal Highway Administration Roadway Construction Noise Model Version 1.1.

During construction, the noise level impacts to the surrounding properties are summarized in Table 11 (RK Engineering, Inc. 2022b).

Table 11 Project Construction Noise Levels

Phase	Equipment	Quantity	Equipment Noise Level at 100ft (dBA Lmax)	Combined Noise Level at 100 ft (dBA Lmax)
Site Preparation	Rubber Tired Dozers	3	75.6	81.0
	Tractors/Loaders/Backhoes	4	78.0	
Grading	Excavators	2	74.7	81.5
	Graders	1	79.0	
	Rubber Tired Dozers	1	75.6	
	Scrapers	2	77.6	
	Tractors/Loaders/Backhoes	2	78.0	
Building Construction	Cranes	1	74.5	81.0
	Forklifts	3	69.0	
	Generator Sets	1	74.6	
	Tractors/Loaders/Backhoes	3	78.0	
	Welders	1	68.0	
Paving	Pavers	2	71.2	81.0
	Paving Equipment	2	74.0	
	Tractors/Loaders/Backhoes	2	78.0	
Architectural Coating	Air Compressors	1	71.6	71.6
Worst Case Construction Phase Noise Level - Leq (dBA)				81.5
City of Perris Construction Noise Threshold (dBA Lmax)				80
Worst Case Construction Phase Noise Level (Lmax with Mitigation)/Potential significant impact (yes / no)?				76.5/No

Lmax: Maximum noise level

Noise generated during construction has the potential for significant impact. Impacts would be reduced to a less than significant level with incorporation of **Mitigation Measures NO-1 through NO-3**.

Operational Noise

On-site noise would include typical neighborhood noise, such as motor vehicle traffic, HVAC equipment and general human activities. Many project noise sources will be screened behind the proposed six-foot property line walls that will shield backyard areas of the site. Thus, most of the typical on-site outdoor residential activity and HVAC equipment would be screened from the neighboring property's line of sight. As a result, the project is not expected to generate on-site stationary noise that would adversely affect the existing ambient conditions in the vicinity of the site.

The project would also contribute additional traffic to the area which may affect roadway noise levels. Typically, a doubling of traffic volume along a roadway would result in approximately a 3 dBA increase in noise, which is typically considered the threshold of significance for causing a perceptible change. Based on the TIA, the project will not double the amount of traffic volumes on any of the roadways adjacent to the project, including Mountain Avenue or McPherson Road, either directly or cumulatively, and therefore the project may be presumed to have a less than significant impact to future roadway noise levels. Table 12 shows the project’s impact to existing traffic noise levels in the vicinity of the site.

Table 12 Traffic Noise Impact Analysis (dBA CNEL)

Roadway ¹	Segment	Existing CNEL (dBA)	Existing Plus Project CNEL (dBA)	Change in Noise Level as a Result of Project (dBA)	Significant Impact ²
Mountain Avenue	McPherson – “A” Street	56.4	57.1	0.7	No
McPherson Road	David Jones Road to Mountain Avenue	42.8	45.3	2.5	No

¹Traffic noise impacts are based on existing traffic volume data from the Pacific Emerald 55+ Housing Traffic Impact Analysis, Albert A. Webb Associates, March 2022. See Appendix K for traffic noise calculations.

² A significant increase typically requires a doubling of traffic volume to result in a barely perceptible change of 3 dBA above ambient noise levels

13b. Less Than Significant Impact

During construction, groundborne vibration and groundborne noise may be generated by equipment used during earth movement and construction of the individual residences. Groundborne vibration and groundborne noise impacts during construction of the proposed project are not expected to cause any potential damage to the nearest structure (RK Engineering, Inc. 2022b). The impact of the project would be less than significant.

13c. Less than Significant Impact

The project site is located outside the 60 DBA CNEL noise contours for both Perris Valley Airport and MARB/IPA. Noise from airport operations would not exceed the City’s 60 dBA CNEL exterior noise standard for new single family residential uses. The impact of the project would be less than significant.

Mitigation Measures NO-1 through NO-3

Mitigation Measure NO-1. The project developer shall post a notification sign in a readily visible location at the project site. All notices and signs shall indicate the dates and duration of construction activities, as well as provide a telephone number where residents can enquire about the construction process and register complaints to a designated construction noise disturbance coordinator.

Mitigation Measure NO-2. The project developer shall ensure all contractors implement construction best management practices to reduce construction noise levels. Best management practices would include the following:

- All construction equipment shall be equipped with muffles and other suitable noise attenuation devices (e.g., engine shields)
- Grading and construction contractors shall use quieter equipment as opposed to noisier equipment (such as rubber-tired equipment rather than track equipment), to the maximum extent feasible
- If feasible, electric hook-ups shall be provided to avoid the use of generators. If electric service is determined to be infeasible for the site, only whisper-quiet generators shall be used (i.e., inverter generators capable of providing variable load.
- Use electric air compressors and similar power tools rather than diesel equipment, where feasible.
- Locate staging area, generators and stationary construction equipment as far from the adjacent residential homes as feasible.
- Construction-related equipment, including heavy-duty equipment, motor vehicles, and portable equipment, shall be turned off when not in use for more than 5 minutes.

Mitigation Measure NO-3. The project developer shall build the proposed CMU block perimeter walls during the early phases of construction to help shield adjacent homes from construction noise.

5.14 POPULATION AND HOUSING

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through the extension of roads or other infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

References: City of Perris 2005

Explanation of Checklist Answers

14a. Less than Significant Impact

The project site has been designated for residential use by the City of Perris General Plan. The existing General Plan Land Use designation for the site is R-6,000 - Residential 6,000 and the existing zoning is R-6,000 (Residential 6,000 square foot lot size). The proposed zoning for the project would be R-6000-PDO (Planned Development Overlay) that would allow for an increase in housing density of up to 10 percent of 6,000 square feet. As the project is consistent with the existing land use and zoning designations identified for the site, the population growth anticipated would not represent a substantial unplanned increase in local or regional populations and impacts would be less than significant.

14b. No Impact

The project site is currently vacant, and no structures or housing is present. As a result, the project would not displace existing housing and not require construction of replacement housing. No impact would occur.

5.15 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 government facilities, need for new or physically altered government 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

References: Firewise 2000, LLC 2021 (Appendix H), Perris Union High School District, 2022, Southern California Gas Company 2021 (Appendix L), Southern California Edison 2021 (Appendix L)

Explanation of Checklist Answers

15a. Less than Significant Impact

The City of Perris contracts with the Riverside County Fire Department (RCFD) for fire protection. RCFD Fire Station Number 9 located at 2165 Steele Peak Drive is approximately 2.7 miles and six minutes driving time from the furthest point of the project site (Firewise 2000, LLC 2021). RCFD Fire Station Number 59 located at 21510 Pinewood Street is approximately 6.7 miles and 12-minutes driving time to the furthest point of the project. The City of Perris has established a developer impact fees to mitigate costs for fire services as a result of developments. Payment of this fee would reduce potential impacts to fire services provided by the RCFD to a less than significant level.

15b. Less than Significant Level

The City of Perris contracts with Riverside County Sheriff’s Department to provide police services for the city. Located at 137 North Perris Boulevard, Suite A, and is located approximately 2 miles to the northeast of the project. As identified in Section 15a, payment of developer impact fees will also mitigate costs for any additional police services and reduce impacts to a less than significant level.

15c. Less than Significant Level

As required by Government Code Section 65995, the project would be required by state law pay the required developer fee towards the cost to offset impacts from the students that would be generated by

the project. Currently the developer fee for commercial, industrial, and/or senior housing in the Perris Elementary School District is \$0.2640 per square foot constructed within the district (Perris Union High School District 2022). The project applicant would be required to pay the school fee in place when building permits have been acquired for the construction of the project. Payment of the required developer fee would reduce the impact of the project to the school district to a less than significant level.

15d. No Impact

The project development includes construction of a recreation center that will include a clubhouse for events, a swimming pool and spa, covered barbeque area, a bocce ball court and a nine-hole putting green with a lounge area. The project also includes construction of an activity lawn with an exercise station and barbeque area as well as a linear parkway equipped with benches. A dog park activity lawn with picnic benches will be build adjacent to the Mountain Avenue Wash opens space located in the northeastern portion of the site. While there would not likely be an increase in demand for parks outside the development, the project applicant will be required to pay applicable fees for parks. The City of Perris uses these fees to acquire and develop new parkland by residents of the city. No impact would occur.

15e. Less than Significant Level

The project residents would increase the demand for library and other public services. The City of Perris contracts with the Riverside County Public Library System and provides library services at Cesar E. Chavez Perris Branch Library located at 163 East San Jacinto Avenue. The project is subject to development impact fees]that would be used to provide new library facilities or expand existing library facilities subsequent to increased demand. Through payment of the applicable developer fees, potential impacts to library services and other government services would be a less than significant level. The nearest emergency medical service available to the project is the Riverside County University Health System Medical Center located at 26520 Cactus Avenue in Moreno Valley, which is approximately nine miles northeast of the project location. In addition, the project applicant has received notices from Southern California Edison and Southern California Gas Company that they can provide natural gas and electrical services, respectively; to the project. The project would not result in the demand for the construction of new or expanded medical facilities (Appendix L). The project would have a less than significant impact to public facilities.

5.16 RECREATION

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

References: N/A

Explanation of Checklist Answers

16a. No Impact

As stated in Section 15d, the project development includes construction of a number of recreational amenities. No increase in use of parks outside the development is anticipated and no impact would occur.

16b. Less than Significant Impact

The project includes development of recreational facilities that would be constructed within the project limits. Impacts to environment from development of entire site that would include the recreational amenities has been considered in this analysis. As indicated in Section 15d, the project applicant will be required to pay applicable fees for parks. The City of Perris uses these fees to acquire and develop new parkland by residents of the city and a less than significant impact to non-project related recreational facilities would occur.

5.17 TRANSPORTATION

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadways, bicycle and pedestrian facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Result in inadequate emergency access	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

References: Albert A. Webb Associates, 2021 and 2022 (Appendix K)

Explanation of Checklist Answers

17a. Impact Verdict

The project's consistency with Perris General Plan goals and policies addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities is analyzed in the Land Use section of this Initial Study in Table 10. As further discussed, the project would not conflict with the General Plan goals and policies. All roadway improvements proposed by the project applicant are consistent with the transportation system that is proposed for the area by the Circulation Element and would serve the project. The project will include both on-site and off-site street improvements, including half-width public roadway improvements along Mountain Avenue, McPherson Road, and David Jones Road and on-site paved surfaces as part of the project. In addition, the applicant would financially support the transportation system through Transportation Uniform Mitigation Fees (TUMF), to pay the projects fair share of the cost to maintain and improve the intersection operations within the City of Perris. A less than significant impact would occur from the project to City of Perris General Plan goals and policies addressing the city circulation system.

17b. Less Than Significant Impact

Senate Bill 743 (SB-743), codified in Public Resources Code section 21099 and signed by the Governor in 2013, directed the Governor's Office of Planning and Research (OPR) to identify alternative metrics for evaluating transportation impacts under CEQA. Pursuant to Section 21099, the criteria for determining the significance of transportation impacts must "promote the reduction of greenhouse gas emissions, the development of multimodal transportation networks, and a diversity of land uses." Recently adopted changes to the CEQA Guidelines in response to Section 21099 include a new section (15064.3) that specifies that Vehicle Miles Traveled (VMT) is the most appropriate measure of transportation impacts. A separate Technical Advisory issued by OPR provides additional technical details on calculating VMT and assessing transportation impacts for various types of projects.

VMT is a metric that accounts for the number of project generated vehicle trips and the distance of those trips. For development projects, the analysis of VMT is to assess whether a proposed project or plan adequately reduces total VMT. A VMT screening analysis was prepared for the project (Albert A. Webb Associates, Inc. 2021, Appendix K).

Using the WRCOG VMT online map-based application that provides parcel-level VMT based on geographic information system (GIS) mapping and the Riverside Transportation Analysis Model (RivTAM), the following was determined for the project.

- The project is not within a Transit Priority Area (TPA).
- The jurisdictional average daily residential home-based VMT per capita is 15.05. The Project Traffic Analysis Zone (TAZ) daily residential home-based VMT per capita is 14.74, which is lower than the jurisdictional average.

As a result, additional VMT modeling was determined to not be required and the project will have a less than significant impact would occur

17c. Less than Significant Impact

The project will include construction of roads to access residences. The roads will be constructed in compliance with City of Perris-issued permits and no hazards due to geometric design features would occur. Access to the residential development would not require construction of roads with hazardous geometric design that can cause traffic safety hazards, Standard vehicles would use the project roads so there would be no incompatible use such as occurs in agricultural settings where farm equipment may need to use the roads. Traffic calming features within the project in the form of narrowing of the roadway by extending the curb at intersections have been included as part of the project. These features would aid in pedestrian safety and traffic speed reduction. Therefore, a less than significant would occur.

17d. Less than Significant Impact

Construction activities that may temporarily restrict vehicular traffic flow would be required to implement adequate measures to facilitate the passage of pedestrians, bicyclists, and vehicles through and/or around any required road closures. Any site-specific activities such as temporary construction activities that may cause temporary restricted vehicular traffic flow are finalized on a project-by-project basis by the City of Perris and are required to ensure adequate emergency access. Roadway improvements that would occur as part of the project would also improve the ability of emergency vehicles to access the project site and surrounding properties and would result in a less than significant impact.

5.18 TRIBAL CULTURAL RESOURCES

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of a tribal cultural resource defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
i) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

References: Paleo Solutions, Inc. 2021

Explanation of Checklist Answers

18a(i) No Impact

The cultural resources records review and field reconnaissance conducted at the project site determined that there are no historic resources within the project area. As a result, no impact to historic resources would occur.

18a(ii) Less Than Significant With Mitigation Incorporated

The City of Perris, as the lead agency, has sent requests for consultation on October 3, 2022, to the following Native American tribes.

- Agua Caliente Band of Cahuilla Indians
- Desert Cahuilla (Torres-Martinez)
- Luiseño Indians
- Morongo Band of Mission Indians
- Pechanga Band of Mission Indians
- Rincon Band of Luiseño Indians.

A request for consultation from the Pechanga Band of Mission Indians was received on October 18, 2022. The Pechanga Band of Mission have requested to be added to the distribution list for public notices and circulation of all CEQA documents associated with the project including environmental review documents, archaeological reports, development plans, conceptual grading plans if available and all other applicable documents related to the project. The tribal consultation process was concluded on November 8, 2022. No other requests for consultation have been received by the City of Perris. Implementation of **Mitigation Measures CUL-1 and CUL-2** would ensure that project specific impacts to tribal cultural resources would be less than significant.

5.19 UTILITIES AND SERVICE SYSTEMS

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electrical power, natural gas, or telecommunications facility, the construction or relocation of which could cause significant environmental impact?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Comply with federal, state, and local statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

References: Eastern Municipal Water District, 2021b (Appendix L1)

Explanation of Checklist Answers

19a. Less than Significant Impact

Water Services: The EMWD (2021b) has indicated that they are able to provide water and services to the subject project. Connections for the project to existing potable water in proximity to the project would be completed during construction.

Wastewater Treatment: A new sewer line to serve the project will be required and is proposed to be constructed to run under Mountain Avenue to travel under "A" Street and east along the northern boundary of the Railroad Museum property located at 2201 "A" Street. The sewer line would then turn north along the western boundary of existing railroad tracks and connect to an existing sewer main located at Ellis Avenue. Preliminary plans have been provided to the City of Perris and have been approved by the City Engineer. Once established, wastewater would be treated by facilities operated by the EMWD. The EMWD has provided a will-serve documentation indicating that they can provide wastewater treatment for the project once a sewer line has been constructed. The project will not require the construction of a new wastewater facility or expansion of existing EMWD facilities.

Stormwater drainages: The project design includes construction of infrastructure to manage stormwater flow within the site. A detention pond has been designed to manage up to a 100-year storm event.

Electrical, natural gas or telecommunications: The project design includes providing electrical, natural gas and telecommunication capability to each residence. Connections for the project to existing electric, natural gas and telecommunications found in proximity to the project site would be completed during construction.

19b. Less than Significant Impact

The EMWD (2021b) has indicated that they are able to provide water and services to the proposed project. Connections for the project to existing potable water in proximity to the project site would be completed during construction. A less than significant impact would occur.

19c. Less than Significant Impact

The EMWD (2021b) has provided a will-serve letter documenting their capability to treat wastewater generated by the project. Once the sewer line is constructed for the project (see Section 19b), the EMWD will treat project-generated wastewater in compliance with applicable Regional Water Quality Control Board requirements and a less than significant impact would occur.

19d. Less than Significant Impact

CR&R Waste Services provides trash, recycling and green waste services for the City of Perris. Riverside County sponsors several hazardous waste collection events throughout the year. Solid waste generated by the project would be transported to the Perris Transfer Station and Materials Recovery Facility located at 1706 Goetz Road, where recyclable materials are separated from solid wastes. Recyclable materials are sold in bulk and transported for processing and transformation for other uses. Solid waste generated by the project would be transported to either the Badlands Landfill on Ironwood Avenue in Moreno Valley, or (2) the El Sobrante Landfill on Dawson Canyon Road in Corona. During construction, construction waste would be recycled when feasible, in compliance with the CalGreen Code. Once constructed, residential trash, recycle material and green waste would be picked up by CR&R Waste Services and represents a small percentage of the daily capacity at either landfills, and a less than significant impact to solid waste disposal needs would occur.

19e. Less than Significant Impact

During construction and operation of the project, compliance with federal, state and local statutes and regulations regarding solid waste generation and disposal will be required. CR&R Waste Services would provide its collection program for recyclables and solid waste. The project both during construction and operation would be required by the City of Perris to comply with all regulatory requirements regarding solid waste and a less than significant impact would occur.

5.20 WILDFIRE

If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result or runoff, post-fire slope instability, or drainage changes?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

References: Firewise 2000, LLC 2021 Appendix H, KWC Engineers 2021b

Explanation of Checklist Answers

20a. Less than Significant Impact

As identified in Section 5.9.h., the project site is located within a high fire hazard area (Firewise 2000, LLC 2021) (Appendix H) and a Fuel Modification Plan (FMP) has been prepared for the project that assessed both the on-site and off-site wildland fire hazard risks. Both short-term and long-term modification actions to minimize projected fire hazards and risks have been identified in the FMP. The FMP provides wildlife fuel treatments for the proposed development to reduce risks from wildlife including infrastructure elements that will reduce risk from wildlife. With incorporation of the FMP, the project would not impair City of Perris emergency response plans or emergency evacuation plans and a less than significant impact would occur.

20b. Less than Significant Impact

The project area is relatively level with rocky outcrops scattered through the site. Approximately 84 percent of the site has no slope (KWC Engineers 2021b). Two percent of the topography associated with the site have slopes as much as 31 percent. Grading during construction will reduce slopes to allow construction of residential units. In addition, the project would be developed in accordance with the FMP and a less than significant impact from slope, prevailing winds or other factors that may exacerbate a wildfire would occur.

20c. Less than Significant Impact

As detailed earlier, an FMP has been prepared for the project that assessed both the on-site and off-site wildland fire hazard risks (Firewise 2000, LLC 2021). Both short-term and long-term modification actions

to minimize projected fire hazards and risks have been identified in the FMP. The FMP provides wildlife fuel treatments for the proposed development to reduce risks from wildfire summarized as follows.

- Fuel treatment zones broken down by zones within the development;
- Construction standards that will reduce risks from wildfire;
- Infrastructure elements that will reduce risks from wildfire;
- Recommendations for a homeowner education program; and
- Mandated Covenants, Conditions and Restrictions that would include statements that identified roles and responsibilities for managing wildfire risks for the project.

With incorporation of the FMP, the project will include infrastructure that will reduce risks from wildfire hazards to a less than significant impact.

20d. Less than Significant Impact

With implementation of the proposed FMP, risks from wildfire would be reduced to a less than significant level. While there are portions of the site with high slopes, once site grading occurs, these slopes would be leveled to allow construction of residences. Once constructed, the project area would not have significant relief that would expose residents to significant risks due to downslope, downstream flooding or landslides as a result of runoff, post-fire slope instability or drainage changes. A less than significant impact would occur.

5.21 MANDATORY FINDINGS OF SIGNIFICANCE

Does the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Have environmental effects which would cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

References: N/A

Explanation of Checklist Answers

21a. Less than Significant Impact with Mitigation Incorporated

As discussed in Section 5.4.a, the project is located within the Western Riverside County MSHCP area. The MSHCP has identified that for APNs associated with the site, a habitat assessment would be required and should address at a minimum if potential habitat for burrowing owl (*Athene cunicularia*), a California Species of Special Concern, is present at the site. An assessment for potential burrowing owl habitat was conducted and completed on October 21, 2020, and is found as Appendix B. The project site was noted as moderately disturbed and vegetation was recorded as mixture of native and non-native vegetation. No sensitive species were observed at the site. No burrowing owl or habitat to support burrowing owl was observed at the site. Construction-related ground disturbance has the potential to impact nesting birds. This potential impact will be reduced to a less than significant level with implementation of **Mitigation BIO-1**. Although no burrowing owl or habitat to support burrowing owl was observed during the reconnaissance survey, potential impacts to this sensitive raptor would be mitigated with implementation of **Mitigation BIO-2**.

21b. Less than Significant Impact with Mitigation Incorporated

Cumulative impacts are defined as two or more individual effects that, when considered together, are considerable or that compound or increase other environmental impacts. The cumulative impact from several projects is the change in the environment that results from the incremental impact of the development when added to the impacts of other closely related past, present, and reasonably foreseeable or probable future developments. Cumulative impacts can result from individually minor, but collectively significant, developments taking place over a period.

The development of the proposed project is consistent with the existing City of Perris General Plan Land Use Map and zoning policies; however, the project contributes to several cumulatively considerable impacts. Analysis conducted in this Initial Study determined that construction of the project may have significant impacts in the following areas:

- Aesthetics: Lighting from the project has the potential to serve as a new source of substantial light once the project has been constructed.
- Biological Resources: Ground clearance has the potential to impact burrowing owls and/or nesting birds which is inconsistent with the Western Riverside County MSHCP
- Cultural Resources: The project can potentially impact cultural resources as well as human remains interred outside a formal cemetery.
- Noise: The project will result in substantial increases in the ambient noise environment during construction;

No other resources analyzed in this Initial Study would cause cumulative impacts. As demonstrated by the analysis in this Initial Study, the proposed project will not result in any unavoidable significant environmental impacts and all impacts would be mitigated to less than significant levels.

The proposed project would potentially result in project-related localized aesthetic resources, biological resources, cultural resources, and noise resources impacts that could be potentially significant without mitigation. While the City of Perris is currently planning for the construction of at least one 300 plus apartment units project and at least one 240 plus single family housing project, only one other Senior Residential development is proposed. Thus, when coupled with the similar impacts related to the

implementation of other these similar type of projects throughout the City of Perris area, the project would potentially result in cumulative-level impacts if these significant impacts are left unmitigated. However, with the incorporation of mitigation identified herein, the proposed project's localized aesthetic resources, biological resources, cultural resources, and noise resources would be reduced to less than significant levels and would not considerably contribute to cumulative impacts in the greater project region.

Additionally, these other related projects would presumably be bound by their applicable lead agency to (1) comply with all applicable federal, state, and local regulatory requirements and (2) incorporate all feasible mitigation measures, consistent with CEQA, to further ensure that their potentially cumulative impacts would be reduced to less than significant levels. Although cumulative impacts are always possible, the project, by incorporating all mitigation measures outlined herein, would reduce its contribution to any such cumulative impacts to levels that are less than cumulatively considerable. Therefore, with the incorporation of mitigation identified in this Initial Study, the proposed project would result in individually limited, but not cumulatively considerable, impacts

21c. Less than Significant Impact with Mitigation Incorporated

The development of the proposed project would not cause adverse impacts on humans, either directly or indirectly. The project site is not located in an area that is susceptible to seismic hazards. Implementation of mitigation measures NO-1 through NO-4 would ensure that potential impacts from noise generated during construction would be less than. significant.

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- 2021a Cultural Resources Assessment Report. Pacific Emerald Residential Development Project (Tentative Tract Map 37904) Perris, Riverside County, California
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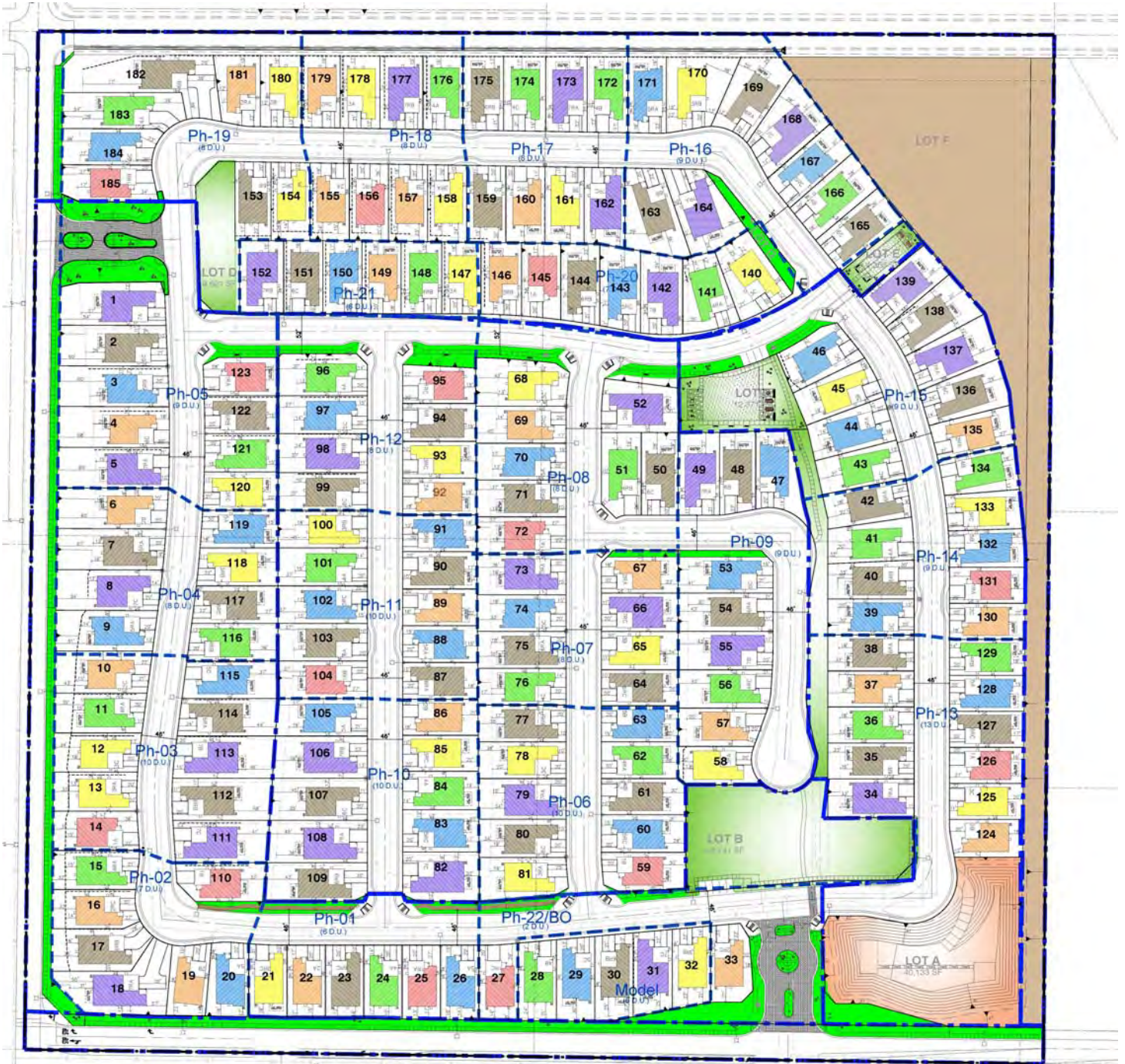
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PACIFIC EMERALD TRACT 37904

AIR QUALITY AND GREENHOUSE GAS ANALYSIS

City of Perris, CA



**PACIFIC EMERALD TRACT 37904
AIR QUALITY AND GREENHOUSE GAS ANALYSIS
City of Perris, California**

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August 26, 2022

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1.0 Introduction

The purpose of this air quality and greenhouse gas (GHG) analysis is to determine whether the estimated criteria air pollutants and greenhouse gas emissions generated from the construction and operation of the proposed Pacific Emerald Tract 37904 Single Family Residential Development Project (hereinafter referred to as project) would cause significant impacts to air resources.

This assessment was conducted within the context of the California Environmental Quality Act (CEQA, California Public Resources Code Sections 21000, et seq.). The methodology follows the California Air Resources Board (CARB), the South Coast Air Quality Management District (SCAQMD), and City of Perris recommendations for quantification of emissions and evaluation of potential impacts.

1.1 Site Location

The proposed project site is located at the northeast corner of McPherson Road and Mountain Avenue, in the City of Perris, California. The project site is located within the South Coast Air Basin (SCAB), the SCAQMD Hemet/Elsinore General Forecast Area, and the Perris Valley Source Receptor Area (SRA) 24.

The project site is bounded by residential uses to the north, south, east, and west and the Apostolic Church to the south.

The project site is located in Planning Area – 7 of the City of Perris General Plan. The existing General Plan Land Use Designation for the site is R-6,000 – Residential 6,000 and the existing zoning is R-6,000 (Residential 6,000 square-foot lot size) in the City of Perris Zoning Map and in the City of Perris General Plan Land Use Designation Map.

The project site location map is provided in Exhibit A.

1.2 Project Description

The project applicant proposes to construct and operate 185 dwelling units of age-restricted (55+) senior detached housing. The site plan used for this analysis, provided by PACIFIC COMMUNITY BUILDER, INC., is illustrated in Exhibit B. Table 1 summarizes the proposed project land uses.

**Table 1
Land Use Summary**

Project Land Use	CalEEMod Land Use	Quantity	Metric¹
Senior Adult Housing – Detached	Retirement	185	DU
On-Site / Off-Site Street Improvements	Parking Lot	367.462	TSF

¹ DU – Dwelling Units
TSF – Total Square Foot

The project applicant is proposing to construct a total of 367,462 square feet of on-site and off-site street improvements, including half-width public roadway improvements along Mountain Avenue, McPherson Road, and David Jones Road and on-site paved surfaces as part of the project. The total area of the site, including the off-site street improvements is approximately 41.70 acres.

Construction of the project is estimated to begin in the year 2024 and last approximately 39 months. Construction activities are expected to consist of site preparation, grading, building construction, paving, and architectural coating. The project is expected to be complete and operational in the year 2027.

1.3 Sensitive Receptors

Sensitive receptors are considered land uses or other types of population groups that are more sensitive to air pollution exposure. Sensitive population groups include children, the elderly, the acutely and chronically ill, and those with cardio-respiratory diseases. For CEQA purposes, the SCAQMD considers a sensitive receptor to be a location where a sensitive individual could remain for 24 hours or longer, such as residences, hospitals, and schools (etc), as described in the Localized Significance Threshold Methodology (SCAQMD 2008a, page 3-2).

The nearest sensitive land uses are considered the residential homes located adjacent to the project site to the north, south, east and west of the site. Sensitive receptors are located within 25 meters of the project site.

1.4 Summary of Analysis Results

Table 2 provides a summary of the CEQA air quality impact analysis results.

**Table 2
CEQA Air Quality Impact Criteria**

Air Quality Impact Criteria	Potentially Significant	Potentially Significant Unless Mitigated	Less Than Significant Impact	No Impact
<i>Would the project:</i>				
a) Conflict with, or obstruct implementation of, the applicable air quality plan?			X	
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable Federal or State ambient air quality standard?			X	
d) Expose sensitive receptors to substantial pollutant concentrations?			X	
e) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?			X	

Table 3 provides a summary of the CEQA GHG impact criteria analysis results.

**Table 3
CEQA GHG Impact Criteria**

GHG Impact Criteria	Potentially Significant	Potentially Significant Unless Mitigated	Less Than Significant Impact	No Impact
<i>Would the project:</i>				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?			X	
b) Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing emissions of greenhouse gases?			X	

1.5 Recommended Project Design Features

The following recommended project design features include standard rules and requirements, construction best practices, and building code requirements that will be included in the project design. Project design features are assumed to be included as conditions of approval of the project and integrated into its design.

Construction Design Features:

DF-1 The project must follow the standard SCAQMD rules and requirements with regards to fugitive dust control, which includes, but are not limited to the following:

1. All active construction areas shall be watered two (2) times daily.
2. Speed on unpaved roads shall be reduced to less than 15 mph.
3. Any visible dirt deposition on any public roadway shall be swept or washed at the site access points within 30 minutes.
4. Any on-site stockpiles of debris, dirt or other dusty material shall be covered or watered twice daily.
5. All operations on any unpaved surface shall be suspended if winds exceed 15 mph.
6. Access points shall be washed or swept daily.
7. Construction sites shall be sandbagged for erosion control.
8. Apply nontoxic chemical soil stabilizers according to manufacturers' specifications to all inactive construction areas (previously graded areas inactive for 10 days or more).
9. Cover all trucks hauling dirt, sand, soil, or other loose materials, and maintain at least 2 feet of freeboard space in accordance with the requirements of California Vehicle Code (CVC) section 23114.
10. Pave or gravel construction access roads at least 100 feet onto the site from the main road and use gravel aprons at truck exits.
11. Replace the ground cover of disturbed areas as quickly possible.

DF-2 Require all construction equipment to have Tier 4 low emission "clean diesel" engines (OEM or retrofit) that include diesel oxidation catalysts and diesel particulate filters that meet the latest CARB best available control technology.

DF-3 Construction equipment shall be maintained in proper tune.

- DF-4** All construction vehicles shall be prohibited from excessive idling. Excessive idling is defined as five (5) minutes or longer.
- DF-5** Minimize the simultaneous operation of multiple construction equipment units.
- DF-6** The use of heavy construction equipment and earthmoving activity should be suspended during Air Alerts when the Air Quality Index reaches the “Unhealthy” level.
- DF-7** Establish an electricity supply to the construction site and use electric powered equipment instead of diesel-powered equipment or generators, where feasible.
- DF-8** Establish staging areas for the construction equipment that are as distant as possible from adjacent sensitive receptors (residential land uses).
- DF-9** Use haul trucks with on-road engines instead of off-road engines for on-site hauling.
- DF-10** Utilize zero VOC and low VOC paints and solvents, wherever possible.
- DF-11** Prepare and implement a Construction Management Plan which will include the construction best practices and conditions of approval to be submitted to the City of Perris and followed by construction contractors and personnel.

Operational Design Features:

- DF-12** Comply with the mandatory requirements of Title 24 part 11 of the California Building Standards Code (CALGreen) and the Title 24 Part 6 Building Efficiency Standards, including net zero energy requirements.
- DF-13** Implement water conservation strategies, including low flow fixtures and toilets, water-efficient irrigation systems, drought tolerant/native landscaping, and reduce the amount of turf.
- DF-14** Comply with the mandatory requirements of CalRecycle’s residential recycling program and implement zero waste strategies.
- DF-15** Provide the necessary infrastructure to support electric vehicle charging, as required by CALGreen.
- DF-16** Use electric-powered landscaping equipment for landscape maintenance.

DF-17

Utilize renewable energy sources, such as solar, to the maximum extent required under Title 24.

2.0 Air Quality Setting

The Federal Clean Air Act (§ 7602) defines air pollution as any agent or combination of such agents, including any physical, chemical, biological, or radioactive substance which is emitted into or otherwise enters the ambient air. Household combustion devices, motor vehicles, industrial facilities, and forest fires are common sources of air pollution. Air pollution can cause disease, allergies, and even death. It affects soil, water, crops, vegetation, manmade materials, animals, wildlife, weather, visibility, and climate. It can also cause damage to and deterioration of property, present hazards to transportation, and negatively impact the economy.

This section provides background information on criteria air pollutants, the applicable federal, state, and local regulations concerning air pollution, and the existing physical setting of the project within the context of local air quality.

2.1 Description of Air Pollutants¹.

The following section describes the air pollutants of concern related to the project. Criteria air pollutants are defined as those pollutants for which the federal and state governments have established air quality standards for outdoor or ambient concentrations to protect public health. The following descriptions of criteria air pollutants have been provided by the SCAQMD.

- **Carbon Monoxide (CO)** is a colorless, odorless, toxic gas produced by incomplete combustion of carbon-containing fuels (e.g., gasoline, diesel fuel, and biomass). Sources include motor vehicle exhaust, industrial processes (metals processing and chemical manufacturing), residential wood burning, and natural sources. CO is somewhat soluble in water; therefore, rainfall and fog can suppress CO conditions. CO enters the body through the lungs, dissolves in the blood, and competes with oxygen, often replacing it in the blood, thus reducing the blood's ability to transport oxygen to vital organs in the body. The ambient air quality standard for carbon monoxide is intended to protect persons whose medical condition already compromises their circulatory system's ability to deliver oxygen. These medical conditions include certain heart ailments, chronic lung diseases, and anemia. Persons with these conditions have reduced exercise capacity even when exposed to relatively low levels of CO. Fetuses are at risk because their blood has an even greater affinity to bind with CO. Smokers are also at risk from ambient CO levels because smoking

¹ SCAQMD. Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning (May 6, 2005)

increases the background level of CO in their blood. The South Coast basin has recently achieved attainment status for carbon monoxide by both USEPA and CARB.

- **Nitrogen Dioxide (NO₂)** is a byproduct of fuel combustion. The principal form of nitrogen oxide produced by combustion is nitric oxide (NO), but NO reacts quickly to form NO₂, creating the mixture of NO and NO₂ commonly called NO_x. NO₂ acts as an acute irritant and, in equal concentrations, is more injurious than NO. At atmospheric concentrations, however, NO₂ is only potentially irritating. There is some indication of a relationship between NO₂ and chronic pulmonary fibrosis. Some increase in bronchitis in young children has also been observed at concentrations below 0.3 parts per million (ppm). NO₂ absorbs blue light which results in a brownish red cast to the atmosphere and reduced visibility. Although NO₂ concentrations have not exceeded national standards since 1991 and the state hourly standard since 1993, NO_x emissions remain of concern because of their contribution to the formation of O₃ and particulate matter.
- **Ozone (O₃)** is one of several substances called photochemical oxidants that are formed when volatile organic compounds (VOC) and NO_x react in the presence of ultraviolet sunlight. O₃ concentrations in the South Coast basin are typically among the highest in the nation, and the damaging effects of photochemical smog, which is a popular name for a number of oxidants in combination, are generally related to the concentrations of O₃. Individuals exercising outdoors, children, and people with preexisting lung disease, such as asthma and chronic pulmonary lung disease, are considered to be the subgroups most susceptible to O₃ effects. Short-term exposures (lasting for a few hours) to O₃ at levels typically observed in southern California can result in breathing pattern changes, reduction of breathing capacity, increased susceptibility to infections, inflammation of the lung tissue, and some immunological changes. In recent years, a correlation between elevated ambient O₃ levels and increases in daily hospital admission rates, as well as mortality, has also been reported. The South Coast Air Basin is designated by the USEPA as an extreme non-attainment area for ozone. Although O₃ concentrations have declined substantially since the early 1990s, the South Coast basin continues to have peak O₃ levels that exceed both state and federal standards.
- **Fine Particulate Matter (PM₁₀)** consists of extremely small, suspended particles or droplets 10 microns or smaller in diameter that can lodge in the lungs, contributing to respiratory problems. PM₁₀ arises from such sources as re-entrained road dust, diesel soot, combustion products, tire and brake abrasion, construction operations, and fires. It is also formed in the atmosphere from NO_x and SO₂ reactions with ammonia. PM₁₀ scatters light and significantly reduces visibility. Inhalable particulates

pose a serious health hazard, alone or in combination with other pollutants. More than half of the smallest particles inhaled will be deposited in the lungs and can cause permanent lung damage. Inhalable particulates can also have a damaging effect on health by interfering with the body's mechanism for clearing the respiratory tract or by acting as a carrier of an absorbed toxic substance. The South Coast basin has recently achieved federal attainment status for PM₁₀, but is non-attainment based on state requirements.

- **Ultra-Fine Particulate Matter (PM_{2.5})** is defined as particulate matter with a diameter less than 2.5 microns and is a subset of PM₁₀. PM_{2.5} consists mostly of products from the reaction of NO_x and SO₂ with ammonia, secondary organics, finer dust particles, and the combustion of fuels, including diesel soot. PM_{2.5} can cause exacerbation of symptoms in sensitive patients with respiratory or cardiovascular disease, declines in pulmonary function growth in children, and increased risk of premature death from heart or lung diseases in the elderly. Daily fluctuations in PM_{2.5} levels have been related to hospital admissions for acute respiratory conditions, school absences, and increased medication use in children and adults with asthma. The South Coast basin is designated as non-attainment for PM_{2.5} by both federal and state standards.
- **Sulfur Dioxide (SO₂)** is a colorless, pungent gas formed primarily by the combustion of sulfur-containing fossil fuels. Health effects include acute respiratory symptoms and difficulty in breathing for children. Individuals with asthma may experience constriction of airways with exposure to SO₂. Though SO₂ concentrations have been reduced to levels well below state and federal standards, further reductions in SO₂ emissions are needed because SO₂ is a precursor to sulfate and PM₁₀. The South Coast basin is considered a SO₂ attainment area by USEPA and CARB.
- **Lead (Pb)** is a toxic heavy metal that can be emitted into the air through some industrial processes, burning of leaded gasoline and past use of lead-based consumer products. Lead is a neurotoxin that accumulates in soft tissues and bones, damages the nervous system, and causes blood disorders. It is particularly problematic in children, in that permanent brain damage may result, even if blood levels are promptly normalized with treatment. Concentrations of lead once exceeded the state and federal air quality standards by a wide margin, but as a result of the removal of lead from motor vehicle gasoline, ambient air quality standards for lead have not been exceeded since 1982. Though special monitoring sites immediately downwind of lead sources recorded localized violations of the state standard in 1994, no violations have been recorded since. Consequently, the South Coast basin is designated as an attainment area for lead by both the USEPA and CARB. This report

does not analyze lead emissions from the project, as it is not expected to emit lead in any significant measurable quantity.

- **Volatile Organic Compounds (VOC)**, although not actually a criteria air pollutant, VOCs are regulated by the SCAQMD because they cause chemical reactions which contribute to the formation of ozone. VOCs are also transformed into organic aerosols in the atmosphere, contributing to higher PM₁₀ and lower visibility levels. Sources of VOCs include combustion engines, and evaporative emissions associated with fuel, paints and solvents, asphalt paving, and the use of household consumer products such as aerosols. Although health-based standards have not been established for VOCs, health effects can occur from exposures to high concentrations of VOC. Some hydrocarbon components classified as VOC emissions are hazardous air pollutants. Benzene, for example, is a hydrocarbon component of VOC emissions that are known to be a human carcinogen. The term reactive organic gases (ROG) are often used interchangeably with VOC.
- **Toxic Air Contaminants (TACs)** are defined as air pollutants which may cause or contribute to an increase in mortality or serious illness, or which may pose a hazard to human health, and for which there is no concentration that does not present some risk. This contrasts with the criteria pollutants, in that there is no threshold level for TAC exposure below which adverse health impacts are not expected to occur. The majority of the estimated health risk from TACs can be attributed to a relatively few compounds, the most common being diesel particulate matter (DPM) from diesel engine exhaust. In addition to DPM, benzene and 1,3-butadiene are also significant contributors to overall ambient public health risk in California.

2.2 Federal and State Ambient Air Quality Standards

The Federal Clean Air Act, which was last amended in 1990, requires the EPA to set National Ambient Air Quality Standards (NAAQS) for criteria pollutants considered harmful to public health and the environment. The State of California has also established additional and more stringent California Ambient Air Quality Standards (CAAQS) in addition to the seven criteria pollutants designated by the federal government.

AAQS are designed to protect the health and welfare of the populace with a reasonable margin of safety. The standards are divided into two categories, primary standards, and secondary standards. Primary standards are implemented to provide protection for the "sensitive" populations such as those with asthma, or the children and elderly. Secondary standards are to provide protection against visible pollution as well as damage to the surrounding environment, including animals, crops, and buildings.

Table 4 shows the Federal and State Ambient Air Quality Standards.

**Table 4
Federal and State Ambient Air Quality Standards (AAQS)¹**

Air Pollutant	Averaging Time²	Federal Standard (NAAQS)²	California Standard (CAAQS)²
Ozone	1 Hour	--	0.09 ppm
	8 Hour	0.070 ppm	0.070 ppm
Carbon Monoxide (CO)	1 Hour	35 ppm	20 ppm
	8 Hour	9 ppm	9 ppm
Nitrogen Dioxide (NO ₂)	1 Hour	0.100 ppm	0.18 ppm
	Annual	0.053 ppm	0.030 ppm
Sulfur Dioxide (SO ₂)	1 Hour	0.075 ppm	0.25 ppm
	3 Hour	0.5 ppm ³	--
	24 Hour	--	0.04 ppm
Particulate Matter (PM ₁₀)	24 Hour	150 µg/m ³	50 µg/m ³
	Mean	--	20 µg/m ³
Particulate Matter (PM _{2.5})	24 Hour	35 µg/m ³	--
	Annual	12 µg/m ³	12 µg/m ³
Lead	30-day	--	1.5 µg/m
	Quarter	1.5 µg/m	--
	3-month average	0.15 µg/m	--
Visibility reducing particles	8 Hour	--	0.23/km extinction coefficient. (10-mile visibility standard)
Sulfates	24 Hour	--	25 µg/m
Vinyl chloride	24 Hour	--	0.01 ppm
Hydrogen sulfide	24 Hour	--	0.03 ppm

¹ Source: USEPA: <https://www.epa.gov/criteria-air-pollutants/naaqs-table> and

CARB: <https://ww2.arb.ca.gov/resources/california-ambient-air-quality-standards>

² ppm = parts per million of air, by volume; µg/m³ = micrograms per cubic meter; Annual = Annual Arithmetic Mean; 30-day = 30-day average; Quarter = Calendar quarter.

³ Secondary standards

Several pollutants listed in Table 4 are not addressed in this analysis. Lead is not included because the project is not anticipated to emit lead. Visibility-reducing particles are not explicitly addressed in this analysis because particulate matter is addressed. The project is not expected to generate or be exposed to vinyl chloride because proposed project uses do not utilize the chemical processes that create this pollutant and there are no such uses in the project vicinity. The proposed project is not expected to cause exposure to hydrogen sulfide because it would not generate hydrogen sulfide in any substantial quantity.

2.3 Attainment Status

The Clean Air Act requires states to prepare a State Implementation Plan (SIP) to ensure air quality meets the NAAQS. The California Air Resources Board (CARB) provides designations of attainment for air basins where AAQS are either met or exceeded. If the AAQS are met, the area is designated as being in "attainment", if the air pollutant concentrations exceed the AAQS, then the area is designated as being "nonattainment". If there is inadequate or inconclusive data to make a definitive attainment designation, the area is considered "unclassified."

National nonattainment areas are further designated as marginal, moderate, serious, severe, or extreme as a function of deviation from standards. Each standard has a different definition, or 'form' of what constitutes attainment, based on specific air quality statistics. For example, the Federal 8-hour CO standard is not to be exceeded more than once per year; therefore, an area is in attainment of the CO standard if no more than one 8-hour ambient air monitoring values exceeds the threshold per year. In contrast, the federal annual PM_{2.5} standard is met if the three-year average of the annual average PM_{2.5} concentration is less than or equal to the standard.

When a state submits a request to the EPA to re-designate a nonattainment area to attainment, the Clean Air Act (CAA) section 175A(a) requires that the state (or states, if the area is a multi-state area) submit a maintenance plan ensuring the area can maintain the air quality standard for which the area is to be re-designated for at least 10 years following the effective date of re-designation.

Table 5 lists the attainment status for the criteria pollutants in the South Coast Air Basin (SCAB).

**Table 5
South Coast Air Basin Attainment Status¹**

Pollutant	State Status	National Status
Ozone	Nonattainment	Nonattainment (Extreme) ²
Carbon monoxide	Attainment	Attainment (Maintenance)
Nitrogen dioxide	Attainment	Attainment (Maintenance)
PM ₁₀	Nonattainment	Attainment (Maintenance)
PM _{2.5}	Nonattainment	Nonattainment
Lead	Attainment	Nonattainment (Partial) ³

¹ Source: California Air Resources Board. <http://www.arb.ca.gov/desig/adm/adm.htm>

² 8-Hour Ozone.

³ Partial Nonattainment designation – Los Angeles County portion of Basin only.

2.4 South Coast Air Quality Management District (SCAQMD)

The agency responsible for air pollution control for the South Coast Air Basin (SCAB) is the South Coast Air Quality Management District (SCAQMD). SCAQMD is responsible for controlling emissions primarily from stationary sources. SCAQMD maintains air quality monitoring stations throughout the SCAB. SCAQMD, in coordination with the Southern California Association of Governments, is also responsible for developing, updating, and implementing the Air Quality Management Plan (AQMP) for the SCAB. An AQMP is a plan prepared and implemented by an air pollution district for a county or region designated as nonattainment of the federal and/or California ambient air quality standards. The term nonattainment area is used to refer to an air SCAB where one or more ambient air quality standards are exceeded.

The latest version is the 2016 AQMP. The 2016 AQMP is a regional blueprint for achieving federal air quality standards and healthful air. While air quality has dramatically improved over the years, the SCAB still exceeds federal public health standards for both ozone and particulate matter (PM) and experiences some of the worst air pollution in the nation. The 2016 AQMP includes both stationary and mobile source strategies to ensure that rapidly approaching attainment deadlines are met, that public health is protected to the maximum extent feasible, and that the region is not faced with burdensome sanctions if the Plan is not approved or if the NAAQS are not met on time.

According to the 2016 AQMP, the most significant air quality challenge in the SCAB is to reduce nitrogen oxide (NOx) emissions sufficiently to meet the upcoming ozone standard deadlines. Based on the inventory and modeling results, 522 tons per day (tpd) of total

SCAB NO_x 2012 emissions are projected to drop to 255 tpd and 214 tpd in the 8-hour ozone attainment years of 2023 and 2031 respectively, due to continued implementation of already adopted regulatory actions (“baseline emissions”). The analysis suggests that total SCAB emissions of NO_x must be reduced to approximately 141 tpd in 2023 and 96 tpd in 2031 to attain the 8-hour ozone standards. This represents an additional 45 percent reduction in NO_x in 2023, and an additional 55 percent NO_x reduction beyond 2031 levels.²

2.4.1 SCAQMD Rules and Regulations

The SCAQMD establishes a program of rules and regulations to obtain attainment of the state and federal standards in conjunction with the AQMP. Several of the rules and regulations that may be applicable to this project include, but are not limited to, the following:

- **SCAQMD Rule 402** prohibits a person from discharging from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property.
- **SCAQMD Rule 403** governs emissions of fugitive dust during construction and operation activities. Compliance with this rule is achieved through application of standard Best Management Practices, such as application of water or chemical stabilizers to disturbed soils, covering haul vehicles, restricting vehicle speeds on unpaved roads to 15 miles per hour, sweeping loose dirt from paved site access roadways, cessation of construction activity when winds exceed 25 mph, and establishing a permanent ground cover on finished sites.
- **SCAQMD Rule 445** restricts wood burning devices from being installed into any new development and is intended to reduce the emissions of particulate matter for wood burning devices.
- **SCAQMD Rule 1113** governs the sale, use, and manufacturing of architectural coating and limits the VOC content in paints and paint solvents. This rule regulates the VOC content of paints available during construction. Therefore, all paints and

² SCAQMD. Final 2016 Air Quality Management Plan. <http://www.aqmd.gov/home/air-quality/clean-air-plans/air-quality-mgt-plan/final-2016-aqmp>

solvents used during construction and operation of project must comply with Rule 1113.

- **SCAQMD Rule 1143** governs the manufacture, sale, and use of paint thinners and solvents used in thinning of coating materials, cleaning of coating application equipment, and other solvent cleaning operations by limiting their VOC content. This rule regulates the VOC content of solvents used during construction. Solvents used during the construction phase must comply with this rule.
- **SCAQMD Rule 1186** limits the presence of fugitive dust on paved and unpaved roads and sets certification protocols and requirements for street sweepers that are under contract to provide sweeping services to any federal, state, county, agency or special district such as water, air, sanitation, transit, or school district.

2.5 Local Climate and Meteorology

The project is located in the South Coast Air Basin (SCAB). Climatological data from the nearest weather station to the project site is summarized in Table 6.

**Table 6
Meteorological Summary¹**

Month	Temperature (°F)			Mean Precipitation (inches) Max.
	Max.	Min.	Mean	
January	66.1	36.3	51.1	2.66
February	68.4	38.7	53.5	3.25
March	69.6	41.1	55.4	1.96
April	76.7	44.4	60.5	0.66
May	82.1	49.6	65.9	0.31
June	91.9	54.0	72.9	0.05
July	97.4	58.9	78.1	0.03
August	98.0	59.4	78.7	0.24
September	92.6	57.5	75.0	0.15
October	84.2	49.2	66.8	0.25
November	73.8	39.8	56.8	0.66
December	67.6	34.5	51.0	1.02
Annual	80.7	46.9	63.8	11.22

¹ Source: Western Regional Climate Center 2016-2022. Averages derived from measurements recorded between 1893 and 2016 at Sun City, (048655).

2.6 Local Air Quality

The air quality at any site is dependent on the regional air quality and local pollutant sources. Regional air quality is determined by the release of pollutants throughout the air basin. Estimates of the existing emissions in the Basin provided in the Final 2016 Air Quality Management Plan, prepared by SCAQMD, March 2017, indicate that collectively, mobile sources account for 60 percent of the VOC, 90 percent of the NOx emissions, 95 percent of the CO emissions and 34 percent of directly emitted PM2.5, with another 13 percent of PM2.5 from road dust.

The SCAQMD has divided the SCAB into fourteen general forecasting areas and thirty-eight Source Receptor Areas (SRA) for monitoring and reporting local air quality. The SCAQMD provides daily reports of the current air quality conditions in each general forecast area and SRA. The monitoring areas provide a general representation of the local meteorological, terrain, and air quality conditions within the SCAB.

The project is located within the Hemet/Elsinore Area general forecasting area and the Perris Valley air monitoring area (SRA-24). For air quality data do not present within the Perris Valley air monitoring station, air quality data is derived from the nearest adjacent stations such as Lake Elsinore (SRA-25) and Metropolitan Riverside County 1 (SRA 23.1).

Table 7 summarizes the published air quality monitoring for the most recent 3-year period available. These pollutant levels were used to comprise a “background” for the project location and existing local air quality.

**Table 7
Local Air Quality**

Air Pollutant Location	Averaging Time	Item	2018	2019	2020
Carbon Monoxide -- Lake Elsinore	1 Hour	Max 1-Hour (ppm)	1.1	1.6	0.9
		Exceeded State Standard (20 ppm)	No	No	No
		Exceeded National Standard (35 ppm)	No	No	No
	8 Hour	Max 8 Hour (ppm)	0.8	0.7	0.7
		Days > State Standard (9 ppm)	No	No	No
		Days > National Standard (9 ppm)	No	No	No
Ozone -- Perris Valley	1 Hour	Max 1-Hour (ppm)	0.117	0.118	0.125
		Days > State Standard (0.09 ppm)	31.0	26.0	34.0
	8 Hour	Max 8 Hour (ppm)	0.103	0.095	0.106
		Days > State Standard (0.070 ppm)	67	64	74
		Days > National Standard (0.070 ppm)	67	64	74
Nitrogen Dioxide -- Lake Elsinore	1 Hour	Max 1-Hour (ppm)	0.041	0.038	0.044
		Exceeded State Standard (0.18 ppm)	No	No	No
	Annual	Annual Average (ppm)	0.009	0.007	0.007
		Exceeded State Standard (0.030 ppm)	No	No	No
Sulfur Dioxide -- Metropolitan Riverside County 1	1 Hour	Max 1 Hour (ppm)	0.0017	0.0018	0.0022
		Exceeded State Standard (0.25 ppm)	No	No	No
		Exceeded National Standard (0.075 ppm)	No	No	No
Suspended Particles (PM10) -- Perris Valley	24 Hour	Max 24-Hour ($\mu\text{g}/\text{m}^3$)	64	97	77
		Days > State Standard ($50 \mu\text{g}/\text{m}^3$)	3	4	6
		Days > National Standard ($150 \mu\text{g}/\text{m}^3$)	0	0	0
	Annual	Annual Average ($\mu\text{g}/\text{m}^3$)	29.70	25.30	35.90
		Exceeded State Standard ($20 \mu\text{g}/\text{m}^3$)	Yes	Yes	Yes
Fine Particulates (PM2.5) -- Metropolitan Riverside County 1	24 Hour	Max 24-Hour ($\mu\text{g}/\text{m}^3$)	50.70	46.70	41.00
		Days > National Standard ($35 \mu\text{g}/\text{m}^3$)	2	4	4
	Annual	Annual Average ($\mu\text{g}/\text{m}^3$)	12.41	11.13	12.63
		Exceeded State Standard ($12 \mu\text{g}/\text{m}^3$)	Yes	No	Yes
		Exceeded National Standard ($15 \mu\text{g}/\text{m}^3$)	No	No	No

Source : <https://www.aqmd.gov/home/air-quality/historical-air-quality-data/historical-data-by-year>

$\mu\text{g}/\text{m}^3$ = micrograms per cubic meter
 ARB = California Air Resource Board
 EPA= Environmental Protection Agency
 ppm = part per million
 (-) = Data not provided

3.0 Global Climate Change Setting

Global climate change is the change in the average weather of the earth that is measured by such things as alterations in temperature, wind patterns, storms, and precipitation. Current data shows that the recent period of warming is occurring more rapidly than past geological events. The average global surface temperature has increased by approximately 1.4° Fahrenheit since the early 20th Century. 1.4° Fahrenheit may seem like a small change, but it's an unusual event in Earth's recent history, and as we are seeing, even small changes in temperature can cause enormous changes in the environment.

The planet's climate record, preserved in tree rings, ice cores, and coral reefs, shows that the global average temperature has been stable over long periods of time. For example, at the end of the last ice age, when the Northeast United States was covered by more than 3,000 feet of ice, average global temperatures were only 5° to 9° Fahrenheit cooler than today. The Intergovernmental Panel on Climate Change (IPCC), which includes more than 1,300 scientists from the United States and other countries, forecasts a temperature rise of 2.5° to 10° Fahrenheit over the next century. Therefore, significant changes to the environment are expected in the near future.

The consequences of global climate change include more frequent and severe weather, worsening air pollution by increasing ground-level ozone, higher rates of plant and animal extinction, more acidic and oxygen-depleted oceans, strain on food and water resources, and threats to densely populated coastal and low lying areas from sea level rise.

The impacts of climate change are already visible in the Southwest United States. In California, the consequences of climate change include;

- A rise in sea levels resulting in the displacement of coastal businesses and residencies
- A reduction in the quality and supply of water from the Sierra snowpack
- Increased risk of large wildfires
- Exacerbation of air quality problems
- Reductions in the quality and quantity of agricultural products
- An increased temperature and extreme weather events
- A decrease in the health and productivity of California's forests

3.1 Greenhouse Gases

GHGs comprise less than 0.1 percent of the total atmospheric composition, yet they play an essential role in influencing climate. Greenhouse gases include naturally occurring compounds such as carbon dioxide (CO₂), methane (CH₄), water vapor (H₂O), and nitrous oxide (N₂O), while others are synthetic. Man-made GHGs include the chlorofluorocarbons (CFCs), hydrofluorocarbons (HFCs) and Perfluorocarbons (PFCs), as well as sulfur hexafluoride (SF₆). Different GHGs have different effects on the Earth's warming. GHGs differ from each other in their ability to absorb energy (their "radiative efficiency") and how long they stay in the atmosphere, also known as the "lifetime".

The Global Warming Potential (GWP) was developed to allow comparisons of the global warming impacts of different gases. Specifically, it is a measure of how much energy the emissions of 1 ton of a gas will absorb over a given period of time, relative to the emissions of 1 ton of CO₂. The larger the GWP, the more that a given gas warms the Earth compared to CO₂ over that time period. The time period usually used for GWPs is 100 years. GWPs provide a common unit of measure, which allows analysts to add up emissions estimates of different gases and allows policymakers to compare emissions reduction opportunities across sectors and gases.

Table 8 lists the 100-year GWP of GHGs from the Intergovernmental Panel on Climate Change (IPCC) fifth assessment report (AR5) and IPCC sixth (6th) assessment report (AR6).

Table 8
Global Warming Potential of Greenhouse Gases^{1, 2}

Gas Name	Formula	Lifetime (years)	GWP
Carbon Dioxide	CO ₂		1
Methane	CH ₄ (Fossil Origin)	12	29.8
	CH ₄ (Non-Fossil Origin)		27.2
Nitrous Oxide	N ₂ O	114	273
Sulphur Hexafluoride	SF ₆	3200	23,500
Nitrogen Trifluoride	NF ₃	740	16,100
Chlorofluorocarbon (CFC-11)	CFC-11	52	8,321
Hexafluoroethane (PFC-116)	C ₂ F ₆	10,000	11,100
Octafluoropropane (PFC-218)	C ₃ F ₈	2,600	8,900
Octafluorocyclobutane (PFC-318)	C ₄ F ₈	3,200	9,540
Tetrafluoromethane (PFC-14)	CF ₄	50,000	5,301
Hydrofluorocarbon 125	HFC-125	29	3,170
Hydrofluorocarbon 134a	HFC-134a	14	1,526
Hydrofluorocarbon 143a	HFC-143a	52	4,800
Hydrofluorocarbon 152a	HFC-152a	1	138
Hydrofluorocarbon 227ea	HFC-227ea	34	3,350
Hydrofluorocarbon 23	HFC-23	270	12,400
Hydrofluorocarbon 236fa	HFC-236fa	240	8,060
Hydrofluorocarbon 245fa	HFC-245fa	8	858
Hydrofluorocarbon 32	HFC-32	5	771
Hydrofluorocarbon 365mfc	HFC-365mfc	9	804
Hydrofluorocarbon 43-10mee	HFC-43-10mee	16	1,650

¹ Source: IPCC Sixth Assessment Report (AR6),
https://www.ipcc.ch/report/ar6/wg1/downloads/report/IPCC_AR6_WGI_Full_Report.pdf &
https://www.ipcc.ch/site/assets/uploads/2018/02/WG1AR5_Chapter08_FINAL.pdf

² GWPs are used to convert GHG emission values to "carbon dioxide equivalent" (CO₂e) units

3.2 GHG Regulatory Setting – State of California

The State of California has been a leader in climate change legislation and has passed numerous bills to reduce greenhouse gas emissions across all sectors of the economy. Some of the key climate legislation in the State include the following:

- **Assembly Bill (AB) 32, California Global Warming Solutions Act of 2006.** AB 32 set the stage for the State’s transition to a sustainable, low-carbon future. AB 32 was the first program in the country to take a comprehensive, long-term approach to addressing climate change.³
- **Senate Bill (SB) 375, Sustainable Communities & Climate Protection Act of 2008.** SB 375 requires the Air Resources Board to develop regional greenhouse gas emission reduction targets for passenger vehicles GHG reduction targets for 2020 and 2035 for each region covered by the State's 18 metropolitan planning organizations.⁴
- **Senate Bill (SB) 100, California Renewables Portfolio Standard Program.** SB 100 established a landmark policy requiring renewable energy and zero-carbon resources supply 100 percent of electric retail sales to end-use customers by 2045.⁵

³ California Air Resources Board. AB 32 Global Warming Solutions Act of 2006.

<https://ww2.arb.ca.gov/resources/fact-sheets/ab-32-global-warming-solutions-act-2006>

⁴ California Air Resources Board. Sustainable Communities and Climate Protection Program.

<https://ww2.arb.ca.gov/our-work/programs/sustainable-communities-climate-protection-program/about>

⁵ California Energy Commission. SB 100 Joint Agency Report. <https://www.energy.ca.gov/sb100>

3.3 GHG Emissions Inventory

Table 9 shows the latest GHG emission inventories at the national, state, regional and local levels.

Table 9
GHG Emissions Inventory¹

United States (2019)²	State of California (2019)³	SCAG (2020)⁴
6,558 MMTCO ₂ e	418 MMTCO ₂ e	216.4 MMTCO ₂ e

¹ MMTCO₂e = Million Metric Tons of Carbon Dioxide Equivalent

² <https://www.epa.gov/ghgemissions/inventory-us-greenhouse-gas-emissions-and-sinks>

³ https://ww3.arb.ca.gov/cc/inventory/pubs/reports/2000_2019/ghg_inventory_trends_00-19.pdf

⁴ <http://www.scag.ca.gov/programs/Pages/GreenhouseGases.aspx>. Projected Emission from SACG - Regional GHG Inventory and Reference Case Projections, 1990-2035, dated May 30, 2012.

4.0 Modeling Parameters and Assumptions

The California Emissions Estimator Model Version 2020.4.1 (CalEEMod) was used to calculate criteria air pollutants and GHG emissions from the construction and operation of the project. CalEEMod is a statewide land use emissions computer model designed to provide a uniform platform for government agencies, land use planners, and environmental professionals to quantify criteria air pollutant and GHG emissions.

The model quantifies direct emissions from construction and operation activities (including vehicle use), as well as indirect emissions, such as GHG emissions from off-site energy generation, solid waste disposal, vegetation planting and/or removal, and water use. The model also identifies mitigation measures to reduce criteria pollutant and GHG emissions. The model was developed for the California Air Pollution Control Officers Association (CAPCOA) in collaboration with the California air districts.

4.1 Construction Assumptions

Construction of the project is assumed to begin in the year 2024 and last approximately 39 months. Construction phases are assumed to consist of site preparation, grading, building construction, paving, and architectural coating. The project site is expected to require the export of 10,000 cubic yards of earthwork material during the grading phase. The project is expected to construct a total of 367,462 square feet of on-site and off-site street improvements as part of the project.

Construction phases are not expected to overlap.

The project's construction schedule is based on the CalEEMod defaults with an exception of the building construction phase, which has been adjusted to meet the project's 2027 opening year timeframe.

The CalEEMod default construction equipment list is based on survey data and the size of the site. The parameters used to estimate construction emissions, such as the worker and vendor trips and trip lengths, utilize the CalEEMod defaults. The construction equipment list is shown in Table 10.

The quantity of fugitive dust estimated by CalEEMod is based on the number of equipment used during site preparation and grading. CalEEMod estimates the worst-case fugitive dust impacts will occur during the grading phase. The maximum daily disturbance footprint would be 5 acres per 8-hour day with all equipment in use.

Based on recent discussions with SCAQMD, the Fact Sheet for Applying CalEEMod to Localized Significance Thresholds should no longer be used to determine disturbance acreage.

**Table 10
Construction Equipment Assumptions Phase ¹**

Phase	Equipment	Amount	Hours Per Day	Soil Disturbance Rate (Acres/ 8hr-Day)	Equipment Daily Disturbance Footprint (Acres)	Total Phase Daily Disturbance Footprint (Acres)
Site Preparation	Rubber Tired Dozers	3	8	0.5	1.5	3.5
	Tractors/Loaders/Backhoes	4	8	0.5	2.0	
Grading	Excavators	2	8	0.0	0.0	5.0
	Graders	1	8	0.5	0.5	
	Rubber Tired Dozers	1	8	0.5	0.5	
	Scrapers	2	8	1.0	2.0	
	Tractors/Loaders/Backhoes	2	8	0.5	1.000	
Building Construction	Cranes	1	7	0.0	0.0	1.3
	Forklifts	3	8	0.0	0.0	
	Generator Sets	1	8	0.0	0.0	
	Tractors/Loaders/Backhoes	3	7	0.5	1.3	
	Welders	1	8	0.0	0.0	
Paving	Pavers	2	8	0.0	0.0	1.0
	Paving Equipment	2	8	0.0	0.0	
	Tractors/Loaders/Backhoes	2	8	0.5	1.0	
Architectural Coating	Air Compressors	1	6	0.0	0.0	0.0

¹ CalEEMod Defaults

4.2 Localized Construction Analysis Modeling Parameters

CalEEMod calculates construction emissions based on the number of equipment hours and the maximum daily disturbance activity possible for each piece of equipment. This report identifies the following parameters in the project design or applicable mitigation measures in order to compare CalEEMod reported emissions against the localized significance threshold lookup tables:

- 1) The off-road equipment list (including type of equipment, horsepower, and hours of operation) assumed for the day of construction activity with maximum emissions.
- 2) The maximum number of acres disturbed on the peak day.
- 3) Any emission control devices added onto off-road equipment.

- 4) Specific dust suppression techniques used on the day of construction activity with maximum emissions.

4.3 Operational Assumptions

Operational emissions occur over the life of the project and are considered “long-term” sources of emissions. Operational emissions include both direct and indirect sources. This section briefly describes the operational sources of emissions analyzed for the project.

4.3.1 Mobile Source Emissions

Mobile source emissions are the largest source of long-term air pollutants from the operation of the project. Mobile sources are direct sources of project emissions that are primarily attributed to tailpipe exhaust and road dust (tire, brake, clutch, and road surface wear) from motor vehicles traveling to and from the site.

Estimates of mobile source emissions require information on four parameters: trip generation, trip length, vehicle/fleet mix, and emission factors (quantity of emission for each mile traveled or time spent idling by each vehicle).

The trip generation rates for this project are based on the latest version of the ITE Trip Generation Manual 11th Edition.

Trip summary information is shown in Table 11.

Table 11
Trip Generation Rates

Land Use	ITE Code	Units ¹	Daily Trip Rate ²		
			Weekday	Saturday	Sunday
Senior Adult Housing – Detached	251	DU	4.31	2.84	2.49

¹ DU = Dwelling Unit; TSF = Thousand Square Feet

² Source: ITE Trip Generation Manual 11th Edition

Operational vehicle trip assumptions include trip lengths, trip types, and diverted/pass-by trips. The CalEEMod default trip assumptions are shown in Table 12.

Table 12
Operational Vehicle Trip Assumptions¹

Land Use	Residential Trips ²								
	Trip Length (miles)			Trip Percent (%)			Trip Type (%)		
	H-W	H-S	H-O	H-W	H-S	H-O	Prim.	Divert	Pass-By
Senior Adult Housing – Detached	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3

¹ CalEEMod Defaults

² Residential Trips:

H-W = Home-Work; H-S = Home-Shopping; H-O = Home-Other.

The Emission Factors (EMFAC) 2017 model is used to estimate the mobile source emissions are embedded in the CalEEMod emissions model. No adjustments have been made to default emission factors.

The project’s total vehicle miles traveled is shown in Table 13 for this project.

Table 13
Operational Vehicle Miles Traveled

Land Use	Annual Vehicle Miles Traveled (VMT)
Senior Adult Housing – Detached	2,427,545

¹ CalEEMod Defaults

The operational vehicle fleet mix has been adjusted to reflect vehicle types used for the typical home-based trips generated by the project. The Southern California Association of Governments (SCAG) regional travel demand model does not include heavy-duty trucks, buses, or other large vehicles that would require passenger car equivalent (PCE) adjustments for residential home-based trips. To be conservative, the Air Quality/GHG analysis has assumed that 2% of the total home-based trips will include trucks with a gross vehicle weight rating (GVWR) of 10,000 pounds or greater. This includes LHD2, MHD, HHD, OBUS, UBUS, and SBUS vehicles. The 2% mix is also consistent with the default Highway Capacity Manual (HCM) assumptions.

Table 14 summarizes the vehicle mix used for this project.

**Table 14
Vehicle Mix for Trips¹**

YUY	Vehicle Mix (%)
Light Duty Automobile (LDA)	55.83%
Light Duty Truck (LDT1)	5.83%
Light Duty Truck (LDT2)	17.94%
Medium Duty Truck (MDV)	13.55%
Light Heavy Truck (LHD1)	2.48%
Light Heavy Truck (LHD2)	0.32%
Medium Heavy Truck (MHD)	0.54%
Heavy Heavy Truck (HHD)	0.85%
Other Bus (OBUS)	0.03%
Urban Bus (UBUS)	0.01%
Motorcycle (MCY)	2.37%
School Bus (SBUS)	0.05%
Motor Home (MH)	0.21%
Total	100.0%

¹ Fleet mix adjusted to 2% Heavy Trucks (GVWR > 10,000 lbs).

4.3.2 Energy Source Emissions

Energy usage includes both direct and indirect sources of emissions. Direct sources of emissions include on-site natural gas usage (non-hearth) for heating, while indirect emissions include electricity generated by offsite power plants. Natural gas use is measured in units of a thousand British Thermal Units (kBtu) per size metric for each land use subtype and electricity use is measured in kilowatt hours (kWh) per size metric for each land use subtype.

CalEEMod divides building electricity and natural gas use into uses that are subject to Title 24 standards and those that are not. Lighting electricity usage is also calculated as a separate category in CalEEMod. For electricity, Title 24 uses include the major building envelope systems covered by Part 6 (California Energy Code) of Title 24, such as space heating, space cooling, water heating, and ventilation. Non-Title 24 uses include all other end uses, such as appliances, electronics, and other miscellaneous plug-in uses. Because some lighting is not considered as part of the building envelope energy budget, and since a

separate mitigation measure is applicable to this end use, CalEEMod makes lighting a separate category.

For natural gas, uses are likewise categorized as Title 24 or Non-Title 24. Title 24 uses include building heating and hot water end uses. Non-Title 24 natural gas uses include cooking and appliances (including pool/spa heaters).

The baseline values are based on the California Energy Commission (CEC) sponsored California Commercial End Use Survey (CEUS) and Residential Appliance Saturation Survey (RASS) studies.

Table 15 shows the total annual expected electricity and natural gas usage for the proposed project.

Table 15
Electricity and Natural Gas Usage

Land Use	Electricity Usage ¹ (KWhr/yr) ²	Natural Gas Usage ¹ (KBTU/yr) ²
Single-Family Residential	1,473,460.00	5,233,080.00
Parking Lot	128,612.00	0.00
Total	1,602,072.0	5,233,080.0

¹ CalEEMod default estimates.

² KWhr/yr = Kilowatt Hours per Year

KBTU/yr = Thousand British Thermal Units per Year

4.3.3 Area Source Emissions

Area source emissions are direct sources of emissions that fall under four categories; hearths, consumer products, architectural coatings, and landscaping equipment. Per SCAQMD rule 445, no wood-burning devices are allowed in new developments; therefore, no wood hearths are included in this project.

Consumer products are various solvents used in non-industrial applications which emit ROG's during their product use. These typically include cleaning supplies, kitchen aerosols, cosmetics, and toiletries.

4.3.4 Other Sources of Operational Emissions

Water. Greenhouse gas emissions are generated from the upstream energy required to supply and treat the water used on the project site. Indirect emissions from water usage are counted as part of the project’s overall impact. The estimated water usage for the project is reported in Table 16 and recommendations to reduce water usage are discussed in Section 6.0.

Waste. CalEEMod calculates the indirect GHG emissions associated with waste that is disposed of at a landfill. The program uses annual waste disposal rates from the California Department of Resources Recycling and Recovery (CalRecycle) data for individual land uses. The program quantifies the GHG emissions associated with the decomposition of the waste which generates methane based on the total amount of degradable organic carbon.

The estimated waste generation by the project is reported in Table 16 and recommendations to reduce waste generation in landfills are discussed in Section 6.0

Table 16
Operational Water and Waste

Land Use	Water Usage (Million gallons/year) ¹			Waste Generation (MT/year) ¹
	Indoor	Outdoor	Total	
Single-Family Residential	12.05350	7.59894	19.65244	216.89
Parking Lot	-	-	-	-
Total	12.05350	7.59894	19.65244	216.89

¹ CalEEMod default estimates.

5.0 Significance Thresholds

5.1 Air Quality Regional Significance Thresholds

The SCAQMD has established air quality emissions thresholds for criteria air pollutants for the purposes of determining whether a project may have a significant effect on the environment per Section 15002(g) of the Guidelines for implementing CEQA. By complying with the thresholds of significance, the project would be in compliance with the SCAQMD Air Quality Management Plan (AQMP) and the federal and state air quality standards.

Table 17 lists the air quality significance thresholds for the six air pollutants analyzed in this report. Lead is not included as part of this analysis as the project is not expected to emit lead in any significant measurable quantity.

Table 17
SCAQMD Regional Significance Thresholds

Pollutant	Construction (lbs/day)	Operation (lbs/day)
NO _x	100	55
VOC	75	55
PM ₁₀	150	150
PM _{2.5}	55	55
SO _x	150	150
CO	550	550

¹ Source: <http://www.aqmd.gov/docs/default-source/ceqa/handbook/scaqmd-air-quality-significance-thresholds.pdf>

5.2 Air Quality Localized Significance Thresholds

Air quality emissions were analyzed using the SCAQMD's Mass Rate Localized Significant Threshold (LST) Look-up Tables.

Table 18 lists the Localized Significance Thresholds (LST) used to determine whether a project may generate significant adverse localized air quality impacts. LSTs represent the maximum emissions from a project that are not expected to cause or contribute to an exceedance of the most stringent applicable federal or state ambient air quality standard.

LSTs are developed based on the ambient concentrations of four applicable air pollutants for source receptor area (SRA) 24 – Perris Valley.

The nearest existing sensitive receptors are located along the northern, southern, and western property lines of the site, less than 25 meters from potential areas of on-site construction and operational activity. Although receptors are located closer than 25 meters to the site, SCAQMD LST methodology states that projects with boundaries located closer than 25 meters to the nearest receptor should use the LSTs for receptors located at 25 meters. The daily disturbance area is calculated to be 5.0 acres.

Table 18
SCAQMD Localized Significance Thresholds¹ (LST)

Pollutant	Construction (lbs/day)	Operational (lbs/day)
NO_x	270.0	270.0
CO	1,577.0	1,577.0
PM₁₀	13.0	4.0
PM_{2.5}	8.0	2.0

¹ Source: SCAQMD Mass Rate Localized Significance Thresholds for a 5-acre site in SRA-24 at 25 meters

5.3 Microscale CO Concentration Standards

The significance of localized CO impacts depends on whether ambient CO levels in the vicinity of the project are above or below federal or state standards. If ambient levels are below the standards, a project is considered to have a significant impact if project emissions result in an exceedance of the AAQS. If ambient levels already exceed State or federal standards, project emissions are considered significant if they increase 1-hour CO concentrations by 1.0 ppm or more or 8-hour CO concentrations by 0.45 ppm or more.

Current CO levels in the SCAB are in attainment of both federal and state standards, and local air quality monitoring data indicates there have not been any localized exceedances of CO over the past three years. Therefore, the project must not contribute to an exceedance of a federal or state ambient air quality standard.

5.4 GHG Significance Thresholds

5.4.1 SCAQMD Interim and Draft GHG Thresholds

For GHG emissions, there is not, at this time, one established, universally agreed-upon “threshold of significance” by which to measure an impact. While the CARB published some draft thresholds in 2008, they were never adopted, and the CARB recommended that local air districts and lead agencies adopt their own thresholds for GHG impacts.

The SCAQMD has been evaluating GHG significance thresholds since April 2008. In December 2008, the SCAQMD adopted an interim 10,000 metric tons CO_{2e} (MTCO_{2e}) per year screening level threshold for stationary source/industrial projects for which the SCAQMD is the lead agency. The SCAQMD has continued to consider adoption of significance thresholds for residential and general development projects.

The SCAQMD’s most recent proposal issued in September 2012 describes the following five-tiered approach for determining GHG Significance Thresholds from various uses.

- **Tier 1** - If a project is exempt from CEQA, project-level and cumulative GHG emissions are less than significant.
- **Tier 2** - If the project complies with a GHG emissions reduction plan or mitigation program that avoids or substantially reduces GHG emissions in the project’s geographic area (i.e., city or county), project-level and cumulative GHG emissions are less than significant.

For projects that are not exempt or where no qualifying GHG reduction plans are directly applicable, SCAQMD requires an assessment based on the following tiers.

- **Tier 3** - Consists of screening values that are intended to capture 90 percent of the GHG emissions from projects. If a project’s emissions are under the screening thresholds, then the project is less than significant. SCAQMD has presented two options that lead agencies could choose for screening values. Option #1 sets the thresholds for residential projects to 3,500 MTCO_{2e}/year, commercial projects to 1,400 MTCO_{2e}/year, and the mixed use to 3,000 MTCO_{2e}/year. Option #2 sets a single numerical threshold for all non-industrial projects of 3,000 MTCO_{2e}/year. The current staff recommendation is to use option #2, but allows lead agencies to choose option #1 if they prefer. Regardless of which option a lead agency chooses to follow, it is recommended that the same option is consistently used for all projects.

Table 19 shows the screening levels described in option #2, which has been used previously in the City of Perris.

Table 19
SCAQMD Tier 3 GHG Screening Values

Land Use	Screening Value
Industrial Projects	10,000 MTCO ₂ e/Yr
Residential/Commercial Projects	3,000 MTCO ₂ e/Yr

- **Tier 4** - includes three performance standard compliance options to demonstrate that a project is not significant for GHG emissions.

Compliance Option 1 consists of achieving a target percentage reduction in emission compared to the business as usual (BAU) methodology. The project proponent would need to incorporate design features into the project and/or implement GHG mitigation measures to demonstrate a 30 percent reduction in GHG emissions below BAU that is consistent with the current applicable goals of AB 32 in the State of the California.

Compliance Option 2 consists of early compliance with AB 32 through early implementation of CARB’s Scoping Plan Measures. This option is intended for projects in sectors subject to the Scoping Plan Measures.

Compliance Option 3 consists of establishing efficiency-based performance standards at the plan level (program-level projects such as general plans) and project level. Efficiency standards are based on the amount of GHG emissions (MTCO₂e/year) per Service Population (SP). SP is defined as the sum of the residential and employment populations provided by a project.

Table 20
SCAQMD Tier 4 Efficiency Thresholds

Project Type	Efficiency Thresholds ¹	
	Target Year 2020	Target Year 2035
Plan (Program) Level	6.6 MTCO ₂ e/yr/SP	4.1 MTCO ₂ e/yr/SP
Project Level	4.8 MTCO ₂ e/yr/SP	3.0 MTCO ₂ e/yr/SP

- **Tier 5** – involves implementing off-site mitigation or the purchasing of offsets to reduce GHG emissions to less than the proposed screening level. The project proponent would be required to provide offsets for the life of the project, which is defined as 30 years.

The thresholds identified above have not been adopted by the SCAQMD nor 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.

In the absence of other thresholds of significance promulgated by the SCAQMD, the City of Perris has been using the SCAQMD's 10,000 MTCO_{2e} threshold for industrial projects and the draft thresholds for non-industrial projects the purpose of evaluating the GHG impacts associated with proposed general development projects. By complying with the SCAQMD GHG thresholds of significance, the project is considered to be in compliance with the applicable State GHG legislation. Other lead agencies through the SCAB have also been using these adopted and draft thresholds.

6.0 Air Quality Impact Analysis

Consistent with CEQA and the State CEQA Guidelines, a significant impact related to air quality would occur if the proposed project is determined to:

- 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 in non-attainment under an applicable Federal or State ambient air quality standard.
- c) Expose sensitive receptors to substantial pollutant concentrations.
- d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

6.1 Short-Term Air Quality Impacts - Construction

6.1.1 Regional Emissions - Construction

Regional air quality emissions include both on-site and off-site emissions associated with construction of the project. Regional daily emissions of criteria pollutants are compared to the SCAQMD regional thresholds of significance.

As shown in Table 21, regional daily emissions of criteria pollutants are expected to be below the allowable thresholds of significance.

CalEEMod daily emissions outputs are provided in Appendix A.

**Table 21
Regional Construction Emissions - Unmitigated**

Maximum Daily Emissions (lbs/day) ¹						
Activity	VOC	NO _x	CO	SO ₂	PM ₁₀	PM _{2.5}
Site Preparation	2.72	27.21	18.95	0.04	8.95	5.05
Grading	3.32	34.19	28.87	0.07	5.40	2.79
Building Construction	2.31	16.68	24.82	0.06	3.63	1.41
Paving	1.36	8.60	15.00	0.02	0.59	0.43
Architectural Coating	40.04	1.21	3.06	0.01	0.55	0.18
Maximum¹	40.04	34.19	28.87	0.07	8.95	5.05
SCAQMD Threshold	75	100	550	150	150	55
Exceeds Threshold (?)	No	No	No	No	No	No

¹ Maximum daily emission during summer or winter; includes both on-site and off-site project emissions.

The project must follow all standard SCAQMD rules and requirements with regards to fugitive dust control, as described in Section 6.1.3. Compliance with the dust control is considered a standard requirement and included as part of the project's design features, not mitigation.

Table 21 shows that the project's daily construction emissions will be below the applicable SCAQMD regional air quality standards and thresholds of significance. As a result, the project would not contribute substantially to an existing or projected air quality violation.

Furthermore, by complying with the SCAQMD standards, the project would not contribute to a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable Federal or State ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors).

The project's short-term construction impact on regional air resources is less than significant.

6.1.2 Localized Emissions - Construction

Table 22 illustrates the construction related localized emissions and compares the results to SCAQMD LST thresholds.

Table 22
Localized Construction Emissions

Maximum Daily Emissions (lbs/day) ¹				
Activity	NOx	CO	PM ₁₀	PM _{2.5}
On-site Emissions	32.38	27.72	8.75	5.00
SCAQMD Construction Threshold ²	270.0	1,577.0	13.0	8.0
Exceeds Threshold (?)	No	No	No	No

¹ Maximum daily emission during summer or winter; includes on-site project emissions only.

² Reference 2006-2008 SCAQMD Mass Rate Localized Significant Thresholds for construction and operation. SRA-24, Perris Valley, 5-acre site, receptor distance 25 meters.

As shown in Table 22, localized daily emissions of criteria pollutants are expected to be below the allowable thresholds of significance. **The project's short-term construction impact to localized air resources is less than significant.**

6.1.3 Fugitive Dust - Construction

The Project is required to comply with regional rules that assist in reducing short-term air pollutant emissions associated with suspended particulate matter, also known as fugitive dust. Fugitive dust emissions are commonly associated with land clearing activities, cut-and-fill grading operations, and exposure of soils to the air and wind. SCAQMD Rule 403 requires that fugitive dust is controlled with best-available control measures so that the presence of such dust does not remain visible in the atmosphere beyond the property line of the emission source. In addition, SCAQMD Rules 402 and 403 require the implementation of dust suppression techniques to prevent fugitive dust from creating a nuisance off-site.

Applicable suppression techniques are as follows:

1. All active construction areas shall be watered two (2) times daily.
2. Speed on unpaved roads shall be reduced to less than 15 mph.

3. Any visible dirt deposition on any public roadway shall be swept or washed at the site access points within 30 minutes.
4. Any on-site stockpiles of debris, dirt or other dusty material shall be covered or watered twice daily.
5. All operations on any unpaved surface shall be suspended if winds exceed 15 mph.
6. Access points shall be washed or swept daily.
7. Construction sites shall be sandbagged for erosion control.
8. Apply nontoxic chemical soil stabilizers according to manufacturers' specifications to all inactive construction areas (previously graded areas inactive for 10 days or more).
9. Cover all trucks hauling dirt, sand, soil, or other loose materials, and maintain at least 2 feet of freeboard space in accordance with the requirements of California Vehicle Code (CVC) section 23114.
10. Pave or gravel construction access roads at least 100 feet onto the site from the main road and use gravel aprons at truck exits.
11. Replace the ground cover of disturbed areas as quickly possible.
12. A fugitive dust control plan should be prepared and submitted to SCAQMD prior to the start of construction.

Localized construction emissions, shown in Section 6.1.2, indicate daily construction emissions, with standard control measures, would be below the applicable thresholds established by the SCAQMD. **The proposed project's short-term construction activities would cause less than significant Fugitive Dust impacts.**

6.1.4 Odors - Construction

Heavy-duty equipment in the project area during construction will emit odors; however, the construction activity would cease to occur after individual construction is completed. The project is required to comply with Rule 402 during construction, which states that a person shall not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property. No other sources of objectionable odors have been identified for the proposed Project. **Therefore, the project impact from odor emissions is less than significant.**

6.1.5 Asbestos - Construction

Based on the California Division of Mines and Geology General Location Guide for Ultramafic Rocks in California - Areas More Likely to Contain Naturally Occurring Asbestos, naturally occurring asbestos, found in serpentine and ultramafic rock, has not been shown to occur within in the vicinity of the project site. Therefore, the potential risk for naturally occurring asbestos (NOA) during project construction is small. However, in the event NOA is found on the site, the project will be required to comply with the National Emission Standard for Hazardous Air Pollutants (NESHAP) standards. An Asbestos NESHAP Notification Form shall be completed and submitted to the CARB immediately upon discovery of the contaminant. The project will be required to follow NESHAP standards for emissions control during site renovation, waste transport and waste disposal. A person certified in asbestos removal procedures will be required to supervise on-site activities.

Prior to demolition of existing structures, an asbestos evaluation must be completed in accordance with the Asbestos NESHAP regulations. Section 61.145 requires written notification of demolition operations. Asbestos NESHAP demolition/Renovation Notification Form can be downloaded at <http://www.arb.ca.gov/enf/asbestosform.pdf>.

This notification should be typewritten and postmarked or delivered no later than ten (10) days prior to the beginning of the asbestos demolition or removal activity.

By following the required asbestos abatement protocols, **the project impact is less than significant.**

6.1.6 Diesel Particulate Matter - Construction

The greatest potential for toxic air contaminant emissions from the project would be related to diesel particulate matter (DPM) emissions associated with off-road diesel equipment used during construction. According to SCAQMD methodology, health effects from carcinogenic air toxics are usually described in terms of "individual cancer risk". "Individual Cancer Risk" is the likelihood that a person exposed to concentrations of toxic air contaminants over a 30-year lifetime will contract cancer, based on the use of standard risk-assessment methodology.

As shown in Tables 21 and 22, construction-based particulate matter (PM) emissions (including diesel exhaust emissions) do not exceed regional or local thresholds with the recommended mitigation measures. Given the short-term construction schedule, the

proposed project's construction activity is not expected to be a long-term (i.e., 30 years) substantial source of toxic air contaminant emissions and corresponding individual cancer risk.

However, it should be noted that a quantified diesel health risk assessment (HRA) was not included within the scope of this analysis. In September 2000, the CARB adopted the Diesel Risk Reduction Plan, which recommends several control measures to reduce the risks associated with diesel particulate matter (DPM). The key elements of the Plan are to clean up existing engines through engine retrofit emission control devices, to adopt stringent standards for new diesel engines, to lower the sulfur content of diesel fuel, and implement advanced technology emission control devices on diesel engines.

The project is located adjacent to residential uses surrounding the project site, therefore, in order to ensure the level of DPM exposure is reduced as much as possible, the project will implement the best available pollution control strategies to minimize potential health risks. The following DPM control measures include:

- Utilize low emission "clean diesel" equipment with new or modified engines (Tier 4 or better) that include diesel oxidation catalysts, diesel particulate filters or Moyer Program retrofits that meet CARB best available control technology.
- Establish staging areas for the construction equipment that are as distant as possible from adjacent sensitive receptors;
- Establish an electricity supply to the construction site and use electric powered equipment instead of diesel-powered equipment or generators, where feasible;
- Use haul trucks with on-road engines instead of off-road engines for on-site hauling.
- Provide temporary dust barriers or construct perimeter walls during the first phase of construction.

6.2 Long Term Air Quality Impacts - Operation

6.2.1 Regional Emissions - Operation

Long-term operational air pollutant impacts from the project are shown in Table 23. The project is not expected to exceed any of the allowable daily emissions thresholds for criteria pollutants at the regional level. CalEEMod daily emissions outputs are provided in Appendix A.

The project's daily operational emissions will be below the applicable SCAQMD regional air quality standards and thresholds of significance, and the project would not contribute substantially to an existing or projected air quality violation. Furthermore, by complying with the SCAQMD standards, the project would not contribute to a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable Federal or State ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors).

The project related long-term air quality impacts are less than significant.

**Table 23
Regional Operational Emissions**

Maximum Daily Emissions (lbs/day) ¹						
Activity	VOC	NO _x	CO	SO ₂	PM ₁₀	PM _{2.5}
Mobile Sources	2.22	2.18	21.68	0.05	5.75	1.55
Energy Sources	0.15	1.32	0.56	0.01	0.11	0.11
Area Sources	8.14	3.24	16.59	0.02	0.33	0.33
Total	10.52	6.75	38.83	0.08	6.19	1.99
SCAQMD Threshold	55	55	550	150	150	55
Exceeds Threshold (?)	No	No	No	No	No	No

¹ Maximum daily emission during summer or winter; includes both on-site and off-site project emissions.

6.2.2 Localized Operational Emissions

Table 24 shows the localized operational emissions and compares the results to SCAQMD Localized Significance Thresholds (LST) thresholds of significance. As shown in Table 24, the emissions will be below the SCAQMD thresholds of significance for localized

operational emissions. **The project will result in less than significant localized operational emissions impacts.**

**Table 24
Localized Operational Emissions**

Maximum Daily Emissions (lbs/day) ¹				
LST Pollutants	NOx (lbs/day)	CO (lbs/day)	PM ₁₀ (lbs/day)	PM _{2.5} (lbs/day)
On-site Emissions ²	4.68	18.24	0.7	0.5
SCAQMD Operation Threshold ³	270.0	1,577.0	4.0	2.0
Exceeds Threshold (?)	No	No	No	No

¹ Maximum daily emission in summer or winter.

² Mobile source emissions include on-site vehicle emissions only. It is estimated that approximately 5% of mobile emissions will occur on the project site.

³ Reference: 2006-2008 SCAQMD Mass Rate Localized Significant Thresholds for construction and operation Table C-1 through C-6; SRA 24, Perris Valley, disturbance area of 5 acres and receptor distance of 25 meters.

6.2.3 Odors - Operation

Land uses that commonly receive odor complaints include agricultural uses (farming and livestock), chemical plants, composting operations, dairies, fiberglass molding facilities, food processing plants, landfills, refineries, rail yards, and wastewater treatment plants. The proposed project does not contain land uses that would typically be associated with significant odor emissions.

The project will be required to comply with standard building code requirements related to exhaust ventilation, as well as comply with SCAQMD Rule 402. Rule 402 requires that a person may not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property. Project related odors are not expected to meet the criteria of being a nuisance. **The project's operation would result in less than significant odor impacts.**

6.2.4 Toxic Air Contaminants - Operations

The project would consist of residential senior adult housing. This type of project does not include major sources of toxic air contaminants (TAC) emissions that would result in significant exposure of sensitive receptors to substantial pollutant concentrations. Therefore, **the project impact is considered less than significant.**

6.3 CO Hot Spot Emissions

A CO hot spot is a localized concentration of carbon monoxide (CO) that is above the state one-hour standard of 20 ppm or the eight-hour standard of 9 ppm. At the time of the publishing of the 1993 CEQA Air Quality Handbook, the SCAB was designated nonattainment, and projects were required to perform hot spot analyses to ensure they did not exacerbate an existing problem. Since this time, the SCAB has achieved attainment status and the potential for hot spots caused by vehicular traffic congestion has been greatly reduced. In fact, the SCAQMD Air Quality Management Plan (AQMP) found that peak CO concentrations were primarily the result of unusual meteorological and topographical conditions, not traffic congestion. Additionally, the 2003 SCAQMD AQMP found that, at four of the busiest intersections in SCAB, there were no CO hot spots concentrations.

Therefore, it is reasonable to conclude that the project would not significantly increase traffic congestion in the vicinity of the site that would lead to the formation of CO Hot Spots. **The project impact to CO Hot Spots is less than significant.**

7.0 Greenhouse Gas Impact Analysis

Consistent with CEQA Guidelines, a significant impact related to greenhouse gas would occur if the proposed project is determined to:

- 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 emissions of greenhouse gases.

7.1 Greenhouse Gas Emissions - Construction

Greenhouse gas emissions are estimated for on-site and off-site construction activity using CalEEMod. Table 25 shows the construction greenhouse gas emissions, including equipment and worker vehicle emissions for all phases of construction. Construction emissions are averaged over 30 years and added to the long-term operational emissions, pursuant to SCAQMD recommendations.

CalEEMod annual GHG output calculations are provided in Appendix B.

**Table 25
Construction Greenhouse Gas Emissions**

Activity	Emissions (MTCO ₂ e) ¹		
	On-site	Off-site	Total
Site Preparation	50.59	2.25	52.84
Grading	206.10	40.54	246.64
Building Construction	758.16	1,010.74	1,768.90
Paving	55.50	3.20	58.70
Architectural Coating	7.03	9.39	16.42
Total	1,077.38	1,066.12	2,143.50
Amortized over 30 years²	35.91	35.54	71.45

¹ MTCO₂e = metric tons of carbon dioxide equivalents (includes carbon dioxide, methane, nitrous oxide, and/or hydrofluorocarbon).

² The emissions are amortized over 30 years and added to the operational emissions, pursuant to SCAQMD recommendations.

Because impacts from construction activities occur over a relatively short-term period of time, they contribute a relatively small portion of the overall lifetime project GHG emissions. By itself, the construction activities from this project are less than significant when compared to the thresholds recommended by SCAQMD. However, SCAQMD recommends that construction emissions be amortized over a 30-year project lifetime and added to the overall project operational emissions. In doing so, construction GHG emissions are included in the overall contribution of the project, as further discussed in the following section.

7.2 Greenhouse Gas Emissions - Operation

Greenhouse gas emissions are estimated for on-site and off-site operational activity using CalEEMod. Greenhouse gas emissions from mobile sources, area sources, and energy sources are shown in Table 26. CalEEMod annual GHG output calculations are provided in Appendix B.

Table 26
Operational Greenhouse Gas Emissions

Emission Source	GHG Emissions (MTCO₂e)¹
Mobile Source	716.29
Energy Source	566.50
Area Source	47.89
Water	59.43
Waste	109.07
Construction (30-year average)	71.45
Total Annual Emissions	1,570.63
SCAQMD Tier 3 Screening Threshold ²	3,000
Exceed Tier 3 Threshold?	No

¹ MTCO₂e = metric tons of carbon dioxide equivalents

² Per South Coast Air Quality Management District (SCAQMD) Draft Guidance Document - Interim CEQA Greenhouse Gas (GHG) Significance Threshold, October 2008

As shown in Table 26, the project GHG emissions are expected to be below the SCAQMD's 3,000 MTCO₂e draft Tier 3 threshold of significance for residential projects.

The project related long-term GHG impacts are less than significant.

The project will also be required to comply with the mandatory requirements of Title 24 part 11 of the California Building Standards Code (CALGreen) and Title 24 Part 6 Building Efficiency Standards to further reduce energy usage and GHG emissions. CALGreen and building code compliance are considered part of the project's design features.

The project will not conflict with an applicable plan, policy or regulation for the purpose of reducing the emissions of greenhouse gases and the impact is considered less than significant.

8.0 References

The following references were used in the preparing this analysis.

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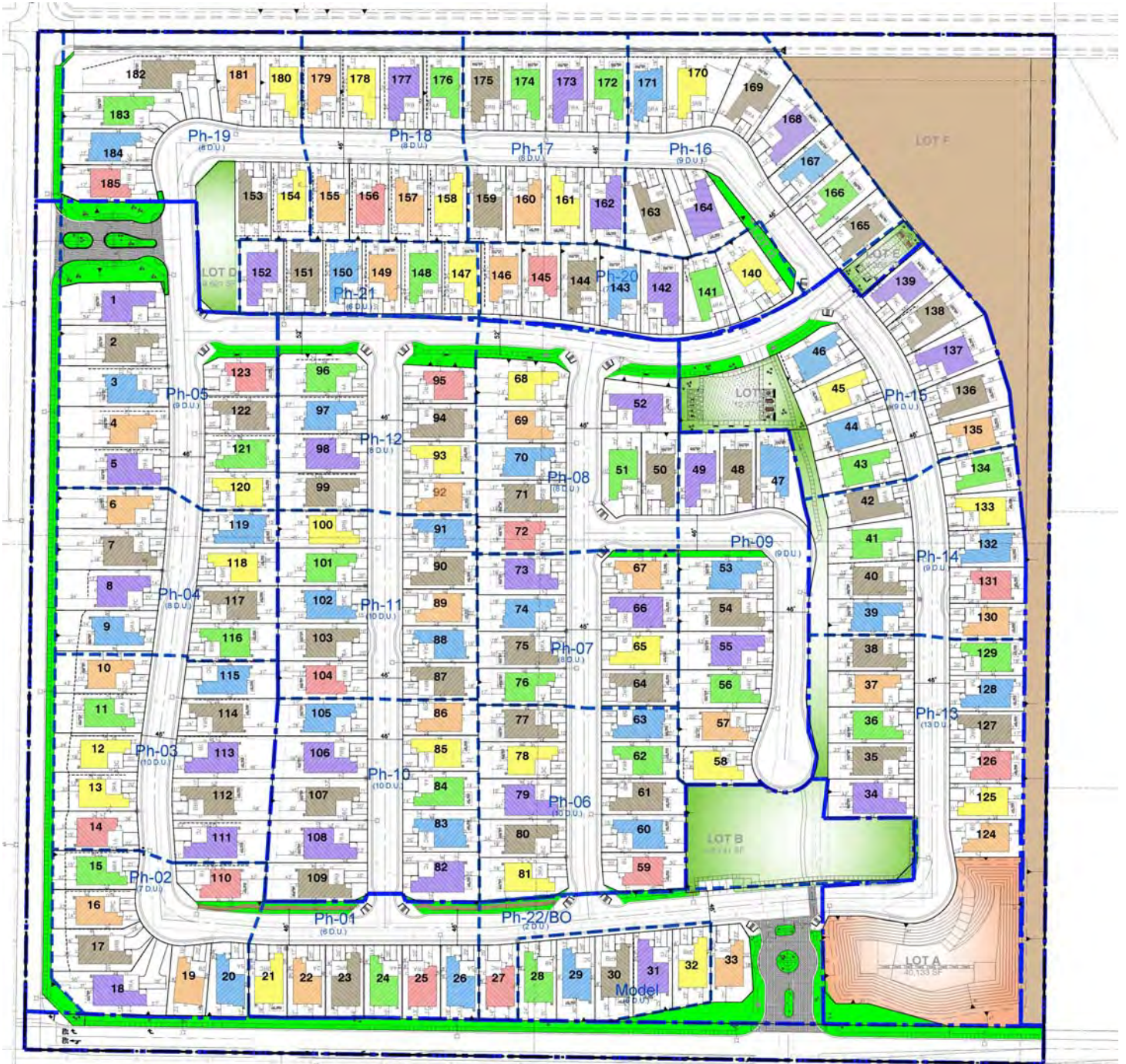
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U.S Environmental Protection Agency 2010a, Final GHG Tailoring Rule, 40 CFR Parts 51, 52, 70, et al., May 2010.

Exhibits





Appendices

Appendix A

Daily Emissions Calculations Output
(CalEEMod)

PACIFIC EMERALD TRACT 37904 - Riverside-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

PACIFIC EMERALD TRACT 37904

Riverside-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Single Family Housing	185.00	Dwelling Unit	33.27	333,000.00	529
Parking Lot	367.46	1000sqft	8.44	367,462.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.4	Precipitation Freq (Days)	28
Climate Zone	10			Operational Year	2027
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 -

Land Use - Land use quantities based on latest project description.

Construction Phase - Construction duration adjusted to meet project schedule.

Grading - 10,000 CY of export during grading phase.

Vehicle Trips - Trip generation rates based on ITE 11th Edition Land Use 251 - Senior Adult Housing - Single Family

Fleet Mix - Fleet mix adjusted to 2% Heavy Trucks (GVWR > 10,000 lbs)

Woodstoves - Per SCAQMD Rule 445, no wood burning fireplaces are allowed.

Construction Off-road Equipment Mitigation - Project will be required to comply with SCAQMD Rule 403 regarding fugitive dust control.

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	740.00	650.00

PACIFIC EMERALD TRACT 37904 - Riverside-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblConstructionPhase	PhaseEndDate	5/5/2028	10/22/2027
tblConstructionPhase	PhaseEndDate	12/3/2027	5/21/2027
tblConstructionPhase	PhaseEndDate	1/31/2025	11/22/2024
tblConstructionPhase	PhaseEndDate	2/18/2028	8/6/2027
tblConstructionPhase	PhaseEndDate	10/18/2024	8/9/2024
tblConstructionPhase	PhaseStartDate	2/19/2028	8/7/2027
tblConstructionPhase	PhaseStartDate	2/1/2025	11/23/2024
tblConstructionPhase	PhaseStartDate	10/19/2024	8/10/2024
tblConstructionPhase	PhaseStartDate	12/4/2027	5/22/2027
tblConstructionPhase	PhaseStartDate	9/7/2024	7/1/2024
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	NumberGas	157.25	185.00
tblFireplaces	NumberNoFireplace	18.50	0.00
tblFireplaces	NumberWood	9.25	0.00
tblFleetMix	HHD	0.02	8.5000e-003
tblFleetMix	LDA	0.54	0.56
tblFleetMix	LDT1	0.06	0.06
tblFleetMix	LDT2	0.18	0.18
tblFleetMix	LHD1	0.02	0.02
tblFleetMix	LHD2	6.8550e-003	3.1580e-003
tblFleetMix	MCY	0.02	0.02
tblFleetMix	MDV	0.13	0.14
tblFleetMix	MH	4.4640e-003	2.0560e-003
tblFleetMix	MHD	0.01	5.3690e-003
tblFleetMix	OBUS	6.0800e-004	2.8000e-004
tblFleetMix	SBUS	1.0890e-003	5.0200e-004
tblFleetMix	UBUS	2.9300e-004	1.3500e-004
tblGrading	MaterialExported	0.00	10,000.00
tblLandUse	LotAcreage	60.06	33.27

PACIFIC EMERALD TRACT 37904 - Riverside-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblVehicleTrips	ST_TR	9.54	2.84
tblVehicleTrips	SU_TR	8.55	2.49
tblVehicleTrips	WD_TR	9.44	4.31
tblWoodstoves	NumberCatalytic	9.25	0.00
tblWoodstoves	NumberNoncatalytic	9.25	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00

2.0 Emissions Summary

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	3.3227	34.0863	28.8726	0.0730	19.8582	1.3564	21.0885	10.1558	1.2486	11.2876	0.0000	7,168.1494	7,168.1494	1.9625	0.2635	7,263.6938
2025	2.1587	15.4608	24.2113	0.0608	2.9826	0.5607	3.5434	0.8027	0.5276	1.3303	0.0000	6,106.9645	6,106.9645	0.6586	0.2561	6,199.7337
2026	2.1151	15.3972	23.7659	0.0599	2.9826	0.5601	3.5427	0.8027	0.5270	1.3297	0.0000	6,031.4961	6,031.4961	0.6553	0.2492	6,122.1255
2027	40.0376	15.3392	23.3855	0.0591	2.9826	0.5594	3.5420	0.8026	0.5263	1.3290	0.0000	5,959.9831	5,959.9831	0.7160	0.2426	6,048.5725
Maximum	40.0376	34.0863	28.8726	0.0730	19.8582	1.3564	21.0885	10.1558	1.2486	11.2876	0.0000	7,168.1494	7,168.1494	1.9625	0.2635	7,263.6938

PACIFIC EMERALD TRACT 37904 - Riverside-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	8.1428	3.2448	16.5916	0.0204		0.3329	0.3329		0.3329	0.3329	0.0000	3,945.2097	3,945.2097	0.1016	0.0718	3,969.1534
Energy	0.1546	1.3213	0.5622	8.4300e-003		0.1068	0.1068		0.1068	0.1068		1,686.7313	1,686.7313	0.0323	0.0309	1,696.7547
Mobile	2.2207	2.0485	21.6771	0.0485	5.7210	0.0308	5.7518	1.5215	0.0287	1.5502		5,121.5211	5,121.5211	0.2339	0.1845	5,182.3403
Total	10.5181	6.6146	38.8309	0.0773	5.7210	0.4705	6.1915	1.5215	0.4684	1.9899	0.0000	10,753.4621	10,753.4621	0.3678	0.2872	10,848.2485

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	8.1428	3.2448	16.5916	0.0204		0.3329	0.3329		0.3329	0.3329	0.0000	3,945.2097	3,945.2097	0.1016	0.0718	3,969.1534
Energy	0.1546	1.3213	0.5622	8.4300e-003		0.1068	0.1068		0.1068	0.1068		1,686.7313	1,686.7313	0.0323	0.0309	1,696.7547
Mobile	2.2207	2.0485	21.6771	0.0485	5.7210	0.0308	5.7518	1.5215	0.0287	1.5502		5,121.5211	5,121.5211	0.2339	0.1845	5,182.3403
Total	10.5181	6.6146	38.8309	0.0773	5.7210	0.4705	6.1915	1.5215	0.4684	1.9899	0.0000	10,753.4621	10,753.4621	0.3678	0.2872	10,848.2485

PACIFIC EMERALD TRACT 37904 - Riverside-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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
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	8/9/2024	5	30	
2	Grading	Grading	8/10/2024	11/22/2024	5	75	
3	Building Construction	Building Construction	11/23/2024	5/21/2027	5	650	
4	Paving	Paving	5/22/2027	8/6/2027	5	55	
5	Architectural Coating	Architectural Coating	8/7/2027	10/22/2027	5	55	

Acres of Grading (Site Preparation Phase): 45

Acres of Grading (Grading Phase): 225

Acres of Paving: 8.44

Residential Indoor: 674,325; Residential Outdoor: 224,775; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 22,048 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Building Construction	Cranes	1	7.00	231	0.29
Grading	Excavators	2	8.00	158	0.38
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Grading	Graders	1	8.00	187	0.41

PACIFIC EMERALD TRACT 37904 - Riverside-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45

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	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	1,250.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	221.00	80.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	44.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Soil Stabilizer

Replace Ground Cover

Water Exposed Area

Water Unpaved Roads

Reduce Vehicle Speed on Unpaved Roads

PACIFIC EMERALD TRACT 37904 - Riverside-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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					19.6570	0.0000	19.6570	10.1025	0.0000	10.1025			0.0000			0.0000
Off-Road	2.6609	27.1760	18.3356	0.0381		1.2294	1.2294		1.1310	1.1310		3,688.010 0	3,688.010 0	1.1928		3,717.829 4
Total	2.6609	27.1760	18.3356	0.0381	19.6570	1.2294	20.8864	10.1025	1.1310	11.2335		3,688.010 0	3,688.010 0	1.1928		3,717.829 4

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	0.0613	0.0362	0.6183	1.7100e-003	0.2012	9.0000e-004	0.2021	0.0534	8.3000e-004	0.0542		176.7466	176.7466	3.7500e-003	3.9200e-003	178.0093
Total	0.0613	0.0362	0.6183	1.7100e-003	0.2012	9.0000e-004	0.2021	0.0534	8.3000e-004	0.0542		176.7466	176.7466	3.7500e-003	3.9200e-003	178.0093

PACIFIC EMERALD TRACT 37904 - Riverside-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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					7.5188	0.0000	7.5188	3.8642	0.0000	3.8642			0.0000			0.0000
Off-Road	2.6609	27.1760	18.3356	0.0381		1.2294	1.2294		1.1310	1.1310	0.0000	3,688.010 0	3,688.010 0	1.1928		3,717.829 4
Total	2.6609	27.1760	18.3356	0.0381	7.5188	1.2294	8.7482	3.8642	1.1310	4.9952	0.0000	3,688.010 0	3,688.010 0	1.1928		3,717.829 4

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	0.0613	0.0362	0.6183	1.7100e-003	0.2012	9.0000e-004	0.2021	0.0534	8.3000e-004	0.0542		176.7466	176.7466	3.7500e-003	3.9200e-003	178.0093
Total	0.0613	0.0362	0.6183	1.7100e-003	0.2012	9.0000e-004	0.2021	0.0534	8.3000e-004	0.0542		176.7466	176.7466	3.7500e-003	3.9200e-003	178.0093

PACIFIC EMERALD TRACT 37904 - Riverside-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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					9.2205	0.0000	9.2205	3.6563	0.0000	3.6563			0.0000			0.0000
Off-Road	3.2181	32.3770	27.7228	0.0621		1.3354	1.3354		1.2286	1.2286		6,009.7487	6,009.7487	1.9437		6,058.3405
Total	3.2181	32.3770	27.7228	0.0621	9.2205	1.3354	10.5559	3.6563	1.2286	4.8849		6,009.7487	6,009.7487	1.9437		6,058.3405

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	0.0364	1.6691	0.4628	9.0000e-003	0.2917	0.0200	0.3117	0.0800	0.0191	0.0991		962.0156	962.0156	0.0146	0.1516	1,007.5651
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	0.0681	0.0402	0.6870	1.9000e-003	0.2236	1.0000e-003	0.2246	0.0593	9.2000e-004	0.0602		196.3851	196.3851	4.1600e-003	4.3600e-003	197.7882
Total	0.1045	1.7093	1.1498	0.0109	0.5152	0.0210	0.5362	0.1393	0.0200	0.1593		1,158.4007	1,158.4007	0.0188	0.1560	1,205.3532

PACIFIC EMERALD TRACT 37904 - Riverside-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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					3.5268	0.0000	3.5268	1.3985	0.0000	1.3985			0.0000			0.0000
Off-Road	3.2181	32.3770	27.7228	0.0621		1.3354	1.3354		1.2286	1.2286	0.0000	6,009.7487	6,009.7487	1.9437		6,058.3405
Total	3.2181	32.3770	27.7228	0.0621	3.5268	1.3354	4.8622	1.3985	1.2286	2.6271	0.0000	6,009.7487	6,009.7487	1.9437		6,058.3405

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	0.0364	1.6691	0.4628	9.0000e-003	0.2917	0.0200	0.3117	0.0800	0.0191	0.0991		962.0156	962.0156	0.0146	0.1516	1,007.5651
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	0.0681	0.0402	0.6870	1.9000e-003	0.2236	1.0000e-003	0.2246	0.0593	9.2000e-004	0.0602		196.3851	196.3851	4.1600e-003	4.3600e-003	197.7882
Total	0.1045	1.7093	1.1498	0.0109	0.5152	0.0210	0.5362	0.1393	0.0200	0.1593		1,158.4007	1,158.4007	0.0188	0.1560	1,205.3532

PACIFIC EMERALD TRACT 37904 - Riverside-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769		2,555.6989	2,555.6989	0.6044		2,570.8077
Total	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769		2,555.6989	2,555.6989	0.6044		2,570.8077

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	0.0888	2.6139	1.0638	0.0138	0.5124	0.0226	0.5350	0.1475	0.0216	0.1692		1,459.3246	1,459.3246	0.0157	0.2153	1,523.8810
Worker	0.7528	0.4446	7.5916	0.0210	2.4703	0.0111	2.4813	0.6551	0.0102	0.6653		2,170.0553	2,170.0553	0.0460	0.0482	2,185.5591
Total	0.8415	3.0585	8.6554	0.0348	2.9827	0.0337	3.0163	0.8027	0.0318	0.8345		3,629.3799	3,629.3799	0.0616	0.2635	3,709.4401

PACIFIC EMERALD TRACT 37904 - Riverside-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769	0.0000	2,555.6989	2,555.6989	0.6044		2,570.8077
Total	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769	0.0000	2,555.6989	2,555.6989	0.6044		2,570.8077

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	0.0888	2.6139	1.0638	0.0138	0.5124	0.0226	0.5350	0.1475	0.0216	0.1692		1,459.3246	1,459.3246	0.0157	0.2153	1,523.8810
Worker	0.7528	0.4446	7.5916	0.0210	2.4703	0.0111	2.4813	0.6551	0.0102	0.6653		2,170.0553	2,170.0553	0.0460	0.0482	2,185.5591
Total	0.8415	3.0585	8.6554	0.0348	2.9827	0.0337	3.0163	0.8027	0.0318	0.8345		3,629.3799	3,629.3799	0.0616	0.2635	3,709.4401

PACIFIC EMERALD TRACT 37904 - Riverside-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963		2,556.474 4	2,556.474 4	0.6010		2,571.498 1
Total	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963		2,556.474 4	2,556.474 4	0.6010		2,571.498 1

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	0.0876	2.5924	1.0518	0.0135	0.5124	0.0226	0.5350	0.1475	0.0217	0.1692		1,433.600 8	1,433.600 8	0.0162	0.2111	1,496.914 6
Worker	0.7037	0.3988	7.0748	0.0203	2.4703	0.0105	2.4808	0.6551	9.6900e-003	0.6648		2,116.889 4	2,116.889 4	0.0415	0.0450	2,131.321 0
Total	0.7913	2.9912	8.1266	0.0338	2.9826	0.0332	3.0158	0.8027	0.0313	0.8340		3,550.490 1	3,550.490 1	0.0577	0.2561	3,628.235 6

PACIFIC EMERALD TRACT 37904 - Riverside-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963	0.0000	2,556.474 4	2,556.474 4	0.6010		2,571.498 1
Total	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963	0.0000	2,556.474 4	2,556.474 4	0.6010		2,571.498 1

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	0.0876	2.5924	1.0518	0.0135	0.5124	0.0226	0.5350	0.1475	0.0217	0.1692		1,433.600 8	1,433.600 8	0.0162	0.2111	1,496.914 6
Worker	0.7037	0.3988	7.0748	0.0203	2.4703	0.0105	2.4808	0.6551	9.6900e-003	0.6648		2,116.889 4	2,116.889 4	0.0415	0.0450	2,131.321 0
Total	0.7913	2.9912	8.1266	0.0338	2.9826	0.0332	3.0158	0.8027	0.0313	0.8340		3,550.490 1	3,550.490 1	0.0577	0.2561	3,628.235 6

PACIFIC EMERALD TRACT 37904 - Riverside-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Building Construction - 2026

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	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963		2,556.474 4	2,556.474 4	0.6010		2,571.498 1
Total	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963		2,556.474 4	2,556.474 4	0.6010		2,571.498 1

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	0.0865	2.5664	1.0418	0.0133	0.5124	0.0225	0.5349	0.1475	0.0216	0.1691		1,407.517 8	1,407.517 8	0.0168	0.2069	1,469.581 8
Worker	0.6611	0.3611	6.6395	0.0197	2.4703	9.9900e-003	2.4803	0.6551	9.1900e-003	0.6643		2,067.503 9	2,067.503 9	0.0376	0.0423	2,081.045 6
Total	0.7477	2.9275	7.6813	0.0329	2.9826	0.0325	3.0152	0.8027	0.0307	0.8334		3,475.021 7	3,475.021 7	0.0544	0.2492	3,550.627 4

PACIFIC EMERALD TRACT 37904 - Riverside-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Building Construction - 2026

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	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963	0.0000	2,556.474 4	2,556.474 4	0.6010		2,571.498 1
Total	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963	0.0000	2,556.474 4	2,556.474 4	0.6010		2,571.498 1

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	0.0865	2.5664	1.0418	0.0133	0.5124	0.0225	0.5349	0.1475	0.0216	0.1691		1,407.517 8	1,407.517 8	0.0168	0.2069	1,469.581 8
Worker	0.6611	0.3611	6.6395	0.0197	2.4703	9.9900e-003	2.4803	0.6551	9.1900e-003	0.6643		2,067.503 9	2,067.503 9	0.0376	0.0423	2,081.045 6
Total	0.7477	2.9275	7.6813	0.0329	2.9826	0.0325	3.0152	0.8027	0.0307	0.8334		3,475.021 7	3,475.021 7	0.0544	0.2492	3,550.627 4

PACIFIC EMERALD TRACT 37904 - Riverside-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Building Construction - 2027

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	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963		2,556.474 4	2,556.474 4	0.6010		2,571.498 1
Total	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963		2,556.474 4	2,556.474 4	0.6010		2,571.498 1

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	2.5403	1.0335	0.0130	0.5124	0.0224	0.5348	0.1475	0.0214	0.1690		1,380.079 5	1,380.079 5	0.0173	0.2025	1,440.853 0
Worker	0.6222	0.3292	6.2673	0.0191	2.4703	9.3800e-003	2.4796	0.6551	8.6400e-003	0.6638		2,023.429 2	2,023.429 2	0.0342	0.0401	2,036.221 4
Total	0.7079	2.8696	7.3008	0.0321	2.9826	0.0318	3.0144	0.8026	0.0301	0.8327		3,403.508 8	3,403.508 8	0.0515	0.2426	3,477.074 4

PACIFIC EMERALD TRACT 37904 - Riverside-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Building Construction - 2027

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	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963	0.0000	2,556.474 4	2,556.474 4	0.6010		2,571.498 1
Total	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963	0.0000	2,556.474 4	2,556.474 4	0.6010		2,571.498 1

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	2.5403	1.0335	0.0130	0.5124	0.0224	0.5348	0.1475	0.0214	0.1690		1,380.079 5	1,380.079 5	0.0173	0.2025	1,440.853 0
Worker	0.6222	0.3292	6.2673	0.0191	2.4703	9.3800e-003	2.4796	0.6551	8.6400e-003	0.6638		2,023.429 2	2,023.429 2	0.0342	0.0401	2,036.221 4
Total	0.7079	2.8696	7.3008	0.0321	2.9826	0.0318	3.0144	0.8026	0.0301	0.8327		3,403.508 8	3,403.508 8	0.0515	0.2426	3,477.074 4

PACIFIC EMERALD TRACT 37904 - Riverside-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Paving - 2027

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	0.9152	8.5816	14.5780	0.0228		0.4185	0.4185		0.3850	0.3850		2,206.745 2	2,206.745 2	0.7137		2,224.587 8
Paving	0.4021					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.3172	8.5816	14.5780	0.0228		0.4185	0.4185		0.3850	0.3850		2,206.745 2	2,206.745 2	0.7137		2,224.587 8

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	0.0422	0.0224	0.4254	1.3000e-003	0.1677	6.4000e-004	0.1683	0.0445	5.9000e-004	0.0451		137.3368	137.3368	2.3200e-003	2.7200e-003	138.2051
Total	0.0422	0.0224	0.4254	1.3000e-003	0.1677	6.4000e-004	0.1683	0.0445	5.9000e-004	0.0451		137.3368	137.3368	2.3200e-003	2.7200e-003	138.2051

PACIFIC EMERALD TRACT 37904 - Riverside-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Paving - 2027

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	0.9152	8.5816	14.5780	0.0228		0.4185	0.4185		0.3850	0.3850	0.0000	2,206.745 2	2,206.745 2	0.7137		2,224.587 8
Paving	0.4021					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.3172	8.5816	14.5780	0.0228		0.4185	0.4185		0.3850	0.3850	0.0000	2,206.745 2	2,206.745 2	0.7137		2,224.587 8

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	0.0422	0.0224	0.4254	1.3000e-003	0.1677	6.4000e-004	0.1683	0.0445	5.9000e-004	0.0451		137.3368	137.3368	2.3200e-003	2.7200e-003	138.2051
Total	0.0422	0.0224	0.4254	1.3000e-003	0.1677	6.4000e-004	0.1683	0.0445	5.9000e-004	0.0451		137.3368	137.3368	2.3200e-003	2.7200e-003	138.2051

PACIFIC EMERALD TRACT 37904 - Riverside-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Architectural Coating - 2027

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	39.7429					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	39.9137	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	0.1239	0.0656	1.2478	3.8100e-003	0.4918	1.8700e-003	0.4937	0.1304	1.7200e-003	0.1322		402.8547	402.8547	6.8100e-003	7.9800e-003	405.4016
Total	0.1239	0.0656	1.2478	3.8100e-003	0.4918	1.8700e-003	0.4937	0.1304	1.7200e-003	0.1322		402.8547	402.8547	6.8100e-003	7.9800e-003	405.4016

PACIFIC EMERALD TRACT 37904 - Riverside-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Architectural Coating - 2027

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	39.7429					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	39.9137	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	0.1239	0.0656	1.2478	3.8100e-003	0.4918	1.8700e-003	0.4937	0.1304	1.7200e-003	0.1322		402.8547	402.8547	6.8100e-003	7.9800e-003	405.4016
Total	0.1239	0.0656	1.2478	3.8100e-003	0.4918	1.8700e-003	0.4937	0.1304	1.7200e-003	0.1322		402.8547	402.8547	6.8100e-003	7.9800e-003	405.4016

PACIFIC EMERALD TRACT 37904 - Riverside-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	2.2207	2.0485	21.6771	0.0485	5.7210	0.0308	5.7518	1.5215	0.0287	1.5502		5,121.521 1	5,121.521 1	0.2339	0.1845	5,182.340 3
Unmitigated	2.2207	2.0485	21.6771	0.0485	5.7210	0.0308	5.7518	1.5215	0.0287	1.5502		5,121.521 1	5,121.521 1	0.2339	0.1845	5,182.340 3

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Parking Lot	0.00	0.00	0.00		
Single Family Housing	797.35	525.40	460.65	2,427,545	2,427,545
Total	797.35	525.40	460.65	2,427,545	2,427,545

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	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
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Single Family Housing	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3

4.4 Fleet Mix

PACIFIC EMERALD TRACT 37904 - Riverside-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Parking Lot	0.544951	0.056922	0.175129	0.132247	0.024165	0.006855	0.011655	0.018450	0.000608	0.000293	0.023172	0.001089	0.004464
Single Family Housing	0.558290	0.058315	0.179416	0.135484	0.024756	0.003158	0.005369	0.008500	0.000280	0.000135	0.023739	0.000502	0.002056

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	0.1546	1.3213	0.5622	8.4300e-003		0.1068	0.1068		0.1068	0.1068		1,686.7313	1,686.7313	0.0323	0.0309	1,696.7547
NaturalGas Unmitigated	0.1546	1.3213	0.5622	8.4300e-003		0.1068	0.1068		0.1068	0.1068		1,686.7313	1,686.7313	0.0323	0.0309	1,696.7547

PACIFIC EMERALD TRACT 37904 - Riverside-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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					
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
Single Family Housing	14337.2	0.1546	1.3213	0.5622	8.4300e-003		0.1068	0.1068		0.1068	0.1068		1,686.7313	1,686.7313	0.0323	0.0309	1,696.7547
Total		0.1546	1.3213	0.5622	8.4300e-003		0.1068	0.1068		0.1068	0.1068		1,686.7313	1,686.7313	0.0323	0.0309	1,696.7547

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					
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
Single Family Housing	14.3372	0.1546	1.3213	0.5622	8.4300e-003		0.1068	0.1068		0.1068	0.1068		1,686.7313	1,686.7313	0.0323	0.0309	1,696.7547
Total		0.1546	1.3213	0.5622	8.4300e-003		0.1068	0.1068		0.1068	0.1068		1,686.7313	1,686.7313	0.0323	0.0309	1,696.7547

6.0 Area Detail

PACIFIC EMERALD TRACT 37904 - Riverside-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	8.1428	3.2448	16.5916	0.0204		0.3329	0.3329		0.3329	0.3329	0.0000	3,945.2097	3,945.2097	0.1016	0.0718	3,969.1534
Unmitigated	8.1428	3.2448	16.5916	0.0204		0.3329	0.3329		0.3329	0.3329	0.0000	3,945.2097	3,945.2097	0.1016	0.0718	3,969.1534

PACIFIC EMERALD TRACT 37904 - Riverside-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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	0.5989					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	6.7236					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.3591	3.0688	1.3059	0.0196		0.2481	0.2481		0.2481	0.2481	0.0000	3,917.647 1	3,917.647 1	0.0751	0.0718	3,940.927 7
Landscaping	0.4613	0.1760	15.2857	8.1000e-004		0.0847	0.0847		0.0847	0.0847		27.5626	27.5626	0.0265		28.2258
Total	8.1428	3.2448	16.5916	0.0204		0.3329	0.3329		0.3329	0.3329	0.0000	3,945.209 7	3,945.209 7	0.1016	0.0718	3,969.153 4

PACIFIC EMERALD TRACT 37904 - Riverside-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	0.5989					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	6.7236					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.3591	3.0688	1.3059	0.0196		0.2481	0.2481		0.2481	0.2481	0.0000	3,917.647 1	3,917.647 1	0.0751	0.0718	3,940.927 7
Landscaping	0.4613	0.1760	15.2857	8.1000e-004		0.0847	0.0847		0.0847	0.0847		27.5626	27.5626	0.0265		28.2258
Total	8.1428	3.2448	16.5916	0.0204		0.3329	0.3329		0.3329	0.3329	0.0000	3,945.209 7	3,945.209 7	0.1016	0.0718	3,969.153 4

7.0 Water Detail

7.1 Mitigation Measures Water

PACIFIC EMERALD TRACT 37904 - Riverside-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
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Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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User Defined Equipment

Equipment Type	Number
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11.0 Vegetation

PACIFIC EMERALD TRACT 37904 - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

PACIFIC EMERALD TRACT 37904

Riverside-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Single Family Housing	185.00	Dwelling Unit	33.27	333,000.00	529
Parking Lot	367.46	1000sqft	8.44	367,462.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.4	Precipitation Freq (Days)	28
Climate Zone	10			Operational Year	2027
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 -

Land Use - Land use quantities based on latest project description.

Construction Phase - Construction duration adjusted to meet project schedule.

Grading - 10,000 CY of export during grading phase.

Vehicle Trips - Trip generation rates based on ITE 11th Edition Land Use 251 - Senior Adult Housing - Single Family

Fleet Mix - Fleet mix adjusted to 2% Heavy Trucks (GVWR > 10,000 lbs)

Woodstoves - Per SCAQMD Rule 445, no wood burning fireplaces are allowed.

Construction Off-road Equipment Mitigation - Project will be required to comply with SCAQMD Rule 403 regarding fugitive dust control.

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	740.00	650.00

PACIFIC EMERALD TRACT 37904 - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblConstructionPhase	PhaseEndDate	5/5/2028	10/22/2027
tblConstructionPhase	PhaseEndDate	12/3/2027	5/21/2027
tblConstructionPhase	PhaseEndDate	1/31/2025	11/22/2024
tblConstructionPhase	PhaseEndDate	2/18/2028	8/6/2027
tblConstructionPhase	PhaseEndDate	10/18/2024	8/9/2024
tblConstructionPhase	PhaseStartDate	2/19/2028	8/7/2027
tblConstructionPhase	PhaseStartDate	2/1/2025	11/23/2024
tblConstructionPhase	PhaseStartDate	10/19/2024	8/10/2024
tblConstructionPhase	PhaseStartDate	12/4/2027	5/22/2027
tblConstructionPhase	PhaseStartDate	9/7/2024	7/1/2024
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	NumberGas	157.25	185.00
tblFireplaces	NumberNoFireplace	18.50	0.00
tblFireplaces	NumberWood	9.25	0.00
tblFleetMix	HHD	0.02	8.5000e-003
tblFleetMix	LDA	0.54	0.56
tblFleetMix	LDT1	0.06	0.06
tblFleetMix	LDT2	0.18	0.18
tblFleetMix	LHD1	0.02	0.02
tblFleetMix	LHD2	6.8550e-003	3.1580e-003
tblFleetMix	MCY	0.02	0.02
tblFleetMix	MDV	0.13	0.14
tblFleetMix	MH	4.4640e-003	2.0560e-003
tblFleetMix	MHD	0.01	5.3690e-003
tblFleetMix	OBUS	6.0800e-004	2.8000e-004
tblFleetMix	SBUS	1.0890e-003	5.0200e-004
tblFleetMix	UBUS	2.9300e-004	1.3500e-004
tblGrading	MaterialExported	0.00	10,000.00
tblLandUse	LotAcreage	60.06	33.27

PACIFIC EMERALD TRACT 37904 - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblVehicleTrips	ST_TR	9.54	2.84
tblVehicleTrips	SU_TR	8.55	2.49
tblVehicleTrips	WD_TR	9.44	4.31
tblWoodstoves	NumberCatalytic	9.25	0.00
tblWoodstoves	NumberNoncatalytic	9.25	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00

2.0 Emissions Summary

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	3.3156	34.1874	28.7533	0.0728	19.8582	1.3564	21.0885	10.1558	1.2486	11.2876	0.0000	7,151.2500	7,151.2500	1.9623	0.2653	7,246.8920
2025	2.1118	15.6327	22.9275	0.0589	2.9826	0.5608	3.5434	0.8027	0.5277	1.3303	0.0000	5,912.6273	5,912.6273	0.6584	0.2578	6,005.9057
2026	2.0725	15.5661	22.5685	0.0581	2.9826	0.5602	3.5428	0.8027	0.5271	1.3297	0.0000	5,842.1083	5,842.1083	0.6552	0.2508	5,933.2237
2027	40.0312	15.5055	22.2613	0.0573	2.9826	0.5594	3.5420	0.8026	0.5264	1.3291	0.0000	5,774.9374	5,774.9374	0.7161	0.2441	5,863.9926
Maximum	40.0312	34.1874	28.7533	0.0728	19.8582	1.3564	21.0885	10.1558	1.2486	11.2876	0.0000	7,151.2500	7,151.2500	1.9623	0.2653	7,246.8920

PACIFIC EMERALD TRACT 37904 - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	8.1428	3.2448	16.5916	0.0204		0.3329	0.3329		0.3329	0.3329	0.0000	3,945.2097	3,945.2097	0.1016	0.0718	3,969.1534
Energy	0.1546	1.3213	0.5622	8.4300e-003		0.1068	0.1068		0.1068	0.1068		1,686.7313	1,686.7313	0.0323	0.0309	1,696.7547
Mobile	1.8875	2.1812	19.1893	0.0447	5.7210	0.0308	5.7518	1.5215	0.0287	1.5502		4,723.9110	4,723.9110	0.2393	0.1893	4,786.3002
Total	10.1849	6.7472	36.3432	0.0735	5.7210	0.4705	6.1915	1.5215	0.4684	1.9899	0.0000	10,355.8520	10,355.8520	0.3732	0.2920	10,452.2083

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	8.1428	3.2448	16.5916	0.0204		0.3329	0.3329		0.3329	0.3329	0.0000	3,945.2097	3,945.2097	0.1016	0.0718	3,969.1534
Energy	0.1546	1.3213	0.5622	8.4300e-003		0.1068	0.1068		0.1068	0.1068		1,686.7313	1,686.7313	0.0323	0.0309	1,696.7547
Mobile	1.8875	2.1812	19.1893	0.0447	5.7210	0.0308	5.7518	1.5215	0.0287	1.5502		4,723.9110	4,723.9110	0.2393	0.1893	4,786.3002
Total	10.1849	6.7472	36.3432	0.0735	5.7210	0.4705	6.1915	1.5215	0.4684	1.9899	0.0000	10,355.8520	10,355.8520	0.3732	0.2920	10,452.2083

PACIFIC EMERALD TRACT 37904 - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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
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	8/9/2024	5	30	
2	Grading	Grading	8/10/2024	11/22/2024	5	75	
3	Building Construction	Building Construction	11/23/2024	5/21/2027	5	650	
4	Paving	Paving	5/22/2027	8/6/2027	5	55	
5	Architectural Coating	Architectural Coating	8/7/2027	10/22/2027	5	55	

Acres of Grading (Site Preparation Phase): 45

Acres of Grading (Grading Phase): 225

Acres of Paving: 8.44

Residential Indoor: 674,325; Residential Outdoor: 224,775; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 22,048 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Building Construction	Cranes	1	7.00	231	0.29
Grading	Excavators	2	8.00	158	0.38
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Grading	Graders	1	8.00	187	0.41

PACIFIC EMERALD TRACT 37904 - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45

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	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	1,250.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	221.00	80.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	44.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Soil Stabilizer

Replace Ground Cover

Water Exposed Area

Water Unpaved Roads

Reduce Vehicle Speed on Unpaved Roads

PACIFIC EMERALD TRACT 37904 - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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					19.6570	0.0000	19.6570	10.1025	0.0000	10.1025			0.0000			0.0000
Off-Road	2.6609	27.1760	18.3356	0.0381		1.2294	1.2294		1.1310	1.1310		3,688.0100	3,688.0100	1.1928		3,717.8294
Total	2.6609	27.1760	18.3356	0.0381	19.6570	1.2294	20.8864	10.1025	1.1310	11.2335		3,688.0100	3,688.0100	1.1928		3,717.8294

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	0.0576	0.0376	0.5023	1.5500e-003	0.2012	9.0000e-004	0.2021	0.0534	8.3000e-004	0.0542		160.1781	160.1781	3.7400e-003	4.0100e-003	161.4679
Total	0.0576	0.0376	0.5023	1.5500e-003	0.2012	9.0000e-004	0.2021	0.0534	8.3000e-004	0.0542		160.1781	160.1781	3.7400e-003	4.0100e-003	161.4679

PACIFIC EMERALD TRACT 37904 - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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					7.5188	0.0000	7.5188	3.8642	0.0000	3.8642			0.0000			0.0000
Off-Road	2.6609	27.1760	18.3356	0.0381		1.2294	1.2294		1.1310	1.1310	0.0000	3,688.010 0	3,688.010 0	1.1928		3,717.829 4
Total	2.6609	27.1760	18.3356	0.0381	7.5188	1.2294	8.7482	3.8642	1.1310	4.9952	0.0000	3,688.010 0	3,688.010 0	1.1928		3,717.829 4

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	0.0576	0.0376	0.5023	1.5500e-003	0.2012	9.0000e-004	0.2021	0.0534	8.3000e-004	0.0542		160.1781	160.1781	3.7400e-003	4.0100e-003	161.4679
Total	0.0576	0.0376	0.5023	1.5500e-003	0.2012	9.0000e-004	0.2021	0.0534	8.3000e-004	0.0542		160.1781	160.1781	3.7400e-003	4.0100e-003	161.4679

PACIFIC EMERALD TRACT 37904 - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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					9.2205	0.0000	9.2205	3.6563	0.0000	3.6563			0.0000			0.0000
Off-Road	3.2181	32.3770	27.7228	0.0621		1.3354	1.3354		1.2286	1.2286		6,009.7487	6,009.7487	1.9437		6,058.3405
Total	3.2181	32.3770	27.7228	0.0621	9.2205	1.3354	10.5559	3.6563	1.2286	4.8849		6,009.7487	6,009.7487	1.9437		6,058.3405

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	0.0335	1.7687	0.4724	9.0200e-003	0.2917	0.0200	0.3117	0.0800	0.0191	0.0991		963.5256	963.5256	0.0145	0.1519	1,009.1427
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	0.0641	0.0417	0.5581	1.7300e-003	0.2236	1.0000e-003	0.2246	0.0593	9.2000e-004	0.0602		177.9757	177.9757	4.1600e-003	4.4600e-003	179.4087
Total	0.0975	1.8104	1.0305	0.0108	0.5152	0.0210	0.5362	0.1393	0.0201	0.1593		1,141.5013	1,141.5013	0.0187	0.1563	1,188.5515

PACIFIC EMERALD TRACT 37904 - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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					3.5268	0.0000	3.5268	1.3985	0.0000	1.3985			0.0000			0.0000
Off-Road	3.2181	32.3770	27.7228	0.0621		1.3354	1.3354		1.2286	1.2286	0.0000	6,009.7487	6,009.7487	1.9437		6,058.3405
Total	3.2181	32.3770	27.7228	0.0621	3.5268	1.3354	4.8622	1.3985	1.2286	2.6271	0.0000	6,009.7487	6,009.7487	1.9437		6,058.3405

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	0.0335	1.7687	0.4724	9.0200e-003	0.2917	0.0200	0.3117	0.0800	0.0191	0.0991		963.5256	963.5256	0.0145	0.1519	1,009.1427
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	0.0641	0.0417	0.5581	1.7300e-003	0.2236	1.0000e-003	0.2246	0.0593	9.2000e-004	0.0602		177.9757	177.9757	4.1600e-003	4.4600e-003	179.4087
Total	0.0975	1.8104	1.0305	0.0108	0.5152	0.0210	0.5362	0.1393	0.0201	0.1593		1,141.5013	1,141.5013	0.0187	0.1563	1,188.5515

PACIFIC EMERALD TRACT 37904 - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769		2,555.6989	2,555.6989	0.6044		2,570.8077
Total	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769		2,555.6989	2,555.6989	0.6044		2,570.8077

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	0.0821	2.7722	1.1000	0.0138	0.5124	0.0227	0.5351	0.1475	0.0217	0.1692		1,462.9717	1,462.9717	0.0154	0.2160	1,527.7329
Worker	0.7077	0.4611	6.1674	0.0191	2.4703	0.0111	2.4813	0.6551	0.0102	0.6653		1,966.6316	1,966.6316	0.0459	0.0493	1,982.4664
Total	0.7898	3.2334	7.2674	0.0329	2.9827	0.0338	3.0164	0.8027	0.0319	0.8346		3,429.6032	3,429.6032	0.0613	0.2653	3,510.1993

PACIFIC EMERALD TRACT 37904 - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769	0.0000	2,555.6989	2,555.6989	0.6044		2,570.8077
Total	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769	0.0000	2,555.6989	2,555.6989	0.6044		2,570.8077

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	0.0821	2.7722	1.1000	0.0138	0.5124	0.0227	0.5351	0.1475	0.0217	0.1692		1,462.9717	1,462.9717	0.0154	0.2160	1,527.7329
Worker	0.7077	0.4611	6.1674	0.0191	2.4703	0.0111	2.4813	0.6551	0.0102	0.6653		1,966.6316	1,966.6316	0.0459	0.0493	1,982.4664
Total	0.7898	3.2334	7.2674	0.0329	2.9827	0.0338	3.0164	0.8027	0.0319	0.8346		3,429.6032	3,429.6032	0.0613	0.2653	3,510.1993

PACIFIC EMERALD TRACT 37904 - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963		2,556.474 4	2,556.474 4	0.6010		2,571.498 1
Total	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963		2,556.474 4	2,556.474 4	0.6010		2,571.498 1

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	0.0810	2.7495	1.0879	0.0135	0.5124	0.0227	0.5351	0.1475	0.0217	0.1693		1,437.204 2	1,437.204 2	0.0159	0.2118	1,500.718 0
Worker	0.6635	0.4135	5.7549	0.0184	2.4703	0.0105	2.4808	0.6551	9.6900e-003	0.6648		1,918.948 8	1,918.948 8	0.0415	0.0460	1,933.689 6
Total	0.7444	3.1630	6.8428	0.0320	2.9826	0.0332	3.0159	0.8027	0.0314	0.8341		3,356.153 0	3,356.153 0	0.0574	0.2578	3,434.407 6

PACIFIC EMERALD TRACT 37904 - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963	0.0000	2,556.474 4	2,556.474 4	0.6010		2,571.498 1
Total	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963	0.0000	2,556.474 4	2,556.474 4	0.6010		2,571.498 1

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	0.0810	2.7495	1.0879	0.0135	0.5124	0.0227	0.5351	0.1475	0.0217	0.1693		1,437.204 2	1,437.204 2	0.0159	0.2118	1,500.718 0
Worker	0.6635	0.4135	5.7549	0.0184	2.4703	0.0105	2.4808	0.6551	9.6900e-003	0.6648		1,918.948 8	1,918.948 8	0.0415	0.0460	1,933.689 6
Total	0.7444	3.1630	6.8428	0.0320	2.9826	0.0332	3.0159	0.8027	0.0314	0.8341		3,356.153 0	3,356.153 0	0.0574	0.2578	3,434.407 6

PACIFIC EMERALD TRACT 37904 - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Building Construction - 2026

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	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963		2,556.474 4	2,556.474 4	0.6010		2,571.498 1
Total	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963		2,556.474 4	2,556.474 4	0.6010		2,571.498 1

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	0.0799	2.7221	1.0778	0.0133	0.5124	0.0226	0.5350	0.1475	0.0216	0.1692		1,411.071 1	1,411.071 1	0.0165	0.2075	1,473.330 3
Worker	0.6252	0.3743	5.4060	0.0179	2.4703	9.9900e-003	2.4803	0.6551	9.1900e-003	0.6643		1,874.562 9	1,874.562 9	0.0377	0.0433	1,888.395 4
Total	0.7051	3.0964	6.4838	0.0311	2.9826	0.0326	3.0152	0.8027	0.0308	0.8335		3,285.634 0	3,285.634 0	0.0542	0.2508	3,361.725 6

PACIFIC EMERALD TRACT 37904 - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Building Construction - 2026

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	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963	0.0000	2,556.474 4	2,556.474 4	0.6010		2,571.498 1
Total	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963	0.0000	2,556.474 4	2,556.474 4	0.6010		2,571.498 1

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	0.0799	2.7221	1.0778	0.0133	0.5124	0.0226	0.5350	0.1475	0.0216	0.1692		1,411.071 1	1,411.071 1	0.0165	0.2075	1,473.330 3
Worker	0.6252	0.3743	5.4060	0.0179	2.4703	9.9900e-003	2.4803	0.6551	9.1900e-003	0.6643		1,874.562 9	1,874.562 9	0.0377	0.0433	1,888.395 4
Total	0.7051	3.0964	6.4838	0.0311	2.9826	0.0326	3.0152	0.8027	0.0308	0.8335		3,285.634 0	3,285.634 0	0.0542	0.2508	3,361.725 6

PACIFIC EMERALD TRACT 37904 - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Building Construction - 2027

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	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963		2,556.474 4	2,556.474 4	0.6010		2,571.498 1
Total	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963		2,556.474 4	2,556.474 4	0.6010		2,571.498 1

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	0.0791	2.6947	1.0696	0.0130	0.5124	0.0225	0.5348	0.1475	0.0215	0.1690		1,383.582 0	1,383.582 0	0.0170	0.2032	1,444.546 2
Worker	0.5900	0.3412	5.1071	0.0173	2.4703	9.3800e-003	2.4796	0.6551	8.6400e-003	0.6638		1,834.881 1	1,834.881 1	0.0344	0.0410	1,847.948 4
Total	0.6691	3.0358	6.1767	0.0304	2.9826	0.0319	3.0145	0.8026	0.0301	0.8328		3,218.463 0	3,218.463 0	0.0514	0.2441	3,292.494 5

PACIFIC EMERALD TRACT 37904 - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Building Construction - 2027

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	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963	0.0000	2,556.474 4	2,556.474 4	0.6010		2,571.498 1
Total	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963	0.0000	2,556.474 4	2,556.474 4	0.6010		2,571.498 1

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	0.0791	2.6947	1.0696	0.0130	0.5124	0.0225	0.5348	0.1475	0.0215	0.1690		1,383.582 0	1,383.582 0	0.0170	0.2032	1,444.546 2
Worker	0.5900	0.3412	5.1071	0.0173	2.4703	9.3800e-003	2.4796	0.6551	8.6400e-003	0.6638		1,834.881 1	1,834.881 1	0.0344	0.0410	1,847.948 4
Total	0.6691	3.0358	6.1767	0.0304	2.9826	0.0319	3.0145	0.8026	0.0301	0.8328		3,218.463 0	3,218.463 0	0.0514	0.2441	3,292.494 5

PACIFIC EMERALD TRACT 37904 - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Paving - 2027

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	0.9152	8.5816	14.5780	0.0228		0.4185	0.4185		0.3850	0.3850		2,206.745 2	2,206.745 2	0.7137		2,224.587 8
Paving	0.4021					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.3172	8.5816	14.5780	0.0228		0.4185	0.4185		0.3850	0.3850		2,206.745 2	2,206.745 2	0.7137		2,224.587 8

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	0.0401	0.0232	0.3466	1.1800e-003	0.1677	6.4000e-004	0.1683	0.0445	5.9000e-004	0.0451		124.5394	124.5394	2.3400e-003	2.7800e-003	125.4264
Total	0.0401	0.0232	0.3466	1.1800e-003	0.1677	6.4000e-004	0.1683	0.0445	5.9000e-004	0.0451		124.5394	124.5394	2.3400e-003	2.7800e-003	125.4264

PACIFIC EMERALD TRACT 37904 - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Paving - 2027

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	0.9152	8.5816	14.5780	0.0228		0.4185	0.4185		0.3850	0.3850	0.0000	2,206.745 2	2,206.745 2	0.7137		2,224.587 8
Paving	0.4021					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.3172	8.5816	14.5780	0.0228		0.4185	0.4185		0.3850	0.3850	0.0000	2,206.745 2	2,206.745 2	0.7137		2,224.587 8

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	0.0401	0.0232	0.3466	1.1800e-003	0.1677	6.4000e-004	0.1683	0.0445	5.9000e-004	0.0451		124.5394	124.5394	2.3400e-003	2.7800e-003	125.4264
Total	0.0401	0.0232	0.3466	1.1800e-003	0.1677	6.4000e-004	0.1683	0.0445	5.9000e-004	0.0451		124.5394	124.5394	2.3400e-003	2.7800e-003	125.4264

PACIFIC EMERALD TRACT 37904 - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Architectural Coating - 2027

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	39.7429					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	39.9137	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	0.1175	0.0679	1.0168	3.4500e-003	0.4918	1.8700e-003	0.4937	0.1304	1.7200e-003	0.1322		365.3157	365.3157	6.8500e-003	8.1600e-003	367.9173
Total	0.1175	0.0679	1.0168	3.4500e-003	0.4918	1.8700e-003	0.4937	0.1304	1.7200e-003	0.1322		365.3157	365.3157	6.8500e-003	8.1600e-003	367.9173

PACIFIC EMERALD TRACT 37904 - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Architectural Coating - 2027

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	39.7429					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	39.9137	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	0.1175	0.0679	1.0168	3.4500e-003	0.4918	1.8700e-003	0.4937	0.1304	1.7200e-003	0.1322		365.3157	365.3157	6.8500e-003	8.1600e-003	367.9173
Total	0.1175	0.0679	1.0168	3.4500e-003	0.4918	1.8700e-003	0.4937	0.1304	1.7200e-003	0.1322		365.3157	365.3157	6.8500e-003	8.1600e-003	367.9173

PACIFIC EMERALD TRACT 37904 - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	1.8875	2.1812	19.1893	0.0447	5.7210	0.0308	5.7518	1.5215	0.0287	1.5502		4,723.9110	4,723.9110	0.2393	0.1893	4,786.3002
Unmitigated	1.8875	2.1812	19.1893	0.0447	5.7210	0.0308	5.7518	1.5215	0.0287	1.5502		4,723.9110	4,723.9110	0.2393	0.1893	4,786.3002

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Parking Lot	0.00	0.00	0.00		
Single Family Housing	797.35	525.40	460.65	2,427,545	2,427,545
Total	797.35	525.40	460.65	2,427,545	2,427,545

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	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
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Single Family Housing	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3

4.4 Fleet Mix

PACIFIC EMERALD TRACT 37904 - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Parking Lot	0.544951	0.056922	0.175129	0.132247	0.024165	0.006855	0.011655	0.018450	0.000608	0.000293	0.023172	0.001089	0.004464
Single Family Housing	0.558290	0.058315	0.179416	0.135484	0.024756	0.003158	0.005369	0.008500	0.000280	0.000135	0.023739	0.000502	0.002056

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	0.1546	1.3213	0.5622	8.4300e-003		0.1068	0.1068		0.1068	0.1068		1,686.7313	1,686.7313	0.0323	0.0309	1,696.7547
NaturalGas Unmitigated	0.1546	1.3213	0.5622	8.4300e-003		0.1068	0.1068		0.1068	0.1068		1,686.7313	1,686.7313	0.0323	0.0309	1,696.7547

PACIFIC EMERALD TRACT 37904 - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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					
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
Single Family Housing	14337.2	0.1546	1.3213	0.5622	8.4300e-003		0.1068	0.1068		0.1068	0.1068		1,686.7313	1,686.7313	0.0323	0.0309	1,696.7547
Total		0.1546	1.3213	0.5622	8.4300e-003		0.1068	0.1068		0.1068	0.1068		1,686.7313	1,686.7313	0.0323	0.0309	1,696.7547

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					
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
Single Family Housing	14.3372	0.1546	1.3213	0.5622	8.4300e-003		0.1068	0.1068		0.1068	0.1068		1,686.7313	1,686.7313	0.0323	0.0309	1,696.7547
Total		0.1546	1.3213	0.5622	8.4300e-003		0.1068	0.1068		0.1068	0.1068		1,686.7313	1,686.7313	0.0323	0.0309	1,696.7547

6.0 Area Detail

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	8.1428	3.2448	16.5916	0.0204		0.3329	0.3329		0.3329	0.3329	0.0000	3,945.2097	3,945.2097	0.1016	0.0718	3,969.1534
Unmitigated	8.1428	3.2448	16.5916	0.0204		0.3329	0.3329		0.3329	0.3329	0.0000	3,945.2097	3,945.2097	0.1016	0.0718	3,969.1534

PACIFIC EMERALD TRACT 37904 - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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	0.5989					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	6.7236					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.3591	3.0688	1.3059	0.0196		0.2481	0.2481		0.2481	0.2481	0.0000	3,917.647 1	3,917.647 1	0.0751	0.0718	3,940.927 7
Landscaping	0.4613	0.1760	15.2857	8.1000e-004		0.0847	0.0847		0.0847	0.0847		27.5626	27.5626	0.0265		28.2258
Total	8.1428	3.2448	16.5916	0.0204		0.3329	0.3329		0.3329	0.3329	0.0000	3,945.209 7	3,945.209 7	0.1016	0.0718	3,969.153 4

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	0.5989					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	6.7236					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.3591	3.0688	1.3059	0.0196		0.2481	0.2481		0.2481	0.2481	0.0000	3,917.647 1	3,917.647 1	0.0751	0.0718	3,940.927 7
Landscaping	0.4613	0.1760	15.2857	8.1000e-004		0.0847	0.0847		0.0847	0.0847		27.5626	27.5626	0.0265		28.2258
Total	8.1428	3.2448	16.5916	0.0204		0.3329	0.3329		0.3329	0.3329	0.0000	3,945.209 7	3,945.209 7	0.1016	0.0718	3,969.153 4

7.0 Water Detail

7.1 Mitigation Measures Water

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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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
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11.0 Vegetation

Appendix B

Annual Emission Calculations Output
(CalEEMod)

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Single Family Housing	185.00	Dwelling Unit	33.27	333,000.00	529
Parking Lot	367.46	1000sqft	8.44	367,462.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.4	Precipitation Freq (Days)	28
Climate Zone	10			Operational Year	2027
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 -

Land Use - Land use quantities based on latest project description.

Construction Phase - Construction duration adjusted to meet project schedule.

Grading - 10,000 CY of export during grading phase.

Vehicle Trips - Trip generation rates based on ITE 11th Edition Land Use 251 - Senior Adult Housing - Single Family

Fleet Mix - Fleet mix adjusted to 2% Heavy Trucks (GVWR > 10,000 lbs)

Woodstoves - Per SCAQMD Rule 445, no wood burning fireplaces are allowed.

Construction Off-road Equipment Mitigation - Project will be required to comply with SCAQMD Rule 403 regarding fugitive dust control.

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	740.00	650.00

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblConstructionPhase	PhaseEndDate	5/5/2028	10/22/2027
tblConstructionPhase	PhaseEndDate	12/3/2027	5/21/2027
tblConstructionPhase	PhaseEndDate	1/31/2025	11/22/2024
tblConstructionPhase	PhaseEndDate	2/18/2028	8/6/2027
tblConstructionPhase	PhaseEndDate	10/18/2024	8/9/2024
tblConstructionPhase	PhaseStartDate	2/19/2028	8/7/2027
tblConstructionPhase	PhaseStartDate	2/1/2025	11/23/2024
tblConstructionPhase	PhaseStartDate	10/19/2024	8/10/2024
tblConstructionPhase	PhaseStartDate	12/4/2027	5/22/2027
tblConstructionPhase	PhaseStartDate	9/7/2024	7/1/2024
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	NumberGas	157.25	185.00
tblFireplaces	NumberNoFireplace	18.50	0.00
tblFireplaces	NumberWood	9.25	0.00
tblFleetMix	HHD	0.02	8.5000e-003
tblFleetMix	LDA	0.54	0.56
tblFleetMix	LDT1	0.06	0.06
tblFleetMix	LDT2	0.18	0.18
tblFleetMix	LHD1	0.02	0.02
tblFleetMix	LHD2	6.8550e-003	3.1580e-003
tblFleetMix	MCY	0.02	0.02
tblFleetMix	MDV	0.13	0.14
tblFleetMix	MH	4.4640e-003	2.0560e-003
tblFleetMix	MHD	0.01	5.3690e-003
tblFleetMix	OBUS	6.0800e-004	2.8000e-004
tblFleetMix	SBUS	1.0890e-003	5.0200e-004
tblFleetMix	UBUS	2.9300e-004	1.3500e-004
tblGrading	MaterialExported	0.00	10,000.00
tblLandUse	LotAcreage	60.06	33.27

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblVehicleTrips	ST_TR	9.54	2.84
tblVehicleTrips	SU_TR	8.55	2.49
tblVehicleTrips	WD_TR	9.44	4.31
tblWoodstoves	NumberCatalytic	9.25	0.00
tblWoodstoves	NumberNoncatalytic	9.25	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00

2.0 Emissions Summary

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	0.1951	1.9149	1.6827	4.1400e-003	0.7022	0.0781	0.7803	0.3053	0.0720	0.3773	0.0000	369.6444	369.6444	0.0912	8.6300e-003	374.4956
2025	0.2713	2.0377	3.0297	7.7400e-003	0.3830	0.0732	0.4561	0.1032	0.0689	0.1721	0.0000	705.0000	705.0000	0.0780	0.0306	716.0620
2026	0.2663	2.0288	2.9802	7.6300e-003	0.3830	0.0731	0.4560	0.1032	0.0688	0.1720	0.0000	696.5204	696.5204	0.0776	0.0298	707.3246
2027	1.2392	1.0521	1.6270	3.7500e-003	0.1660	0.0412	0.2073	0.0447	0.0387	0.0833	0.0000	340.9902	340.9902	0.0483	0.0115	345.6195
Maximum	1.2392	2.0377	3.0297	7.7400e-003	0.7022	0.0781	0.7803	0.3053	0.0720	0.3773	0.0000	705.0000	705.0000	0.0912	0.0306	716.0620

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.1 Overall Construction

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	0.1951	1.9149	1.6827	4.1400e-003	0.3066	0.0781	0.3847	0.1270	0.0720	0.1990	0.0000	369.6441	369.6441	0.0912	8.6300e-003	374.4952
2025	0.2713	2.0377	3.0297	7.7400e-003	0.3830	0.0732	0.4561	0.1032	0.0689	0.1721	0.0000	704.9997	704.9997	0.0780	0.0306	716.0617
2026	0.2663	2.0288	2.9802	7.6300e-003	0.3830	0.0731	0.4560	0.1032	0.0688	0.1720	0.0000	696.5200	696.5200	0.0776	0.0298	707.3242
2027	1.2392	1.0521	1.6270	3.7500e-003	0.1660	0.0412	0.2073	0.0447	0.0387	0.0833	0.0000	340.9900	340.9900	0.0483	0.0115	345.6192
Maximum	1.2392	2.0377	3.0297	7.7400e-003	0.3830	0.0781	0.4561	0.1270	0.0720	0.1990	0.0000	704.9997	704.9997	0.0912	0.0306	716.0617

	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
Percent Reduction	0.00	0.00	0.00	0.00	24.21	0.00	20.82	32.04	0.00	22.15	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	1.1224	1.1224
2	10-1-2024	12-31-2024	0.9737	0.9737
3	1-1-2025	3-31-2025	0.5704	0.5704
4	4-1-2025	6-30-2025	0.5726	0.5726
5	7-1-2025	9-30-2025	0.5789	0.5789
6	10-1-2025	12-31-2025	0.5830	0.5830
7	1-1-2026	3-31-2026	0.5670	0.5670
8	4-1-2026	6-30-2026	0.5691	0.5691

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9	7-1-2026	9-30-2026	0.5754	0.5754
10	10-1-2026	12-31-2026	0.5796	0.5796
11	1-1-2027	3-31-2027	0.5638	0.5638
12	4-1-2027	6-30-2027	0.4595	0.4595
13	7-1-2027	9-30-2027	0.9419	0.9419
		Highest	1.1224	1.1224

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	1.3985	0.0604	1.9270	3.5000e-004		0.0137	0.0137		0.0137	0.0137	0.0000	47.5509	47.5509	3.8600e-003	8.1000e-004	47.8901
Energy	0.0282	0.2411	0.1026	1.5400e-003		0.0195	0.0195		0.0195	0.0195	0.0000	563.3779	563.3779	0.0293	8.0300e-003	566.5032
Mobile	0.3098	0.3564	3.2143	7.3800e-003	0.9123	4.9900e-003	0.9173	0.2429	4.6500e-003	0.2476	0.0000	707.0622	707.0622	0.0351	0.0280	716.2944
Waste						0.0000	0.0000		0.0000	0.0000	44.0267	0.0000	44.0267	2.6019	0.0000	109.0743
Water						0.0000	0.0000		0.0000	0.0000	3.8240	42.8064	46.6304	0.3964	9.7100e-003	59.4340
Total	1.7365	0.6579	5.2440	9.2700e-003	0.9123	0.0382	0.9505	0.2429	0.0378	0.2808	47.8507	1,360.7974	1,408.6482	3.0666	0.0466	1,499.1959

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	1.3985	0.0604	1.9270	3.5000e-004		0.0137	0.0137		0.0137	0.0137	0.0000	47.5509	47.5509	3.8600e-003	8.1000e-004	47.8901
Energy	0.0282	0.2411	0.1026	1.5400e-003		0.0195	0.0195		0.0195	0.0195	0.0000	563.3779	563.3779	0.0293	8.0300e-003	566.5032
Mobile	0.3098	0.3564	3.2143	7.3800e-003	0.9123	4.9900e-003	0.9173	0.2429	4.6500e-003	0.2476	0.0000	707.0622	707.0622	0.0351	0.0280	716.2944
Waste						0.0000	0.0000		0.0000	0.0000	44.0267	0.0000	44.0267	2.6019	0.0000	109.0743
Water						0.0000	0.0000		0.0000	0.0000	3.8240	42.8064	46.6304	0.3964	9.7100e-003	59.4340
Total	1.7365	0.6579	5.2440	9.2700e-003	0.9123	0.0382	0.9505	0.2429	0.0378	0.2808	47.8507	1,360.7974	1,408.6482	3.0666	0.0466	1,499.1959

	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
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	8/9/2024	5	30	
2	Grading	Grading	8/10/2024	11/22/2024	5	75	
3	Building Construction	Building Construction	11/23/2024	5/21/2027	5	650	

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4	Paving	Paving	5/22/2027	8/6/2027	5	55
5	Architectural Coating	Architectural Coating	8/7/2027	10/22/2027	5	55

Acres of Grading (Site Preparation Phase): 45

Acres of Grading (Grading Phase): 225

Acres of Paving: 8.44

Residential Indoor: 674,325; Residential Outdoor: 224,775; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 22,048 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Building Construction	Cranes	1	7.00	231	0.29
Grading	Excavators	2	8.00	158	0.38
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Grading	Graders	1	8.00	187	0.41
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
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45

Trips and VMT

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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	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	1,250.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	221.00	80.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	44.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

- Use Soil Stabilizer
- Replace Ground Cover
- Water Exposed Area
- Water Unpaved Roads
- Reduce Vehicle Speed on Unpaved Roads

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					0.2949	0.0000	0.2949	0.1515	0.0000	0.1515	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0399	0.4076	0.2750	5.7000e-004		0.0184	0.0184		0.0170	0.0170	0.0000	50.1856	50.1856	0.0162	0.0000	50.5914
Total	0.0399	0.4076	0.2750	5.7000e-004	0.2949	0.0184	0.3133	0.1515	0.0170	0.1685	0.0000	50.1856	50.1856	0.0162	0.0000	50.5914

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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	8.2000e-004	5.8000e-004	7.9400e-003	2.0000e-005	2.9700e-003	1.0000e-005	2.9800e-003	7.9000e-004	1.0000e-005	8.0000e-004	0.0000	2.2303	2.2303	5.0000e-005	6.0000e-005	2.2482
Total	8.2000e-004	5.8000e-004	7.9400e-003	2.0000e-005	2.9700e-003	1.0000e-005	2.9800e-003	7.9000e-004	1.0000e-005	8.0000e-004	0.0000	2.2303	2.2303	5.0000e-005	6.0000e-005	2.2482

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					0.1128	0.0000	0.1128	0.0580	0.0000	0.0580	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0399	0.4076	0.2750	5.7000e-004		0.0184	0.0184		0.0170	0.0170	0.0000	50.1855	50.1855	0.0162	0.0000	50.5913
Total	0.0399	0.4076	0.2750	5.7000e-004	0.1128	0.0184	0.1312	0.0580	0.0170	0.0749	0.0000	50.1855	50.1855	0.0162	0.0000	50.5913

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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	8.2000e-004	5.8000e-004	7.9400e-003	2.0000e-005	2.9700e-003	1.0000e-005	2.9800e-003	7.9000e-004	1.0000e-005	8.0000e-004	0.0000	2.2303	2.2303	5.0000e-005	6.0000e-005	2.2482
Total	8.2000e-004	5.8000e-004	7.9400e-003	2.0000e-005	2.9700e-003	1.0000e-005	2.9800e-003	7.9000e-004	1.0000e-005	8.0000e-004	0.0000	2.2303	2.2303	5.0000e-005	6.0000e-005	2.2482

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					0.3458	0.0000	0.3458	0.1371	0.0000	0.1371	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1207	1.2141	1.0396	2.3300e-003		0.0501	0.0501		0.0461	0.0461	0.0000	204.4482	204.4482	0.0661	0.0000	206.1013
Total	0.1207	1.2141	1.0396	2.3300e-003	0.3458	0.0501	0.3959	0.1371	0.0461	0.1832	0.0000	204.4482	204.4482	0.0661	0.0000	206.1013

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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	1.3200e-003	0.0660	0.0175	3.4000e-004	0.0108	7.5000e-004	0.0115	2.9600e-003	7.2000e-004	3.6800e-003	0.0000	32.7488	32.7488	5.0000e-004	5.1600e-003	34.2993
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	2.2700e-003	1.6100e-003	0.0221	7.0000e-005	8.2400e-003	4.0000e-005	8.2800e-003	2.1900e-003	3.0000e-005	2.2200e-003	0.0000	6.1954	6.1954	1.4000e-004	1.5000e-004	6.2450
Total	3.5900e-003	0.0677	0.0396	4.1000e-004	0.0190	7.9000e-004	0.0198	5.1500e-003	7.5000e-004	5.9000e-003	0.0000	38.9442	38.9442	6.4000e-004	5.3100e-003	40.5444

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					0.1323	0.0000	0.1323	0.0525	0.0000	0.0525	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1207	1.2141	1.0396	2.3300e-003		0.0501	0.0501		0.0461	0.0461	0.0000	204.4480	204.4480	0.0661	0.0000	206.1010
Total	0.1207	1.2141	1.0396	2.3300e-003	0.1323	0.0501	0.1823	0.0525	0.0461	0.0985	0.0000	204.4480	204.4480	0.0661	0.0000	206.1010

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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	1.3200e-003	0.0660	0.0175	3.4000e-004	0.0108	7.5000e-004	0.0115	2.9600e-003	7.2000e-004	3.6800e-003	0.0000	32.7488	32.7488	5.0000e-004	5.1600e-003	34.2993
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	2.2700e-003	1.6100e-003	0.0221	7.0000e-005	8.2400e-003	4.0000e-005	8.2800e-003	2.1900e-003	3.0000e-005	2.2200e-003	0.0000	6.1954	6.1954	1.4000e-004	1.5000e-004	6.2450
Total	3.5900e-003	0.0677	0.0396	4.1000e-004	0.0190	7.9000e-004	0.0198	5.1500e-003	7.5000e-004	5.9000e-003	0.0000	38.9442	38.9442	6.4000e-004	5.3100e-003	40.5444

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	0.0199	0.1815	0.2183	3.6000e-004		8.2800e-003	8.2800e-003		7.7900e-003	7.7900e-003	0.0000	31.2996	31.2996	7.4000e-003	0.0000	31.4847
Total	0.0199	0.1815	0.2183	3.6000e-004		8.2800e-003	8.2800e-003		7.7900e-003	7.7900e-003	0.0000	31.2996	31.2996	7.4000e-003	0.0000	31.4847

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	1.1500e-003	0.0370	0.0146	1.9000e-004	6.8200e-003	3.1000e-004	7.1300e-003	1.9700e-003	2.9000e-004	2.2600e-003	0.0000	17.8911	17.8911	1.9000e-004	2.6400e-003	18.6830
Worker	9.0400e-003	6.3900e-003	0.0877	2.6000e-004	0.0328	1.5000e-004	0.0329	8.7100e-003	1.4000e-004	8.8500e-003	0.0000	24.6453	24.6453	5.6000e-004	6.1000e-004	24.8427
Total	0.0102	0.0434	0.1023	4.5000e-004	0.0396	4.6000e-004	0.0401	0.0107	4.3000e-004	0.0111	0.0000	42.5364	42.5364	7.5000e-004	3.2500e-003	43.5257

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	0.0199	0.1815	0.2183	3.6000e-004		8.2800e-003	8.2800e-003		7.7900e-003	7.7900e-003	0.0000	31.2996	31.2996	7.4000e-003	0.0000	31.4846
Total	0.0199	0.1815	0.2183	3.6000e-004		8.2800e-003	8.2800e-003		7.7900e-003	7.7900e-003	0.0000	31.2996	31.2996	7.4000e-003	0.0000	31.4846

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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	1.1500e-003	0.0370	0.0146	1.9000e-004	6.8200e-003	3.1000e-004	7.1300e-003	1.9700e-003	2.9000e-004	2.2600e-003	0.0000	17.8911	17.8911	1.9000e-004	2.6400e-003	18.6830
Worker	9.0400e-003	6.3900e-003	0.0877	2.6000e-004	0.0328	1.5000e-004	0.0329	8.7100e-003	1.4000e-004	8.8500e-003	0.0000	24.6453	24.6453	5.6000e-004	6.1000e-004	24.8427
Total	0.0102	0.0434	0.1023	4.5000e-004	0.0396	4.6000e-004	0.0401	0.0107	4.3000e-004	0.0111	0.0000	42.5364	42.5364	7.5000e-004	3.2500e-003	43.5257

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	0.1785	1.6273	2.0991	3.5200e-003		0.0689	0.0689		0.0648	0.0648	0.0000	302.6549	302.6549	0.0711	0.0000	304.4335
Total	0.1785	1.6273	2.0991	3.5200e-003		0.0689	0.0689		0.0648	0.0648	0.0000	302.6549	302.6549	0.0711	0.0000	304.4335

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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	0.0110	0.3550	0.1394	1.7600e-003	0.0660	2.9600e-003	0.0689	0.0190	2.8300e-003	0.0219	0.0000	169.9000	169.9000	1.9100e-003	0.0250	177.4075
Worker	0.0818	0.0554	0.7912	2.4600e-003	0.3170	1.3700e-003	0.3184	0.0842	1.2700e-003	0.0854	0.0000	232.4451	232.4451	4.9300e-003	5.5500e-003	234.2211
Total	0.0928	0.4104	0.9306	4.2200e-003	0.3829	4.3300e-003	0.3873	0.1032	4.1000e-003	0.1073	0.0000	402.3452	402.3452	6.8400e-003	0.0306	411.6285

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	0.1784	1.6273	2.0991	3.5200e-003		0.0689	0.0689		0.0648	0.0648	0.0000	302.6545	302.6545	0.0711	0.0000	304.4331
Total	0.1784	1.6273	2.0991	3.5200e-003		0.0689	0.0689		0.0648	0.0648	0.0000	302.6545	302.6545	0.0711	0.0000	304.4331

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	0.0110	0.3550	0.1394	1.7600e-003	0.0660	2.9600e-003	0.0689	0.0190	2.8300e-003	0.0219	0.0000	169.9000	169.9000	1.9100e-003	0.0250	177.4075
Worker	0.0818	0.0554	0.7912	2.4600e-003	0.3170	1.3700e-003	0.3184	0.0842	1.2700e-003	0.0854	0.0000	232.4451	232.4451	4.9300e-003	5.5500e-003	234.2211
Total	0.0928	0.4104	0.9306	4.2200e-003	0.3829	4.3300e-003	0.3873	0.1032	4.1000e-003	0.1073	0.0000	402.3452	402.3452	6.8400e-003	0.0306	411.6285

3.4 Building Construction - 2026

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	0.1785	1.6273	2.0991	3.5200e-003		0.0689	0.0689		0.0648	0.0648	0.0000	302.6549	302.6549	0.0711	0.0000	304.4335
Total	0.1785	1.6273	2.0991	3.5200e-003		0.0689	0.0689		0.0648	0.0648	0.0000	302.6549	302.6549	0.0711	0.0000	304.4335

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Building Construction - 2026

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	0.0109	0.3514	0.1381	1.7300e-003	0.0660	2.9400e-003	0.0689	0.0190	2.8200e-003	0.0218	0.0000	166.8096	166.8096	1.9700e-003	0.0245	174.1688
Worker	0.0770	0.0501	0.7430	2.3800e-003	0.3170	1.3000e-003	0.3183	0.0842	1.2000e-003	0.0854	0.0000	227.0559	227.0559	4.4800e-003	5.2200e-003	228.7223
Total	0.0878	0.4015	0.8811	4.1100e-003	0.3829	4.2400e-003	0.3872	0.1032	4.0200e-003	0.1072	0.0000	393.8655	393.8655	6.4500e-003	0.0298	402.8911

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	0.1784	1.6273	2.0991	3.5200e-003		0.0689	0.0689		0.0648	0.0648	0.0000	302.6545	302.6545	0.0711	0.0000	304.4331
Total	0.1784	1.6273	2.0991	3.5200e-003		0.0689	0.0689		0.0648	0.0648	0.0000	302.6545	302.6545	0.0711	0.0000	304.4331

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3.4 Building Construction - 2026

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	0.0109	0.3514	0.1381	1.7300e-003	0.0660	2.9400e-003	0.0689	0.0190	2.8200e-003	0.0218	0.0000	166.8096	166.8096	1.9700e-003	0.0245	174.1688
Worker	0.0770	0.0501	0.7430	2.3800e-003	0.3170	1.3000e-003	0.3183	0.0842	1.2000e-003	0.0854	0.0000	227.0559	227.0559	4.4800e-003	5.2200e-003	228.7223
Total	0.0878	0.4015	0.8811	4.1100e-003	0.3829	4.2400e-003	0.3872	0.1032	4.0200e-003	0.1072	0.0000	393.8655	393.8655	6.4500e-003	0.0298	402.8911

3.4 Building Construction - 2027

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	0.0691	0.6297	0.8123	1.3600e-003		0.0266	0.0266		0.0251	0.0251	0.0000	117.1193	117.1193	0.0275	0.0000	117.8076
Total	0.0691	0.6297	0.8123	1.3600e-003		0.0266	0.0266		0.0251	0.0251	0.0000	117.1193	117.1193	0.0275	0.0000	117.8076

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Building Construction - 2027

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	4.1600e-003	0.1346	0.0530	6.6000e-004	0.0255	1.1300e-003	0.0267	7.3600e-003	1.0800e-003	8.4500e-003	0.0000	63.2929	63.2929	7.9000e-004	9.2900e-003	66.0814
Worker	0.0281	0.0177	0.2716	9.0000e-004	0.1227	4.7000e-004	0.1231	0.0326	4.4000e-004	0.0330	0.0000	86.0009	86.0009	1.5800e-003	1.9100e-003	86.6101
Total	0.0322	0.1523	0.3246	1.5600e-003	0.1482	1.6000e-003	0.1498	0.0399	1.5200e-003	0.0415	0.0000	149.2938	149.2938	2.3700e-003	0.0112	152.6915

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	0.0691	0.6297	0.8123	1.3600e-003		0.0266	0.0266		0.0251	0.0251	0.0000	117.1192	117.1192	0.0275	0.0000	117.8075
Total	0.0691	0.6297	0.8123	1.3600e-003		0.0266	0.0266		0.0251	0.0251	0.0000	117.1192	117.1192	0.0275	0.0000	117.8075

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3.4 Building Construction - 2027

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	4.1600e-003	0.1346	0.0530	6.6000e-004	0.0255	1.1300e-003	0.0267	7.3600e-003	1.0800e-003	8.4500e-003	0.0000	63.2929	63.2929	7.9000e-004	9.2900e-003	66.0814
Worker	0.0281	0.0177	0.2716	9.0000e-004	0.1227	4.7000e-004	0.1231	0.0326	4.4000e-004	0.0330	0.0000	86.0009	86.0009	1.5800e-003	1.9100e-003	86.6101
Total	0.0322	0.1523	0.3246	1.5600e-003	0.1482	1.6000e-003	0.1498	0.0399	1.5200e-003	0.0415	0.0000	149.2938	149.2938	2.3700e-003	0.0112	152.6915

3.5 Paving - 2027

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	0.0252	0.2360	0.4009	6.3000e-004		0.0115	0.0115		0.0106	0.0106	0.0000	55.0530	55.0530	0.0178	0.0000	55.4981
Paving	0.0111					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0362	0.2360	0.4009	6.3000e-004		0.0115	0.0115		0.0106	0.0106	0.0000	55.0530	55.0530	0.0178	0.0000	55.4981

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3.5 Paving - 2027

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	1.0400e-003	6.5000e-004	0.0100	3.0000e-005	4.5300e-003	2.0000e-005	4.5500e-003	1.2000e-003	2.0000e-005	1.2200e-003	0.0000	3.1787	3.1787	6.0000e-005	7.0000e-005	3.2012
Total	1.0400e-003	6.5000e-004	0.0100	3.0000e-005	4.5300e-003	2.0000e-005	4.5500e-003	1.2000e-003	2.0000e-005	1.2200e-003	0.0000	3.1787	3.1787	6.0000e-005	7.0000e-005	3.2012

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	0.0252	0.2360	0.4009	6.3000e-004		0.0115	0.0115		0.0106	0.0106	0.0000	55.0529	55.0529	0.0178	0.0000	55.4980
Paving	0.0111					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0362	0.2360	0.4009	6.3000e-004		0.0115	0.0115		0.0106	0.0106	0.0000	55.0529	55.0529	0.0178	0.0000	55.4980

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3.5 Paving - 2027

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	1.0400e-003	6.5000e-004	0.0100	3.0000e-005	4.5300e-003	2.0000e-005	4.5500e-003	1.2000e-003	2.0000e-005	1.2200e-003	0.0000	3.1787	3.1787	6.0000e-005	7.0000e-005	3.2012
Total	1.0400e-003	6.5000e-004	0.0100	3.0000e-005	4.5300e-003	2.0000e-005	4.5500e-003	1.2000e-003	2.0000e-005	1.2200e-003	0.0000	3.1787	3.1787	6.0000e-005	7.0000e-005	3.2012

3.6 Architectural Coating - 2027

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	1.0929					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.7000e-003	0.0315	0.0498	8.0000e-005		1.4200e-003	1.4200e-003		1.4200e-003	1.4200e-003	0.0000	7.0215	7.0215	3.8000e-004	0.0000	7.0310
Total	1.0976	0.0315	0.0498	8.0000e-005		1.4200e-003	1.4200e-003		1.4200e-003	1.4200e-003	0.0000	7.0215	7.0215	3.8000e-004	0.0000	7.0310

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3.6 Architectural Coating - 2027

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	3.0400e-003	1.9200e-003	0.0294	1.0000e-004	0.0133	5.0000e-005	0.0134	3.5300e-003	5.0000e-005	3.5800e-003	0.0000	9.3241	9.3241	1.7000e-004	2.1000e-004	9.3901
Total	3.0400e-003	1.9200e-003	0.0294	1.0000e-004	0.0133	5.0000e-005	0.0134	3.5300e-003	5.0000e-005	3.5800e-003	0.0000	9.3241	9.3241	1.7000e-004	2.1000e-004	9.3901

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	1.0929					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.7000e-003	0.0315	0.0498	8.0000e-005		1.4200e-003	1.4200e-003		1.4200e-003	1.4200e-003	0.0000	7.0214	7.0214	3.8000e-004	0.0000	7.0310
Total	1.0976	0.0315	0.0498	8.0000e-005		1.4200e-003	1.4200e-003		1.4200e-003	1.4200e-003	0.0000	7.0214	7.0214	3.8000e-004	0.0000	7.0310

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3.6 Architectural Coating - 2027

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	3.0400e-003	1.9200e-003	0.0294	1.0000e-004	0.0133	5.0000e-005	0.0134	3.5300e-003	5.0000e-005	3.5800e-003	0.0000	9.3241	9.3241	1.7000e-004	2.1000e-004	9.3901
Total	3.0400e-003	1.9200e-003	0.0294	1.0000e-004	0.0133	5.0000e-005	0.0134	3.5300e-003	5.0000e-005	3.5800e-003	0.0000	9.3241	9.3241	1.7000e-004	2.1000e-004	9.3901

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	0.3098	0.3564	3.2143	7.3800e-003	0.9123	4.9900e-003	0.9173	0.2429	4.6500e-003	0.2476	0.0000	707.0622	707.0622	0.0351	0.0280	716.2944
Unmitigated	0.3098	0.3564	3.2143	7.3800e-003	0.9123	4.9900e-003	0.9173	0.2429	4.6500e-003	0.2476	0.0000	707.0622	707.0622	0.0351	0.0280	716.2944

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Parking Lot	0.00	0.00	0.00		
Single Family Housing	797.35	525.40	460.65	2,427,545	2,427,545
Total	797.35	525.40	460.65	2,427,545	2,427,545

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	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
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Single Family Housing	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Parking Lot	0.544951	0.056922	0.175129	0.132247	0.024165	0.006855	0.011655	0.018450	0.000608	0.000293	0.023172	0.001089	0.004464
Single Family Housing	0.558290	0.058315	0.179416	0.135484	0.024756	0.003158	0.005369	0.008500	0.000280	0.000135	0.023739	0.000502	0.002056

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 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	284.1207	284.1207	0.0240	2.9100e-003	285.5864
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	284.1207	284.1207	0.0240	2.9100e-003	285.5864
Natural Gas Mitigated	0.0282	0.2411	0.1026	1.5400e-003		0.0195	0.0195		0.0195	0.0195	0.0000	279.2573	279.2573	5.3500e-003	5.1200e-003	280.9168
Natural Gas Unmitigated	0.0282	0.2411	0.1026	1.5400e-003		0.0195	0.0195		0.0195	0.0195	0.0000	279.2573	279.2573	5.3500e-003	5.1200e-003	280.9168

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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					
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
Single Family Housing	5.23308e+006	0.0282	0.2411	0.1026	1.5400e-003		0.0195	0.0195		0.0195	0.0195	0.0000	279.2573	279.2573	5.3500e-003	5.1200e-003	280.9168
Total		0.0282	0.2411	0.1026	1.5400e-003		0.0195	0.0195		0.0195	0.0195	0.0000	279.2573	279.2573	5.3500e-003	5.1200e-003	280.9168

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					
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
Single Family Housing	5.23308e+006	0.0282	0.2411	0.1026	1.5400e-003		0.0195	0.0195		0.0195	0.0195	0.0000	279.2573	279.2573	5.3500e-003	5.1200e-003	280.9168
Total		0.0282	0.2411	0.1026	1.5400e-003		0.0195	0.0195		0.0195	0.0195	0.0000	279.2573	279.2573	5.3500e-003	5.1200e-003	280.9168

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5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Parking Lot	128612	22.8087	1.9300e-003	2.3000e-004	22.9264
Single Family Housing	1.47346e+006	261.3119	0.0221	2.6700e-003	262.6600
Total		284.1207	0.0240	2.9000e-003	285.5864

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Parking Lot	128612	22.8087	1.9300e-003	2.3000e-004	22.9264
Single Family Housing	1.47346e+006	261.3119	0.0221	2.6700e-003	262.6600
Total		284.1207	0.0240	2.9000e-003	285.5864

6.0 Area Detail

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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	1.3985	0.0604	1.9270	3.5000e-004		0.0137	0.0137		0.0137	0.0137	0.0000	47.5509	47.5509	3.8600e-003	8.1000e-004	47.8901
Unmitigated	1.3985	0.0604	1.9270	3.5000e-004		0.0137	0.0137		0.0137	0.0137	0.0000	47.5509	47.5509	3.8600e-003	8.1000e-004	47.8901

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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	0.1093					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.2271					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	4.4900e-003	0.0384	0.0163	2.4000e-004		3.1000e-003	3.1000e-003		3.1000e-003	3.1000e-003	0.0000	44.4254	44.4254	8.5000e-004	8.1000e-004	44.6894
Landscaping	0.0577	0.0220	1.9107	1.0000e-004		0.0106	0.0106		0.0106	0.0106	0.0000	3.1256	3.1256	3.0100e-003	0.0000	3.2008
Total	1.3985	0.0604	1.9270	3.4000e-004		0.0137	0.0137		0.0137	0.0137	0.0000	47.5509	47.5509	3.8600e-003	8.1000e-004	47.8901

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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	0.1093					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.2271					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	4.4900e-003	0.0384	0.0163	2.4000e-004		3.1000e-003	3.1000e-003		3.1000e-003	3.1000e-003	0.0000	44.4254	44.4254	8.5000e-004	8.1000e-004	44.6894
Landscaping	0.0577	0.0220	1.9107	1.0000e-004		0.0106	0.0106		0.0106	0.0106	0.0000	3.1256	3.1256	3.0100e-003	0.0000	3.2008
Total	1.3985	0.0604	1.9270	3.4000e-004		0.0137	0.0137		0.0137	0.0137	0.0000	47.5509	47.5509	3.8600e-003	8.1000e-004	47.8901

7.0 Water Detail

7.1 Mitigation Measures Water

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	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	46.6304	0.3964	9.7100e-003	59.4340
Unmitigated	46.6304	0.3964	9.7100e-003	59.4340

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	12.0535 / 7.59894	46.6304	0.3964	9.7100e-003	59.4340
Total		46.6304	0.3964	9.7100e-003	59.4340

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7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	12.0535 / 7.59894	46.6304	0.3964	9.7100e-003	59.4340
Total		46.6304	0.3964	9.7100e-003	59.4340

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	44.0267	2.6019	0.0000	109.0743
Unmitigated	44.0267	2.6019	0.0000	109.0743

PACIFIC EMERALD TRACT 37904 - Riverside-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	216.89	44.0267	2.6019	0.0000	109.0743
Total		44.0267	2.6019	0.0000	109.0743

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	216.89	44.0267	2.6019	0.0000	109.0743
Total		44.0267	2.6019	0.0000	109.0743

9.0 Operational Offroad

PACIFIC EMERALD TRACT 37904 - Riverside-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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
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User Defined Equipment

Equipment Type	Number
----------------	--------

11.0 Vegetation

WESTERN RIVERSIDE COUNTY HABITAT ASSESSMENT AND MSHCP CONSISTENCY ANALYSIS

**APN: 342-080-039, 040, 041, 042
CITY OF PERRIS, COUNTY OF RIVERSIDE, CALIFORNIA
(Township 5 South, Range 4 West, Section 1)**

Prepared for:

**Pacific Communities
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Report prepared by R. Hunter, L. Cardoso & R. Arnold



EST. 1990
Project: #2020-56

**May 6, 2021
(Updated)**

TITLE PAGE

Date Report Updated: May 6, 2021

Date Field Work Completed: October 21, 2020

Report Title: Western Riverside Habitat Assessment and MSHCP
Consistency Analysis

Assessor's Parcel Number: APN: 342-080-039, 040, 041, 042

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SECTION 1: EXECUTIVE SUMMARY

This report contains the results of a habitat assessment and MSHCP consistency analysis conducted by RCA Associates, Inc. on a 39.36-acre parcel located in the City of Perris, Riverside County, California. The purpose of the habitat assessment and MSHCP consistency analysis is to identify potential impacts to biological resources associated with construction of the proposed commercial project. The project will consist of 201 single family dwellings in a track home configuration with three recreation areas and a catch basin.

This report describes the results of the site visit conducted on October 21, 2020, which assessed the property for the potential to support special-status species, and the presence of other sensitive biological resources protected by local, state, and federal laws and regulations. This report also contains an evaluation of potential impacts to special-status species and sensitive biological resources which may occur as a result of the proposed Project, and the potential mitigation measures which may be required to compensate for those impacts. The assessment includes a review of pertinent literature, a review of the California Natural Diversity DataBase (CNDDDB), field investigations, and analysis of potential impacts to biological resources.

SECTION 2: INTRODUCTION

At the request of the project proponent, RCA Associates, Inc., conducted a habitat assessment and MSHCP Consistency Analysis for the 39.36-acre parcel located in the City of Perris, Riverside County, California (Figures 1, 2, and 3). The proposed project will hereafter be referred to as the “project” or “project site.”

2.1 Project Location

The project site is located at the northeast corner of the intersection of Mountain Avenue and McPherson Road in the City of Perris, California 92570, (Township 5 South, Range 4 West, Section 1) (Figure 2). Existing residential homes surround the site to the north, east, west, and south. The 39.36-acre site is composed of four parcels (APN: 342-080-039, 040, 041, 042). The site appears to be moderately disturbed, with a main dirt road following along the border and smaller dirt bike trails transecting the site. The property supports a few rock outcroppings throughout the site, and contains a mix of both native and non-native vegetation.

2.2 Project Description

The project proponent is proposing to construct tract homes on the site (Appendix A, Figure 6). The development would include 201 tract homes, 3 recreation areas, and a catch basin. Development activities would occur within the boundaries of the property, which as discussed above, has been previously disturbed (Figure 3). The site is not located within the Riverside County HCP fee area for Stephen’s kangaroo rat, but is located in the burrowing owl survey area (Riverside County Habitat Conservation Agency, 1995) (Figure 9).

2.3 Reserve Assembly Analysis

The project site does not occur within a Cell or Cell Group and will not have any impact on any Core linkages in the region (Figure 4). The 39.36-acre site does not support any populations of any Planning Species and the proposed project will not impede the overall function of any Planning Species.

2.4 Covered Road

The project does not propose the construction of or any improvements to any MSHCP covered roads as part of the proposed project.

SECTION 3: METHODS

RCA Associates, Inc. evaluated the project site in relation to the MSHCP areas including criteria cells, core habitat, linkages, and areas proposed for conservation. The MSHCP also requires a riparian/riverine and vernal pool habitat assessments within the project site which were conducted by a biologist from RCA Associates, Inc. According to the MSHCP, the documentation for the assessment shall include mapping and a description of the functions and values of the mapped areas with respect to the species listed in Section 6.1.2. In addition, protection of species associated with riparian/riverine areas and vernal pools also needs to be addressed if such habitat is present on the site.

3.1 Literature Review and Field Investigations

Prior to conducting the field investigations, a literature review was conducted of background data as well as the environmental setting of the project site. The literature reviewed included, but was not limited to, the United States Department of Agriculture (USDA 1971) Soil Survey for the project site, U.S. Fish, and Wildlife Service (USFWS) data sources, and the California Natural Diversity Database (CNDDDB, 2020). The closest recorded location of sensitive species was determined through a five-mile radius query of the CNDDDB (2020) (Appendix A, Table 1). A search of the CNDDDB database was conducted for the Perris USGS quadrangle and the surrounding eight quadrangles (See Appendix A for results of CNDDDB search.). The CNDDDB database was reviewed to locate the previously recorded locations of sensitive plant and wildlife occurrences and determine the distance from the project site. Additionally, the Riverside County MSHCP was reviewed for additional information on the known occurrence of the species within Riverside County.

The MSHCP Online Conservation Report Generator and Riverside County Land Information System (RCLIS) databases were queried to determine the specific requirements for compliance with the policies of the MSHCP as described in Volume 1, Chapter 6 Implementation Structure (RCIP 2004), i.e. Reserve Assembly (6.1.1); Riparian/Riverine and Vernal Pools (6.1.2); Narrow Endemic Plants (6.1.3); Urban/Wildlands Interface (6.1.4); and Additional Survey Needs (6.2.3).

RCA Associates, Inc. biologists Ryan Hunter and Lisa Cardoso surveyed the project site on October 21, 2020 from about 0900 to 1200 p.m. Weather conditions during the survey included about 100 percent cloud cover from 0900 to 1000 with cloud cover gradually disappearing from 1030 to 1200. Temperatures ranged from low-60's to low-80's °F. The entire project site was assessed to determine the extent of plant communities and to evaluate the presence of any areas which may have any jurisdictional features or may support riparian/riverine habitat. Parameters assessed included soil conditions, the presence of indicator species, slope, aspect, and hydrology.

3.2 Plant Communities

Plant communities on the site were initially evaluated using aerial photography and were evaluated on the ground using pedestrian surveys conducted by biologists from RCA Associates, Inc. on October 21, 2020. The plant communities within the project site were classified according to the California Department of Fish and Wildlife (CDFW) List of Terrestrial Natural Communities (2003) and descriptions provided in Holland's Preliminary Descriptions of the Terrestrial Natural Communities of California (1986) were also reviewed. Currently, the site has been moderately disturbed and consists of native and non-native vegetation (Figure 7).

3.3 Riparian/Riverine Habitat, Vernal Pools and Fairy Shrimp

Aerial photography was reviewed prior to conducting the field investigations in October 2020. The aerial photographs were used to determine if any potential natural drainage features and water bodies that may be considered riparian/riverine habitat or which may be under the jurisdiction of either the U.S. Army Corps of Engineers (USACE) and/or CDFW were present on the site. Such areas are considered potentially riparian/riverine habitat and may be subject to State and federal regulatory authority as "Waters of the State" or "Waters" of the U.S. Under the MSHCP, riparian/riverine habitat is defined as lands which contain habitat dominated by trees, shrubs, persistent emergent, or emergent mosses and lichens, which occur close to or which depend upon soil moisture from a nearby freshwater source, or areas with freshwater flow during all or a portion of the year.

Vernal pools are considered an important habitat in Southern California and provide critical habitat for various species, including State and federal listed species such as fairy shrimp. No vernal pools have been previously mapped for the site nor were any vernal pools observed during the October 2020 field investigations. The proposed project is not expected to impact any vernal pools nor will any fairy shrimp be impacted.

3.4 Plants

Plant species observed during the field survey were identified by visual characteristics and morphology in the field and recorded in a field notebook. Samples of some plant species were collected and returned to the lab for identification using taxonomical guides. A list of all species observed on the project site was compiled from the survey data (Appendix A, Table 1). The taxonomic nomenclature used in this study follows the California Native Plant Society (CNPS 2020).

3.5 Wildlife and Riparian Birds

Wildlife species detected during the field surveys were identified by sight, calls, tracks, scat, or other signs and were recorded in a field notebook. Field guides were used to assist with identification of species during surveys and included the Sibley Field Guide to Birds of Western North America (2017) and Burt and Grossenheider (1980) for mammals. Although common names of wildlife species are relatively well standardized, scientific names are used in this report and are provided in Table 2, Appendix A for reference.

3.6 Regional Connectivity/Wildlife Habitat Linkages

The analysis of wildlife habitat linkages associated with the Study Area is based on information compiled from literature, including MSHCP-mapped habitat linkages (Figure 3-2, Schematic Cores and Linkages Map in the MSHCP [2004]); analysis of aerial photographs; and direct observations (including sign, tracks and physical movement barriers, including recent development) made in the field during the October 2020 field investigations. This information was crucial to assessing the relationship of the project site to large open space areas in the region.

The discussions in this report are intended to focus on wildlife movement associated with the property and the immediate vicinity.

Wildlife habitat linkages mitigate the effects of habitat fragmentation by (1) allowing animals to move between remaining habitats, which allows depleted populations to be replenished and promotes genetic diversity; (2) providing escape routes from natural disasters, predators, and human disturbances, thus reducing the risk that catastrophic events (such as fires or disease) will result in population or local species extinction; and (3) serving as travel routes for individual animals as they move within their home ranges in search of food, water, mates, and other needs (Noss 1983, Fahrig and Merriam 1985, Simberloff and Cox 1987, Harris and Gallagher 1989). Wildlife linkages are landscape features that connect and link habitat patches or habitat cores with each other. They serve a similar purpose in that they are areas that allow for animal movement, but they may not have all the resources a particular species needs to complete its life cycle.

3.7 Additional Survey Needs and Procedures

Based on the results of the field investigations conducted on the 39.36-acre site in October 2020, it is the opinion of RCA Associates, Inc. that no additional surveys or procedures are required. As discussed above, the site has been significantly disturbed in the past and does not support any undisturbed native habitats, nor does it support any special status species. The nearest linkage to the project site is 1.5 miles to the south east, which is more than sufficient distance to have no adverse effects due to construction. It is the opinion of RCA Associates, Inc. that the project site does not have any effects on existing or proposed cores or linkages.

3.8 Project Relationship to Reserve Assembly

The subject property is not located within any Criteria Cells and according to the RCMSHCP Reserve Assembly, a RCA review is not required. The MSHCP established habitat assessment requirements for certain species of plants, birds, mammals, and amphibians. The MSHCP Conservation Areas (3.2.2) may be described in terms of bioregions, vegetation, soils, patch size, and edge affected lands. In regards to bioregions the site is located in a relatively developed area

of the City of Perris and is not within an area of public/quasi-public conserved lands or within any pre-existing conservation agreements. In addition, the site is not located within any lands that have been designated as American Indian Lands.

3.9 Public Quasi-Public Lands

According to the MSHCP in Section 3.2.1 (Figure 3-1, The MSHCP Plan Map), the site is not depicted as PQP land; furthermore, the project site is not located in an area designated as Rural Mountain Designation in the MSHCP Area, American Lands, Lake, Preexisting Conservation Agreements, or any wildlife areas. The project will therefore not have any impact on POP designated lands.

SECTION 4: EXISTING CONDITIONS

4.1 Environmental Setting

The property site has been moderately disturbed by past human activities and appears to have been cleared of some native vegetation in previous years (Appendix A, Figure 3). The property supports a mix of native and nonnative vegetation, and a gentle slope from north to south. A drainage swale crosses the site on its eastern boundary, going in a north to south direction. The project site is located within an area of the City of Perris that has been developed or disturbed over the last few decades. The property is bordered on the north, west, east and south by existing residential homes. (Figures 1 and 2).

4.2 Soils

According to the Soil Survey provided by the U.S. Department of Agriculture, the soil on the property consists of six varieties of soils: cieneba rocky sandy loam (CkF2), hanford coarse sandy loam (HcC), monserate sandy loam (MmB), monserate sandy loams, eroded (MmD2), vista coarse sandy loam (VsC), and vista coarse sandy loam, eroded (VsD2) (Figure 10).

- Cieneba rocky sandy loam (CkF2) - 8 to 15 percent slopes, medium runoff, moderate hazard of erosion, and rock outcrops covering 2 to 10 percent of soils surface.
- Hanford coarse sandy loam (HcC) - 2 to 8 percent slopes, occurs on alluvial fans, slow to medium runoff, moderately rapid permeability, water holding capacity of 5.0to7.5 inches, with a slight to moderate hazard of erosion.
- Monserate sandy loam (MmB) - 0 to5 percent slope, slow runoff, and hazard of erosion is slight.
- Monserate sandy loam, eroded (MmD2) - 8 to 15 percent slopes, medium runoff, and moderate hazard of erosion.
- Vista coarse sandy loam (VsC) - 2 to 8 percent slopes, slow runoff, slight hazard of erosion.
- Vista coarse sandy loam, eroded (VsD2) - 8 to 15 percent slopes, moderately rapid permeability, medium runoff, moderate hazard of erosion, root zone of 20-36 inches, natural fertility, and water holding capacity of 3.5-6.0 inches.

The soil is not listed as a hydric soil (U.S. Department of Agriculture [USDA] National List of Hydric Soils, 2020).

4.3 Plant Communities

The site has been moderately disturbed by past human activities and some clearing of native vegetation was removed in previous years (Appendix A, Figures 5 and 6). Various grass species, wild oat (*Avena fatua*), and foxtail brome (*Bromus madritensis*), were the dominant species. Other plants scattered throughout the site included dove weed (*Croton setigerus*), horseweed (*Erigeron canadensis*), fourwing saltbush (*Atriplex canescens*), common sunflower (*Helianthus annuus*), and California buckwheat (*Eriogonum fasciculatum*). The site also supports multiple species of trees such as Jerusalem thorn (*Parkinsonia aculeata*), tree of Heaven (*Ailanthus altissima*), tree tobacco (*Nicotiana glauca*), mulefat (*Baccharis salicifolia*), and red willow (*Salix laevigata*). A compendium of all plant species observed during the October 2020 survey is provided in Table 1.

4.4 Jurisdictional Waters

The United States Army Corps of Engineers (USACE) regulates discharges of dredged or fill material into waters of the United States, and the State of California also regulates waters of the State and streambeds under the preview of regional water quality boards and CDFW jurisdiction. These waters include wetlands and non-wetland bodies of water that meet specific criteria. During the October 2020 field investigations biologists from RCA Associates, Inc. notated the observation of one drainage channel or wash running along the eastern boundary of the project site. A comprehensive jurisdictional delineation survey and report will be performed in the near future.

4.5 Nesting and Riparian Birds

The property contains marginal nesting bird habitat for avian species given the presence of few trees and shrubs along the southern and edges of the site. Nesting birds are protected under section 3503 of the CDFW code and/or the Migratory Bird Treaty Act (MBTA). A few common bird species were observed within the project area during the surveys included red tailed hawks (*buteo*

jamaicensis), lesser goldfinches (*Spinus psaltria*), Cassin's kingbird (*Tyrannus vociferans*), mourning dove (*Zenaida macroura*), and house sparrow (*Passer domesticus*). All bird species observed are included in the faunal compendium in Appendix A, Table 2.

4.6 Burrowing Owl

The project site is located within the MSHCP Additional Survey Areas for Burrowing Owl. Several potential burrows were observed during the October 2020 field investigations but showed no sign of being inhabited. No feathers, white wash, or casting were found near the entrance to any burrow. Based on the field investigations and the MSHCP requirements a 30-day pre-construction survey may be required prior to the start of site clearing activities to ensure no owls have moved onto the site since the October 2020 field investigations.

4.7 Federal and State Listed Species

There are several special status wildlife species which have been documented in the region and those species occurring in the Perris Quadrangle and the surrounding eight quadrangles. The CNDDDB tables for these quadrangles are provided in Appendix A and lists the Federal and State listed species, as well as other special status wildlife species.

There are twenty-two federal and/or State listed wildlife species which have been documented in the region including southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*), southern California legless lizard (*Anniella stebbinsi*), orange-throated whiptail (*Aspidoscelis hyperythra*), coastal whiptail (*Aspidoscelis tigris stejnegeri*), northwestern San Diego pocket mouse (*Chaetodipus fallax fallax*), Stephen's kangaroo rat (*Dipodomys stephensii*), western yellow bat (*Lasiurus xanthinus*), Los Angeles pocket mouse (*Perognathus longimembris brevinasus*), coast horned lizard (*Phrynosoma blainvillii*), western spadefoot (*Spea hammondi*), tricolored blackbird (*Agelaius tricolor*), California glossy snake (*Arizona elegans occidentalis*), burrowing owl (*Athene cunicularia*), red-diamond rattlesnake (*Crotalus ruber*), western pond turtle (*Emys marmorata*), California horned lark (*Eremophila alpestris actia*), western mastiff bat (*Eumops perotis californicus*), San diego black-tailed jackrabbit (*Lepus californicus bennettii*), southern grasshopper mouse (*Onychomys torridus ramona*), coastal California gnatcatcher

(*Polioptila californica californica*), American badger (*Taxidea taxus*), and least bell's vireo (*Vireo bellii pusillus*). There is one federal and/or State listed invertebrate occurring in the region which is the crotch bumble bee (*Bombus crotchii*). Each of the above listed species has specific habitat requirements in order to support populations of the species, and the probability of the site supporting any of these species is discussed in Section 6.3.

There are eleven federal and/or State listed plants that have been documented in the region including chaparral sand-verbena (*Abronia villosa var. aurita*), Payson's jewelflower (*Caulanthus simulans*), smooth tarplant (*Centromadia pungens ssp. laevis*), San Jacinto Valley crownscale (*Atriplex coronata var. notatior*), Parish's brittlescale (*Atriplex parishii*), Davidson's saltscale (*Atriplex sereaba var. davidsonii*), thread-leaved brodiaea (*Brodiaea filifolia*), long-spined spineflower (*Chorizanthe polygonoides var. longispina*), Coulter's goldfields (*Lasthenia glabrata ssp. coulteri*), spreading navarretia (*Navarretia fossalis*), and Wright's trichocoronis (*Trichocoronis wrightii var. wrightii*). The probability of any of these plants occurring on the site is discussed in Section 6.3.

4.8 Wildlife Species of Special Concern and Special Status Plants

Focused surveys were not conducted for any of the species of special concern given the very disturbed conditions throughout the site. In terms of the special status plants which have been documented in the region, these plants are unlikely to occur on the site given the past disturbances which have occurred during previous years (Appendix A, CNDDDB table).

SECTION 5: WESTERN RIVERSIDE COUNTY MSHCP CONSISTENCY ANALYSIS

5.1 MSHCP Requirements

The purpose of this discussion is to provide an analysis of the proposed project with respect to compliance with biological aspects of the Western Riverside County MSHCP. Specifically, this analysis evaluates the proposed project with respect to the project's compliance with MSHCP Reserve Assembly Requirements (Section 6.1.1); Protection of Species Associated with Riparian/Riverine Areas and Vernal Pools (Section 6.1.2); Protection of Narrow Endemic Plant Species (Section 6.1.3); Guidelines Pertaining to the Urban/Wildlands Interface (Section 6.1.4), and Additional Survey Needs and Procedures (Section 6.3.2).

5.2 Project Relationship to Reserve Assembly

The subject property is not located within any Criteria Cells with the nearest Cell being in Subunit 4, and Quadrant Number (3377) (Appendix A, Figure 4). This cell is roughly 1.3 miles to the east of the project site shown in MSHCP section (3.3.10). According to the RCMSHCP Reserve Assembly, a RCA review is not required since the property is not located within a Criteria Cell.

The MSHCP established habitat assessment requirements for certain species of plants, birds, mammals, and amphibians. The MSHCP Conservation Areas (3.2.2) may be described in terms of bioregions, vegetation, soils, patch size, and edge affected lands. In regards to bioregions, the site is located in a developed area of the City of Perris and is not within an area of public/quasi-public conserved lands or within any pre-existing conservation agreements. In addition, the site is not located within any lands that have been designated as American Indian Lands, according to the MSHCP Geographical Map (MSHCP Figure 9-1).

5.3 Protection of Species Associated with Riparian/Riverine Areas and Vernal Pools

None of the riparian/riverine species listed in Section 6.1.2 of the MSHCP were found on the property nor were any riparian plant species observed during the field investigations. In addition, there are no features on the site that meet the MSHCP definition of vernal pools. In order to be

considered a vernal pool under the MSHCP, a feature must be a wetland (based on the presence of hydrophytic vegetation, hydric soil, and wetland hydrology). The feature must also have a natural origin. No vernal pools were observed during the field investigations on the project site; consequently, the site does not support suitable habitat for fairy shrimp. The lack of suitable habitat for fairy shrimp is due to the soil that is made up of sandy loam soil which cannot hold water for a long enough duration to allow for the formation of vernal pools. Therefore, the site does not support any sensitive plants that are associated with wetland features. Other non-vernal pool features such as depressions, drainages, and road ruts, which may provide habitat for fairy shrimp, were absent from the site. It is RCA Associates' opinion that the site lacks suitable habitat for fairy shrimp. In addition, no riparian/riverine habitat is present on the site and plant species typically associated with riparian/riverine areas were not present on the property.

5.4 Jurisdictional Waters

Potential jurisdictional waters (i.e., streams, ponds, lakes, etc.) were observed on the site during the October 2020 field investigations. The Mountain Avenue Wash runs along the eastern border of the project site and is considered jurisdictional. The project site must abide by California Department of Fish and Game regulations regarding section 1600 along with the Federal Clean Water Act sections 401, 402, and 404 as stated in the MSHCP (section 6.1.2).

5.5 Protection of Narrow Endemic Plant Species

The project site is not located within the MSHCP Narrow Endemic Plant Species Survey Area (NEPSSA), the closest NEPSSA is Area 3 located 1.30 miles east of the site (MSHCP Figure 6-1). Therefore, focused plant surveys were not conducted for species identified under Section 6.1.3 of the MSHCP. In addition, the property has been disturbed by past human activities and is very unlikely to support any rare plants at the present time. No focused surveys for rare plants are required and the project is consistent with the Narrow Endemic Plant Species requirements of the MSHCP.

5.6 Guidelines Pertaining to the Urban/Wildland Interface

The MSHCP Urban/Wildland Interface Guidelines (6.1.4) are intended to address indirect effects associated with locating development in proximity to MSHCP Conservation Areas. The project site is not located in any Criteria Cells, with the nearest cell, 3377, being 1.30 miles east, which is part of the San Jacinto river lower subunit 4 of the Mead Valley area plan. There are several main biological issues for this area including: conserving willow, domino, and travers soils that support sensitive species, conserving vernal pool complexes associated with the San Jacinto River floodplain, maintain and provide continuous linkages west and east of the San Jacinto river, maintain floodplain habitat for mountain plovers, and determine presence of potential core area for Los Angeles pocket mouse along San Jacinto River east of the I-215.

Given the location of the site in a developed area, and past human disturbances which have occurred on the site, the proposed project is not expected to result in any significant indirect impacts to special-status biological resources. Implementation of Best Management Practices (BMPs) are only required if Conservation Areas are “in proximity” of the project site; however, no Conservations Areas are near the property.

5.7 Wildlife Habitat Linkage

According to the MSHCP (Figure 3-2: Schematic Cores and Linkages Map), there are no documented terrestrial migration corridors in the immediate vicinity of the project site. Furthermore, the project site is within a developed portion of the County and there are numerous existing residential and commercial developments in the immediate area. The site does not provide any wildlife corridors which are used for migration, movement or dispersal of wildlife.

5.8 Additional Survey Needs and Procedures

The project site is located within the MSHCP Additional Survey Areas for Burrowing Owl. Furthermore, no surveys will be required for amphibians, Criteria Area Species, mammals, or Special Linkage Areas (Figure 7). As stated in section 4.4 of this report a comprehensive jurisdictional delineation will be prepared in the near future.

SECTION 6: PROJECT IMPACTS AND MITIGATION

6.1 Impacts Per Plant Community

The proposed project will impact approximately 39.36-acres of ruderal vegetation. Loss of the existing disturbed vegetation would also affect some wildlife species; although, the number of species that would be impacted is relatively low given the already disturbed small parcel and the absence of any extensive areas of native vegetation.

6.2 Nesting Birds

There is relatively low potential for nesting birds to utilize the few trees and shrubs on the site. Potential impacts to nesting birds can be eliminated or significantly reduced if vegetation suitable for nesting birds is removed outside of the nesting bird season. The nesting season for birds typically occurs from February 15th to August 31st. Therefore, vegetation removal activities should be conducted outside of the nesting bird season, if possible. If grading and clearing activities must occur during the nesting season, a nesting bird survey should be conducted within seven days prior to the start of any ground disturbing activities to determine if any nesting birds occur within the project site. If nesting birds are not found within the project site, no further actions will be required. If nesting birds are observed, no impacts shall occur within 250 feet (500 feet for raptors) of any active nests. Also, construction activity may only occur within 250 feet of an active nest at the discretion of the project's biological monitor.

6.3 Federal and State Listed Species and Special Status Species

Based on the disturbed conditions of the 39.36-acre site, and the lack of evidence, no focused surveys were deemed necessary for any federal or State listed species or any special status species.

6.4 Habitat Fragmentation and Wildlife Movement

As previously discussed, the property is located in an area where habitat has been fragmented due to past development activities, agricultural activities, and on-going developments in the surrounding region. Therefore, the incremental loss of wildlife habitat associated with the

proposed development is expected to be negligible. There are no wildlife corridors present on the site and the proposed project will not impede regional wildlife movement or impact any MSHCP-designated corridors or habitat linkages. Therefore, the proposed project is not expected to have any significant impacts in regard to habitat fragmentation and regional wildlife movement.

6.5 Riparian/Riverine Habitat, Vernal Pools and Jurisdictional Waters

The site does not support any riparian or riverine habitats. In addition, no depressions or areas where water would pool were observed within the project site which would be classified as vernal pools. Consequently, the site does not support suitable habitat for fairy shrimp. None of the riparian/riverine species listed in Section 6.1.2 of the MSHCP were found within the project site during the October 2020 field investigations, nor were any sensitive plants identified during the field investigations. Furthermore, potential jurisdictional waters were observed during the October 2020 field investigations and a comprehensive jurisdictional delineation survey will be prepared in the near future and report submitted upon completion.

6.6 Local Policies and Ordinances

The proposed project will not conflict with or have any adverse impact on any local policies or ordinances.

SECTION 7: CONCLUSIONS

No listed or special status plant or wildlife species or sensitive habitats were observed within the project site during the field investigations conducted on October 21, 2020. The property does not contain any vernal pools or Urban/Wildlands interface areas. If any sensitive species are observed on the property during future activities, CDFW and USFWS (as applicable) should be contacted to discuss specific mitigation measures which may be required for the individual species. The RCMSHCP does allow for the “take” of covered species that have been adequately conserved as outlined in Section 9.2 of the MSHCP.

SECTION 8: CERTIFICATION

I hereby certify that the statements furnished above and in the attached exhibits, present the data and information required for this biological evaluation and that the facts, statements, and information presented are true and correct to the best of my knowledge and belief. Fieldwork conducted for this assessment was performed by me or other biologists under my direct supervision. I certify that I have not signed a non-disclosure or consultant confidentiality agreement with the project applicant or applicant's representative and that I have no financial interest in the project.

Date: May 6, 2021 Signed: *Randall Arnold*

Work Performed By: Randall Arnold
President and Senior Biologist

Ryan Hunter
Environmental Scientist/Biologist

Lisa Cardoso
Biologist

SECTION 9: REFERENCES

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Appendix A

Figures and Tables

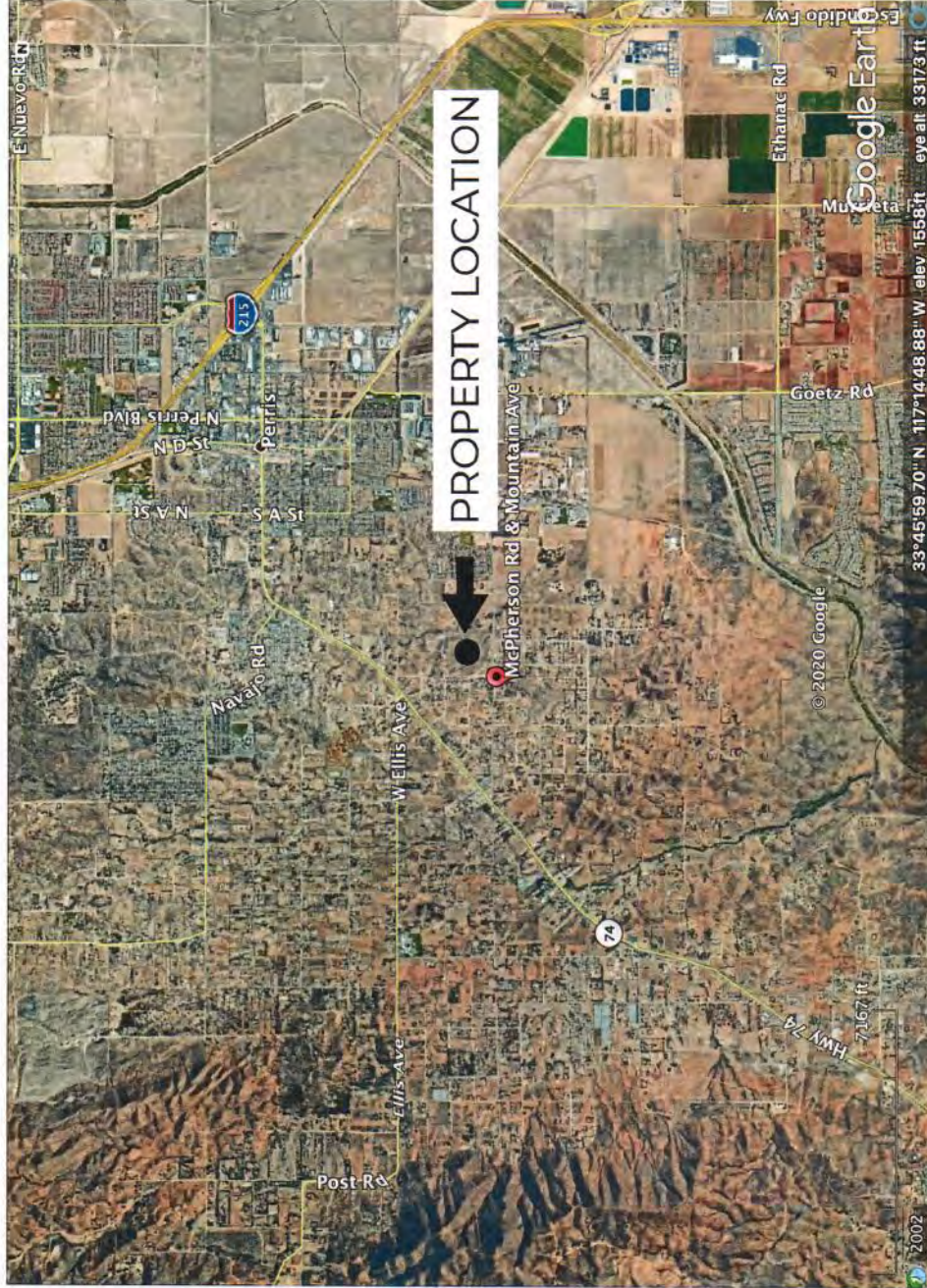


FIGURE 1: REGIONAL EXHIBIT

RCA ASSOCIATES, INC.
SOURCE: GOOGLE EARTH

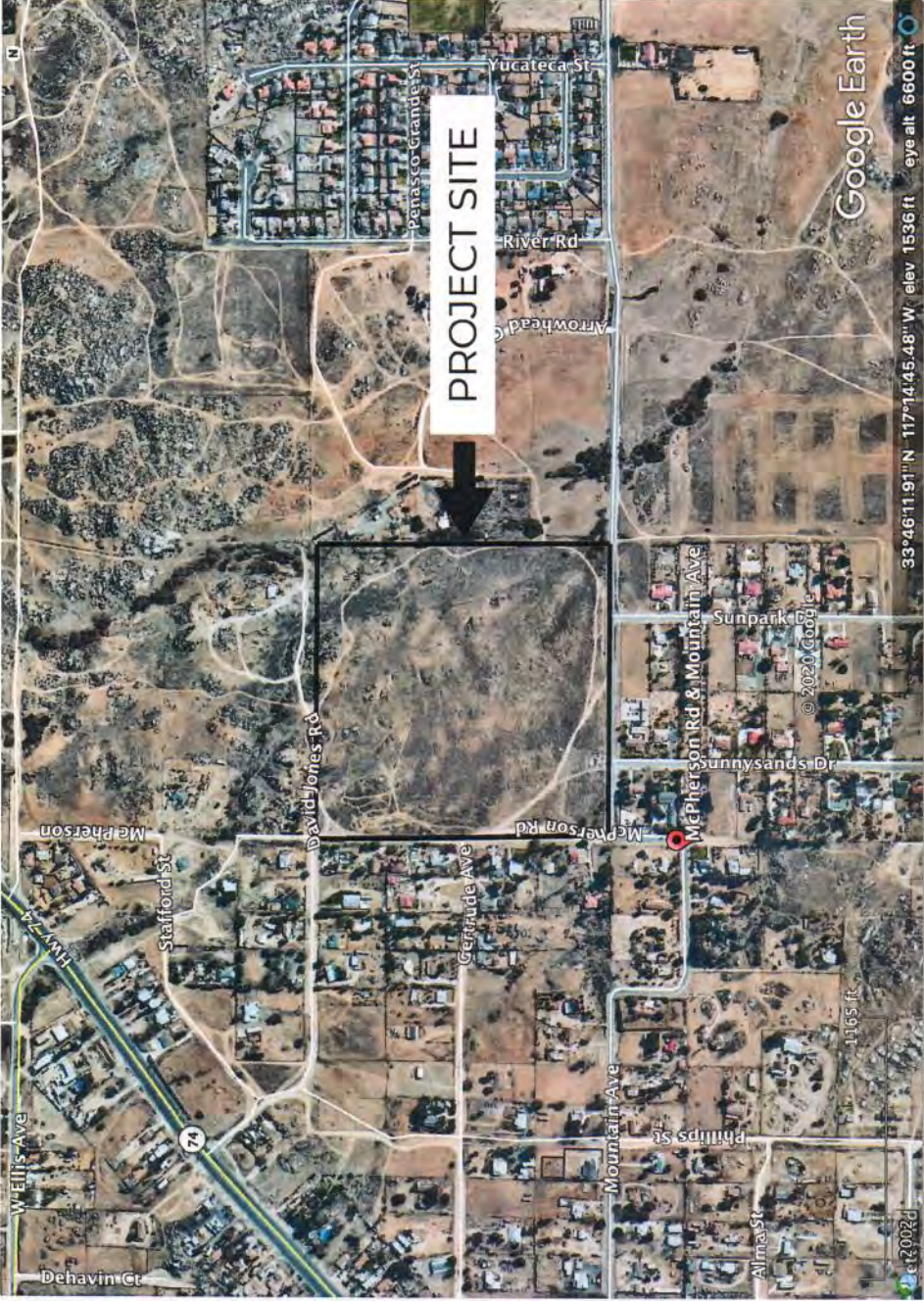


FIGURE 2: VICINITY EXHIBIT



CENTER OF SITE LOOKING NORTH



CENTER OF SITE LOOKING WEST

FIGURE 3
PHOTOGRAPHS OF SITE



CENTER OF SITE LOOKING SOUTH



CENTER OF SITE LOOKING EAST

FIGURE 3, cont.
PHOTOGRAPHS OF SITE

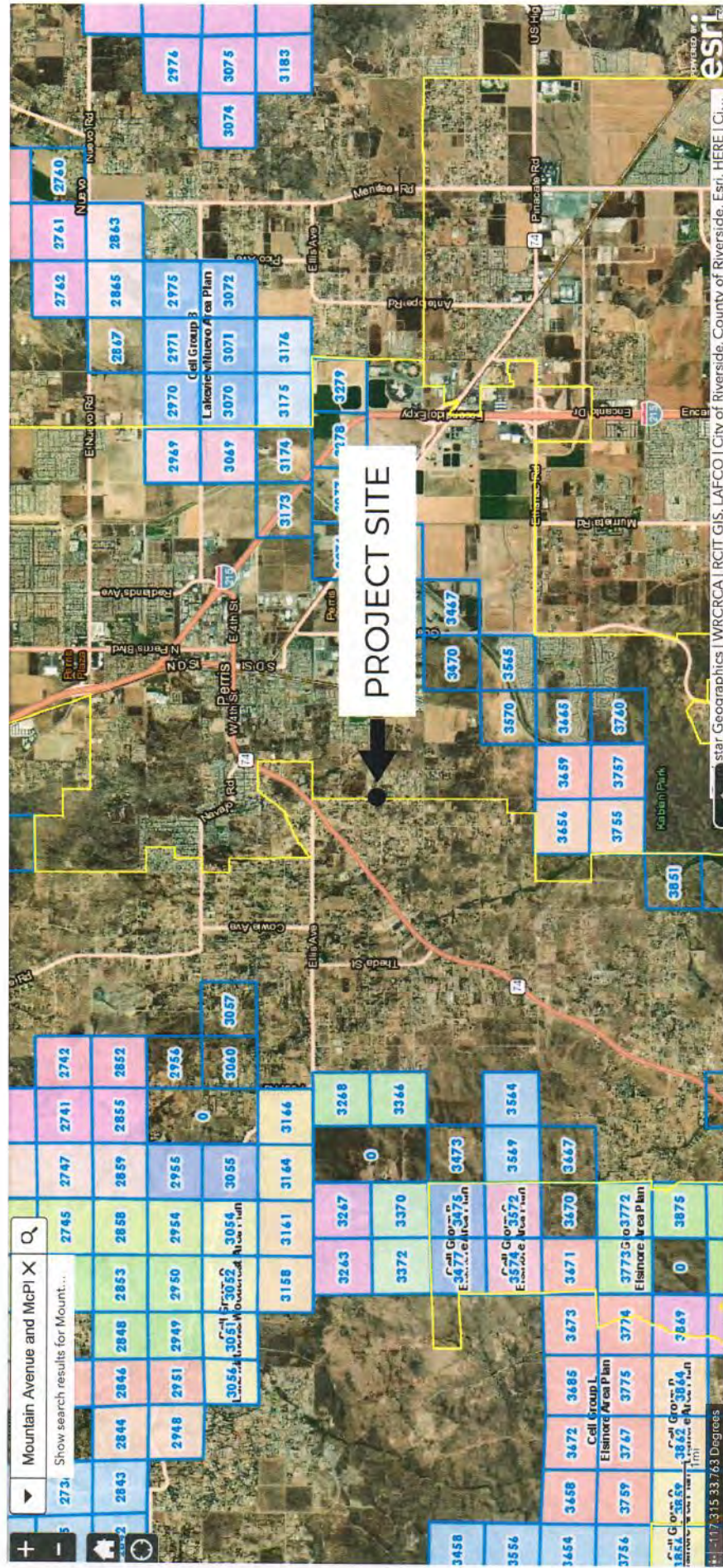


FIGURE 4: Proximity to Cell Groups & Criteria Cells of the Riverside MSHCP

SOURCE: RIVERSIDE MSHCP MAP



FIGURE 5: BIOLOGICAL RESOURCES EXHIBIT



Figure 6



VICINITY MAP
SCALE NTS

Plan	Ph-1	Ph-2	Ph-3	Ph-4	Ph-5	Ph-6	Ph-7	Ph-8	Ph-9	Ph-10	Ph-11	Ph-12	Ph-13	Ph-14	Ph-15	Ph-16	Ph-17	Ph-18	Ph-19	Ph-20	Ph-21	Ph-22	Ph-23BC	TOTAL	
Lot Area	183.4	173.0	179.0	183.0	193.0	203.0	213.0	223.0	233.0	243.0	253.0	263.0	273.0	283.0	293.0	303.0	313.0	323.0	333.0	343.0	353.0	363.0	373.0	383.0	251.0
Units	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	4	26
Density	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

Plan	Ph-1	Ph-2	Ph-3	Ph-4	Ph-5	Ph-6	Ph-7	Ph-8	Ph-9	Ph-10	Ph-11	Ph-12	Ph-13	Ph-14	Ph-15	Ph-16	Ph-17	Ph-18	Ph-19	Ph-20	Ph-21	Ph-22	Ph-23BC	TOTAL	
Lot Area	183.4	173.0	179.0	183.0	193.0	203.0	213.0	223.0	233.0	243.0	253.0	263.0	273.0	283.0	293.0	303.0	313.0	323.0	333.0	343.0	353.0	363.0	373.0	383.0	251.0
Units	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	4	26

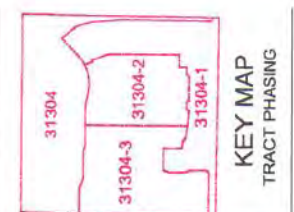
GENERAL INFO
 Total Acreage: 40.40 Acre
 Total Residential Unit: 201 D.U.
 Rec. Residing: 1 D.U.
 Building Coverage: 10.60 Acre
 Density: 4.99 Unit/Acre
 Green Belt: 1.50 Acre
 Open Space: 0.86 Acre
 Estemment Space: 0.65 Acre
 Catch Basin: 0.45 Acre
 Rec. Area 1: 0.27 Acre
 Rec. Area 2: 0.22 Acre
 Rec. Area 3: 0.22 Acre

PLAN TYPES
CONSTRUCTION PHASING

DEVELOPER:
 Pacific Communities Builder, Inc.
 ADDRESS: 1000 Dove Street, Suite 300, Newport Beach, CA 92660
 TEL: (949) 660-8988

CITY OF PERRIS
PACIFIC EMERALD
TR 37904
 Conceptual Site Plan - Scheme A

SCALE: 1" = 60'
 DESIGNED BY: [Blank]
 DRAWN BY: C.R.C.
 SHEET NO. 1 of 1
 2020/4/20



KEY MAP
TRACT PHASING

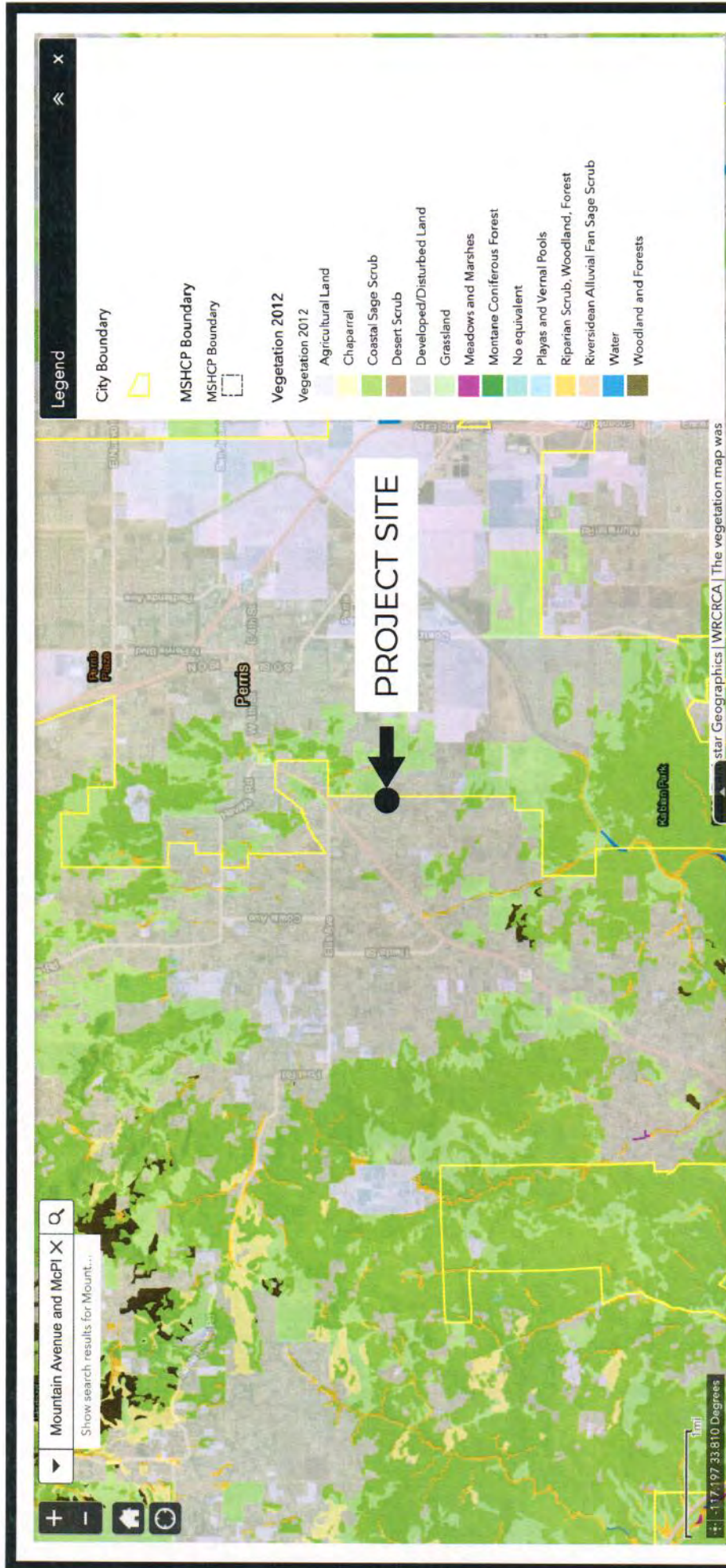


FIGURE 7: Community Vegetation Map
SOURCE: RIVERSIDE MSHCP MAP

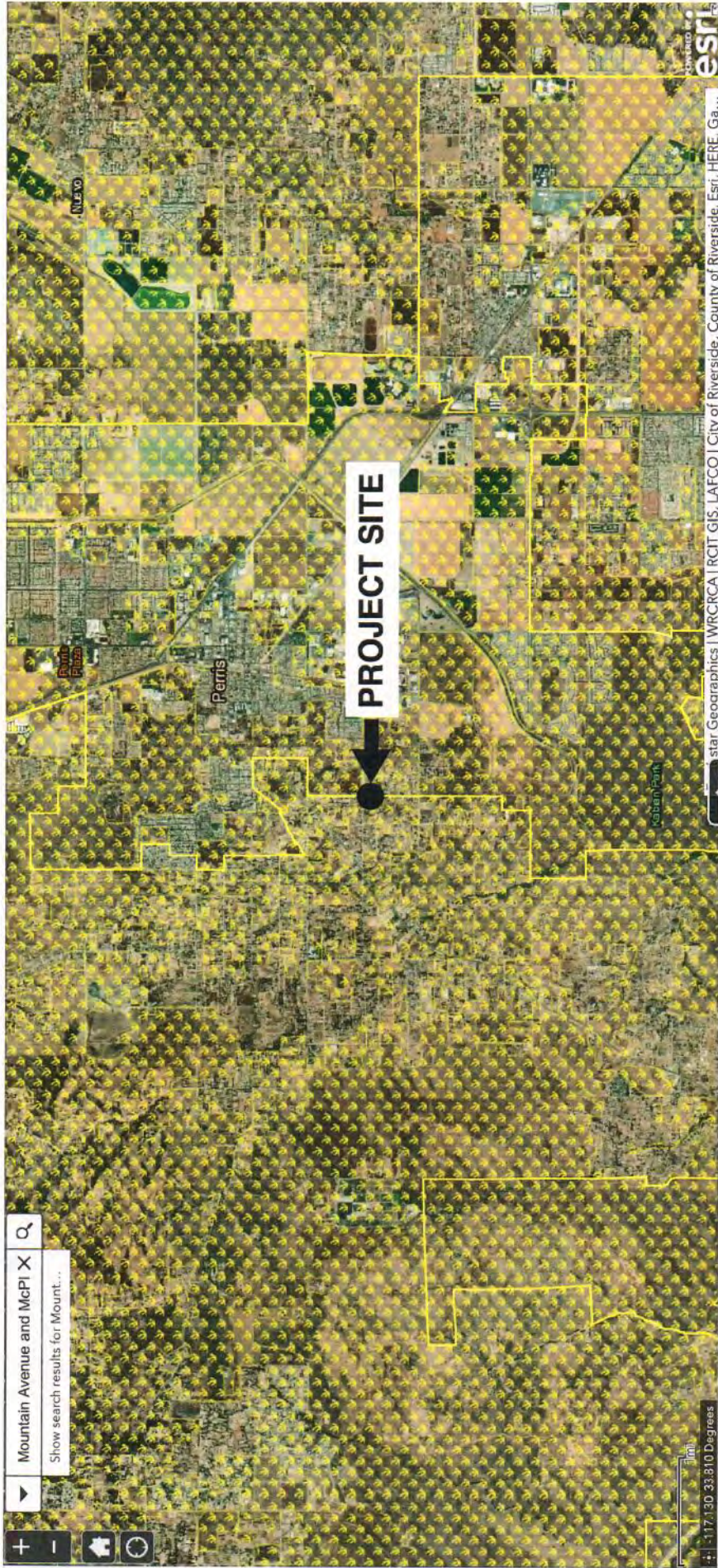



FIGURE 8: Riverside MSHCP Burrowing Owl Survey

SOURCE: RIVERSIDE MSHCP MAP

 Burrowing Owl Survey Area

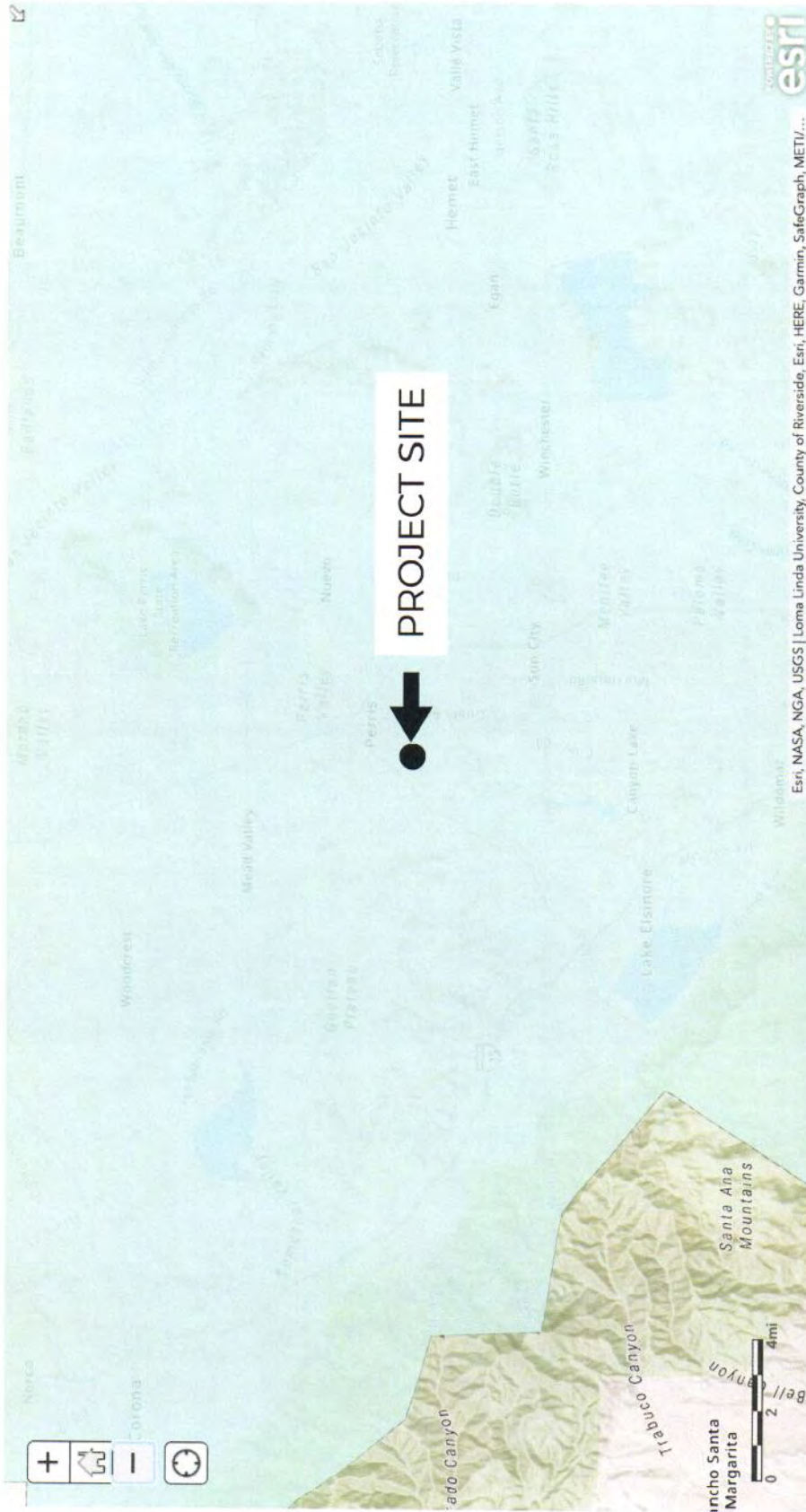


FIGURE 9: RIVERSIDE MSCHP STEPHEN'S KANGAROO RAT FEE AREA
STEPHEN'S KANGAROO RAT PLAN & FEE AREA



Western Riverside Area, California (CA679)
 Western Riverside Area, California
 (CA679)

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
CKD2	Cieneba rocky sandy loam, 8 to 15 percent slopes, eroded	8.8	34.4%
CKF2	Cieneba rocky sandy loam, 15 to 50 percent slopes, eroded	0.0	0.0%
MmB	Monserate sandy loam, 0 to 5 percent slopes	1.1	4.2%
MmD2	Monserate sandy loam, 8 to 15 percent slopes, eroded	7.9	30.6%
Vsc	Vista coarse sandy loam, 2 to 8 percent slopes	0.3	1.0%
Vsd2	Vista coarse sandy loam, 8 to 15 percent slopes,	7.5	29.3%
Vsf2	Vista coarse sandy loam, 15 to 35 percent slopes, eroded	0.1	0.5%
Totals for Area of Interest		25.7	100.0%

FIGURE 10: USDA SOIL MAP
 SOURCE: USDA WEB SOIL SURVEY

Table 1 - Plants observed on the site and known to occur in the area.

Note: The following Tables are not comprehensive lists of every plant or animal species which may occur in the area, but are a list of those common species which have been identified on the site or in the region by biologists from RCA Associates, Inc.

Common Name	Scientific Name	Comments
Doveweed	<i>Croton setigerus</i>	Observed on-site
Common tarweed	<i>Deinandra fasciculata</i>	Observed on-site
Telegraph weed	<i>Heterotheca grandiflora</i>	Observed on-site
Fiddleneck	<i>Ansickia tessellata</i>	Observed on-site
Horseweed	<i>Erigeron canadensis</i>	Observed on-site
Wild Oat	<i>Avena fatua</i>	Observed on-site
Red Brome	<i>Bromus rubens</i>	Observed on-site
Common sunflower	<i>Helianthus annuus</i>	Observed on-site
Tree of Heaven	<i>Ailanthus altissima</i>	Observed on-site
Tumbleweed	<i>Kali tragus ssp. tragus</i>	Observed on-site
Jerusalem thorn	<i>Parkinsonia aculeata</i>	Observed on-site
Red willow	<i>Salix laevigata</i>	Observed on-site
Western jimson weed	<i>Datura wrightii</i>	Observed on-site
Salt heliotrope	<i>Heliotropium curassavicum</i>	Observed on-site
Tree tobacco	<i>Nicotiana glauca</i>	Observed on-site
California buckwheat	<i>Eriogonum fasciculatum</i>	Observed on-site
White brittlebush	<i>Encelia farinosa</i>	Observed on-site
Mulefat	<i>Baccharis salicifolia</i>	Observed on-site
Gander's cholla	<i>Cylindropuntia ganderi</i>	Observed on-site
Fourwing saltbush	<i>Atriplex canescens</i>	Observed on-site
Vinegarweed	<i>Trichostema lanceolatum</i>	Observed on-site
Stinknet	<i>Oncosiphon pilulifer</i>	Observed on-site

Table 2 - Wildlife observed on the site and those species expected to the area.

Common Name	Scientific Name	Comments
Mammals		
Cottontail	<i>Sylvilagus auduboni</i>	Observed on-site and surrounding areas.
California ground squirrel	<i>Spermophilus beecheyi</i>	Observed on-site and surrounding areas.
Coyote	<i>Canis latrans</i>	Scat found
Jackrabbit	<i>Lepus californicus</i>	Observed on site
Birds		
American Kestrel	<i>Falco sparverius</i>	Observed on-site and surrounding areas.
American Crow	<i>C. brachyrhynchus</i>	“
Northern mockingbird	<i>Mimus polyglottus</i>	“
Red-tail Hawk	<i>Buteo jamaicensis</i>	“
Rock pigeon	<i>Columba livia</i>	“
Eurasian collared dove	<i>Streptopelia decaocto</i>	“
Song sparrow	<i>Melospiza melodia</i>	“
California towhee	<i>Melozone crissalis</i>	“
House sparrow	<i>Passer domesticus</i>	“
Cassin's kingbird	<i>Tyrannus vociferans</i>	“
Anna's hummingbird	<i>Calypte amna</i>	“
Mourning dove	<i>Zenaida macroura</i>	“
Lesser goldfinch	<i>Spinus psaltria</i>	“
White-crowned sparrow	<i>Zonotrichia leucophrys</i>	“
House finch	<i>Carpodacus mexicanis</i>	“
Reptiles and Amphibians		
Side-blotched lizard	<i>Uta stansburiana</i>	Seen on site
Western fence lizard	<i>Sceloporus occidentalis</i>	Seen on site

SOURCES:

- (1) Blair, W.F. 1968. Vertebrates of the United States. McGraw-Hill, Inc. New York. 616 pp.
- (2) Whitaker, J. O. 1980. The Audubon Society Field Guide to North American Mammals. A. A. Knopf, New York. 745 pp.
- (3) NGS. 1987. Field Guide to the Birds of North America. The National Geographic Society. 464 pp.

Appendix B

Regulatory Background

REGULATORY BACKGROUND

Special status species are native species that have been afforded special legal or management protection because of concern for their continued existence. There are several categories of protection at both federal and State levels, depending on the magnitude of the threat to continued existence and existing knowledge of population levels.

CEQA GUIDELINES SECTION 15380

Although threatened and endangered species are protected by specific federal and state statutes, CEQA Guidelines Section 15380(b) provides that a species not listed on the federal or state list of protected species may be considered rare or endangered if the species can be shown to meet certain specified criteria. These criteria have been modeled after the definition in FESA and the section of the California Fish and Game Code dealing with rare or endangered plants or animals. This section was included in CEQA primarily to deal with situations in which a public agency is reviewing a project that may have a significant effect on, for example, a candidate species that has not been listed by either USFWS or CDFW. Thus, CEQA provides an agency with the ability to protect a species from the potential impacts of a project until the respective government agencies have an opportunity to designate the species as protected if warranted. CEQA also calls for the protection of other locally or regionally significant resources, including natural communities. Although natural communities do not at present have legal protection of any kind, CEQA calls for an assessment of whether any such resources would be affected and requires findings of significance if there would be substantial losses. Natural communities listed by CNDDDB as sensitive are considered by CDFW to be significant resources and fall under the CEQA Guidelines for addressing impacts. Local planning documents such as general plans often identify these resources as well.

FEDERAL ENDANGERED SPECIES ACT

The U.S. Fish and Wildlife Service (USFWS) administers the federal Endangered Species Act (FESA) that provides a process for listing species as either threatened or endangered and the methods of protecting listed species. The FESA defines as “endangered” any plant or animal species that is in danger of extinction throughout all or a significant portion of its range. A “threatened” species is a species that is likely to become endangered in the near future. A

“proposed” species is one that has been officially proposed by USFWS in addition to the federal threatened and endangered species list.

Section 9 of the FESA prohibits “take” of threatened or endangered species. The term “take” means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in such conduct. The presence of any federally threatened or endangered species that are in a project area generally imposes severe constraints on development, particularly if the development would result in “take” of the species or its habitat. Under the regulations of the FESA, the USFWS may authorize “take” when it is incidental to, but not the purpose of, an otherwise lawful act.

CALIFORNIA ENDANGERED SPECIES ACT

The CDFW administers the California Endangered Species Act (CESA). The State of California considers an endangered species as one whose prospects of survival and reproduction are in immediate jeopardy. A threatened species is considered as one present in such small numbers throughout its range that it is likely to become an endangered species in the near future in the absence of special protection or management. A rare species is one that is considered present in such small numbers throughout its range that it may become endangered if its present environment worsens. State threatened and endangered species are fully protected against taking, as defined above.

SECTION 3503 AND 3511 OF CALIFORNIA FISH AND WILDLIFE CODE

The CDFW administers the California Fish and Wildlife Code. There are particular sections of the Code that are applicable to natural resource management. For example, section 3503 of the Code states it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird. Section 3511 of the Code lists fully protected bird species, where the CDFW is unable to authorize the issuance of permits or licenses to take these species.

CALIFORNIA NATIVE PLANT PROTECTION ACT

The California Native Plant Protection Act (CNPPA) of 1977 (Fish and Wildlife Code Sections 1900–1913) is intended to preserve, protect, and enhance endangered or rare native plants in California and gives the CDFW authority to designate state endangered, threatened, and rare plants

and provides specific protection measures for identified populations. The Act also directs the California Fish and Game Commission to adopt regulations governing taking, possessing, propagation, and sale of any endangered or rare native plant.

Vascular plants listed as rare or endangered by the California Native Plant Society (2011), but which have no designated status or protection under federal or state endangered species legislation, are defined as follows:

- Rank 1A: Plants Believed Extinct.
- Rank 1B: Plants Rare, Threatened, or Endangered in California and elsewhere.
- Rank 2: Plants Rare, Threatened, or Endangered in California, but more numerous elsewhere.
- Rank 3: Plants About Which More Information is Needed - A Review List.
- Rank 4: Plants of Limited Distribution - A Watch List.

NATURAL COMMUNITY CONSERVATION PLANNING PROGRAM

The Natural Community Conservation Program (NCCP) Act, Sections 2800-2840 of the state Fish and Game Code, authorized the preparation of NCCPs to protect natural communities and species while allowing a reasonable amount of economic development. The MSHCP, adopted by the County of Riverside on June 17, 2003, serves as a Habitat Conservation Plan (HCP) pursuant to the NCCP Act and pursuant to Section 10 (a)(1)(B) of the FESA.

CULTURAL RESOURCES ASSESSMENT REPORT

PACIFIC EMERALD RESIDENTIAL DEVELOPMENT PROJECT (TENTATIVE TRACT MAP NO. 37904) PERRIS, RIVERSIDE COUNTY CALIFORNIA



Prepared for: Pacific Communities, Inc.
1000 Dove Street, Suite 300
Newport Beach, California 92660

Prepared by: **Paleo Solutions, Inc.**
1906 Orange Tree Lane, Suite 210
Redlands, CA 92374

Evelyn N. Chandler, M.A., and Karen Brehm, M.Sc.

Principal Investigator: Evelyn N. Chandler, M.A.

May 2021

**Cultural Resources Assessment Report
Pacific Emerald Residential Development Project
(Tentative Tract Map No. 37904)
City of Perris, Riverside County, California**

Prepared For:

Pacific Communities, Inc.
Tony Arnest, Senior Project Manager
1000 Dove Street, Suite 300
Newport Beach, California 92660

Prepared By:



Evelyn N. Chandler, M.A. and Karen Brehm, M.Sc.
Paleo Solutions
1906 Orange Tree Lane
Redlands, California 92374

May 2021

U.S. Geological Survey 7.5-Minute Quadrangle:
Perris, California (1997)

PLSS:
SW ¼ of NE ¼ of Section 1, Township 5S, Range
4W, San Bernardino BM

Area Surveyed: 40.4 Acres

Cultural Resources Identified: None

Keywords: City of Perris, Cultural Resources Survey,
Ethnohistory, History, Luiseño, Prehistory, Riverside County



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APPENDICES

Appendix A	Native American Heritage Commission Correspondence
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EXECUTIVE SUMMARY

This report presents the results of the cultural resources assessment conducted by Paleo Solutions, Inc. (Paleo Solutions), under contract to Pacific Communities Builder, Inc., in support of the Pacific Emerald Residential Development 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 assessment included a records search, a search of the Sacred Lands File (SLF) by the Native American Heritage Commission (NAHC), review of historic maps and aerial photographs, and intensive pedestrian survey of the Project area.

The records search results indicate that three previous cultural resources investigations overlapped the Project area but did not identify any cultural resources within the current Project area. A total of six previously-recorded sites are located within 0.5 mile of the Project area, including one prehistoric site with unknown constituents, one multicomponent site containing prehistoric milling slicks and historic-age (i.e., 50 years old or older) refuse, and four historic-age roads. None of these resources are situated within the Project area.

The search of the SLF by the NAHC was negative for sensitive or sacred Native American resources. No cultural resources were identified within the Project area during the field survey.

There are no historical resources as defined under CEQA within the Project area, and there would be no impact to historical resources from the proposed residential development of the project area. However, there is a potential for buried archaeological resources to exist within the Project area. A program of archaeological monitoring, supervised by a qualified Principal Investigator who meets the U.S. Secretary of Interior professional qualification standards for archaeology, is recommended to avoid or mitigate significant impacts to buried archaeological resources.

In the unlikely event that human remains are encountered, all activity within the work location shall be halted, and City and the Riverside County Coroner notified immediately, with procedures implemented to comply with CEQA Guidelines Section 15064.5(e), California Health and Safety Code Section 7050.5(b), and California PRC 5097.98.



1.0 PROJECT DESCRIPTION AND LOCATION

The Project area is situated in the City of Perris in Riverside County, California (Figure 1). The Project consists of the construction of a gated community of 201 detached single story, single family homes (age restricted to 55+), three recreation areas, a 1.66-acre designated open space, one detention basin, and paved streets.

The Project area is located northeast of the intersection of Mountain Avenue and McPherson Road. It encompasses approximately 40.4 acres and is located in Section 1 of Township 5 South and Range 4 West and is mapped on the United States Geologic Survey (USGS) *Perris, California* (1997) 7.5' topographic quadrangle (Figure 2). The Project area is undeveloped, vacant land crisscrossed by a number of dirt roads (Figure 3).

2.0 REGULATORY SETTING

2.1 STATE REGULATIONS

This investigation was completed under the provisions of CEQA. Sections 21083.2 and 21084.1 of the Statutes of CEQA, Public Resources Code (PRC) Section 5024.1, and Section 15064.5 of the CEQA Guidelines were also used as basic guidelines for the cultural resource study (Governor's Office of Planning and Research 1998). AB 52 of 2014 amended PRC Section 5097.94 and added PRC Sections 21073, 21074, 21080.3.1, 21080.3.2, 21082.3, 21083.09, 21084.2, and 21084.3. AB 52 established that "tribal cultural resource" (TCRs) must be considered under CEQA and provided for additional Native American consultation requirements for the lead agency. The California Health and Safety Code 7050.5(b) also applies to this study.

PRC 5024.1 requires evaluation of historical resources to determine their eligibility for listing on the California Register of Historical Resources (CRHR). In California, the term "historical resource" includes but is not limited to "any object, building, structure, site, area, place, record, or manuscript which is historically or archaeologically significant, or is significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California" (California PRC Section 5020.1(j)). Historical resources also include any site described in a local register of historic resources or identified as significant in a historical resources survey (meeting the requirements of California PRC Section 5024.1(q)). A property that has achieved significance within the last 45 years is not considered eligible for inclusion in the CRHR.

The purposes of the CRHR are to maintain listings of the state's historical resources and to indicate which properties are to be protected from substantial adverse change (Office of Historic Preservation 1997). The criteria for listing resources on the CRHR were expressly developed to be in accordance with previously established criteria developed for listing on the National Register of Historic Places. A resource is determined significant if it:

- 1) is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
- 2) is associated with the lives of persons important in our past;
- 3) Embodies the distinctive characteristics of a type, period, region, or method of installation, or represents the work of an important creative individual, or possesses high artistic values;
- 4) Has yielded, or may be likely to yield, information important in prehistory or history.



Figure 1. Vicinity Map of Project Area

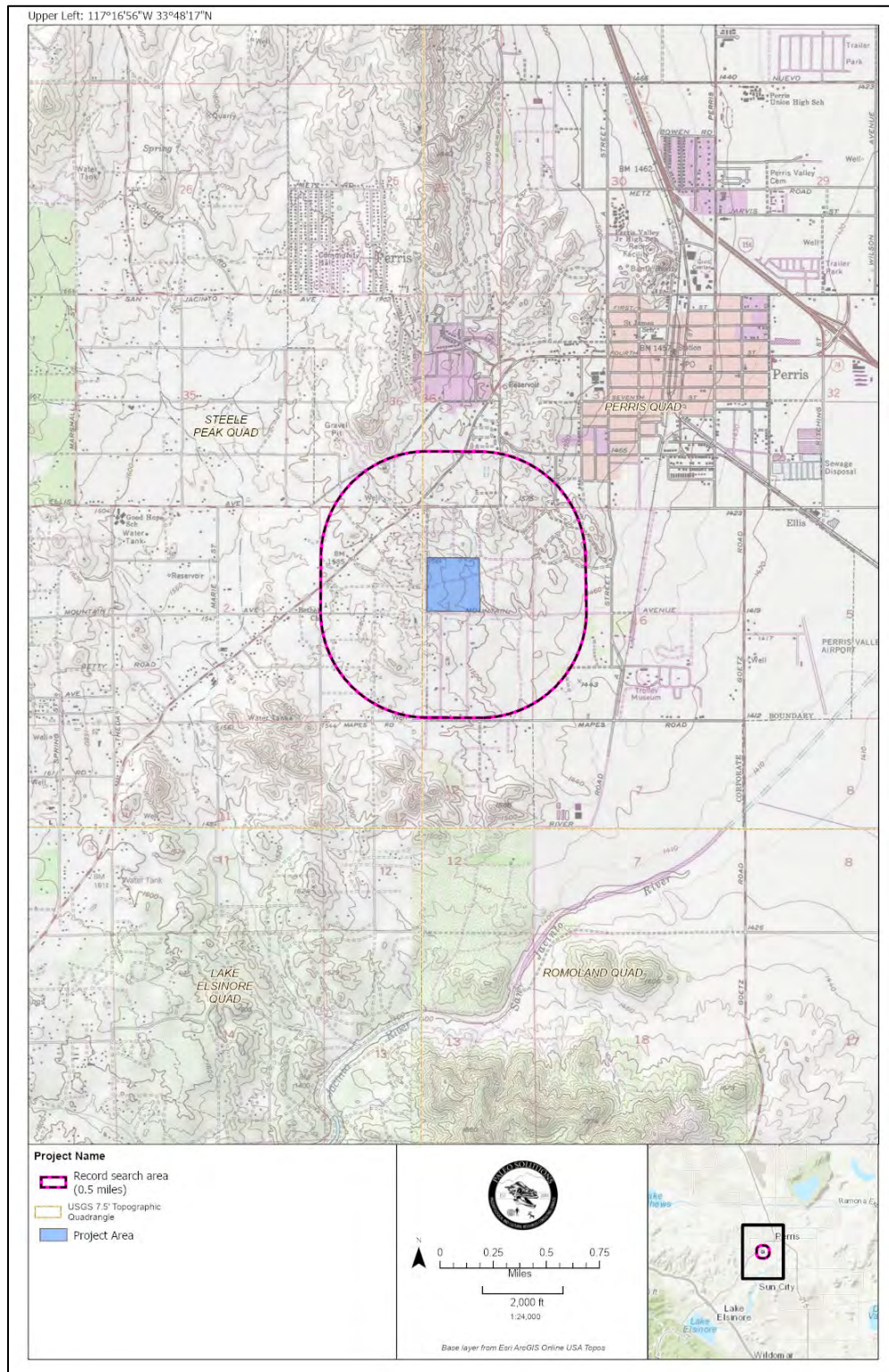


Figure 2. Location Map of Project Area



Figure 3. Aerial Map of Project Area



Under CEQA, if an archaeological site is not a historical resource but meets the definition of a “unique archeological resource” as defined in PRC Section 21083.2, then it should be treated in accordance with the provisions of that section. A unique archaeological resource is defined as follows:

“An archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

- (1) Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information
- (2) Has a special and particular quality such as being the oldest of its type or the best available example of its type
- (3) Is directly associated with a scientifically recognized important prehistoric or historic event or person.”

A resource that neither meets any of these criteria for the CRHR nor qualifies as a “unique archaeological resource” under CEQA PRC Section 21083.2 is viewed as not significant. Under CEQA, “a non-unique archaeological resource need be given no further consideration, other than the simple recording of its existence by the lead agency if it so elects” (PRC 21083.2[h]).

Section 21074 of CEQA describes a TCR as a site, feature, place, cultural landscape, sacred place, or object that is considered of cultural value to a California Native American Tribe and that is either:

- On or determined to be eligible for the California Register of Historical Resources or a local historic register; or
- 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 Section 5024.1.

Assembly Bill (AB) 52 formalizes the lead agency–tribal consultation process, requiring the lead agency to initiate consultation with California Native American groups that are traditionally and culturally affiliated with the project site, including tribes that may not be federally recognized. Lead agencies are required to begin consultation prior to the release of a negative declaration, mitigated negative declaration, or environmental impact report.

Section 1 (a)(9) of AB 52 establishes that “a substantial adverse change to a tribal cultural resource has a significant effect on the environment.” Effects on TCRs should be considered under CEQA. Section 6 of AB 52 adds Section 21080.3.2 to the PRC, which states that parties may propose mitigation measures “capable of avoiding or substantially lessening potential significant impacts to a tribal cultural resource or alternatives that would avoid significant impacts to a tribal cultural resource.” Further, if a California Native American tribe requests consultation regarding project alternatives, mitigation measures, or significant effects to tribal cultural resources, the consultation shall include those topics (PRC Section 21080.3.2[a]). The environmental document and the mitigation monitoring and reporting program (where applicable) shall include any mitigation measures that are adopted (PRC Section 21082.3[a]).

The California Health and Safety Code Section 7050.5(b) specifies protocol when human remains are discovered. Specifically, burials or human remains found either inside or outside a known cemetery are not to be disturbed or removed unless by authority of law, and the area of a discovery of human remains should remain undisturbed until the County Coroner is notified and has examined the remains prior to determining the appropriate course of action.



2.2 CITY OF PERRIS REGULATIONS

The Conservation Element of the City of Perris General Plan (adopted July 12, 2005) includes the following goal, policy, and implementation measures regarding the preservation of cultural resources:

Goal IV - Cultural Resources

Protection of historical, archaeological and paleontological sites.

Policy IV.A

Comply with state and federal regulations and ensure preservation of the significant historical, archaeological and paleontological resources.

Implementation Measures

- IV.A.1 For all private and public projects involving new construction, substantial grading, or demolition, including infrastructure and other public service facilities, staff shall require appropriate surveys and necessary site investigations in conjunction with the earliest environmental document prepared for a project.
- IV.A.2 For all projects subject to CEQA, applicants will be required to submit results of an archaeological records search request through the Eastern Information Center, at the University of California, Riverside.
- IV.A.3 Require Phase I Surveys for all projects located in areas that have not previously been surveyed for archaeological or historic resources, or which lie near areas where archaeological and/or historic sites have been recorded.
- IV.A.4 In Area 1 and Area 2 shown on the Paleontological Sensitivity Map, paleontologic monitoring of all projects requiring subsurface excavations will be required once any excavation begins. In Areas 4 and 5, paleontologic monitoring will be required once subsurface excavations reach five feet in depth, with monitoring levels reduced if appropriate, at the discretion of a certified Project Paleontologist.
- IV.A.5 Identify and collect previous surveys of cultural resources. Evaluate such resource and consider preparation of a comprehensive citywide inventory of cultural resources including both prehistoric sites and man-made resources.
- IV.A.6 Create an archive for the City wherein all surveys, collections, records and reports can be centrally located.
- IV.A.7 Strengthen efforts and coordinate the management of cultural resources with other agencies and private organizations.



3.0 SETTING

3.1 ENVIRONMENTAL SETTING

The Project area is situated in a vacant parcel approximately 1 mile southwest of L downtown Perris and 1.5 miles northwest of the San Jacinto River. It lies within the Perris Valley, a broad, relatively flat alluvial plain surrounded by the Lakeview Mountains to the east, Steele Peak and the Santa Ana Mountains to the west and southwest, and low undulating hills to the north and south. The topography of the Project area is relatively flat with a gentle slope to the east. An ephemeral drainage bisects the northeastern corner of the Project area. The elevation of the Project area ranges from 1,500 to 1,565 feet above mean sea level (see Figure 2). Geologic mapping indicates that the Project area is underlain by Cretaceous-age quartz granite (Richards and Zhao 2021). The regional climate is characterized as Mediterranean, with hot, dry summers and cool, wet winters. The Project area is undeveloped, vacant land crisscrossed by a number of dirt roads (see Figure 3).

3.2 CULTURAL SETTING

3.2.1 Prehistoric Overview

It is generally believed that human occupation of coastal southern California dates back to at least 10,000 years before present (BP). Four cultural periods of precontact occupation of California during the Holocene Epoch (10,000 years BP to present) are discussed below: the Early Holocene Period, the Early Horizon Period, the Middle Horizon Period, and the Late Horizon Period. During the Early Holocene Period (10,000 to 8,000 years BP), hunters/gatherers utilized lacustrine and marshland settings for the varied and abundant resources found there. Milling-related artifacts are lacking during this period, but the atlatl and dart are common. Hunting of large and small game occurred, as well as fishing. A few, scattered permanent settlements were established near large water sources, but a nomadic lifestyle was more common (Moratto 1984).

Milling-related artifacts first appear in sites dating to the Early Horizon Period (8,000 to 4,000 years BP). Hunting and gathering continue during this period, but with greater reliance on vegetal foods. Mussels and oysters were a staple. This gave way to greater consumption of shellfish in the Middle Horizon Period (4,000 to 2,000 years BP). Use of bone artifacts appears to have increased during this period, and baked-earth steaming ovens were developed. Occupation of permanent or semi-permanent villages occurred in this period, as did reoccupation of seasonal sites. During the Late Horizon Period (2,000 years BP to the time of European Contact [i.e., AD 1769]), population densities were high and settlement in permanent villages increased (Erlandson 1994; Moratto 1984). Regional subcultures also developed, each with their own geographical territory and language or dialect. These groups, bound by shared cultural traits, maintained a high degree of interaction, including trading extensively with one another.

3.2.2 Ethnographic Overview

The project area is located in the territory known ethnographically to have been occupied by the Luiseño, a Takiic-speaking people. The term Luiseño was given by the Spanish to the native groups who were living in the area under influence of Mission San Luis Rey (Bean and Shipek 1978).

The Luiseño lived in sedentary and autonomous village groups, each with specific subsistence territories encompassing hunting, collecting, and fishing areas. Villages were typically located in valley bottoms, along streams, or along coastal strands near mountain ranges where water was available and village defense was possible. Inland populations had access to fishing and gathering sites on the coast, which they used during the winter months (Bean and Shipek 1978).



Luiseno subsistence was centered around the gathering of acorns, seeds, greens, bulbs, roots, berries, and other vegetal foods. This was supplemented with hunting mammals such as deer, antelope, rabbit, woodrat, ground squirrels, and mice, as well as quail, doves, ducks, and other birds. Bands along the coast also exploited marine resources, such as sea mammals, fish, crustaceans, and mollusks. Inland, trout and other fish were taken from mountain streams (Bean and Shipek 1978).

Hunting was done both individually and by organized groups. Tool technology for food acquisition, storage, and preparation reflects the size and quantity of items procured. Small game was hunted with the use of curved throwing sticks, nets, slings, or traps. Bows and arrows were used for hunting larger game. Dugout canoes, basketry fish traps, and shell hooks were used for near-shore ocean fishing. Coiled and twined baskets were made for food gathering, preparation, storing, and serving. Other items used for food processing included large shallow trays for winnowing chaff from grain, ceramic and basketry storage containers, manos and metates for grinding seeds, and ceramic jars for cooking (Bean and Shipek 1978).

Villages had hereditary chiefs who controlled religious, economic, and territorial activities (Bean and Shipek 1978; Boscana 1933). An advisory council of ritual specialists and shamans was consulted for environmental and other knowledge. Large villages located along the coast or in inland valleys may have had more complex social and political structures than settlements controlling smaller territories (Bean and Shipek 1978; Strong 1929).

Most Luiseno villages contained a ceremonial structure enclosed by circular fencing located near the center of the village. Houses were semisubterranean and thatched with locally available brush, bark, or reeds. Earth-covered semisubterranean sweatshouses were also common and were used for purification and curing rituals (Bean and Shipek 1978).

The Luiseno first came into contact with Europeans in 1769 when the expedition led by Gaspar de Portolá arrived in their territory. That same year, the San Diego Mission was established just to the south, followed by the San Juan Capistrano Mission in 1776 and the San Luis Rey Mission in 1798. Poor living conditions at the missions and introduced European diseases led to a rapid decline of the Luiseno population. Following the Mission Period (1769-1834), Luiseno Indians scattered throughout southern California. Some became serfs on the Mexican ranchos, others moved to newly founded pueblos established for them, some sought refuge among inland groups, and a few managed to acquire land grants. Later, many moved to or were forced onto reservations. Although many of their cultural traditions had been suppressed during the Mission Period, the Luiseno were successful at retaining their language and certain rituals and ceremonies. Starting in the 1970s, there was a revival of interest in the Luiseno language and classes were organized. Since then, traditional games, songs, and dances have been performed, traditional foods have been gathered and prepared, and traditional medicines and curing procedures have been practiced (Bean and Shipek 1978).

3.2.3 Historic Overview

The first European to visit California was Spanish maritime explorer Juan Rodriguez Cabrillo in 1542. Cabrillo was sent north by the Viceroy of New Spain (Mexico) to look for the Northwest Passage. Cabrillo visited San Diego Bay, Catalina Island, San Pedro Bay, and the northern Channel Islands. The English adventurer Francis Drake visited the Miwok Native American group at Drake's Bay or Bodega Bay in 1579. Sebastian Vizcaíno explored the coast as far north as Monterey in 1602. He reported that Monterey was an excellent location for a port (Castillo 1978). Vizcaíno also named San Diego Bay to commemorate Saint Didacus. The name began to appear on European maps of the New World by 1624 (Gudde 1998:332).



Colonization of California began with the Spanish Portolá land expedition. The expedition, led by Captain Gaspar de Portolá of the Spanish army and Father Junipero Serra, a Franciscan missionary, explored the California coast from San Diego to the Monterrey Bay Area in 1769. As a result of this expedition, Spanish missions to convert the native population, *presidios* (forts), and towns were established. The Franciscan missionary friars established 21 missions in Alta California (the area north of Baja California) beginning with Mission San Diego in 1769 and ending with the mission in Sonoma established in 1823. The purpose of the missions and presidios was to establish Spanish economic, military, political, and religious control over the Alta California territory. Mission San Diego was established to convert the Native Americans that lived in the area, known as the *Kumeyaay* or Diegueño. Mission San Gabriel Archangel was founded in 1771 east of what is now Los Angeles to convert the *Tongva* or Gabrielino. Mission San Fernando, also in *Tongva*/Gabrielino territory, was established in 1797. Mission San Juan Capistrano was established in 1776 on San Juan Creek (in what is now southern Orange County) to convert the *Ajichemem* or Juaneño. Mission San Luis Rey was established in 1798 on the San Luis Rey River (in what is now northern San Diego County) to convert the Luiseño. Missions San Buenaventura and Santa Barbara were founded in Chumash territory in 1782 and 1786, respectively (Castillo 1978:100).

Some missions later established outposts in inland areas. An *asistencia* (mission outpost) of Mission San Luis Rey, known as San Antonio de Pala, was built in Luiseño territory along the upper San Luis Rey River near Mount Palomar in 1810 (Pourade 1961). A chapel administered by Mission San Gabriel Archangel was established in the San Bernardino area in 1819 (Bean and Smith 1978a). The present *asistencia* within the western outskirts of present-day Redlands was built circa 1830 (Haenszel and Reynolds 1975). The missions sustained themselves through cattle ranching and traded hides and tallow for supplies brought by ship. Large cattle ranches were established by Mission San Luis Rey at Temecula and San Jacinto (Gunther 1984). The Spanish also constructed *presidios*, or forts, at San Diego and Santa Barbara, and a *pueblo*, or town, was established at Los Angeles. The Spanish period in California began in 1769 with the Portola expedition and ended in 1821 with Mexican independence.

After Mexico became independent from Spain in 1821, what is now California became the Mexican province of Alta California. The Mexican government closed the missions in the 1830s and former mission lands were granted to retired soldiers and other Mexican citizens for use as cattle ranches. Much of the land along the coast and in the interior valleys became part of Mexican land grants or “ranchos” (Robinson 1948). During the Mexican period there were small towns at San Diego (near the presidio), San Juan Capistrano (around the mission), and Los Angeles. The rancho owners lived in one of the towns or in an adobe house on the rancho. The Mexican Period includes the years 1821 to 1848.

The American period began when the Treaty of Guadalupe Hidalgo was signed between Mexico and the United States in 1848. As a result of the treaty, Alta California became part of the United States as the territory of California. Rapid population increase occasioned by the Gold Rush of 1849 allowed California to become a state in 1850. Most Mexican land grants were confirmed to the grantees by U.S. courts, but usually with more restricted boundaries which were surveyed by the U.S. Surveyor General’s office. Land that was not part of a land grant was owned by the U.S. government until it was acquired by individuals through purchase or homesteading. Floods and drought in the 1860s greatly reduced the cattle herds on the ranchos, making it difficult to pay the new American taxes on the thousands of acres they owned. Many Mexican-American cattle ranchers borrowed money at usurious rates from newly arrived Anglo-Americans. The resulting foreclosures and land sales transferred most of the land grants into the hands of Anglo-Americans (Cleland 1941:137-138).

The City of Perris is located on a portion of the land known during the Spanish Period and the Mexican Period as both Rancho San Jacinto and Rancho San Jacinto Nuevo y Potrero. At some time prior to 1821, Rancho San Jacinto was established by Mission San Luis Rey for grazing of mission livestock. In



1842, Governor *pro tempore* Manuel Jimeno granted a large portion of the mission's holdings to José Antonio Estudillo, who was *mayordomo* of the mission. The name Rancho San Jacinto was retained for this property. Three years later, Estudillo's son-in-law, Miguel de Pedrorena, petitioned for the western half of Rancho San Jacinto. Estudillo had no objection to splitting the rancho, since the land Pedrorena was asking for was considered surplus. In 1846, Governor Pio Pico approved the grant under the name Rancho San Jacinto Nuevo y Potrero. The patent for Rancho San Jacinto Nuevo y Potrero was issued in 1883 to Thomas W. Sutherland, legal guardian of Pedrorena's widow and children (Gunther 1984), excluded the land later occupied by Perris. Alternate sections of the public land outside the land grant boundaries were granted to the Southern Pacific Company to subsidize construction of the Southern Pacific Railroad. Settlers bought land from the Southern Pacific Company or obtained public land through homestead grants.

In 1882 and 1883, the California Southern Railroad, a subsidiary of the Atchison, Topeka, & Santa Fe Railroad, was built from National City, south of San Diego, to San Bernardino. Along the way, it crossed the San Jacinto Plain, which is now known as Perris Valley. A small settlement called Pinacate was established in 1885 along the San Jacinto River as settlers came into the area to start homesteads. Disputes over land title soon led to a large number of Pinacate residents relocating about two miles north, where a well was dug to start a new settlement. Lots were offered to the California Southern Railroad, along with a promise to build a new train station if the railway would agree to move their stop from Pinacate to the new settlement. Railroad officials agreed, and land for the town site was purchased from the Southern Pacific Company. The townsite was surveyed and mapped by E. Dexter, and the plat was submitted in 1886. The new community was named Perris, in honor of Frederick Thomas Perris, the chief engineer and supervisor of the California Southern Railroad. The railway switch and siding were soon moved from Pinacate to Perris, and Perris was officially designated a station on the California Southern Railroad route. Many buildings were moved from Pinacate to Perris, and a two-story hotel was built and operated by Isabella Smith. Mrs. Smith was appointed the first postmaster of Perris on February 26, 1886. At that time, Perris was in San Diego County. When the northern portion of the county was split off to form Riverside County in 1893, Perris became one of the new county's original towns. The City of Perris was incorporated on May 16, 1911 (Ellis 1912; Gunther 1984).

By 1887, six passenger trains and two freight trains stopped at Perris daily, and numerous houses and businesses had been built during the real estate boom. Growth of the town slowed when heavy storms repeatedly washed out the railroad tracks in the Temecula Gorge in the early 1890s, causing the Atchison, Topeka, and Santa Fe Railroad to abandon service to San Diego by way of the California Southern Railroad line through Perris after 1892 (Ellis 1912; City of Perris 2018).

Once it became clear that Perris would need more than the railroad to support it, residents turned to agriculture for the future development of the town. Because of limited groundwater, dry grain farming and wool from sheep were the main agricultural enterprises before water was brought to the valley from Bear Valley Reservoir (Big Bear Lake) by the Perris Irrigation District, organized in 1890 (Dumke 1944:128). Alfalfa, potatoes, citrus, olives, prunes, peaches, pears, grapes, and later, sugar beets became the mainstays of farming in the Perris Valley (Ellis 1912; *Riverside Reflex* 1893). Soon, however, the Bear Valley Water Company became unable to supply the Perris Irrigation District with the water it had promised. Drought had lowered the water level of Bear Valley Reservoir, and other communities, such as Redlands and San Bernardino, had prior claims to whatever water was available. By 1895, the supply was completely cut off, and Perris Valley farmers began to replace their lost supply of imported water by digging wells. By 1905, wells and pumping plants were located throughout the valley, and agriculture began to flourish (Ellis 1912).



Like most southern California communities, Perris suffered economic setbacks during the Great Depression of the 1930s. But, as happened in many areas throughout the country, the local economy was re-energized by the activities at military facilities during World War II. In the Perris area, it was the wartime growth of March Army Air Field, which helped bring about a return to prosperity. The post-war expansion of the facility, renamed March Air Force Base in 1947, continued to benefit Perris. An improved, more reliable water supply was brought to the valley by the Eastern Municipal Water District in the early 1950s. With the construction of Lake Perris in the late 1960s and early 1970s, Perris has become, in addition to an agricultural center, a popular recreational area. Water sports on Lake Perris, hot air ballooning, the Orange Empire Railway Museum, and skydiving are among the activities that continue to attract visitors to the community (City of Perris 2018).

4.0 BACKGROUND RESEARCH

4.1 RECORDS SEARCH METHODS

A records search was requested from the Eastern Information Center (EIC) of the California Historical Resources Information System (CHRIS) at University of California, Riverside on December 11, 2020. Preliminary results of the records search were received on January 22, 2021, with full results received on March 23, 2021. The records search identified previously-recorded cultural resources within the project area and within a 0.5-mile radius. The records search reviewed reports from previous investigations and site records of known resources within the project and records search radius. In addition, the Built Environment Resources Directory (BERD) was reviewed to identify resources listed on or determined eligible for listing on the National Register of Historic Places (NRHP), the CRHR, and local registers. It also included a review of resources listed as California Historical Landmarks and California Points of Historical Interest.

A search of the Sacred Lands File (SLF) was requested from the NAHC on December 14, 2020. The NAHC responded on December 30, 2020 that the results of the SLF search were negative; however, they noted that the absence of specific site information in the SLF does not indicate the absence of cultural resources in the area. The NAHC provided a list of Native American tribes who may also have knowledge of cultural resources in the project area (Appendix A).

4.2 RECORDS SEARCH RESULTS

4.2.1 Previously Conducted Cultural Resources Studies

The records search identified six previous investigations have been completed within 0.5 mile of the Project area between 1980 and 2016. Of these, three investigations overlapped the Project area but did not identify any cultural resources within the current Project area. All six investigations are detailed in Table 1.

4.2.2 Previously Identified Cultural Resources

The EIC records search results identified six previously-documented resources within 0.5 mile of the Project area, including one prehistoric site with unknown constituents, one multicomponent site containing prehistoric milling slicks and historic-age refuse, and four historic-age roads. None of the six identified resources are situated within the Project area. All six resources are detailed in Table 2.

A review of BERD indicates that there are no NRHP or CRHR-listed or eligible resources, California Historical Landmarks, or California Points of Historical Interest located within the Project area.



Table 1. Previous Investigations within 0.5 Mile of the Project Area

CHRIS Report No.	Year	Author(s)	Title	Affiliation	Proximity to Project Area
RI-04403	1993	Romani, John	Archaeological Survey Report for the Proposed Widening of Route 74 from Seventh Street to the I-15 Freeway, Riverside County, CA.	Greenwood and Associates	Outside
RI-04421	1990	LSA Associates	Appendix B-Cultural Resources. In: Measure A Program Project Alternatives Analysis-Environmental Component, Technical Appendix Volume I	LSA Associates	Outside
RI-06888	2006	Lerch, Michael K. and Gray, Marlesa A.	Cultural Resources Assessment of the Valley-Ivyglen Transmission Line Project, Riverside County, California	Statistical Research, Inc.	Overlaps
RI-07002	2006	White, Robert S. and White, Laura S.	A Cultural Resources Assessment of 12.55-Acres As Shown on VTTM 32549 Located North of Arrowhead Circle and West of River Road, City of Perris, Riverside County	Archaeological Associates	Overlaps
RI-07157	2004	Caprice D. Harper	Cultural Resource Assessment for Gingular Wireless Facility No. SB 334-01 Near Perris, Riverside County, California	LSA Associates, Inc.	Overlaps
RI-08639	2009	Evelyn N. Chandler and Cary D. Cotterman	Cultural Resources Inventory of Two Proposed Pole Replacement ins in Perris and Homeland Riverside County, California (W.O. 6077-4800, E4832, E4833)	ECORP Consulting, Inc.	Outside

Table 2. Previously-Documented Resources within 0.5 Mile of the Project Area

Primary No.	Trinomial	Age and Type	Resource Description	Proximity to Project Area
P-33-000412	CA-RIV-000412	Unknown	Prehistoric Site	Outside
P-33-015377	CA-RIV-008124	Multicomponent Site	Prehistoric Milling Slicks, Historic Artifact Scatter	Outside
P-33-020451	CA-RIV-010352	Historic Site	Road	Outside
P-33-020466	CA-RIV-010367	Historic Site	Road	Outside
P-33-020467	CA-RIV-010368	Historic Site	Road	Outside
P-33-020658	CA-RIV-010565	Historic Site	Road	Outside

4.3 HISTORIC MAP REVIEW

A review of available aerial imagery and historic maps reveals that the Project area is currently vacant land crisscrossed by a number of dirt roads. The Project area also shows signs of past grading or disking for vegetation removal (Google Earth 2020). One southwest-northeast road is shown bisecting the Project area on the 1901 U.S. Geologic Survey (USGS) Elsinore, California 1:125,000-scale topographic map. That road is no longer evident by 1942. The USGS Perris, California 1:24,000-scale topographic quadrangles from 1942, 1953, 1967, 1973 show no roads, structures, or other built features within the Project area. By 1980, a dirt road extension of Gertrude Avenue is shown bisecting the Project area from west to east (USGS Historical Topographic Map Explorer 2020). That dirt road, along with additional dirt roads is evident in aerial imagery from 1994 (Google Earth 2020).



5.0 FIELD SURVEY METHODS AND RESULTS

Paleo Solutions archaeologists Rosemarie Pavel, M.A., RPA, and Antonio Cortez, B.A., conducted an intensive pedestrian field survey of the approximately 45-acre project area on December 28, 2020. The project area was inventoried using pedestrian transect intervals of 15 to 20 meters. The entire area was closely inspected for evidence of prehistoric and historic-age archaeological sites and historic-age elements of the built environment.

The project area boundaries were verified using a hand-held global positioning system (GPS) unit. The setting and disturbances were recorded and photo-documented using a digital camera. All photographs and documentation are on file at the Paleo Solutions' Monrovia, California office.

No cultural resources were encountered within the Project area during the field survey. There is no evidence of the dirt road that appears on the 1901 USGS Elsinore, California topographic map but that was not evident on the 1942 map. Some modern-age refuse was observed scattered along the southern portion of the Project area. There are several granite outcrops near the center of the Project area, but they are heavily eroded and show no signs of cultural use. Portions of the Project area had been cleared of vegetation and had good visibility (80 to 100 percent), while other areas had dense vegetation reducing visibility to 10 to 20 percent. Observed vegetation included tumbleweeds, grasses, mallow, and Paleo Verde trees. Signs of coyote and lagomorphs were noted.

6.0 SUMMARY AND RECOMMENDATIONS

To identify cultural resources that could be affected by the proposed Project, Paleo Solutions conducted a records search with the EIC, a SLF search with the NAHC, a review of historic maps and aerial photographs, and a field survey of the Project area. The records search results indicate that three previous cultural resources investigations overlapped the Project area but did not identify any cultural resources within the current Project area. A total of six previously-recorded sites are located within 0.5 mile of the Project area, including one prehistoric site with unknown constituents, one multicomponent site containing prehistoric milling slicks and historic-age refuse, and four historic-age roads. None of these resources are situated within the Project area.

The search of the SLF by the NAHC was negative for sensitive or sacred Native American resources. No cultural resources were identified within the Project area during the field survey.

There are no historical resources as defined under CEQA (i.e., CRHR-eligible resources) within the Project area, and there would be no impact to historical resources from the proposed residential development of the project area. However, the presence of six cultural resources within 0.5 mile of the Project area, including two sites that contain prehistoric archaeological materials, indicates that there is a potential for buried archaeological resources to exist within the Project area. Bedrock outcrops like those found within the project area, were commonly used by Native Americans as milling stations for processing acorns, seeds, and other vegetal resources. Although no milling features were observed on the exposed outcrops during the field survey, milling features can be buried over time by natural alluvial processes. It is possible that buried milling features, such as milling slicks and mortars, as well as subsurface prehistoric artifacts, may be present within the Project area.

The following measures are recommended to avoid or mitigate potential impacts to archaeological resources during construction:



- 1) Monitoring by a qualified archaeologist shall be conducted during initial ground-disturbing construction activities. Monitoring shall be supervised by a qualified Principal Investigator who meets the U.S. Secretary of Interior professional qualification standards for archaeology. Initial monitoring shall be conducted to identify subsurface archaeological resources and to assess the potential of the Project area to contain buried resources. If the subsurface sediments are assessed as having a low or no potential to contain buried resources, archaeological monitoring may be reduced or eliminated, as determined appropriate by the Principal Investigator in consultation with the City of Perris. At the conclusion of all monitoring activities, a monitoring report shall be prepared by the Principal Investigator to document the methods and results of the monitoring, including detailed descriptions of all resources encountered and the measures taken to evaluate the resource(s) and to avoid or mitigate impacts to significant resources. The report shall be submitted to the City of Perris and the EIC.
- 2) If subsurface archaeological materials are identified during ground-disturbing activities, work shall be halted within 100 feet (30 meters) of the find, and the City shall be notified immediately. The Principal Investigator shall evaluate the resource for eligibility to the CRHR. If determined eligible, the Principal Investigator shall develop and implement appropriate measures to avoid or mitigate significant impacts to the resource, in coordination with the City of Perris and any consulting Tribes. This may include preparation of a Treatment Plan. Work shall not resume until the resource has been adequately documented and evaluated by the Principal Investigator with appropriate treatment measures implemented, and the City has given authorization to resume work.
- 3) In the unlikely event that human remains are encountered, all activity within the work location shall be halted, and City and the Riverside County Coroner notified immediately, with procedures implemented to comply with CEQA Guidelines Section 15064.5(e), California Health and Safety Code Section 7050.5(b), and California PRC 5097.98.



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2020 <https://livingatlas.arcgis.com/topoexplorer/index.html>. Accessed December 17, 2020.



8.0 REPORT AND FIELD PERSONNEL

8.1 REPORT PREPARERS

Evelyn N. Chandler, Principal Investigator/Principal Author

2011 M.A. Archaeology and Heritage, University of Leicester, UK
1989 B.A. Anthropology/Sociology, University of Redlands, California
1989 B.A. Political Science, University of Redlands, California
Years of Experience: 28

Karen Brehm, Contributing Author

2014 M.Sc. Archaeological Sciences, Durham University, UK
2011 B.A. Anthropology, University of California, San Diego
2011 B.A. Near Eastern History, University of California, San Diego
Years of Experience: 7

8.2 FIELD PERSONNEL

Rosemarie Pavel, RPA, Field Director

2019 M.A., Humanities with an Emphasis on Cultural Resources Management, Adams State University, Colorado
2009 B.A., Anthropology, University of Texas at Austin
Years of Experience: 11

Antonio Cortex, Field Technician

2019 B.A., Anthropology, San Diego State University, California
Years of Experience: 3



APPENDIX A
NATIVE AMERICAN HERITAGE COMMISSION
CORRESPONDENCE

Sacred Lands File & Native American Contacts List Request

Native American Heritage Commission

1550 Harbor Blvd, Suite 100

West Sacramento, CA 95691

916-373-3710

916-373-5471 – Fax

nahc@nahc.ca.gov

Information Below is Required for a Sacred Lands File Search

Project: Pacific Communities – Pacific Emerald Project

County: Riverside, CA

USGS Quadrangle Name: Perris, CA and Steele Peak, CA

Township: 5 South **Range:** 4 West **Section(s):** 1

Company/Firm/Agency: Paleo Solutions, Inc.

Street Address: 911 S. Primrose Avenue, Unit N

City: Monrovia, CA **Zip:** 91016

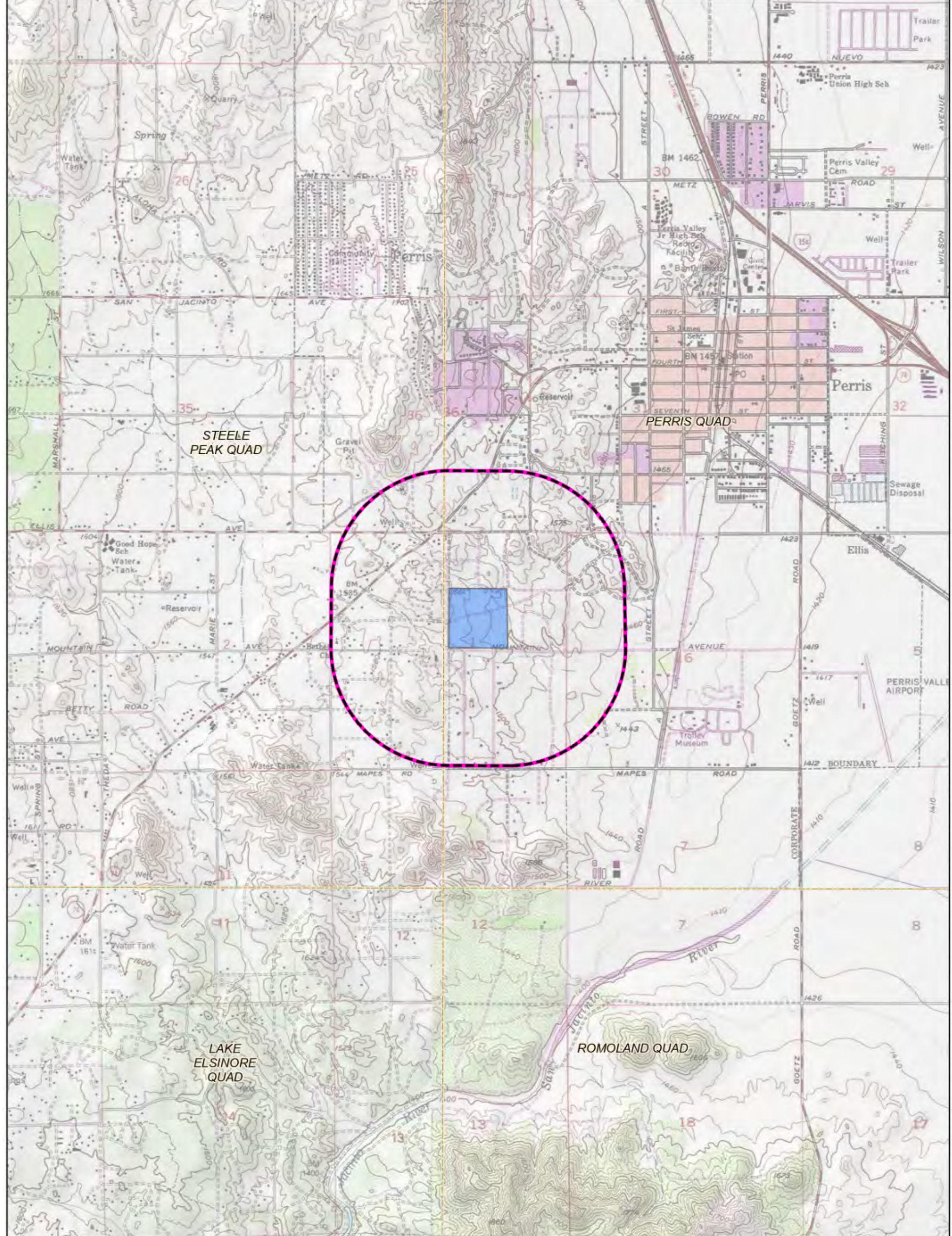
Phone: (909) 226-3802

Fax: N/A

Email: evelyn@paleosolutions.com

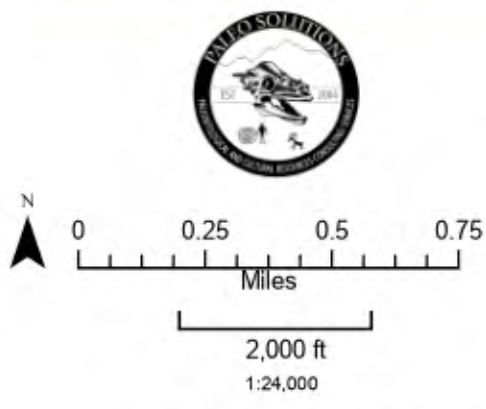
Project Description:

Pacific Communities, Inc. proposes the residential development of a 40-acre parcel located northeast of the intersection of Mountain Avenue and McPherson Road in Perris (Tentative Tract Map 37904). The project consists of the construction of a gated community with 201 single family homes. Other project elements include streets, sidewalks, three recreation areas, a detention basin, and an open space area.



Project Name

-  Record search area (0.5 miles)
-  USGS 7.5' Topographic Quadrangle
-  Project Area



Base layer from Esri ArcGIS Online USA Topos



NATIVE AMERICAN HERITAGE COMMISSION

December 30, 2020

Evelyn Chandler
Paleo Solutions, Inc.Via Email to: evelyn@paleosolutions.com

Re: Pacific Communities – Pacific Emerald Project, Riverside County

Dear Ms. Chandler:

A record search of the Native American Heritage Commission (NAHC) Sacred Lands File (SLF) was completed for the information you have submitted for the above referenced project. The results were negative. However, the absence of specific site information in the SLF does not indicate the absence of cultural resources in any project area. Other sources of cultural resources should also be contacted for information regarding known and recorded sites.

Attached is a list of Native American tribes who may also have knowledge of cultural resources in the project area. This list should provide a starting place in locating areas of potential adverse impact within the proposed project area. I suggest you contact all of those indicated; if they cannot supply information, they might recommend others with specific knowledge. By contacting all those listed, your organization will be better able to respond to claims of failure to consult with the appropriate tribe. If a response has not been received within two weeks of notification, the Commission requests that you follow-up with a telephone call or email to ensure that the project information has been received.

If you receive notification of change of addresses and phone numbers from tribes, please notify me. With your assistance, we can assure that our lists contain current information.

If you have any questions or need additional information, please contact me at my email address: Andrew.Green@nahc.ca.gov.

Sincerely,

Andrew Green
Cultural Resources Analyst

Attachment

CHAIRPERSON
Laura Miranda
LuiseñoVICE CHAIRPERSON
Reginald Pagaling
ChumashSECRETARY
Merri Lopez-Keifer
LuiseñoPARLIAMENTARIAN
Russell Attebery
KarukCOMMISSIONER
Marshall McKay
WintunCOMMISSIONER
William Mungary
Paiute/White Mountain
ApacheCOMMISSIONER
Julie Tumamait-
Stenslie
ChumashCOMMISSIONER
[Vacant]COMMISSIONER
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NAHC.ca.gov

**Native American Heritage Commission
Native American Contact List
Riverside County
12/30/2020**

**Agua Caliente Band of Cahuilla
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Cahuilla

**Los Coyotes Band of Cahuilla
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Cahuilla

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Indians**

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dtorres@morongo-nsn.gov

Cahuilla
Serrano

**Augustine Band of Cahuilla
Mission Indians**

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Cahuilla

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Cahuilla
Serrano

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Cahuilla

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Cupeno
Luiseno

Cahuilla Band of Indians

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Cahuilla

**Pechanga Band of Luiseno
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Luiseno

This list is current only as of the date of this document. Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resource Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources assessment for the proposed Pacific Communities – Pacific Emerald Project, Riverside County.

**Native American Heritage Commission
Native American Contact List
Riverside County
12/30/2020**

Pechanga Band of Luiseno Indians

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Quechan Tribe of the Fort Yuma Reservation

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Kw'ts'an Cultural Committee
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Soboba Band of Luiseno Indians

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San Jacinto, CA, 92583 Luiseno
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jontiveros@soboba-nsn.gov

This list is current only as of the date of this document. Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resource Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources assessment for the proposed Pacific Communities – Pacific Emerald Project, Riverside County.

**Native American Heritage Commission
Native American Contact List
Riverside County
12/30/2020**

***Torres-Martinez Desert Cahuilla
Indians***

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Resource Coordinator
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Thermal, CA, 92274
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Fax: (760) 397-8146
mmirelez@tmdci.org

Cahuilla

This list is current only as of the date of this document. Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resource Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources assessment for the proposed Pacific Communities – Pacific Emerald Project, Riverside County.

To: Stephanie Pacheco, Tetra Tech, Inc.

From: Jenna Farrell, MA, RPA., Tetra Tech, Inc., Principal Archaeologist

Date: November 15, 2022

Subject: Response to Comments dated August 09, 2022, on the Preliminary Draft Initial Study/Mitigated Negative Declaration for the Tentative Tract Map. No. 37904 Pacific Emerald Project, Perris, California – regarding the Cultural Resource section.

This technical memo was prepared in response to comments dated August 09, 2022, from Cadence Environmental who conducted a peer review of the Cultural Resource Section of the Preliminary Draft Initial Study/Mitigated Negative Declaration for the Tentative Tract Pacific Emerald Project (Project), Perris, California on behalf of the City of Perris Planning Department.

1. Comment on the Background Research discussion (Comment from Cadence Environmental dated September 9, 2022):

- a. *The discussion states that a records search was conducted for a 0.5-mile radius of the site. Given the known sensitivity for Native American resources in the Perris area, the City generally prefers that a 1-mile radius be used for records searches. This is especially important given the sensitivity of the rock outcroppings at the site and in the surrounding area. The archaeologist will either need to expand the research radius or explain why a 0.5-mile radius is sufficient for this project analysis. Our preference would be to see the data for a 1-mile radius.*

Response:

1a: The 2021 cultural resource study conducted for the Project included a record search conducted via the Eastern Information Center (EIC), Department of Anthropology, University of California at Riverside, of the California Historical Resources Information System of the Project area and a 0.5-mile record search radius extending from the Project area (defined as the Project's property of 40.4 acres) boundary¹. The results of the record search did not identify any previously recorded resources within the Project area. The 2021 EIC search identified six previously documented resources within 0.5 mile of the Project area, including one prehistoric site with unknown constituents, one multicomponent site containing prehistoric milling slicks and historic-age refuse, and four historic-age roads. No resources were identified within the Project area.

Based on comments received from Cadence Environmental (above), Tetra Tech, Inc.'s Principal Archaeologist requested an expanded record search for the Project of an additional 0.5-mile radius beyond the initial 0.5-mile EIC record search, for a total of a 1-mile radius (both record searches combined) beyond the Project boundary. The record search was conducted October 13, 2022, via the EIC. As part of this records search, the EIC database of survey reports and overviews was consulted, as well as documented cultural resources, cultural landscapes, and ethnic resources. Additionally, the search included a review of the following publications and lists: California Office of Historic Preservation Historic Properties Directory, NRHP, California Office of Historic Preservation

¹ Paleo Solutions, Inc. 2021. Pacific Emerald Residential Development Project (Tentative Tract Map No. 37904), Perris, Riverside County, California.

Archaeological Determinations of Eligibility, California Inventory of Historical Resources/CRHR, California Points of Historical Interest, and California Historical Landmarks.

This EIC records search identified thirteen previously conducted reports within the expanded 0.5-mile radius. These previous investigations were conducted between 1977 and 2015 and consist of architectural and archaeological field studies and reporting.

Thirty-six previously recorded cultural resources were identified within the expanded 0.5-mile radius (0.5 to 1 mile from the Project area) and include: 1 recorded location with unknown site type, 32 built environment resources (28 buildings (residential), 1 railway line, 1 ditch, and 2 road segments), 3 prehistoric sites (all are recorded as bedrock milling stations with no other artifacts observed), and 1 multicomponent site (prehistoric bedrock milling station, historic refuse scatter). None of the previously recorded resources have been formally evaluated for the National Register of Historic Places or California Register of Historical Resources. No cultural resources were identified within the Project area. Note: disclosure of site locations is prohibited and record search results are confidential and not contained in this memo, in compliance with Section 6254 of the Government Code, Public Records Act. Cal. Code Regs. § 15120 (d), Pub. Res. Code, §§ 5097.9 and 5097.993, and 36 CFR 800.11(c).

- b. *The report should be expanded to identify the ownership history of the property in order to determine if there is any historical significance to the property. The report is incomplete without this information.*”

1b. The 2021 cultural resource study conducted for the Project included a record search and pedestrian field survey with negative results². No buildings, structures, features, or sites were identified as a result of the cultural resource pedestrian survey³. The Project property (Project area) is defined as 40.4 acres within the south half of the northeast quarter of Section 1, Township 5 South and Range 4 West (within Assessor Parcel Numbers 342080042, 342080039, 342080041, and 342080040). Based on comments received from Cadence Environmental (above), Tetra Tech, Inc.’s Principal Archaeologist conducted a review of historic property records such as federal land patents through the Bureau of Land Management’s (BLM) General Land Office (GLO) Records, title searches, and historic aerial imagery and maps for information regarding potential historic significance of the Project property.

A search of federal land patents through the BLM’s General Land Office Records website identified one early patent holder, the Southern Pacific Railroad Company, for Section 1, of Township 5 South and Range 4 West (T5S, R4W), by the State of California in 1894 under the title authority of the July 27, 1866: Grant-RR-Atlantic and Pacific Act:14 Stat. 292. Review of the 1880 GLO plat map did not identify any buildings, features, or illustrated labels within the Project area. Review of historic era USGS 7.5 minute topographic maps of Perris, CA (c. 1953, 1961, 1965, 1969, and 1975)⁴ did not identify any illustrated buildings, structures, or features within the Project area. Based on the historic aerial imagery (c. 1938, 1949, 1953, 1961, 1966, 1967, 1978)^{5,6}, the Project area appears as primarily undeveloped land to current time. No potential historic era buildings, structures, or features were observed on aerial imagery within the Project area. A title search was conducted for the Project area, no ownership

² Ibid

³ Ibid

⁴ USGS 2022. Topoview: access to topographic maps. Electronic document <https://ngmdb.usgs.gov/topoview/> accessed October 25, 2022.

⁵ EDR 2022. The EDR Aerial Photo Decade Package, Inquiry Number 6286613.8 On file at Tetra Tech, Inc.

⁶ Netronline 2022. Historic Aerials viewer. Electronic document <https://www.historicaerials.com/viewer> accessed October 25, 2022.

Confidential: Disclosure of site locations prohibited. Information contained in this report is confidential, in compliance with 36 CFR 800.11(c), and access to this information is restricted by the National Historic Preservation Act of 1966 (as amended) Section 1 (16 USC 470), and the Archaeological Resources Protection Act of 1979 (as amended).

information prior to 1963 was available. The title research conducted for the Project property identified the following information:

- Henry Upton and Sons, a partnership, composed of Henry Upton, Myron Upton, and Mural Upton granted a deed on January 18, 1963, to Robret T. O'Donnell and Delta O'Donnell (husband and wife), as to an undivided half interest; and Myron Upton and Liliias Upton (husband and wife), as tenants in common, as to an undivided half interest of the southeast quarter of property in: Section 1, T5S, R4W, consisting of 163 acres, and lots 1 and 2, and the south half of the northeast quarter of Section 1, T5S, R4W consisting of 154.61 acres (Deed number 6253). Hence, the title indicates that Henty Upton and Sons were the owners of the property (Project area) prior to 1963. No tite information was available regarding when the property was aquired by Upton and Sons. On November 19th 1963, Delta O'Donnell and Liliias Upton released claim to the property (Quitclaim Deed #122547). Based on the 1930 census records, Myron Upton is listed as a 21 year old white male, born in 1909 in Missouri, married to Lilas E. Upton, and worked as a manager at a poultry farm⁷. In 1936, a Mural Upton is registered as a U.S. voter (Republican) living in Perris, California, as a rancher. No other information was available (i.e., ancestry.com, online archive newspapers, City of Perris government website, etc.) for Myron, Mural, and Henry Upton, or Henry Upton and Sons; or Robret T. O'Donnell and Delta O'Donnell.
- On August 5th, 1964, Robret T. O'Donnell and Myron Upton granted the northeast quarter of Section 1, T5S, R4W, Lots 1 and 2 to Gnral Lands, Inc. (a California corportation, as an undivided threefourths interest and Michael Krug and Teress Krug (husband and wife), as joint tenants as to an undived quarter interest (Grant Deed #112609). No information from readily available sources (i.e., ancestry.com, online achive newespapers, City of Perris government website, etc.) was available for Michael Krug and Teress Krug.
- On October 27th 1964, Michael Krug and Teress Krug granted the southwest quarter of the northeast quarter (contain Lots 1 and 2) of Section 1, T5S, R4W, reserving a 30 foot easement along the easterly boundary for road purposes, to Masaru Kamatani and Fujiye Kamatani (husband and wife), as joint tenants (Joint Tenancy Grant Deed #129758). Based on 1940s US census records, a F. [Fujiye] Kamatani was listed as a 40 year old Japanese American, born in California, and married to husband Masaru Kamatani, and lived with their three children, son Jack (18 years old), daughter Marion (17 years old), and Mary (15 years old) in Tustin, Orange County, Calfifornia⁸. Masaru Kamatani is listed as a 40 year old Japanese American and his occupation is listed as a truck farmer. No other information was avaiable regarding Fujiye. Masaru Kamatani arrived in Seattle, Washington, from Takamatsu-City, Japan in 1917⁹. No other information was available (i.e., ancestry.com, online archive newspapers, City of Perris government website, etc.) regarding the Kamatani's.
- On September 7, 1979, Masaru Kamatani and Fujiye Kamatani granted the southwest quarter of the northeast quarter (contain Lots 1 and 2) of Section 1, T5S, R4W, reserving a 30 foot easement along the easterly boundary for road purposes, to Arthur D. Boston and Barbara M. Boston (husband and wife) as

⁷ U.S. Bureau of the Census 1930. Fifteenth Census of The United States: 1930, Population Scheule. Perris Township, Riversie County, California. Records of the Department of Commerce Bureau of the Census. National Archives, Washington, D.C.

⁸ U.S. Bureau of the Census 1940. Sixteenth Census of The United States: 1940 Population Scheule. Tustin, Unicorporated Irvine, California, Orange County. Records of the Department of Commerce Bureau of the Census. National Archives, Washington, D.C.

⁹ National Archives and Records Administration; Washington, D.C.; Passenger and Crew Lists 1882-1965, of Vessels Arriving At Seattle, Washington; NAI Number: 4449160; Record Group Title: Records of the Immigration and Naturalization Service, 1787-2004; Record Group Number: 85

joint tenants, as to an undivided one-third interest; Joseph P. Saline, Junior, and Margo A. Saline (husband and wife) as joint tenants, as to an undivided one-third interest; and Richard P. Trueba (a single man), as to the undivided one-third interest.

No building, structures, or features were identified within the Project area. Research conducted on the background of the previous owners of the Project property revealed little information that could be linked definitely to the owners and little information from readily available sources did not reveal substantive or significant information on the owners of the Project area or use of the Project area. Based on the 2021 cultural resource study for the Project, and archival research conducted by Tetra Tech, Inc., the Project property does not appear to exert any historical significance.

**UPDATED GEOTECHNICAL AND INFILTRATION EVALUATION
PROPOSED SINGLE-FAMILY RESIDENTIAL DEVELOPMENT
TRACT No. 31304 – PACIFIC EMERALD PROJECT
CITY OF PERRIS, RIVERSIDE COUNTY, CALIFORNIA**

PREPARED FOR

**PACIFIC COMMUNITIES BUILDER, INC.
1000 DOVE STREET, SUITE 300
IRVINE, CALIFORNIA 92660**

PREPARED BY

**GEOtek, INC.
1548 NORTH MAPLE STREET
CORONA, CALIFORNIA 92880**



GeoTek, Inc.

1548 North Maple Street, Corona, California 92880
(951) 710-1160 Office (951) 710-1167 Fax www.geotekusa.com

May 6, 2020
Project No. 2359-CR

Pacific Communities Builder, Inc.

1000 Dove Street, Suite 300
Irvine, California 92660

Attention: Mr. Tony Arnest

Subject: Updated Geotechnical and Infiltration Evaluation
Tract No. 31304 – Pacific Emerald Project
Northeast Corner of McPherson Road and Mountain Avenue
City of Perris, Riverside County, California

Dear Mr. Arnest:

We are pleased to provide the results of our updated geotechnical and infiltration evaluation for the subject project located along the north side of Mountain Avenue and east side of McPherson Road in the city of Perris, Riverside County, California. This report presents the results of our evaluation and discussion of our findings.

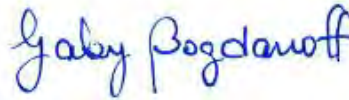
In our opinion, site development appears feasible from a geotechnical viewpoint. Final site development and grading plans should be reviewed by this firm as they become available, as it will be necessary to provide appropriate recommendations for intended specific site development as those plans become refined.

The opportunity to be of service is sincerely appreciated. If you should have any questions, please do not hesitate to call our office.

Respectfully submitted,
GeoTek, Inc.



Edward H. LaMont
CEG 1892, Exp. 07/31/20
Principal Geologist



Gaby M. Bogdanoff
CE 66619, Exp. 06/30/20
Project Engineer



Kyle R. McHargue
PG 9790, Exp. 02/28/22
Project Geologist



Distribution: (I) Addressee via email

G:\Projects\2351 to 2400\2359CR Pacific Communities Tract 31304 Pacific Emerald Perris\Geotechnical and Infiltration\2359CR Updated Geotechnical and Infiltration Evaluation Tract 31304 Perris.doc

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ENCLOSURES

Figure 1 – Site Location Map

Figure 2 – Exploration Location Map

Appendix A – Logs of Exploratory Borings by Robert Prater Associates (2002) and Sladden (2003)

Appendix B – Logs of Exploratory Trenches and Borings by GeoTek

Appendix C – Seismic Refraction Survey Results

Appendix D – Results of Laboratory Testing by GeoTek

Appendix E – Soil Corrosivity Study

Appendix F – General Grading Guidelines

I. PURPOSE AND SCOPE OF SERVICES

The purpose of this study was to evaluate the general geotechnical conditions on the site and provide updated geotechnical recommendations as deemed appropriate. Services for this study included the following:

- Research and review of available geologic and geotechnical data, and general information pertinent to the site,
- Review of the referenced *Rippability Study*, prepared by Robert Prater Associates, Inc (2002) and *Geotechnical Investigation* report, prepared by Sladden Engineering, Inc (2003),
- Perform a reconnaissance of the site,
- Excavation of sixteen exploratory trenches to assess general subsurface soil conditions of the property,
- Site evaluation of rock hardness via a seismic refraction survey, performed by a subconsultant,
- Excavation of one exploratory boring and four borings for infiltration testing within the area of the currently planned catch basin,
- Collection of relatively undisturbed and bulk samples of the onsite materials including samples for corrosion evaluation,
- Laboratory testing of selected soil samples,
- A corrosion study for the property,
- Review and evaluation of site seismicity, and
- Compilation of this updated geotechnical and infiltration evaluation report which presents our findings, conclusions, and recommendations for the site development.

The intent of this report is to aid in the evaluation of the site for future development from a geotechnical perspective. The professional opinions and geotechnical information contained in this report will likely need to be updated based on our review of final site development plans. These should be provided to GeoTek for review when available.

2. SITE DESCRIPTION AND PROPOSED DEVELOPMENT

2.1 SITE DESCRIPTION

The square-shaped site is located adjacent to the north side of Mountain Avenue and east side of McPherson Road in the city of Perris, Riverside County, California. The site is comprised of four parcels of land identified with Riverside County Assessor's Parcel Numbers (APNs) 342-080-039, -040, -041, and -042 and is approximately 40.4 acres. The general location of the site is shown in Figure 1.

Based on a review of available maps, information provided within the referenced reports, and observations at the time of our recent site reconnaissance, the site consists of vacant land with a light to moderate growth of dry weeds and brush and some dispersed trees and bushes. Numerous granitic boulders (corestones) up to approximately 10 to 15 feet in diameter were also observed scattered across the site. The site also has some visible trash and litter.

The site has a gently sloping terrain, with the highest ground elevation of approximately 1,572 feet above mean sea level (amsl) located in the western edge of the site and lowest ground elevation of 1,495 feet amsl towards the southeastern corner. Surface drainage is to the east-southeast. A drainage course is located within the northeastern portion of the site.

The site is bounded by Mountain Avenue (a paved roadway) and scattered residences to the south; McPherson Road (a dirt roadway) and dispersed residences to the west; David Jones Road (a dirt roadway) with scattered residences to the north; and vacant land with scattered residences to the east.

2.2 PROPOSED DEVELOPMENT

According to the referenced *Conceptual Site Plan*, prepared by KWC Engineers, site development includes the grading and construction of 199 single-family residential lots, a catch basin, a park site, two recreation areas, underground utilities and street improvements. An undeveloped, open space is planned to remain at the northeastern edge of the property. Cuts and fills up to 17 and 12 feet, respectively, are anticipated to be required to reach design grades. Also, slopes to maximum heights of about 25 feet in cut and 10 feet in fill at 2:1 (h:v) maximum gradients as well as retaining walls are expected. Plans for utility construction were not available at the time of this review. However, based on discussions with Victor Elia of

KWC Engineers, the deepest utility proposed will be the sewer line at a depth of approximately 12 feet below existing ground surface.

A stormwater detention/catch basin is also proposed within the southeastern portion of the property. Cuts on the order of 10 feet are expected to be required to reach the proposed basin bottom.

If site development differs from the assumptions made herein, the recommendations included in this report should be subject to further review and evaluation. Final site development plans should be reviewed by GeoTek when they become available. Additional geotechnical field exploration, analyses, and recommendations may be necessary upon review of site development plans.

3. REPORT REVIEW

On December 19, 2002, Robert Prater Associates, Inc., (RPA) issued a report entitled *Rippability Study, Mountain Avenue Subdivision, Perris, California*. The purpose of the study was to evaluate the hardness on-site bedrock and presence of compressible soils at the subject property. The study assumed that the site grading would involve cuts of about 5 feet or less and trenching for utility construction would be about 15 feet deep or less. The study included 16 exploratory borings to maximum depths of about 20 feet below grade. RPA stated that the borings encountered a surficial layer of topsoil atop granitic bedrock. This stratum appears to be mostly comprised of loose silty sand with an average thickness of about 1.5 feet or less. However, in localized areas within the northeastern region of the site, the topsoil was observed to consist of very loose to loose clayey to sandy silt and clayey sand and extended to 7 feet below grade. Beneath the topsoil, decomposed granitic bedrock was encountered and was recovered as medium dense to very dense silty sand. RPA also noted that scattered corestones of mildly decomposed rock were locally encountered within more weathered granitic rock. Practical refusal due to underlying bedrock was experienced in the majority of the site borings at depths between 6 and 18 feet, as reported by RPA.

In addition to the boring exploration, RPA conducted 12 seismic refraction traverses across the property. RPA indicated that the site subsurface materials can generally be divided into three layers. The upper layer consists of loose to medium dense soils with thicknesses ranging between about 1.5 and 12 feet. This layer generally comprises topsoil and highly weathered bedrock, with compressional wave velocities ranging between 1,240 and 2,370 feet per second (fps). The intermediate layer was noted to comprise mildly to moderately decomposed granitic bedrock with velocities ranging from 2,520 to 4,550 fps and extends to depths of about

16 to 33 feet. The third layer was stated to be comprised of slightly decomposed to massive bedrock with velocities greater than 5,900 fps and detected at depths ranging from 5 to 44 feet. RPA mentioned that high velocity materials were encountered at depths of 8 feet in Traverse 4NE, 12 feet in 4SW, 5 feet in 8N, and 6 feet in 11SE.

The study stated that while a Caterpillar D-9 tractor with a single ripper can reportedly excavate bedrock materials with velocities near 7,000 fps, local experience indicates that such high velocities usually require blasting. The study pointed out that a more reasonable rippable velocity would be on the order of 5,500 fps. Velocities on the order of 4,500 to 5,500 fps are considered marginal and involve difficult ripping conditions.

For trench excavation, the study stated that velocities as low as 3,500 fps may indicate difficult ripping depending on the degree of fracturing or weathering of the rock. It also pointed out that most materials with velocities of about 3,800 fps or less are rippable, velocities between 3,800 and 4,300 fps are marginally rippable, and above 4,300 fps are non-rippable based on the use of an excavator Kohring 505 or similar.

The study concluded that cuts up to 5 feet deep for the site grading can be achieved utilizing standard heavy earthmoving equipment. Materials generated by site excavations will likely consist of coarse-grained silty sand with significant amounts of large corestones/boulders. RPA noted that granitic outcrops with individual boulders up to 12 feet in diameter exist across the property. RPA also stated that their seismic refraction data indicates the presence of numerous subsurface corestones/boulders within the intermediate velocity layer beneath the locations of Traverses 2, 4, 5, 7, 8, and 11, with some localized blasting or chipping required to dislodge and remove larger corestones.

RPA also mentioned that some difficult trenching for utility installation should be anticipated below depths of 5 feet in the areas of Traverses 8 and 11 feet and below 10 feet in the areas of Traverses 2, 3, 7, 10 and Boring B-10. Trenching below the said depths may require localized blasting and/or heavy chipping due to hard rock.

On December 1, 2003, Sladden Engineering, Inc. (Sladden) issued a report entitled *Geotechnical Investigation, Tentative Tract 31304, NEC McPherson Road and Mountain Avenue, Perris, California*. The subject investigation included the excavation of 14 exploratory borings to depths ranging from 12 to 50 feet below grade. Sladden stated that the site contained a thin layer of native alluvial materials covering bedrock. The older alluvium reportedly consisted of silty sandy soils and the underlying granitic bedrock was reportedly weathered to varying degrees. While

some of the borings experienced early refusal at depths of about 12 to 14 feet, most of the borings were effectively excavated to depths of 10 to 20 feet into the underlying bedrock.

Sladden noted the lack of groundwater under the site. However, Sladden mentioned that groundwater seepage was observed within the underlying bedrock in some borings (B-2, B-6, and B-8) at 15 to 35 feet below grade. Because of the lack of groundwater and the presence of shallow bedrock, the potential for liquefaction was considered negligible.

Sladden recommended that the native soils and underlying bedrock within the proposed foundation zones be removed and recompact to a depth of at least 3 feet below existing grade or 2 feet below the bottom of footings, whichever is deeper. Removals were recommended to be extended at least five feet beyond the footing lines.

The evaluation by Sladden stated that the presence of shallow bedrock at the property may require the utilization of specialized grading equipment to perform planned cuts. Sladden also mentioned that the on-site materials are “very low” expansive and have negligible sulfate concentrations.

4. FIELD EXPLORATION, LABORATORY TESTING, AND CORROSION TESTING

4.1 FIELD EXPLORATION

GeoTek investigated the project site via exploratory trenches and borings which were performed between April 2, 2020 and April 28, 2020. The trenching exploration consisted of sixteen trenches to depths ranging from 10 to 20 feet and were excavated to log the subsurface materials and examine the rippability and/or hardness of localized areas throughout the site. The boring exploration consisted of drilling one exploratory boring to approximately 20 feet below grade and four borings for infiltration testing to depths of about 10 feet below grade within the currently proposed catch basin area. The trenches were excavated utilizing a Western SK500 excavator, and the borings were drilled with a track-mounted hollow-stem auger drill rig.

Also, a seismic refraction survey was conducted on April 21, 2020 by a subconsultant (Subsurface Surveys & Associates, Inc.). The seismic refraction survey involved the recording and measuring of man-made energy waves from seven seismic refraction lines placed in site areas

where deep excavations are proposed. The seismic survey summary report is included in Appendix C.

The approximate locations of our site explorations along with the locations of the exploratory borings and seismic refraction lines performed by RPA (2002) and Sladden (2003) are shown on the Exploration Location Map, Figure 2. Logs of the borings by Robert Prater Associates and Sladden, in addition to the trenches and seismic refraction lines by GeoTek are provided in Appendices A and B, respectively.

4.2 LABORATORY TESTING

Laboratory testing was performed on selected relatively bulk soil and bedrock samples collected during the field exploration. The purpose of the laboratory testing was to confirm the field classification of the subsurface materials encountered and to evaluate the soil/bedrock physical properties for use in the engineering design and analysis. Our test results along with a brief description and relevant information regarding testing procedures are included in Appendix D.

4.3 CORROSION TESTING

GeoTek collected a total of 10 samples across the site from the upper one foot. The samples were taken to the laboratory to be evaluated for their corrosion potential. The locations of the samples obtained for the site are shown on the Exploration Location Map, Figure 2. The results of corrosion tests are presented in Appendix E.

5. INFILTRATION TESTING

As part of our field investigation, four infiltration test borings were drilled to a depth of 10 feet below ground surface and one exploratory boring to 20 feet below grade within the proposed basin area. The exploratory boring was excavated to verify that a minimum of 5 feet of permeable materials exists below the bottom of the future infiltration basin and a minimum of 10 feet between the bottom of the basin and a seasonal high groundwater level.

Groundwater was encountered in all our borings at approximate depths ranging from 2 to 4 feet below existing ground surface. The high groundwater table encountered is most likely a perched water condition between the older alluvium and the granitic bedrock and is likely the result of seasonal heavy rains that had occurred within the previous weeks. Due to the high

groundwater situation, we were unable to perform the infiltration testing. A layer of older alluvium approximately 4 to 8 feet in thickness covering weathered bedrock was encountered at the basin location.

6. GEOLOGIC AND SOILS CONDITIONS

6.1 REGIONAL SETTING

The subject property is situated in the Peninsular Ranges geomorphic province. The Peninsular Ranges province is one of the largest geomorphic units in western North America. It extends from the point of contact with the Transverse Ranges geomorphic province, southerly to the tip of Baja California. This province varies in width from about 30 to 100 miles. It is bounded on the west by the Pacific Ocean, on the south by the Gulf of California and on the east by the Colorado Desert Province.

The Peninsular Ranges are essentially a series of northwest-southeast oriented fault blocks. Several major fault zones are found in this province. The Elsinore Fault zone and the San Jacinto Fault zone trend northwest-southeast and are mostly found near the middle of the province. The San Andreas Fault zone borders the northeasterly margin of the province, and the San Jacinto fault borders the province adjacent the Colorado Desert province.

More specific to the subject property, the site is located in an area geologically mapped by others to be underlain by tonalite bedrock (Dibblee, T.W. and Minch, J.A., 2003). The regional geologic maps noted the general trend of foliations in the bedrock had a northwest-southeast orientation and a 30-degree to 70-degree inclination to the northeast.

No active faults are shown in the immediate site vicinity on the maps reviewed for the area. The site is not located within an Earthquake Fault Zone (Alquist-Priolo) as designated by the State of California. The Riverside County website (<https://gis.countyofriverside.us/>) has designated the site as “not in a fault zone”, “not in a fault line”, “not in a liquefaction area”, and “not in a subsidence area”.

6.2 EARTH MATERIALS

A brief description of the earth materials reported to be on the site by RPA (2002) and Sladden (2003) and encountered in our explorations is presented in the following sections.



6.2.1 Colluvium

Colluvium was encountered in the majority of our exploratory trenches and previous borings by RPA and Sladden. These materials consist of silty sand and extended from the ground surface to depths of about 1 to 3 feet. The colluvium was brown in color, slightly moist to moist, and generally loose to medium dense, based on our field observations.

6.2.2 Older alluvium

Older alluvium was observed in our exploratory borings placed within the southeastern corner of the site (basin area) and in some our exploratory trenches excavated near the eastern site region which is adjacent to a seasonal drainage course. The older alluvium mostly consists of silty sand with some clayey sand and extended from the ground surface to depths of about 1 to 4 feet. In localized areas, such as the areas of trench T-4 and future basin, the alluvial materials extended to 8 feet. The older alluvium was brown in color, dry to moist, and generally medium dense, based on our field observations.

6.2.3 Granitic Bedrock

Granitic bedrock was observed at the property as rock outcrops or encountered in site explorations at typical depths of 1 to 3 feet and in some areas as deep as approximately 8 feet. Also, bedrock materials were found at or near the ground surface in the seismic refraction lines placed at the site by our firm. The regional geologic map shows the bedrock is foliated, generally in a northwest/southeast orientation with inclinations ranging from 35 degrees to 75 degrees to the northeast.

The on-site bedrock consists of tonalite which is moderately to highly weathered within its upper portions and is recovered as gray fine to coarse sand when excavated. The bedrock becomes less weathered with depth. While all the trenches were dug to the planned depths, particularly slow/difficult excavations were noted in Trenches T-7, T-8, and T-11 within the western portion of the site where deeper cuts are proposed. Trenches T-8 and T-11 experienced especially slow excavation starting at 15 and 11 feet, respectively. Trench T-7 encountered a corestone at about 6 feet below grade, and the trench was relocated.

The seismic refraction survey generally identified three zones of subsurface materials. The uppermost zone comprises mostly colluvial and alluvial soils and is estimated to extend up to 5 feet below grade mostly, with exception of Line 4 where soils extend to 10 feet. The middle zone was noted to correspond to highly weathered bedrock to depths ranging from 5 to 23 feet with velocities ranging from 2,685 to 3,251 fps. The bottom zone was noted to comprise less weathered bedrock with velocities ranging from 3,437 to 6,083 fps. Particularly hard unweathered bedrock was estimated to exist under the area of Line 6 starting at depths of 21

feet. Also, high velocity corestones were estimated to be present beneath Line 3 at 7 feet below grade and beneath Line 7 at depths of 12 to 15 feet.

To estimate the approximate depth to non-rippable bedrock and non-rippable trenching (utility construction) using the seismic refraction data collected at the site, we have utilized cut-off velocities of 5,500 fps and 4,300 fps, respectively. We have also used our field observations during the excavation of the recent site trenches. Based on the above and per the proposed grades shown on the referenced *Conceptual Site Plan* (KWC, 2020) and maximum utility depth of 12 feet, we estimate that much on-site bedrock is rippable with a Caterpillar D-9R Ripper. As stated previously, some areas within the western region of the site, such as Trench T-8 at about 15 feet and T-11 at about 11 feet, may experience very slow excavation and blasting or other excavation techniques could be more cost-effective. Cuts in the vicinity of Traverse 8 by RPA (2002) may also encounter non-rippable bedrock at about 5 feet below grade.

Very difficult trenching may be encountered near the areas of Trench T-7 at about 6 feet, Line 2 at about 8 feet, Line 3 at 7 feet, and Line 7 at 12 feet. RPA (2002) identified additional areas with non-rippable trenching such as near Traverses 8 and 11 at about 5 feet and near Traverses 2, 3, 10, and Boring B-10 at 10 feet.

Results of the seismic refraction survey are provided in Appendix C.

The surficial soils and bedrock materials were tested and found to have a “very low” expansion potential.

Detailed logs of the subsurface conditions of the site are presented in Appendices A and B.

6.3 SURFACE WATER AND GROUNDWATER

6.3.1 Surface Water

Surface water was not noted during our field work. If encountered during earthwork construction, surface water on this site is the result of precipitation or possibly some minor surface run-off from immediately surrounding properties. Overall site area drainage is generally to the east-southeast, as directed by site topography. Provisions for surface drainage will need to be accounted for by the project civil engineer.

6.3.2 Groundwater

Groundwater was not encountered in any of the borings by RPA (2002), majority of borings by Sladden (2003), and recent trenches by GeoTek. Sladden (2003) reported a bedrock groundwater seepage observed in their borings B-2, B-6, and B-8 at 25, 15, and 35 feet below grade, respectively. Our exploratory borings placed within the planned site basin encountered groundwater at 2 to 4 feet below grade. This high groundwater table is most likely a perched water condition between the older alluvium and the granitic bedrock and is probably associated with the heavy rains that had occurred within the previous weeks and close location to an existing drainage course.

California Department of Water Resources, Water Data Library, indicates that the groundwater depth for a well (State Well No. 05S03W04M001S) is approximately 46 feet below ground surface as of 2020. The well is located approximately 2 miles east-southeast of the site. Based on the above, groundwater is not anticipated to be a factor during the majority of the site grading. However, seasonal perched groundwater may be encountered during grading within the lower elevations on the southeast portion of the site.

GeoTek should review grading plans once available to determine if groundwater is anticipated to adversely affect the proposed developments.

6.4 FAULTING AND SEISMICITY

The geologic structure of the entire southern California area is dominated mainly by northwest-trending faults associated with the San Andreas system. The site is in a seismically active region. No active or potentially active fault is known to exist at this site nor is the site situated within a State of California designated “Alquist-Priolo” Earthquake Fault Zone (Bryant and Hart, 2007; CGS, 1986).

The County of Riverside has designated the site as “not in a fault zone” and “not in a fault line.”

6.4.1 Seismic Design Parameters

The site is located at approximately 33.7667 Latitude and -117.2474 Longitude. Site spectral accelerations (S_a and S_1), for 0.2 and 1.0 second periods for a Class “C” site, were determined from the SEAOC/OSHPD web interface that utilizes the USGS web services and retrieves the seismic design data and presents that information in a report format. Due to the presence of shallow bedrock, a Site Class C is considered appropriate. The results are presented in the following table:

SITE SEISMIC PARAMETERS	
Mapped 0.2 sec Period Spectral Acceleration, S_s	1.455g
Mapped 1.0 sec Period Spectral Acceleration, S_1	0.534g
Site Coefficient for Site Class "C", F_a	1.2
Site Coefficient for Site Class "C", F_v	1.466
Maximum Considered Earthquake Spectral Response Acceleration for 0.2 Second, S_{MS}	1.747g
Maximum Considered Earthquake Spectral Response Acceleration for 1.0 Second, S_{M1}	0.783g
5% Damped Design Spectral Response Acceleration Parameter at 0.2 Second, S_{DS}	1.164g
5% Damped Design Spectral Response Acceleration Parameter at 1 second, S_{D1}	0.522g
Site Modified Peak Ground Acceleration, PGA_M	0.6g

Final selection of the appropriate seismic design coefficients should be made by the project structural engineer based upon the local practices and ordinances, expected building response and desired level of conservatism.

6.4.2 Surface Fault Rupture

The site is in a seismically active region; however, no active or potentially active fault is known to exist at this site nor is the site situated within an "Alquist-Priolo" Earthquake Fault Zone (Bryant and Hart, 2007). No faults are identified on geologic maps readily available and reviewed by this firm for the immediate study area. The nearest known active fault zone is the Elsinore Fault - Glen Ivy Section located approximately 8.5 miles southwest of the site. Therefore, the potential for surface rupture at the site is considered negligible.

6.4.3 Liquefaction and Seismically Induced Settlement

The County of Riverside has designated the site as "not in a liquefaction area", and "not in a subsidence area".

Liquefaction is not considered to be a hazard at the subject site due the presence of shallow bedrock materials. Also, the potential for seismically induced settlement at the property is considered to be nil because of the minimal thickness of soil atop bedrock.

6.4.4 Other Seismic Hazards

Evidence of ancient landslides or slope instabilities at this site was not observed during our investigation. Thus, the potential for landslides is considered negligible.



The potential for secondary seismic hazards such as a seiche or tsunami is considered negligible due to site elevation and distance to an open body of water.

7. CONCLUSIONS AND RECOMMENDATIONS

7.1 GENERAL

Development of the site appears feasible from a geotechnical viewpoint. The following recommendations should be incorporated into the design and construction phases of development.

7.2 EARTHWORK CONSIDERATIONS

7.2.1 General

Earthwork and grading should be performed in accordance with the applicable grading ordinances of the City of Perris, the 2019 California Building Code (CBC), and recommendations contained in this report. The General Grading Guidelines included in Appendix F outline general procedures and do not anticipate all site-specific situations. In the event of conflict, the recommendations presented in the text of this report should supersede those contained in Appendix F.

Final site grading plans should be reviewed by this office when they become available. Additional recommendations will likely be offered subsequent to review of these plans.

7.2.2 Site Clearing

Site preparation should start with removal of any existing improvements, deleterious materials, and vegetation within the planned development areas of the site. These materials should be properly disposed of off-site.

7.2.3 Remedial Grading

All topsoil, older alluvium/colluvium, and highly weathered bedrock should be removed to expose competent bedrock. Competent bedrock is defined as firm, unyielding materials. A representative of this firm should observe and approve the bottom of all excavations.

Based on the data available, removals/over-excavations generally on the order of two feet (and up to eight feet locally) from existing grade or to a minimum of three feet below proposed grades, whichever is greater, should be performed below structural areas. Actual depths of removal/over-excavation should be determined in the field based on observation and in-place density testing. As a minimum, removals/overexcavations should extend down and away from foundation elements at a 1:1 (h:v) projection to the recommended removal depth, or a minimum of five feet laterally, whichever is greater. The bottom of the removals/overexcavations should be graded to drain toward the front of the lot at a gradient of at least two percent.

In order to facilitate footing excavation and installation of house services, consideration should be given to overexcavate cut lots to a minimum depth of five feet below proposed grades. We also recommend that utility alignments be overexcavated to at least one foot below the depth of the lowest underground utility.

To prevent potential differential settlement, the cut portions of transition (i.e. cut/fill) lots should be overexcavated a minimum of five feet below proposed grades or to a depth of one-half of the maximum fill thickness on the lot, whichever is greater. The horizontal extent of over-excavation could comprise the entire lot or extend at least five feet outside the structural area, or a distance equal to the depth of overexcavation below the bottom of the structural elements, whichever is greater. Overexcavation bottoms should be graded to drain toward the front of the lot (two percent minimum).

The approved removal/over-excavation bottom exposed should then be scarified to a depth of about six inches, be moisture conditioned to slightly above the soil's optimum moisture content and then be compacted to at least 90 percent of the soil's maximum dry density, per ASTM D 1557.

7.2.4 Engineered Fill

The onsite materials are considered suitable for reuse as engineered fill provided they are free from vegetation, roots, and rock/hard lumps greater than six inches in maximum dimension.

The undercut areas should be brought to final subgrade elevations with fill materials that are placed and compacted in general accordance with minimum project standards. Engineered fill should be placed in six- to eight-inch loose lifts, moisture conditioned to the optimum moisture content, and compacted to a minimum relative compaction of 90 percent as determined by ASTM D 1557. Placement of engineered fill should be observed and tested on a full-time basis by a GeoTek representative during grading activities.

If oversized materials (greater than six inches) are generated from cuts into bedrock, the oversized rock should be disposed of offsite or stockpiled on site and crushed for future use.

7.2.5 Excavation Characteristics

Based on the results of the seismic refraction survey (Appendix C) and our trenching exploration, most of on-site bedrock materials is considered rippable with a Caterpillar D9R Ripper to general depths of about 11 to 25 feet. However, some areas within the western region of the site, such as Trench T-8 at about 15 feet and T-11 at 11 feet, may experience very slow excavation and blasting or other excavation techniques could be more cost-effective. Cuts in the vicinity of Traverse 8 by RPA (2002) may also encountered non-rippable bedrock at 5 feet. Scattered, non-rippable corestones such as noted during this investigation and the exploration by RPA (2002) may also exist at shallow depths that could require special excavation techniques or blasting.

The data also suggests that trenching for utility construction may be feasible across much of the site utilizing a large excavator such as Western SK500 or equivalent. However, very difficult trenching conditions may be experienced in the near surface areas of Trench T-7 at 6 feet, Line 2 at 8 feet, Line 3 at 7 feet, and Line 7 at 12 feet due to either existing corestones or hard unweathered bedrock. RPA (2002) identified additional areas with non-rippable trenching such as near Traverses 8 and 11 at about 5 feet and near Traverses 2, 3, 10, and Boring B-10 at 10 feet. Localized blasting, chipping to dislocate and remove the corestones, or other special techniques may be warranted.

Excavation of alluvial deposits and most granitic bedrock to the design elevations is expected to be feasible with heavy-duty grading equipment in good operating condition. All temporary excavations for grading purposes and installation of underground utilities should be constructed in accordance with local and Cal-OSHA guidelines. Temporary excavations within the on-site materials should be stable at 1:1 (h:v) inclinations for cuts less than ten feet in height.

7.2.6 Slope Construction

An engineering geologist should observe all cut slopes. Cut slopes should expose competent bedrock. If adverse structure or incompetent materials are exposed and identified in the cut slopes, stabilization fills may be recommended.

Fill slopes constructed at maximum gradients of 2:1 (h:v), in accordance to industry standards, are anticipated to be both grossly and surficially stable. Where fill is to be placed against sloping terrain with gradients of 5:1 (h:v) or steeper, the sloping ground surface should be benched to

remove loose and disturbed surface soil to assure that the new fill is placed in direct contact with competent bedrock and to provide horizontal surfaces for fill placement. A 10- to 15-foot wide keyway should be constructed at the toe of the fill slope areas extending at least 2 to 3 feet vertically into competent natural material.

The base of the keyways and benches should be sloped back into the hillside at a gradient of at least two percent. The base of the benches should be evaluated by a representative of GeoTek prior to processing. Upon approval, the exposed materials should be moistened to at least the optimum moisture content and densified to a relative compaction of at least 90 percent (ASTM D 1557).

Fill slopes should be overfilled during construction and then cut back to expose fully compacted soil. A suitable alternative would be to compact the slopes during construction and then roll the final slope to provide a dense, erosion resistant surface.

7.2.7 Trench Excavations and Backfill

Temporary trench excavations within the on-site materials should be stable at 1:1 (h:v) inclinations for short durations during construction and where cuts do not exceed ten feet in height. We anticipate that temporary cuts to a maximum height of four feet can be excavated vertically.

Trench excavations should conform to Cal-OSHA regulations. The contractor should have a competent person, per OSHA requirements, on site during construction to observe conditions and to make the appropriate recommendations.

Utility trench backfill should be compacted to at least 90 percent relative compaction (as determined per ASTM D 1557). Under-slab trenches should also be compacted to project specifications. Where applicable, based on jurisdictional requirements, the top 12 inches of backfill below subgrade for road pavements should be compacted to at least 95 percent relative compaction. On-site materials may not be suitable for use as bedding material but should be suitable as backfill provided particles larger than six inches are removed.

Compaction should be achieved with a mechanical compaction device. Ponding or jetting of trench backfill is not recommended. If backfill soils have dried out, they should be thoroughly moisture conditioned prior to placement in trenches.

7.2.8 Shrinkage and Bulking

Several factors will impact earthwork balancing on the site, including shrinkage, subsidence, trench spoil from utilities and footing excavations, as well as the accuracy of topography.

Shrinkage is primarily dependent upon the degree of compactive effort achieved during construction. For planning purposes, a shrinkage factor of five to ten percent may be considered for the surficial soils. Bedrock materials may bulk up to ten percent. Site balance areas should be available in order to adjust project grades, depending on actual field conditions at the conclusion of site earthwork construction.

Subsidence is not considered to be a factor with the underlying site materials.

7.3 DESIGN RECOMMENDATIONS

7.3.1 Foundation Design Criteria

Foundation design criteria for a conventional foundation system, in general conformance with the 2019 CBC, are presented herein. These are typical design criteria and are not intended to supersede the design by the structural engineer.

Based on the results of laboratory testing, the on-site materials are classified as having “very low” ($0 \leq EI \leq 20$) expansion potential per ASTM D 4829. Additional laboratory testing should be performed at the completion of site grading to verify the expansion potential of the near-surface soils.

A summary of our preliminary foundation design recommendations is presented in the table below:

MINIMUM DESIGN REQUIREMENTS FOR CONVENTIONALLY REINFORCED SHALLOW FOUNDATIONS	
Design Parameter	“Very Low” Expansion Potential ($0 \leq EI \leq 20$)
Foundation Depth or Minimum Perimeter Beam Depth (inches below lowest adjacent grade)	One- and Two-Story – 12
Minimum Foundation Width (Inches)*	One- and Two-Story – 12
Minimum Slab Thickness (actual)	4 inches
Sand Blanket and Moisture Retardant Membrane below On-Grade Building Slabs	2 inches of sand** overlying moisture vapor retardant membrane overlying 2 inches of sand**
Minimum Slab Reinforcing	6" x 6" – W1.4/W1.4 welded wire fabric placed in middle of slab
Minimum Footing Reinforcement	Two No. 4 Reinforcing bars, one top and one bottom
Presaturation of Subgrade Soil (Percent of Optimum)	Minimum 100% to a depth of 12 inches

*Code minimums per Table 1809.7 of the 2019 CBC.

** Sand should have a sand equivalent of at least 30

It should be noted that the criteria provided are based on soil support characteristics only. The structural engineer should design the slab and beam reinforcement based on actual loading conditions.

An allowable bearing capacity of 2,000 pounds per square foot (psf) may be used for design of continuous and perimeter footings 12 inches deep and 12 inches wide, and pad footings 24 inches square and 12 inches deep. This value may be increased by 400 psf for each additional 12 inches in depth and by 400 psf for each additional 12 inches in width to a maximum value of 3,000 psf. Additionally, an increase of one-third may be applied when considering short-term live loads (e.g. seismic and wind loads).

Based on the recommended site grading, we estimate a total static settlement of less than 1 inch. A differential static settlement of about 1/2 inch over a 30-foot span is also estimated. Seismically induced total and differential settlement are considered to be negligible.

The passive earth pressure may be computed as an equivalent fluid having a density of 300 psf per foot of depth, to a maximum earth pressure of 2,500 psf for footings founded on engineered fill. A coefficient of friction between soil and concrete of 0.40 may be used with dead load forces. When combining passive pressure and frictional resistance, the passive pressure component should be reduced by one-third.



A grade beam, a minimum of 12 inches wide and 12 inches deep, should be utilized across large entrances. The base of the grade beam should be at the same elevation as the bottom of the adjoining footings.

A moisture and vapor retarding system should be placed below slabs-on-grade where moisture migration through the slab is undesirable. Guidelines for these are provided in the 2019 California Green Building Standards Code (CALGreen) Section 4.505.2, the 2019 CBC Section 1907.1 and ACI 360R-10. The vapor retarder design and construction should also meet the requirements of ASTM E 1643. A portion of the vapor retarder design should be the implementation of a moisture vapor retardant membrane.

It should be realized that the effectiveness of the vapor retarding membrane can be adversely impacted as the result of construction related punctures (e.g. stake penetrations, tears, punctures from walking on the aggregate layer, etc.). These occurrences should be limited as much as possible during construction. Thicker membranes are generally more resistant to accidental puncture than thinner ones. Products specifically designed for use as moisture/vapor retarders may also be more puncture resistant. It is GeoTek's opinion that a minimum ten mil thick membrane with joints properly overlapped and sealed should be considered, unless otherwise specified by the slab design professional. Moisture and vapor retarding systems are intended to provide a certain level of resistance to vapor and moisture transmission through the concrete, but do not eliminate it. The acceptable level of moisture transmission through the slab is to a large extent based on the type of flooring used and atmospheric conditions.

Ultimately, the vapor retarding system should be comprised of suitable elements to limit migration of water and reduce transmission of water vapor through the slab to acceptable levels. The selected elements should have suitable properties (i.e. thickness, composition, strength, and permeance) to achieve the desired performance level. Consideration should be given to consulting with an individual possessing specific expertise in this area for additional evaluation.

We recommend that control joints be placed in two directions spaced approximately 24 to 36 times the thickness of the slab in inches. These joints are a widely accepted means to control cracks and should be reviewed by the project structural engineer.

7.3.2 Miscellaneous Foundation Recommendations

To minimize moisture penetration beneath the slab-on-grade areas, utility trenches should be backfilled with engineered fill, lean concrete, or concrete slurry where they intercept the perimeter footing or thickened slab edge.

Soils from the footing excavations should not be placed in the slab-on-grade areas unless properly compacted and tested. The excavations should be free of loose/sloughed materials and be neatly trimmed at the time of concrete placement.

7.3.3 Foundation Set Backs

Where applicable, the following setbacks should apply to all foundations. Any improvements not conforming to these setbacks may be subject to lateral movements and/or differential settlements:

- The outside bottom edge of all footings should be set back a minimum of $H/3$ (where H is the slope height) from the face of any descending slope. The setback should be at least 5 feet and need not exceed 40 feet.
- The outside bottom edge of all footings should be set back a minimum of $H/2$ (where H is the slope height) from the face of any ascending slope. The setback should be at least 5 feet and need not to exceed 15 feet. Where a retaining wall is constructed at the toe of the slope, the height of the slope should be measured from top of the wall to the top of the slope.
- The bottom of all footings for structures near retaining walls should be deepened so as to extend below a 1:1 (h:v) projection upward from the bottom inside edge of the wall footing.
- The bottom of any proposed foundations for structures should be deepened so as to extend below a 1:1 (h:v) projection upward from the bottom of the nearest excavation.

7.4 RETAINING WALL DESIGN AND CONSTRUCTION

7.4.1 General Design Criteria

Recommendations presented herein may apply to typical masonry or concrete vertical walls retaining up to six feet of soil. Additional review and recommendations should be requested for higher walls.

Retaining wall foundations embedded a minimum of 12 inches below the lowest adjacent grade and should rest on either 24 inches of compacted fill placed on competent bedrock or on competent bedrock. Wall footings should be designed using an allowable bearing capacity of 2,000 psf. An increase of one-third may be applied when considering short-term live loads (e.g. seismic and wind loads). The passive earth pressure may be computed as an equivalent fluid having a density of 300 psf per foot of depth, to a maximum earth pressure of 2,500 psf. A coefficient of friction between soil and concrete of 0.40 may be used with dead load forces. When combining passive pressure and frictional resistance, the passive pressure component should be reduced by one-third.

An equivalent fluid pressure approach may be used to compute the horizontal active pressure against the wall. The appropriate fluid unit weights are given in the table below for specific slope gradients of retained materials.

ACTIVE EARTH PRESSURES	
Surface Slope of Retained Materials (H:V)	Equivalent Fluid Pressure (PCF) Native Materials*
Level	37
2:1	53

*The design pressures assume the native backfill material has an expansion index less than or equal to 20. Backfill zone includes area between the back of the wall and footing to a plane (1:1 h:v) up from the bottom of the wall foundation to the ground surface.

The above equivalent fluid weights do not include superimposed loading conditions such as expansive soils, vehicular traffic, structures, seismic conditions or adverse geologic conditions.

7.4.2 Restrained Retaining Walls

Any retaining wall that will be restrained prior to placing backfill or walls that have male or reentrant corners should be designed for at-rest soil conditions using an equivalent fluid pressure of 57 pcf, plus any applicable surcharge loading. For areas having male or reentrant corners, the restrained wall design should extend a minimum distance equal to twice the height of the wall laterally from the corner, or as otherwise determined by the structural engineer.

7.4.3 Wall Backfill and Drainage

Retaining wall backfill should be free of deleterious and/or oversized materials and should have an expansion index of less than 20. Retaining walls should be provided with an adequate pipe

and gravel back drain system to help prevent buildup of hydrostatic pressures. Backdrains should consist of a four-inch diameter perforated collector pipe (Schedule 40, SDR 35, or approved equivalent) embedded in a minimum of one-cubic foot per linear foot of $\frac{3}{4}$ - to 1-inch clean crushed rock or an approved equivalent, wrapped in filter fabric (Mirafi 140N or an approved equivalent). The drain system should be connected to a suitable outlet. Waterproofing of site walls should be performed where moisture migration through the wall is undesirable.

Retaining wall backfill should be placed in lifts no greater than eight inches in thickness and compacted to a minimum of 90 percent relative compaction in accordance with ASTM Test Method D 1557. The wall backfill should also include a minimum one-foot wide section of $\frac{3}{4}$ - to 1-inch clean crushed rock (or an approved equivalent). The rock should be placed immediately adjacent to the back of the wall and extend up from a back drain to within approximately 24 inches of the finish grade. The rock should be separated from the earth with filter fabric. The upper 24 inches should consist of compacted on-site soil.

As an alternative to the drain rock and fabric, Miradrain 2000, or approved equivalent, may be used behind the retaining wall. The Miradrain 2000 should extend from the base of the wall to within two feet of the ground surface. The subdrain should be placed at the base of the wall in direct contact with the Miradrain 2000.

The presence of other materials might necessitate revision to the parameters provided and modification of the wall designs. Proper surface drainage needs to be provided and maintained. Walls from two to four feet in height may be drained using localized gravel packs behind weep holes at eight feet maximum spacing (e.g. approximately 1.5 cubic feet of gravel in a woven plastic bag). Weep holes should be provided or the head joints omitted in the first course of block extended above the ground surface. However, nuisance water may still collect in front of the wall.

Drain outlets should be maintained over the life of the project and should not be obstructed or plugged by adjacent improvements.

7.4.3.1 Other Design Considerations

- Wall design should consider the additional surcharge loads from superjacent slopes and/or footings, where appropriate.
- No backfill should be placed against concrete until minimum design strengths are evident by compression tests of cylinders.

- The retaining wall footing excavations, backcuts, and backfill materials should be approved by the project geotechnical engineer or their authorized representative.
- Positive separations should be provided in garden walls at horizontal distances not exceeding 20 feet.

7.4.4 Pavement Design Considerations

Pavement design for proposed on-site and off-site street improvements was conducted per Caltrans *Highway Design Manual* guidelines for flexible pavements. Based on traffic indices (TIs) of 5.0 to 7.0 generally associated with these types of projects and using an assumed design R-value of 50, the following preliminary sections were calculated:

PRELIMINARY PAVEMENT SECTIONS			
TI	R-Value	Thickness of Asphalt Concrete (inches)	Thickness of Aggregate Base (inches)
5.0	50	3	4
6.0		3	5
7.0		4	5

The TIs used in our pavement design are considered reasonable values for the proposed street areas and should provide a pavement life of approximately 20 years with a normal amount of flexible pavement maintenance. Irrigation adjacent to pavements, without a deep curb or other cutoff to separate landscaping from the paving may result in premature pavement failure. Traffic parameters used for design were selected based upon engineering judgment and not upon information furnished to us such as an equivalent wheel load analysis or a traffic study.

The recommended pavement sections provided are intended as a minimum guideline and final selection of pavement cross section parameters should be made by the project civil engineer, based upon the local laws and ordinates, expected subgrade and pavement response, and desired level of conservatism. If thinner or highly variable pavement sections are constructed, increased maintenance and repair could be expected. Final pavement design should be checked by testing of soils exposed at subgrade (the upper 12 inches) after final grading has been completed.

Asphalt concrete and aggregate base should conform to current Caltrans Standard Specifications Section 39 and 26-1.02, respectively. As an alternative, asphalt concrete can conform to Section 203-6 of the current Standard Specifications for Public Work (Green

Book). Crushed aggregate base or crushed miscellaneous base can conform to Section 200-2.2 and 200-2.4 of the Green Book, respectively. Pavement base should be compacted to at least 95 percent of the ASTM D1557 laboratory maximum dry density (modified proctor).

All pavement installation, including preparation and compaction of subgrade, compaction of base material, placement and rolling of asphaltic concrete, should be done in accordance with the City of Perris specifications, and under the observation and testing of GeoTek and a City Inspector where required. Jurisdictional minimum compaction requirements in excess of the aforementioned minimums may govern.

Deleterious material, excessive wet or dry pockets, oversized rock fragments, and other unsuitable yielding materials encountered during grading should be removed. Once existing compacted fill are brought to the proposed pavement subgrade elevations, the subgrade should be proof-rolled in order to check for a uniform and unyielding surface. The upper 12 inches of pavement subgrade soils should be scarified, moisture conditioned at or near optimum moisture content, and recompact to at least 95 percent of the laboratory maximum dry density (ASTM D1557). If loose or yielding materials are encountered during construction, additional evaluation of these areas should be carried out by GeoTek. All pavement section changes should be properly transitioned.

7.4.5 Soil Corrosivity

A corrosion report was prepared for the site by our sub-consultant HDR based on various samples recently obtained across the site. The site corrosion report is included in Appendix E. In general, the report concluded that the on-site materials are “severely corrosive” to ferrous metals and “aggressive” to copper.

7.4.6 Soil Sulfate Content

The corrosion evaluation performed by HDR, Inc. states that the site soils have negligible sulfate concentrations. Based upon the test results, no special concrete mix design is required by Code for sulfate attack resistance. Additional recommendations for mitigation of soil corrosion are provided in Appendix E.

7.4.7 Import Soils

Import soils should have expansion characteristics similar to the on-site soils. GeoTek also recommends that the proposed import soils be tested for expansion and sulfate potential. GeoTek should be notified a minimum of 72 hours prior to importing so that appropriate sampling and laboratory testing can be performed.

7.4.8 Concrete Flatwork

7.4.8.1 Exterior Concrete Slabs, Sidewalks, and Driveways

Exterior concrete slabs, sidewalks and driveways should be designed using a four-inch minimum thickness. No specific reinforcement is required from a geotechnical perspective. However, some shrinkage and cracking of the concrete should be anticipated as a result of typical mix designs and curing practices commonly utilized in industrial construction.

Sidewalks and driveways may be under the jurisdiction of the governing agency. If so, jurisdictional design and construction criteria would apply, if more restrictive than the recommendations presented in this report.

Subgrade soils should be pre-moistened prior to placing concrete. The subgrade soils below exterior flatwork should be pre-saturated to a minimum of 100 percent of optimum moisture content to a depth of at least 12 inches.

All concrete installation, including preparation and compaction of subgrade, should be done in accordance with the City of Perris specifications, and under the observation and testing of GeoTek and a City inspector, if necessary.

7.4.8.2 Concrete Performance

Concrete cracks should be expected. These cracks can vary from sizes that are essentially unnoticeable to more than 0.125-inch in width. Most cracks in concrete, while unsightly, do not significantly impact long-term performance. While it is possible to take measures (proper concrete mix, placement, curing, control joints, etc.) to reduce the extent and size of cracks that occur, some cracking will occur despite the best efforts to minimize it. Concrete can also undergo chemical processes that are dependent upon a wide range of variables, which are difficult, at best, to control. Concrete, while seemingly a stable material, is subject to internal expansion and contraction due to external changes over time.

One of the simplest means to control cracking is to provide weakened control joints for cracking to occur along. These do not prevent cracks from developing; they simply provide a relief point for the stresses that develop. These joints are a widely accepted means to control cracks but are not always effective. Control joints are more effective the more closely spaced they are. GeoTek suggests that control joints be placed in two orthogonal directions and located a distance apart approximately equal to 24 to 36 times the slab thickness.

7.5 POST CONSTRUCTION CONSIDERATIONS

7.5.1 Landscape Maintenance and Planting

Water has been shown to weaken the inherent strength of soil, and slope stability is significantly reduced by overly wet conditions. Positive surface drainage away from graded slopes should be maintained and only the amount of irrigation necessary to sustain plant life should be provided for planted slopes. Controlling surface drainage and runoff and maintaining a suitable vegetation cover can minimize erosion. Plants selected for landscaping should be lightweight, deep-rooted types that require little water and are capable of surviving the prevailing climate.

Overwatering should be avoided. Care should be taken when adding soil amendments to avoid excessive watering. Leaching as a method of soil preparation prior to planting is not recommended. An abatement program to control ground-burrowing rodents should be implemented and maintained. This is critical as burrowing rodents can decreased the long-term performance of slopes.

It is common for planting to be placed adjacent to structures in planter or lawn areas. This will result in the introduction of water into the ground adjacent to the foundations. This type of landscaping should be avoided. Due to the presence of high expansive soils, irrigation should be minimized adjacent to the buildings. Planters within 30 feet of the buildings should be above ground and underlain by a concrete slab. Waterproofing of the foundation and/or subdrains may be warranted and advisable. We could discuss these issues, if desired, when plans are made available.

7.5.2 Drainage

The need to maintain proper surface drainage and subsurface systems cannot be overly emphasized. Positive site drainage should be maintained at all times, as directed by the project civil engineer. Drainage should not flow uncontrolled down any descending slope. Water should be directed away from foundations and not allowed to pond or seep into the ground adjacent to the footings and floor-slabs. Pad drainage should be directed toward approved areas and not be blocked by other improvements.

Roof gutters should be installed that will direct the collected water at least 20 feet from the buildings.

It is the owner's responsibility to maintain and clean drainage devices on or contiguous to their lot. In order to be effective, maintenance should be conducted on a regular and routine schedule and necessary corrections made prior to each rainy season.

7.6 PLAN REVIEW AND CONSTRUCTION OBSERVATIONS

We recommend that site grading, specifications, retaining wall/shoring plans and foundation plans be reviewed by this office prior to construction to check for conformance with the recommendations of this report. Additional recommendations may be necessary based on these reviews. We also recommend that GeoTek representatives be present during site grading and foundation construction to check for proper implementation of the geotechnical recommendations. The owner/developer should have GeoTek's representative perform at least the following duties:

- Observe site clearing and grubbing operations for proper removal of unsuitable materials.
- Observe and test bottom of removals prior to fill placement.
- Evaluate the suitability of on-site and import materials for fill placement and collect soil samples for laboratory testing when necessary.
- Observe the fill for uniformity during placement including utility trenches.
- Test the fill for field density and relative compaction.
- Test the near-surface soils to verify proper moisture content.
- Observe and probe foundation excavations to confirm suitability of bearing materials.

If requested, a construction observation and compaction report can be provided by GeoTek, which can comply with the requirements of the governmental agencies having jurisdiction over the project. We recommend that these agencies be notified prior to commencement of construction so that necessary grading permits can be obtained.

8. LIMITATIONS

This evaluation does not and should in no way be construed to encompass any areas beyond the specific area of proposed construction as indicated to us by the client. Further, no evaluation of any existing site improvements is included. The scope is based on our understanding of the project and the client's needs, our proposal (Proposal No. P-0302620-



CR) dated April 7, 2020 and geotechnical engineering standards normally used on similar projects in this region.

The materials observed on the project site appear to be representative of the area; however, soil and bedrock materials vary in character between excavations and natural outcrops or conditions exposed during site construction. Site conditions may vary due to seasonal changes or other factors. GeoTek, Inc. assumes no responsibility or liability for work, testing or recommendations performed or provided by others.

Since our recommendations are based on the site conditions observed and encountered, and laboratory testing, our conclusions and recommendations are professional opinions that are limited to the extent of the available data. Observations during construction are important to allow for any change in recommendations found to be warranted. These opinions have been derived in accordance with current standards of practice and no warranty is expressed or implied. Standards of practice are subject to change with time.

9. SELECTED REFERENCES

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Pacific Communities Builder, Inc.
Proposed Residential Development
Tract No. 31304
Perris, Riverside County, California









GeoTek Project No. 2359-CR



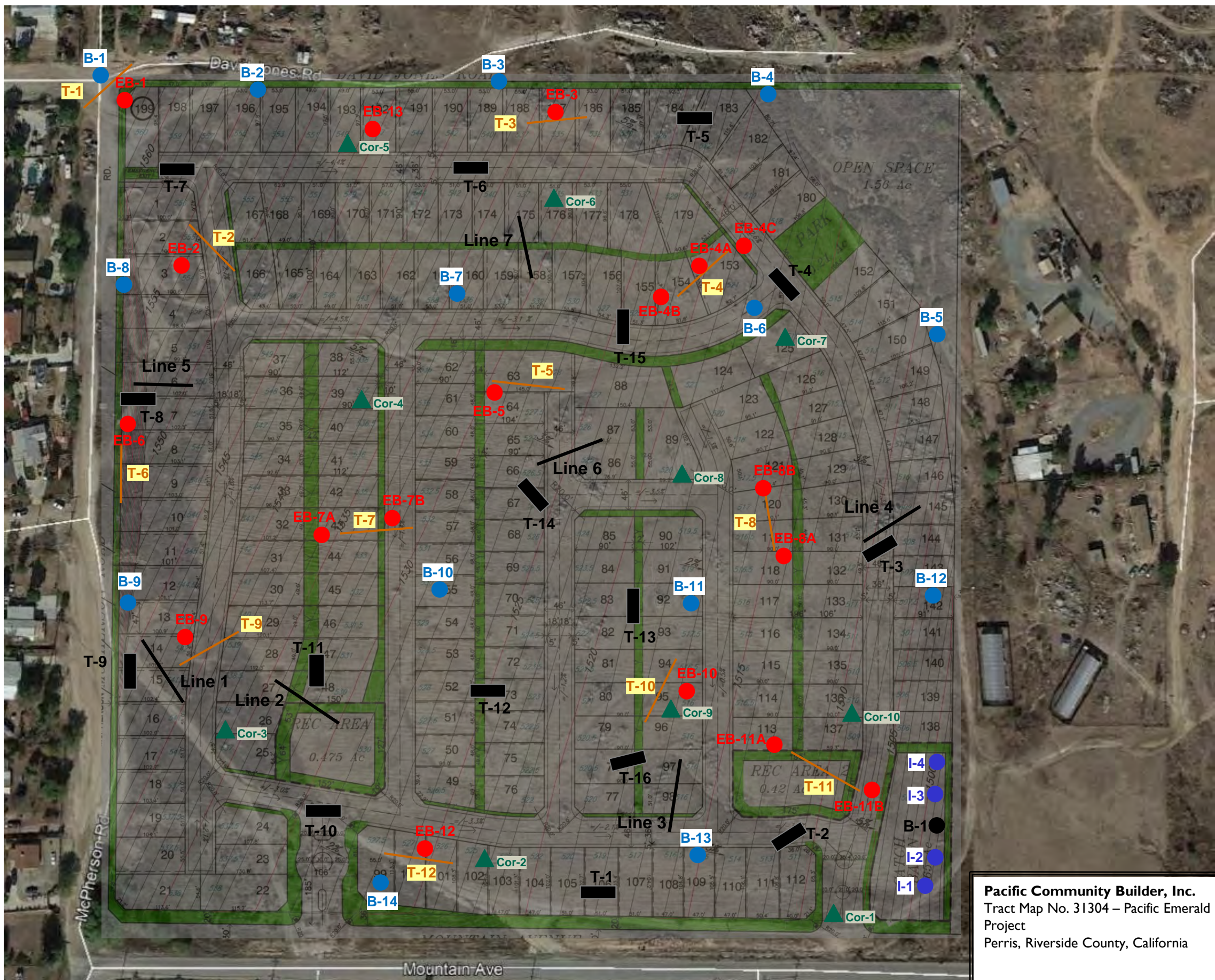
Figure 1
Site Location Map



Legend
(Locations are approximate)

-  T-16 - Exploratory Trench by GeoTek
-  B-1 - Exploratory Boring by GeoTek
-  I-4 - Percolation Boring by GeoTek
-  Line 7 - Seismic Refraction Line by GeoTek
-  Cor-4 - Corrosion Sample collected by GeoTek
-  T-12 - Seismic Refraction Line (RPA, 2002)
-  EB-13 - Exploratory Boring (RPA, 2002)
-  B-14 - Exploratory Boring (Sladden, 2003)

250 FEET



Pacific Community Builder, Inc.
Tract Map No. 31304 – Pacific Emerald
Project
Perris, Riverside County, California

Project No. 2359-CR



Figure 2
Exploration Location
Map

APPENDIX A

**LOGS OF EXPLORATORY BORINGS BY ROBERT PRATER ASSOCIATES
(2002) AND SLADDEN (2003)**

**Updated Geotechnical and Infiltration Evaluation
Tract No. 31304, Perris, Riverside County, California
Project No. 2359-CR**



DRILL RIG Continuous Flight Auger		SURFACE ELEVATION 1557' (approx.)		LOGGED BY CW									
DEPTH TO GROUNDWATER None		BORING DIAMETER 6 inches		DATE DRILLED 12/13/2002									
DESCRIPTION AND CLASSIFICATION					DEPTH (FEET)	SAMPLER	PENETRATION RESISTANCE (BLOWS/FT.)	WATER CONTENT (%)	SHEAR STRENGTH BY TORVANE (KSF)	DRY UNIT WEIGHT (PCF)			
DESCRIPTION AND REMARKS	SYM-BOL	COLOR	CONSIST	SOIL TYPE									
SILTY SAND (decomposed granitic rock)		olive and grayish brown	medium dense	SM	1								
			dense		2	X							
						3							
					very dense	4							
					5								
					6								
					7								
		olive			8	X							
					9								
					10								
					11								
					12								
					13								
					14								
					15	X							
					16								
					17								
					18								
					19								
	Bottom of Boring @ 20 feet Note: The stratification lines represent the approximate boundary between material types and the transition may be gradual.					20							
ROBERT PRATER ASSOCIATES Consulting Geotechnical Engineers & Geologists					EXPLORATORY BORING LOG								
					MOUNTAIN AVENUE SUBDIVISION Perris, California								
					PROJECT NO.			DATE			BORING NO. 1		
					442-4			December 2002					

DRILL RIG Continuous Flight Auger		SURFACE ELEVATION 1554' (approx.)		LOGGED BY CW						
DEPTH TO GROUNDWATER None		BORING DIAMETER 6 Inches		DATE DRILLED 12/13/2002						
DESCRIPTION AND CLASSIFICATION					DEPTH (FEET)	SAMPLER	PENETRATION RESISTANCE (BLOW/FT)	WATER CONTENT (%)	SHEAR STRENGTH BY TORVANE (KSF)	DRY UNIT WEIGHT (PCF)
DESCRIPTION AND REMARKS	SYM-SOL	COLOR	CONSIST	SOIL TYPE						
SILTY SAND (topsoil)		yellowish brown	loose	SM	1	X				
SILTY SAND (decomposed granitic rock) Core-stone(s) from 8' to 10' Core-stone(s) from 13' to 15'		light yellowish brown	medium dense	SM	2					
					3					
			dense		4					
					5	X				
					6					
			very dense		7					
					8	X				
					9					
					10					
					11					
					12					
					13					
					14	X				
					15					
		16								
		17								
		18								
		19								
Bottom of Boring @ 20 feet Note: The classification lines represent the approximate boundary between material types and the transition may be gradual.					20					
ROBERT PRATER ASSOCIATES <i>Consulting Geotechnical Engineers & Geologists</i>					EXPLORATORY BORING LOG					
					MOUNTAIN AVENUE SUBDIVISION Perris, California					
					PROJECT NO.		DATE		BORING NO. 2	
					442-4		December 2002			

DRILL RIG Continuous Flight Auger		SURFACE ELEVATION 1530' (approx.)		LOGGED BY CW						
DEPTH TO GROUNDWATER None		BORING DIAMETER 6 Inches		DATE DRILLED 12/13/2002						
DESCRIPTION AND CLASSIFICATION					DEPTH (FEET)	SAMPLER	PENETRATION RESISTANCE (BLOWS/FT)	WATER CONTENT (%)	SHEAR STRENGTH BY TORVANE (KSF)	DRY UNIT WEIGHT (PCF)
DESCRIPTION AND REMARKS	SYM-BOL	COLOR	CONSIST.	SOIL TYPE						
CLAYEY-SANDY SILT and CLAYEY SAND (topsoil)		olive brown	loose	ML/SC	1					
CLAYEY SAND (decomposed granitic rock)		olive brown	dense	SC	2					
					3					
					4					
					5	X				
					6					
					7					
					8					
SILTY SAND (decomposed granitic rock)		olive	very dense	SM	8					
					9					
					10	X				
					11					
Core-stone at 11'										
Bottom of Boring @ 12 feet Met refusal on granitic rock					12					
Bottom of Boring @ 20 feet Note: The stratification lines represent the approximate boundary between major types and the transition may be gradual.										
ROBERT PRATER ASSOCIATES Consulting Geotechnical Engineers & Geologists					EXPLORATORY BORING LOG					
					MOUNTAIN AVENUE SUBDIVISION Perris, California					
					PROJECT NO		DATE		BORING NO.	
					442-4		December 2002		3	

DRILL RIG: Continuous Flight Auger		SURFACE ELEVATION: 1515' (approx.)		LOGGED BY: CW								
DEPTH TO GROUNDWATER: None		BORING DIAMETER: 8 Inches		DATE DRILLED: 12/13/2002								
DESCRIPTION AND CLASSIFICATION					DEPTH (FEET)	SAMPLER	PENETRATION RESISTANCE (BLOWS/FT.)	WATER CONTENT (%)	SHEAR STRENGTH BY TORVANE (KSF)	DRY UNIT WEIGHT (PCF)		
DESCRIPTION AND REMARKS	SYMBOL	COLOR	CONSIST.	SOIL TYPE								
CLAYEY-SANDY SILT (topsoil)		olive brown to brown	very loose	ML	1							
					2							
					3			2				
					4							
					5							
					6		loose		4			
					7							
CLAYEY-SILTY SAND (decomposed granitic rock)		dark brown	medium dense	SC-SM	8							
SILTY SAND (decomposed granitic rock)		dark olive brown	very dense	SM	9							
					10		50/5					
					11							
					12							
					13							
					14	olive						
					15				X			
					16							
					17							
	Bottom of Boring @ 17 feet Met refusal on granitic rock											
<p>Note: The stratification lines represent the approximate boundary between material types and the transition may be gradual.</p>												
ROBERT PRATER ASSOCIATES Consulting Geotechnical Engineers & Geologists					EXPLORATORY BORING LOG							
					MOUNTAIN AVENUE SUBDIVISION Perris, California							
					PROJECT NO.		DATE		BORING NO. 4A			
					442-4		December 2002					

DREL. NO. Continuous Flight Auger		SURFACE ELEVATION 1516' (approx.)		LOGGED BY CW						
DEPTH TO GROUNDWATER None		BORING DIAMETER 6 inches		DATE DRILLED 12/13/2002						
DESCRIPTION AND CLASSIFICATION					DEPTH (FEET)	SAMPLER	PENETRATION RESISTANCE (BLOW/FT)	WATER CONTENT(%)	SHEAR STRENGTH BY TORVANE (KSF)	DRY UNIT WEIGHT (PCF)
DESCRIPTION AND REMARKS	SYM-BOL	COLOR	CONSIST	SOIL TYPE						
SILTY SAND (topsoil)		light yellowish brown	loose	SM	1	X				
SILTY SAND (decomposed granitic rock)		olive brown	medium dense	SM	2					
					3					
					4	X				
			5							
			6							
			7							
			8			very dense				
			9							
			10							
			11		X					
			12							
Core-stone(s) at 12' to 13-1/2'										
13										
14										
Core-stone(s) at 15' to 16-1/2'										
15										
16										
Bottom of Boring @ 17 feet Met refusal on granitic rock					17					
<small>Note: The stratification lines represent the approximate boundary between material types and the transition may be gradual.</small>										
ROBERT PRATER ASSOCIATES Consulting Geotechnical Engineers & Geologists					EXPLORATORY BORING LOG					
					MOUNTAIN AVENUE SUBDIVISION Perris, California					
					PROJECT NO.		DATE		BORING NO. 4B	
					442-4		December 2002			

DRILL RIG: Continuous Flight Auger		SURFACE ELEVATION: 1514' (approx.)		LOGGED BY: CW						
DEPTH TO GROUNDWATER: None		BORING DIAMETER: 6 Inches		DATE DRILLED: 12/13/2002						
DESCRIPTION AND CLASSIFICATION					DEPTH (FEET)	SAMPLER	PENETRATION RESISTANCE (BLOWS/FT)	WATER CONTENT (%)	SHEAR STRENGTH BY TORVANE (KSF)	DRY UNIT WEIGHT (PCF)
DESCRIPTION AND REMARKS	SYMBOL	COLOR	CONSIST	SOIL TYPE						
CLAYEY-SANDY SILT and CLAYEY SAND (topsoil)		olive brown	loose	ML/SC	1					
					2					
					3	X				
					4					
					5					
					6					
					7					
SILTY SAND (decomposed granitic rock)		olive brown	medium dense	SM	8	X				
					9					
					10					
					11					
					12					
					13	dark olive	very dense			
					14				X	
Core-stone at 15'					15					
Bottom of Boring @16 feet Met refusal on granitic rock					16					
<small>Note: The stratification lines represent the approximate boundary between material types and the transition may be gradual.</small>										
ROBERT PRATER ASSOCIATES Consulting Geotechnical Engineers & Geologists					EXPLORATORY BORING LOG					
					MOUNTAIN AVENUE SUBDIVISION Perris, California					
					PROJECT NO.		DATE		BORING NO. 4C	
					442-4		December 2002			

DRILL RIG Continuous Flight Auger		SURFACE ELEVATION 1526' (approx.)		LOGGED BY CW						
DEPTH TO GROUNDWATER None		BORING DIAMETER 6 Inches		DATE DRILLED 12/13/2002						
DESCRIPTION AND CLASSIFICATION					DEPTH (FEET)	SAMPLER	PENETRATION RESISTANCE (BLOW/FEET)	WATER CONTENT(%)	SHEAR STRENGTH BY TORVANE (KSF)	DRY UNIT WEIGHT (PCF)
DESCRIPTION AND REMARKS	SYM-BOL	COLOR	CONSIST.	SOIL TYPE						
SILTY SAND (topsoil)		brown	loose	SM	1					
SILTY SAND (decomposed granitic rock)		light olive brown	medium dense	SM	2	X				
			dense		3					
		olive			4					
			very dense		5					
					6	X				
					7					
					8					
					9					
					10					
					11					
					12					
					13	X				
					14					
					15					
Bottom of Boring @ 15 feet Met refusal on granitic rock										
<p>Note: The stratification lines represent the approximate boundary between material types and the transition may be gradual.</p>										
ROBERT PRATER ASSOCIATES <i>Consulting Geotechnical Engineers & Geologists</i>					EXPLORATORY BORING LOG					
					MOUNTAIN AVENUE SUBDIVISION Perris, California					
					PROJECT NO.		DATE		BORING NO. 5	
					442-4		December 2002			

DRILLING: Continuous Flight Auger		SURFACE ELEVATION: 1560' (approx.)		LOGGED BY: CW								
DEPTH TO GROUNDWATER: None		BORING DIAMETER: 6 inches		DATE DRILLED: 12/13/2002								
DESCRIPTION AND CLASSIFICATION					DEPTH (FEET)	SAMPLER	PENETRATION RESISTANCE (BLOWS/FT.)	WATER CONTENT(%)	SHEAR STRENGTH BY TORVANE (KSF)	DRY UNIT WEIGHT (PCF)		
DESCRIPTION AND REMARKS	SYM-BOL	COLOR	CONSIST.	SOIL TYPE								
SILTY SAND (decomposed granitic rock)		light yellowish brown	medium dense	SM	1							
						2						
							3	S				
							4					
							5					
							6					
							7					
							8					
							9					
							10	X				
			light olive brown			11						
						12						
						13						
						14						
						15	X					
						16						
						17						
						18						
						19						
						20	X					
Bottom of Boring @ 20 feet Note: The classification lines represent the approximate boundary between material types and the transition may be gradual.												
ROBERT PRATER ASSOCIATES Consulting Geotechnical Engineers & Geologists					EXPLORATORY BORING LOG							
					MOUNTAIN AVENUE SUBDIVISION Perris, California							
					PROJECT NO. 442-4		DATE December 2002		BORING NO. 6			

DRILL RIG Continuous Flight Auger		SURFACE ELEVATION 1537' (approx.)		LOGGED BY CW						
DEPTH TO GROUNDWATER None		BORING DIAMETER 6 inches		DATE DRILLED 12/13/2002						
DESCRIPTION AND CLASSIFICATION					DEPTH (FEET)	SAMPLER	PENETRATION RESISTANCE (BLOW/FT.)	WATER CONTENT(%)	SHEAR STRENGTH BY TORVANE (KSF)	DRY UNIT WEIGHT (PCF)
DESCRIPTION AND REMARKS	SYM-BOL	COLOR	CONSIST	SOIL TYPE						
SILTY SAND (topsoil)		brown	loose	SM	1	X				
SILTY SAND (decomposed granitic rock)		light yellowish brown	medium dense	SM	2					
					3					
			dense		4					
					5	X				
			very dense		6					
					7					
			light olive brown		8					
					9	X				
					10					
					11					
Core-stone at 10'										
Bottom of Boring @ 11 feet Met refusal on granitic rock										
<p>Note: The stratification lines represent the approximate boundary between material types and the transition may be gradual.</p>										
ROBERT PRATER ASSOCIATES Consulting Geotechnical Engineers & Geologists					EXPLORATORY BORING LOG					
					MOUNTAIN AVENUE SUBDIVISION Perris, California					
					PROJECT NO.		DATE		BORING NO.	
					442-4		December 2002		7A	

DRILL RIG	Continuous Flight Auger			SURFACE ELEVATION	1535' (approx.)		LOGGED BY	CW								
DEPTH TO GROUNDWATER	None			BORING DIAMETER	8 Inches		DATE DRILLED	12/13/2002								
DESCRIPTION AND CLASSIFICATION							DEPTH (FEET)	SAMPLER	PENETRATION RESISTANCE (BLOWS/FT.)	WATER CONTENT (%)	SHEAR STRENGTH BY TORVANE (KSF)	DRY UNIT WEIGHT (PCF)				
DESCRIPTION AND REMARKS	SYM-BOL	COLOR	CONSIST.	SOIL TYPE												
SILTY SAND (topsoil)		brown	loose	SM	1											
SILTY SAND (decomposed granitic rock)		light yellowish brown	medium dense	SM	2											
			dense		3											
					4											
			very dense		5											
					6											
					7											
					8											
					9											
					10											
					11											
					12											
					13											
					14											
			Core-stone at 15'		light olive brown			15		x						
			Bottom of Boring @ 16 feet Met refusal on granitic rock					16								
<p>Note: The stratification lines represent the approximate boundary between material types and the transition may be gradual.</p>																
ROBERT PRATER ASSOCIATES Consulting Geotechnical Engineers & Geologists					EXPLORATORY BORING LOG											
					MOUNTAIN AVENUE SUBDIVISION Perris, California											
					PROJECT NO.				DATE				BORING NO.			
					442-4				December 2002				7B			

DRILL RIG Continuous Flight Auger		SURFACE ELEVATION 1513' (approx.)		LOGGED BY CW						
DEPTH TO GROUNDWATER None		BORING DIAMETER 6 inches		DATE DRILLED 12/13/2002						
DESCRIPTION AND CLASSIFICATION					DEPTH (FEET)	SAMPLER	PENETRATION RESISTANCE (BLOWS/FT)	WATER CONTENT (%)	SHEAR STRENGTH BY TORVANE (KSF)	DRY UNIT WEIGHT (PCF)
DESCRIPTION AND REMARKS	SYM-BOL	COLOR	CONSIST	SOIL TYPE						
SILTY SAND (topsoil)		light brown	loose	SM	1					
SILTY SAND (decomposed granitic rock)		light yellowish brown	medium dense	SM	2					
			dense		3	X				
					4					
			very dense		5					
					6	X				
Bottom of Boring @ 7 feet. Met refusal on granitic rock					7					
<p>Note: The stratification lines represent the approximate boundary between material types and the transition may be gradual.</p>										
ROBERT PRATER ASSOCIATES <i>Consulting Geotechnical Engineers & Geologists</i>					EXPLORATORY BORING LOG					
					MOUNTAIN AVENUE SUBDIVISION Perris, California					
					PROJECT NO.		DATE		BORING NO. 8A	
					442-4		December 2002			

DRILL RIG - Continuous Flight Auger		SURFACE ELEVATION 1514' (approx.)		LOGGED BY CW						
DEPTH TO GROUNDWATER None		BORING DIAMETER 6 Inches		DATE DRILLED 12/13/2002						
DESCRIPTION AND CLASSIFICATION					DEPTH (FEET)	SAMPLER	PENETRATION RESISTANCE (BLOWS/FT.)	WATER CONTENT (%)	SHEAR STRENGTH BY TORVANE (KSF)	DRY UNIT WEIGHT (PCF)
DESCRIPTION AND REMARKS	SYM-BOL	COLOR	CONSIST.	SOIL TYPE						
SILTY SAND (topsoil)		light brown	loose	SM	1					
SILTY SAND (decomposed granitic rock)		light yellowish brown	medium dense	SM	2					
					3					
			dense		4					
					5					
			very dense		6					
					7					
					8					
					9					
					10			X		
					11					
					12					
					13					
					14					
					15					
					16					
					17			X		
			Bottom of Boring @ 18 feet Met refusal on granitic rock					18		
<p>Note: The stratification lines represent the approximate boundary between material types and the transition may be gradual.</p>										
ROBERT PRATER ASSOCIATES Consulting Geotechnical Engineers & Geologists					EXPLORATORY BORING LOG					
					MOUNTAIN AVENUE SUBDIVISION Perris, California					
					PROJECT NO.		DATE		BORING NO.	
					442-4		December 2002		88	

DRILL RIG	Continuous Flight Auger			SURFACE ELEVATION	1548' (approx.)		LOGGED BY	CW				
DEPTH TO GROUNDWATER	None			BORING DIAMETER	6 inches		DATE DRILLED	12/13/2002				
DESCRIPTION AND CLASSIFICATION					DEPTH (FEET)	SAMPLER	PENETRATION RESISTANCE (BLOWS/FT)	WATER CONTENT(%)	SHEAR STRENGTH BY TORVANE (KSF)	DRY UNIT WEIGHT (PCF)		
DESCRIPTION AND REMARKS				SYMBOL							COLOR	CONSIST
SILTY SAND (topsoil)					light yellowish brown	loose	SM					
SILTY SAND (decomposed granitic rock)					light yellowish brown	medium dense	SM					
				Bottom of Boring @ 20 feet								
Note: The stratification lines represent the approximate boundary between material types and the transition may be gradual												
ROBERT PRATER ASSOCIATES Consulting Geotechnical Engineers & Geologists				EXPLORATORY BORING LOG								
				MOUNTAIN AVENUE SUBDIVISION Perris, California								
				PROJECT NO.		DATE		BORING NO. 9				
				442-4		December 2002						

DRILL RIG: Continuous Flight Auger		SURFACE ELEVATION: 1514' (approx.)		LOGGED BY: CW								
DEPTH TO GROUNDWATER: None		BORING DIAMETER: 6 inches		DATE DRILLED: 12/13/2002								
DESCRIPTION AND CLASSIFICATION					DEPTH (FEET)	SAMPLER	PENETRATION RESISTANCE (BLOWS/FT.)	WATER CONTENT (%)	SHEAR STRENGTH BY TORQUE (KSF)	DRY UNIT WEIGHT (PCF)		
DESCRIPTION AND REMARKS	SYMBOL	COLOR	CONSIST	SOIL TYPE								
SILTY SAND (topsoil)			loose	SM	1							
SILTY SAND (decomposed granitic rock) - - Small core-stones from 12' to 13'		light olive brown	medium dense	SM	2	X						
					3							
				dense		4						
		olive		very dense		5						
						6						
						7						
						8						
						9	X					
						10						
						11						
						12						
						13						
						14						
						15	X					
	Bottom of Boring @ 16 feet Met refusal on granitic rock					16						
<small>Note: The stratification lines represent the approximate boundary between material types and the transition may be gradual.</small>												
ROBERT PRATER ASSOCIATES Consulting Geotechnical Engineers & Geologists					EXPLORATORY BORING LOG							
					MOUNTAIN AVENUE SUBDIVISION Perris, California							
					PROJECT NO:		DATE:		BORING NO:		10	
					442-4		December 2002					

DRILL RIG Continuous Flight Auger		SURFACE ELEVATION 1507' (approx.)		LOGGED BY CW						
DEPTH TO GROUNDWATER None		BORING DIAMETER 8 inches		DATE DRILLED 12/13/2002						
DESCRIPTION AND CLASSIFICATION					DEPTH (FEET)	SAMPLER	PENETRATION RESISTANCE (BLOWS/FT.)	WATER CONTENT(%)	SHEAR STRENGTH BY TORVANE (KSF)	DRY UNIT WEIGHT (PCF)
DESCRIPTION AND REMARKS	SYM BOL	COLOR	CONSIST.	SOIL TYPE						
CLAYEY-SILTY SAND (topsoil)		light brown	loose	SC-SM	1	X				
SILTY SAND (decomposed granitic rock)		light olive brown	medium dense	SM	2					
			dense		3					
					4					
			very dense		5	X				
Bottom of Boring @ 6 feet Met refusal on granitic rock					6					
<p>Note: The stratification lines represent the approximate boundary between material types and the transition may be gradual.</p>										
ROBERT PRATER ASSOCIATES Consulting Geotechnical Engineers & Geologists					EXPLORATORY BORING LOG					
					MOUNTAIN AVENUE SUBDIVISION Perris, California					
					PROJECT NO.		DATE		BORING NO.	
					442-4		December 2002		11A	

DRILL RIG	Continuous Flight Auger	SURFACE ELEVATION	1506' (approx.)	LOGGED BY	CW					
DEPTH TO GROUNDWATER	None	BORING DIAMETER	8 Inches	DATE DRILLED	12/13/2002					
DESCRIPTION AND CLASSIFICATION					DEPTH (FEET)	SAMPLER	PENETRATION RESISTANCE (BLOWS/FT.)	WATER CONTENT (%)	SHEAR STRENGTH BY TORVANE (KSF)	DRY UNIT WEIGHT (PCF)
DESCRIPTION AND REMARKS	SYM- BOL	COLOR	CONSIST.	SOIL TYPE						
CLAYEY-SILTY SAND (topsoil)		light brown	loose	SC- SM	1					
SILTY SAND (decomposed granitic rock)		light olive brown	medium dense	SM	2					
			dense		3					
			very dense		4					
					5					
					6					
					7					
		olive			8					
					9					
					10					
					11					
		dark olive			12					
					13					
					14					
					15		X			
					16					
					17					
					18					
	Very moist below 19'				19					
	Bottom of Boring @ 20 feet <small>Note: The stratification lines represent the approximate boundary between material types and the transition may be gradual</small>				20		X			
ROBERT PRATER ASSOCIATES <i>Consulting Geotechnical Engineers & Geologists</i>					EXPLORATORY BORING LOG					
					MOUNTAIN AVENUE SUBDMISION Perris, California					
					PROJECT NO.		DATE		BORING NO. 11B	
					442-4		December 2002			

DRILL RIG Continuous Flight Auger		SURFACE ELEVATION 1525' (approx.)		LOGGED BY CW									
DEPTH TO GROUNDWATER None		BORING DIAMETER 6 Inches		DATE DRILLED 12/13/2002									
DESCRIPTION AND CLASSIFICATION					DEPTH (FEET)	SAMPLER	PENETRATION RESISTANCE (BLOWS/FT.)	WATER CONTENT (%)	SHEAR STRENGTH BY TORVANE (KSF)	DITY UNIT WEIGHT (PCF)			
DESCRIPTION AND REMARKS	SYM-BOL	COLOR	CONSIST.	SOIL TYPE									
SILTY SAND (topsoil)		light olive brown	loose	SM	1								
SILTY SAND (decomposed granitic rock)		olive brown	medium dense	SM	2	X							
			dense		3								
					4								
					5								
			very dense		6								
					7								
					8								
					9								
					10								
					11								
					12								
					13								
					14								
					15								
					16								
					17								
					18								
					19								
				Bottom of Boring @ 20 feet							20		
ROBERT PRATER ASSOCIATES Consulting Geotechnical Engineers & Geologists					EXPLORATORY BORING LOG								
					MOUNTAIN AVENUE SUBDIVISION Perris, California								
					PROJECT NO.			DATE			BORING NO. 12		
					442-4			December 2002					

DRILL RIG: Continuous Flight Auger		SURFACE ELEVATION: 1544' (approx.)		LOGGED BY: CW						
DEPTH TO GROUNDWATER: None		BORING DIAMETER: 6 inches		DATE DRILLED: 12/13/2002						
DESCRIPTION AND CLASSIFICATION					DEPTH (FEET)	SAMPLER	PENETRATION RESISTANCE (BLOWS/FT)	WATER CONTENT(%)	SHEAR STRENGTH @ 150/300 (KSF)	DRY UNIT WEIGHT (PCF)
DESCRIPTION AND REMARKS	SYM-BOL	COLOR	CONSIST	SOIL TYPE						
SILTY SAND (decomposed granitic rock)		light olive brown	dense	SM	1					
			very dense		2	X				
		light gray			3					
					4					
					5	X				
					6					
					7					
					8					
					9					
					10					
Core-stone @ 9'										
Bottom of Boring @ 10 feet Met refusal on granitic rock.										
<small>Note: The stratification lines represent the approximate boundary between material types and the transition may be gradual.</small>										
ROBERT PRATER ASSOCIATES <small>Consulting Geotechnical Engineers & Geologists</small>					EXPLORATORY BORING LOG					
					MOUNTAIN AVENUE SUBDIVISION Perris, California					
					PROJECT NO.		DATE		BORING NO. 13	
					442-4		December 2002			

TABLE A-1 (cont.)

SEISMIC TRAVERSE RESULTS

<u>Traverse</u>	<u>Seismic Velocity (feet per second)</u>	<u>Depth Interpretation (feet)</u>
T-11NW	1,600	0 - 2
	2,810	2 - 17
	12,200	>17
T-11SE	1,520	0 - 6
	6,050	6 - 29½
	14,500	>29½
T-12E	1,470	0 - 2
	3,760	2 - 31½
	14,500	>31½
T-12W	1,570	0 - 3
	3,510	3 - 30
	16,350	>30

Notes:

- 1) Traverses denoted by line number corresponding to designation on Figure 1. Seismic measurements for each traverse were run in opposite directions. The letters following each traverse number indicates the general compass heading of the run.
- 2) The results presented for each traverse direction are indicative of the conditions near the beginning of the run (i.e. T-1NE results are indicative of the conditions at the southwest end of the traverse).

TABLE A-1 (cont.)

SEISMIC TRAVERSE RESULTS

<u>Traverse</u>	<u>Seismic Velocity (feet per second)</u>	<u>Depth Interpretation (feet)</u>
T-6N	1,570	0 - 4½
	3,580	4½ - 31½
	7,800	>31½
T-6S	1,780	0 - 3½
	3,470	3½ - 33
	7,800	>33
T-7E	1,980	0 - 2
	3,210	2 - 30½
	14,000	>30½
T-7W	2,300	0 - 4½
	3,460	4½ - 28
	13,000	>28
T-8N	1,460	0 - 5
	5,910	5 - 26½
	14,400	>26½
T-8S	1,960	0 - 3
	2,960	3 - 22½
	20,000	>22½
T-9E	2,060	0 - 2
	3,150	2 - 16
	4,550	>16
T-9W	2,050	0 - 1½
	2,660	1½ - 16
	5,120	>16
T-10N	2,060	0 - 2½
	4,040	2½ - 26½
	20,000	>26½
T-10S	1,280	0 - 3½
	4,300	3½ - 18
	14,300	>18

TABLE A-1 (cont.)

SEISMIC TRAVERSE RESULTS

<u>Traverse</u>	<u>Seismic Velocity (feet per second)</u>	<u>Depth Interpretation (feet)</u>
T-6N	1,570	0 - 4½
	3,580	4½ - 31½
	7,800	>31½
T-6S	1,780	0 - 3½
	3,470	3½ - 33
	7,800	>33
T-7E	1,980	0 - 2
	3,210	2 - 30½
	14,000	>30½
T-7W	2,300	0 - 4½
	3,460	4½ - 28
	13,000	>28
T-8N	1,460	0 - 5
	5,910	5 - 26½
	14,400	>26½
T-8S	1,960	0 - 3
	2,960	3 - 22½
	20,000	>22½
T-9E	2,060	0 - 2
	3,150	2 - 16
	4,550	>16
T-9W	2,050	0 - 1½
	2,660	1½ - 16
	5,120	>16
T-10N	2,060	0 - 2½
	4,040	2½ - 26½
	20,000	>26½
T-10S	1,280	0 - 3½
	4,300	3½ - 18
	14,300	>18

**Riverside Land Development
Mountain Ave., Perris**

Date: 10/16/03

Boring No. 1

Job Number:

644-3209

Depth, ft	Symbol	Core	Blows/6"	Description	Soil type	Unit Wt, pcf	Moisture, %	% Minus #200	Remarks	
0			1	Silty Sand with D.G.: Brown	SM	1	1	1	Native Soils	
5			50-2"	Silty Sand with D.G.: Brown	SM		3.1			
10			50-6"	D.G.: Grey	SM		1.5			
15				Refusal @ 14'					Total Depth = 14' No Bedrock No Groundwater	
30				Recovered Sample						
				Unrecovered Sample						
				Standard Penetration Sample						
40				Note: The stratification lines represent the approximate boundaries between the soil types; the transition may be gradual.						

**Riverside Land Development
Mountain Ave., Perris**

Date: 10/16/03

Boring No. 2

Job Number:

644-3209

Depth, ft	Symbol	Core	Blows/6"	Description	Soil type	Unit Wt, pcf	Moisture, %	% Minus #200	Remarks
0			--	Silty Sand with Decomposed Granite: Grey	SM	--	--	--	Native Soils
5		X	--	Silty Sand with Decomposed Granite: Grey	SM	--	--	--	
25			--	Groundwater @ 25' - Seeping Layer	--				
32			--	Less Decomposed Granite @ 32'	--				
50.5									Note: The stratification lines represent the approximate boundaries between the soil types; the transition may be gradual. Total Depth = 50.5' No Bedrock

**Riverside Land Development
Mountain Ave., Perris**

Date: 10/16/03

Boring No. 3

Job Number:

644-3209

Depth, ft	Symbol	Core	Blows/6"	Description	Soil type	Unit Wt, pcf	Moisture, %	% Minus #200	Remarks
0			1	Silty Sand: Light Brown	SM				Native Soils
5			1	Decomposed Granite: Grey	SM				
10									
15									
20									
25									Total Depth = 20' No Groundwater
30									
35									
40									
45									
50									

Note: The stratification lines represent the approximate boundaries between the soil types; the transition may be gradual.

Riverside Land Development






Mountain Ave., Perris

Date: 10/16/03

Boring No. 4

Job Number:

644-3209

Depth, ft	Symbol	Core	Blows/6"	Description	Soil type	Unit Wt, pcf	Moisture, %	% Minus #200	Remarks
0			1	Silty Sand: Light Brown	SM				Native Soils
1		X	1	Decomposed Granite: Grey	GM				
5									
10									
15									
20									
25									Total Depth = 20' No Groundwater
30				Recovered Sample					
31		X		Unrecovered Sample					
32				Standard Penetration Sample					
35									
40									
45									
50									

Note: The stratification lines represent the approximate boundaries between the soil types; the transition may be gradual.

**Riverside Land Development
Mountain Ave., Perris**

Date: 10/16/03

Boring No. 5

Job Number: 644-3209

Depth, ft	Symbol	Core	Blows/6"	Description	Soil type	Unit Wt, pcf	Moisture, %	% Minus #200	Remarks
0			1	Silty Sand: Reddish Brown	SM				Native Soils Alluvium
1									
2									
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									
13				Refusal @ 13'					Total Depth = 13' No Groundwater
14									
15									
16									
17									
18									
19									
20									
21									
22									
23									
24									
25									
26									
27									
28									
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31									
32									
33									
34									
35									
36									
37									
38									
39									
40									
41									
42									
43									
44									
45									
46									
47									
48									
49									
50									

- Recovered Sample
- Unrecovered Sample
- Standard Penetration Sample

Note: The stratification lines represent the approximate boundaries between the soil types; the transition may be gradual.

Riverside Land Development

Mountain Ave., Perris




Date: 10/16/03

Boring No. 6

Job Number:

644-3209

Depth, ft	Symbol	Core	Blows/6"	Description	Soil type	Unit Wt, pcf	Moisture, %	% Minus #200	Remarks
0			1	Decomposed Granite: Grey	1				Native Soils
5									
10									
15									Groundwater @ 15'
20									Total Depth = 16'
25									
30									
35									
40									
45									
50									

-  Recovered Sample
-  Unrecovered Sample
-  Standard Penetration Sample

Note: The stratification lines represent the approximate boundaries between the soil types; the transition may be gradual.

Riverside Land Development
 Mountain Ave., Perris

Date: 10/16/03

Boring No. 7

Job Number:

644-3209

Depth, ft	Symbol	Core	Blows/6"	Description	Soil type	Unit Wt, pcf	Moisture, %	% Minus #200	Remarks
0			-	Decomposed Granite: Grey	-				Native Soils
-									
-									
-									
-									
-									
-									
-									
-									
-									
-									
-									
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-									
-									
-									
15			-						Total Depth = 16' No Groundwater
-									
-									
-									
-									
-									
-									
-									
-									
-									
-									
-									
-									
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Recovered Sample
 Unrecovered Sample
 Standard Penetration Sample

Note: The stratification lines represent the approximate boundaries between the soil types; the transition may be gradual.

Riverside Land Development
 Mountain Ave., Perris

Date: 10/16/03

Boring No. 8

Job Number:

644-3209

Depth, ft	Symbol	Core	Blows/6"	Description	Soil type	Unit Wt, pcf	Moisture, %	% Minus #200	Remarks
0			1	Decomposed Granite: Grey	1				Native Soils
5									
10									
15									
20									
25									
30									
35				Groundwater @ 35'					
40				Refusal @ 40'					Note: The stratification lines represent the approximate boundaries between the soil types; the transition may be gradual.
45									Total Depth = 40' No Bedrock
50									





**Riverside Land Development
Mountain Ave., Perris**

Date: 10/16/03

Boring No. 9

Job Number:

644-3209





Depth, ft	Symbol	Core	Blows/6"	Description	Soil type	Unit Wt, pcf	Moisture, %	% Minus #200	Remarks
0			1	Silty Sand: Light Brown	SM				Native Soils
			1	Decomposed Granite: Grey Brown	DG				
5									
10									
15									
20									
25									Total Depth = 16' No Groundwater
30		Recovered Sample							
		Unrecovered Sample							
35		Standard Penetration Sample							
40				Note: The stratification lines represent the approximate boundaries between the soil types; the transition may be gradual.					
45									
50									

**Riverside Land Development
Mountain Ave., Perris**

Date: 10/16/03

Boring No. 10

Job Number: 644-3209

Depth, ft	Symbol	Core	Blows/6"	Description	Soil type	Unit Wt, pcf	Moisture, %	% Minus #200	Remarks
0			1	Silty Sand: Light Brown	SM				Native Soils
5			1	Decomposed Granite: Grey	DG				
20									Total Depth = 20' No Groundwater
30		Recovered Sample							
32		Unrecovered Sample							
34		Standard Penetration Sample							
40				Note: The stratification lines represent the approximate boundaries between the soil types; the transition may be gradual.					

**Riverside Land Development
Mountain Ave., Perris**

Date: 10/16/03

Boring No. 11

Job Number:

644-3209

Depth, ft	Symbol	Core	Blows/6"	Description	Soil type	Unit Wt, pcf	Moisture, %	% Minus #200	Remarks
0	[Symbol]		-	Silty Sand: Light Brown	SM				Native Soils
5			-	Decomposed Granite: Grey	DG				
10				Refusal @ 12'					
15									Total Depth = 12' No Groundwater
30				Recovered Sample					
32				Unrecovered Sample					
34				Standard Penetration Sample					
40				Note: The stratification lines represent the approximate boundaries between the soil types; the transition may be gradual.					
45									
50									





Riverside Land Development
Mountain Ave., Perris

Date: 10/16/03

Boring No. 12

Job Number:

644-3209

Depth, ft	Symbol	Core	Blows/6"	Description	Soil type	Unit Wt, pcf	Moisture, %	% Minus #200	Remarks
0			--	Silty Sand: Light Brown	SM				Native Soils
-			--	Decomposed Granite: Grey	DG				
-									
5									
-									
-									
10									
-									
-									
-									
-									
-									
-									
15									Total Depth = 13'
-									No Groundwater
-									
-									
-									
20									
-									
-									
-									
-									
25									
-									
-									
-									
-									
30				Recovered Sample					
-				Unrecovered Sample					
-				Standard Penetration Sample					
35									
-									
-									
-									
-									
40									
-									
-									
-									
-									
45									
-									
-									
-									
50									
-									

Refusal @ 13'


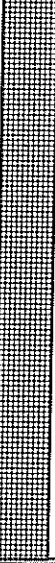



Note: The stratification lines represent the approximate boundaries between the soil types; the transition may be gradual.

**Riverside Land Development
Mountain Ave., Perris**

Date: 10/16/03

Boring No. 13

Job Number: 644-3209

Depth, ft	Symbol	Core	Blows/6"	Description	Soil type	Unit Wt, pcf	Moisture, %	% Minus #200	Remarks
0			1	Silty Sand: Light Brown	SM				Native Soils
5			1	Decomposed Granite: Grey	DG				
10									
15									
20									
25									Total Depth = 20' No Groundwater
30				Recovered Sample					
32				Unrecovered Sample					
34				Standard Penetration Sample					
40				Note: The stratification lines represent the approximate boundaries between the soil types; the transition may be gradual.					
45									
50									

**Riverside Land Development
Mountain Ave., Perris**

Date: 10/16/03

Boring No. 14

Job Number:

644-3209

Depth, ft	Symbol	Core	Blows/6"	Description	Soil type	Unit Wt, pcf	Moisture, %	% Minus #200	Remarks
0	[Hatched Pattern]		--	Decomposed Granite: Grey	DG				Native Soils
-									
-									
-									
-									
5									
-									
-									
-									
-									
10									
-									
-									
-									
-									
15									
-									
-									
-									
20									
-									
-									
-									
-									
-									
25									
-									
-									
-									
-									
30		Recovered Sample							
-	X	Unrecovered Sample							
-		Standard Penetration Sample							
35									
-									
-									
-									
-									
40									
-									
-									
-									
-									
45									
-									
-									
-									
50									
-									
				Note: The stratification lines represent the approximate boundaries between the soil types; the transition may be gradual.					

APPENDIX B

LOGS OF EXPLORATORY TRENCHES AND BORINGS BY GEOTEK

**Updated Geotechnical and Infiltration Evaluation
Tract No. 31304, Perris, Riverside County, California
Project No. 2359-CR**



A - FIELD TESTING AND SAMPLING PROCEDURES

Bulk Samples (Large)

These samples are normally large bags of earth materials over 20 pounds in weight collected from the field by means of hand digging or exploratory cuttings.

Bulk Samples (Small)

These are plastic bag samples which are normally airtight and contain less than 5 pounds in weight of earth materials collected from the field by means of hand digging or exploratory cuttings. These samples are primarily used for determining natural moisture content and classification indices.

B – TRENCH/BORING LOG LEGEND

The following abbreviations and symbols often appear in the classification and description of soil and rock on the logs of trenches and borings:

SOILS

USCS	Unified Soil Classification System
f-c	Fine to coarse
f-m	Fine to medium

GEOLOGIC

B: Attitudes Bedding: strike/dip

J: Attitudes Joint: strike/dip

C: Contact line

.....	Dashed line denotes USCS material change
_____	Solid Line denotes unit / formational change
————	Thick solid line denotes end of the trench/boring

(Additional denotations and symbols are provided on the log of trench/boring)

GeoTek, Inc.
LOG OF EXPLORATORY TRENCH

CLIENT: Pacific Communities Builder, Inc.
PROJECT NAME: Tract 31304
PROJECT NO.: 2359-CR
LOCATION: See Exploration Location Map

LOGGED BY: KRM
EQUIPMENT: Western SK500
DATE: 4/2/2020

Depth (ft)	SAMPLES		USCS Symbol	TRENCH NO.: T-1 MATERIAL DESCRIPTION AND COMMENTS	Laboratory Testing		
	Sample Type	DCP Blow Count			Water Content (%)	Dry Density (pcf)	Others
5			SM	Colluvium/Topsoil: Silty f-m SAND, brown, slightly moist to moist, medium dense Granitic Bedrock TONALITE, gray, moist, moderately hard, weathered Hard Little to no difficulty excavating			
10				TRENCH TERMINATED AT 10 FEET No groundwater encountered Trench backfilled with excavated soils			
15							

LEGEND	Sample type:	---Ring	---Large Bulk	---Water Table
	Lab testing:	AL = Atterberg Limits SR = Sulfate/Resistivity Test	EI = Expansion Index SH = Shear Test	SA = Sieve Analysis HC= Consolidation RV = R-Value Test MD = Maximum Density

GeoTek, Inc.
LOG OF EXPLORATORY TRENCH

CLIENT: Pacific Communities Builder, Inc.
PROJECT NAME: Tract 31304
PROJECT NO.: 2359-CR
LOCATION: See Exploration Location Map

LOGGED BY: KRM
EQUIPMENT: Western SK500
DATE: 4/2/2020

Depth (ft)	SAMPLES		USCS Symbol	TRENCH NO.: T-2 MATERIAL DESCRIPTION AND COMMENTS	Laboratory Testing		
	Sample Type	DCP Blow Count			Water Content (%)	Dry Density (pcf)	Others
5			SM	<p>Older Alluvium: Silty f-m SAND, dark brown, moist, medium dense</p> <p>Granitic Bedrock TONALITE, gray, moist, moderately hard, weathered</p> <p>Little to no weathering</p> <p>Excavation slowed, becoming difficult to excavate</p> <p>2-3 scrapes to get 1/8 bucket full</p>			
10				<p>TRENCH TERMINATED AT 10 FEET</p> <p>No groundwater encountered Trench backfilled with excavated soils</p>			
15							

LEGEND	Sample type:	---Ring	---Large Bulk	---Water Table
	Lab testing:	AL = Atterberg Limits SR = Sulfate/Resistivity Test	EI = Expansion Index SH = Shear Test	SA = Sieve Analysis HC= Consolidation RV = R-Value Test MD = Maximum Density

GeoTek, Inc.
LOG OF EXPLORATORY TRENCH

CLIENT: Pacific Communities Builder, Inc.
PROJECT NAME: Tract 31304
PROJECT NO.: 2359-CR
LOCATION: See Exploration Location Map

LOGGED BY: KRM
EQUIPMENT: Western SK500
DATE: 4/2/2020

Depth (ft)	SAMPLES		USCS Symbol	TRENCH NO.: T-3	Laboratory Testing		
	Sample Type	DCP Blow Count			Water Content (%)	Dry Density (pcf)	Others
				MATERIAL DESCRIPTION AND COMMENTS			
0			SM-ML	Colluvium/Topsoil: Silty SAND/Sandy SILT, brown, slightly moist to moist, moderately hard/stiff, roots			
5				Granitic Bedrock TONALITE, gray, slightly moist to moist, moderately hard, weathered Some fracturing			
10				Excavation slowed			
15				Little to no difficulty excavating TRENCH TERMINATED AT 15 FEET No groundwater encountered Trench Backfilled with excavated soils			

LEGEND	Sample type: ---Ring ---Large Bulk ---Water Table
	Lab testing: AL = Atterberg Limits EI = Expansion Index SA = Sieve Analysis RV = R-Value Test SR = Sulfate/Resistivity Test SH = Shear Test HC= Consolidation MD = Maximum Density

GeoTek, Inc.
LOG OF EXPLORATORY TRENCH

CLIENT: Pacific Communities Builder, Inc.
PROJECT NAME: Tract 31304
PROJECT NO.: 2359-CR
LOCATION: See Exploration Location Map

LOGGED BY: KRM
EQUIPMENT: Western SK500
DATE: 4/2/2020

Depth (ft)	SAMPLES		USCS Symbol	TRENCH NO.: T-4	Laboratory Testing		
	Sample Type	DCP Blow Count			Water Content (%)	Dry Density (pcf)	Others
				MATERIAL DESCRIPTION AND COMMENTS			
5			SM	<u>Older Alluvium:</u> Silty f SAND, dark brown, moist, medium dense, roots			
10				<u>Granitic Bedrock</u> TONALITE, gray, moist, moderately hard, weathered in upper 3-5 feet Breaks down to f-c SAND Hard			
15				Little to no difficulty excavating TRENCH TERMINATED AT 15 FEET No groundwater encountered Trench backfilled with excavated soils			

LEGEND	Sample type:	---Ring	---Large Bulk	---Water Table
	Lab testing:	AL = Atterberg Limits SR = Sulfate/Resistivity Test	EI = Expansion Index SH = Shear Test	SA = Sieve Analysis HC= Consolidation

RV = R-Value Test
MD = Maximum Density

GeoTek, Inc.
LOG OF EXPLORATORY TRENCH

CLIENT: Pacific Communities Builder, Inc.
PROJECT NAME: Tract 31304
PROJECT NO.: 2359-CR
LOCATION: See Exploration Location Map

LOGGED BY: KRM
EQUIPMENT: Western SK500
DATE: 4/2/2020

Depth (ft)	SAMPLES		USCS Symbol	TRENCH NO.: T-5	Laboratory Testing		
	Sample Type	DCP Blow Count			Water Content (%)	Dry Density (pcf)	Others
				MATERIAL DESCRIPTION AND COMMENTS			
5			SM	<p>Colluvium/Topsoil: Silty f-m SAND, brown, slightly moist, loose</p> <p>Granitic Bedrock TONALITE, yellowish gray, moist, moderately hard, weathered</p> <p>Excavation slowed slightly</p> <p>Moderately difficult excavation from 9 feet to 10 feet</p>			
10				TRENCH TERMINATED AT 10 FEET			
15				<p>No groundwater encountered</p> <p>Trench backfilled with excavated soils</p>			

LEGEND	Sample type:	---Ring	---Large Bulk	---Water Table
	Lab testing:	AL = Atterberg Limits SR = Sulfate/Resistivity Test	EI = Expansion Index SH = Shear Test	SA = Sieve Analysis HC= Consolidation

RV = R-Value Test
MD = Maximum Density

GeoTek, Inc.
LOG OF EXPLORATORY TRENCH

CLIENT: Pacific Communities Builder, Inc.
PROJECT NAME: Tract 31304
PROJECT NO.: 2359-CR
LOCATION: See Exploration Location Map

LOGGED BY: KRM
EQUIPMENT: Western SK500
DATE: 4/2/2020

Depth (ft)	SAMPLES		USCS Symbol	TRENCH NO.: T-6 MATERIAL DESCRIPTION AND COMMENTS	Laboratory Testing		
	Sample Type	DCP Blow Count			Water Content (%)	Dry Density (pcf)	Others
5			SM	<p>Colluvium/Topsoil: Silty f-m SAND, brown, slightly moist, loose</p> <p>Granitic Bedrock TONALITE, dark gray, moist, moderately hard, weathered in upper 3 feet</p> <p>Hard Excavation slowed</p> <p>2-3 scrapes to get 1/2 bucket full</p> <p>5 minutes of excavation time from 13 feet to 15 feet Moderately difficult excavation</p>			
15				<p style="text-align: center;">TRENCH TERMINATED AT 15 FEET</p> <p>No groundwater encountered Trench backfilled with excavated soils</p>			

LEGEND	Sample type:	---Ring	---Large Bulk	---Water Table
	Lab testing:	AL = Atterberg Limits SR = Sulfate/Resistivity Test	EI = Expansion Index SH = Shear Test	SA = Sieve Analysis HC= Consolidation RV = R-Value Test MD = Maximum Density

GeoTek, Inc. LOG OF EXPLORATORY TRENCH

CLIENT: Pacific Communities Builder, Inc.
PROJECT NAME: Tract 31304
PROJECT NO.: 2359-CR
LOCATION: See Exploration Location Map

LOGGED BY: KRM
EQUIPMENT: Western SK500
DATE: 4/2/2020

Depth (ft)	SAMPLES		USCS Symbol	TRENCH NO.: T-7 MATERIAL DESCRIPTION AND COMMENTS	Laboratory Testing		
	Sample Type	DCP Blow Count			Water Content (%)	Dry Density (pcf)	Others
5			SM	<p>Colluvium/Topsoil: Silty f-m SAND, brown, slightly moist, loose</p> <p>Granitic Bedrock TONALITE, dark gray, moist, moderately hard, weathered in upper 3 feet</p> <p>Very hard locally due to quartz dike, stepped back to continue excavation adjacent to dike</p> <p>Excavation slowed</p> <p>2-3 scrapes to get 1/2 bucket full</p> <p>Light to moderate difficulty excavating</p>			MD, EI
10							
15				<p style="text-align: center;">TRENCH TERMINATED AT 15 FEET</p> <p>No groundwater encountered Trench backfilled with excavated soils</p>			

LEGEND	Sample type:	---Ring	---Large Bulk	---Water Table
	Lab testing:	AL = Atterberg Limits SR = Sulfate/Resistivity Test	EI = Expansion Index SH = Shear Test	SA = Sieve Analysis HC= Consolidation

RV = R-Value Test
MD = Maximum Density

GeoTek, Inc.
LOG OF EXPLORATORY TRENCH

CLIENT: Pacific Communities Builder, Inc.
PROJECT NAME: Tract 31304
PROJECT NO.: 2359-CR
LOCATION: See Exploration Location Map

LOGGED BY: KRM
EQUIPMENT: Western SK500
DATE: 4/2/2020

Depth (ft)	SAMPLES		USCS Symbol	TRENCH NO.: T-8 Sheet 1 of 2 MATERIAL DESCRIPTION AND COMMENTS	Laboratory Testing		
	Sample Type	DCP Blow Count			Water Content (%)	Dry Density (pcf)	Others
<div style="display: flex; flex-direction: column; align-items: center;"> <div style="margin-bottom: 20px;">5</div> <div style="margin-bottom: 20px;">10</div> <div>15</div> </div>			SM	<p>Colluvium/Topsoil: Silty f-m SAND, reddish brown, slightly moist, medium dense, roots</p> <p>Granitic Bedrock TONALITE, dark gray, slightly moist, moderately hard, weathered in upper 4 feet</p> <p style="margin-top: 100px;">Excavation slowed</p>			

LEGEND	Sample type:	---Ring	---Large Bulk	---Water Table
	Lab testing:	AL = Atterberg Limits SR = Sulfate/Resistivity Test	EI = Expansion Index SH = Shear Test	SA = Sieve Analysis HC= Consolidation

RV = R-Value Test
MD = Maximum Density

GeoTek, Inc.
LOG OF EXPLORATORY TRENCH

CLIENT: Pacific Communities Builder, Inc.
PROJECT NAME: Tract 31304
PROJECT NO.: 2359-CR
LOCATION: See Exploration Location Map

LOGGED BY: KRM
EQUIPMENT: Western SK500
DATE: 4/2/2020

Depth (ft)	SAMPLES		USCS Symbol	TRENCH NO.: T-8 Sheet 2 of 2 MATERIAL DESCRIPTION AND COMMENTS	Laboratory Testing		
	Sample Type	DCP Blow Count			Water Content (%)	Dry Density (pcf)	Others
20				2-3 scrapes to get 1/4 bucket full 8 minutes to excavate from 18 feet to 20 feet			
25				TRENCH TERMINATED AT 20 FEET No groundwater encountered Trench backfilled with excavated soils			
30							
35							

LEGEND	Sample type:	---Ring	---Large Bulk	---Water Table
	Lab testing:	AL = Atterberg Limits SR = Sulfate/Resistivity Test	EI = Expansion Index SH = Shear Test	SA = Sieve Analysis HC= Consolidation RV = R-Value Test MD = Maximum Density

GeoTek, Inc.
LOG OF EXPLORATORY TRENCH

CLIENT: Pacific Communities Builder, Inc.
PROJECT NAME: Tract 31304
PROJECT NO.: 2359-CR
LOCATION: See Exploration Location Map

LOGGED BY: KRM
EQUIPMENT: Western SK500
DATE: 4/2/2020

Depth (ft)	SAMPLES		USCS Symbol	TRENCH NO.: T-9 Sheet 2 of 2 MATERIAL DESCRIPTION AND COMMENTS	Laboratory Testing		
	Sample Type	DCP Blow Count			Water Content (%)	Dry Density (pcf)	Others
20				13 minutes to excavate from 18 feet to 20 feet Difficult excavation from 19 feet to 20 feet			
25				TRENCH TERMINATED AT 20 FEET No groundwater encountered Trench backfilled with excavated soils			
30							
35							

LEGEND	Sample type:	---Ring	---Large Bulk	---Water Table
	Lab testing:	AL = Atterberg Limits SR = Sulfate/Resistivity Test	EI = Expansion Index SH = Shear Test	SA = Sieve Analysis HC= Consolidation

RV = R-Value Test
MD = Maximum Density

GeoTek, Inc.
LOG OF EXPLORATORY TRENCH

CLIENT: Pacific Communities Builder, Inc.
PROJECT NAME: Tract 31304
PROJECT NO.: 2359-CR
LOCATION: See Exploration Location Map

LOGGED BY: KRM
EQUIPMENT: Western SK500
DATE: 4/2/2020

Depth (ft)	SAMPLES		USCS Symbol	TRENCH NO.: T-10 MATERIAL DESCRIPTION AND COMMENTS	Laboratory Testing		
	Sample Type	DCP Blow Count			Water Content (%)	Dry Density (pcf)	Others
5			SM	<p>Colluvium/Topsoil: Silty f SAND, brown, slightly moist, loose</p> <p>Granitic Bedrock TONALITE, dark gray, moist, moderately hard, weathered in upper 3 feet</p> <p>Little to no weathering</p> <p>Hard</p> <p>Some fracturing</p> <p>2-3 scrapes to get 1/4 to 1/2 bucket full</p> <p>Moderately difficult excavation</p>			
15				<p style="text-align: center;">TRENCH TERMINATED AT 15 FEET</p> <p>No groundwater encountered Trench backfilled with excavated soils</p>			

LEGEND	Sample type:	---Ring	---Large Bulk	---Water Table
	Lab testing:	AL = Atterberg Limits SR = Sulfate/Resistivity Test	EI = Expansion Index SH = Shear Test	SA = Sieve Analysis HC= Consolidation

RV = R-Value Test
MD = Maximum Density

GeoTek, Inc.
LOG OF EXPLORATORY TRENCH

CLIENT: Pacific Communities Builder, Inc.
PROJECT NAME: Tract 31304
PROJECT NO.: 2359-CR
LOCATION: See Exploration Location Map

LOGGED BY: KRM
EQUIPMENT: Western SK500
DATE: 4/2/2020

Depth (ft)	SAMPLES		USCS Symbol	TRENCH NO.: T-11 MATERIAL DESCRIPTION AND COMMENTS	Laboratory Testing		
	Sample Type	DCP Blow Count			Water Content (%)	Dry Density (pcf)	Others
5			SM	<p>Colluvium/Topsoil: Silty f-m SAND, dark brown, slightly moist, loose, roots</p> <p>Granitic Bedrock TONALITE, gray, moist, moderately hard, weathered in upper 2 feet</p> <p>Little to no weathering</p> <p>Hard</p> <p>Excavation slowed</p> <p>2-3 scrapes for 1/4 bucket</p> <p>14 minutes to excavate from 13 feet to 15 feet</p> <p>Only teeth scraping</p> <p style="text-align: center;">TRENCH TERMINATED DUE TO REFUSAL AT 16 FEET</p> <p>No groundwater encountered Trench backfilled with excavated soils</p>			

LEGEND	Sample type:	---Ring	---Large Bulk	---Water Table
	Lab testing:	AL = Atterberg Limits SR = Sulfate/Resistivity Test	EI = Expansion Index SH = Shear Test	SA = Sieve Analysis HC= Consolidation RV = R-Value Test MD = Maximum Density

GeoTek, Inc.
LOG OF EXPLORATORY TRENCH

CLIENT: Pacific Communities Builder, Inc.
PROJECT NAME: Tract 31304
PROJECT NO.: 2359-CR
LOCATION: See Exploration Location Map

LOGGED BY: KRM
EQUIPMENT: Western SK500
DATE: 4/2/2020

Depth (ft)	SAMPLES		USCS Symbol	TRENCH NO.: T-12 MATERIAL DESCRIPTION AND COMMENTS	Laboratory Testing		
	Sample Type	DCP Blow Count			Water Content (%)	Dry Density (pcf)	Others
5			SM	<p>Colluvium/Topsoil: Silty f SAND, brown, dry to slightly moist, loose, roots</p> <p>Granitic Bedrock TONALITE, dark gray, slightly moist, moderately hard, weathered in upper 3 feet</p> <p>Little to no weathering</p> <p>Excavation slowed</p> <p>2-3 scrapes to get 1/4 to 1/2 bucket full</p> <p>Little to no difficulty excavating</p>			
15				<p style="text-align: center;">TRENCH TERMINATED AT 15 FEET</p> <p>No groundwater encountered Trench backfilled with excavated soils</p>			

LEGEND	Sample type:	---Ring	---Large Bulk	---Water Table
	Lab testing:	AL = Atterberg Limits SR = Sulfate/Resistivity Test	EI = Expansion Index SH = Shear Test	SA = Sieve Analysis HC= Consolidation

RV = R-Value Test
MD = Maximum Density

GeoTek, Inc.
LOG OF EXPLORATORY TRENCH

CLIENT: Pacific Communities Builder, Inc.
PROJECT NAME: Tract 31304
PROJECT NO.: 2359-CR
LOCATION: See Exploration Location Map

LOGGED BY: KRM
EQUIPMENT: Western SK500
DATE: 4/2/2020

Depth (ft)	SAMPLES		USCS Symbol	TRENCH NO.: T-13 MATERIAL DESCRIPTION AND COMMENTS	Laboratory Testing		
	Sample Type	DCP Blow Count			Water Content (%)	Dry Density (pcf)	Others
5			SM	<p>Colluvium/Topsoil: Silty f-m SAND, brown, dry to slightly moist, medium dense, roots</p> <p>Granitic Bedrock TONALITE, gray, slightly moist, moderately hard, weathered in upper 3 feet</p> <p>Breaks down to f-c SAND</p> <p>Little to no weathering</p> <p>excavation slowed</p> <p>2-3 scrapes to get 1/4 to 1/2 bucket full</p> <p>Little to moderate difficulty excavating</p>			
10							
15				<p style="text-align: center;">TRENCH TERMINATED AT 15 FEET</p> <p>No groundwater encountered Trench backfilled with excavated soils</p>			

LEGEND	Sample type:	---Ring	---Large Bulk	---Water Table
	Lab testing:	AL = Atterberg Limits SR = Sulfate/Resistivity Test	EI = Expansion Index SH = Shear Test	SA = Sieve Analysis HC= Consolidation

RV = R-Value Test
MD = Maximum Density

GeoTek, Inc.
LOG OF EXPLORATORY TRENCH

CLIENT: Pacific Communities Builder, Inc.
PROJECT NAME: Tract 31304
PROJECT NO.: 2359-CR
LOCATION: See Exploration Location Map

LOGGED BY: KRM
EQUIPMENT: Western SK500
DATE: 4/2/2020

Depth (ft)	SAMPLES		USCS Symbol	TRENCH NO.: T-14 MATERIAL DESCRIPTION AND COMMENTS	Laboratory Testing		
	Sample Type	DCP Blow Count			Water Content (%)	Dry Density (pcf)	Others
5			SM	Older Alluvium: Silty f-m SAND, brown, dry to slightly moist, medium dense, roots			
10				Granitic Bedrock TONALITE, gray, slightly moist, moderately hard, weathered in upper 3 feet Excavation slowed			
15				Little to moderate difficulty excavating TRENCH TERMINATED AT 15 FEET No groundwater encountered Trench backfilled with excavated soils			

LEGEND	Sample type:	---Ring	---Large Bulk	---Water Table
	Lab testing:	AL = Atterberg Limits SR = Sulfate/Resistivity Test	EI = Expansion Index SH = Shear Test	SA = Sieve Analysis HC= Consolidation

RV = R-Value Test
MD = Maximum Density

GeoTek, Inc.
LOG OF EXPLORATORY TRENCH

CLIENT: Pacific Communities Builder, Inc.
PROJECT NAME: Tract 31304
PROJECT NO.: 2359-CR
LOCATION: See Exploration Location Map

LOGGED BY: KRM
EQUIPMENT: Western SK500
DATE: 4/2/2020

Depth (ft)	SAMPLES		USCS Symbol	TRENCH NO.: T-15	Laboratory Testing		
	Sample Type	DCP Blow Count			Water Content (%)	Dry Density (pcf)	Others
				MATERIAL DESCRIPTION AND COMMENTS			
0			SM	Older Alluvium: Silty f-m SAND, brown, dry to slightly moist, medium dense, roots			
5				Granitic Bedrock TONALITE, gray, slightly moist, moderately hard, weathered in upper 3 feet Excavation slowed Little to no weathering Very hard locally due to quartz dike, stepped back from dike to continue excavation Excavation slowed Little to no difficulty excavating			
15				TRENCH TERMINATED AT 15 FEET No groundwater encountered Trench backfilled with excavated soils			

LEGEND	Sample type:	---Ring	---Large Bulk	---Water Table
	Lab testing:	AL = Atterberg Limits SR = Sulfate/Resistivity Test	EI = Expansion Index SH = Shear Test	SA = Sieve Analysis HC = Consolidation

RV = R-Value Test
MD = Maximum Density

GeoTek, Inc.
LOG OF EXPLORATORY TRENCH

CLIENT: Pacific Communities Builder, Inc.
PROJECT NAME: Tract 31304
PROJECT NO.: 2359-CR
LOCATION: See Exploration Location Map

LOGGED BY: KRM
EQUIPMENT: Western SK500
DATE: 4/2/2020

Depth (ft)	SAMPLES		USCS Symbol	TRENCH NO.: T-16 MATERIAL DESCRIPTION AND COMMENTS	Laboratory Testing		
	Sample Type	DCP Blow Count			Water Content (%)	Dry Density (pcf)	Others
5			SM	Older Alluvium: Silty f-m SAND, brown, dry to slightly moist, medium dense, roots			
10				Granitic Bedrock TONALITE, gray, slightly moist, moderately hard, weathered in upper 3 feet Excavation slowed Hard 2-3 scrapes to get 1/4 bucket full Only teeth scraping			
15				TRENCH TERMINATED DUE TO REFUSAL AT 10 FEET No groundwater encountered Trench backfilled with excavated soils			

LEGEND	Sample type:	---Ring	---Large Bulk	---Water Table
	Lab testing:	AL = Atterberg Limits SR = Sulfate/Resistivity Test	EI = Expansion Index SH = Shear Test	SA = Sieve Analysis HC= Consolidation RV = R-Value Test MD = Maximum Density

GeoTek, Inc.
LOG OF EXPLORATORY BORING

CLIENT: Pacific Communities Builder, Inc.
PROJECT NAME: Tract 31304
PROJECT NO.: 2359-CR
LOCATION: See Exploration Location Map

DRILLER: 2R Drilling Inc.
DRILL METHOD: Hollow Stem Auger
HAMMER: 140lbs/30in.

LOGGED BY: DRW
OPERATOR: Jeff
RIG TYPE: CME 75
DATE: 4/28/2020

Depth (ft)	SAMPLES				USCS Symbol	BORING NO.: B-1 MATERIAL DESCRIPTION AND COMMENTS	Laboratory Testing		
	Sample Type	Blows/ 6 in	Sample Number	Sample Number			Water Content (%)	Dry Density (pcf)	Others
0	X				SM-SC	Older Alluvium: Silty clayey f-c SAND, dark brown, moist to very moist Perched groundwater at 2 feet			MD, EI, SH
5	■	40 50/3"				Granitic Bedrock: TONALITE, gray, moist to very moist, indurated			
10	■	50/6"				Same as above			
15						Same as above, becomes light gray, slightly moist			
20						BORING TERMINATED AT 20 FEET Perched groundwater encountered at 2 feet below ground surface Boring backfilled with soil cuttings			
25									
30									

LEGEND	Sample type:	■ ---Ring	■ ---SPT	□ ---Small Bulk	X ---Large Bulk	□ ---No Recovery	▽ ---Water Table	
	Lab testing:	AL = Atterberg Limits	EI = Expansion Index	SA = Sieve Analysis	RV = R-Value Test	SR = Sulfate/Resistivity Test	SH = Shear Test	HC = Consolidation

GeoTek, Inc.
LOG OF EXPLORATORY BORING

CLIENT: Pacific Communities Builder, Inc.
PROJECT NAME: Tract 31304
PROJECT NO.: 2359-CR
LOCATION: See Exploration Location Map

DRILLER: 2R Drilling Inc.
DRILL METHOD: Hollow Stem Auger
HAMMER: 140lbs/30in.

LOGGED BY: DRW
OPERATOR: Jeff
RIG TYPE: CME 75
DATE: 4/28/2020

Depth (ft)	SAMPLES				USCS Symbol	BORING NO.: I-I MATERIAL DESCRIPTION AND COMMENTS	Laboratory Testing		
	Sample Type	Blows/ 6 in	Sample Number	Sample Number			Water Content (%)	Dry Density (pcf)	Others
5		15 22 25			SM	Older Alluvium: Silty clayey f-c SAND, dark brown, moist to very moist Perched groundwater at 3.75 feet			
10		10 24 29			SC	Clayey silty f-c SAND, dark brown, very moist, medium dense Granitic Bedrock: TONALITE, gray, moist to very moist, very weathered			
15						BORING TERMINATED AT 10 FEET			
20						Perched groundwater encountered at 3.75 feet below ground surface Boring backfilled with soil cuttings			
25									
30									

LEGEND	Sample type:	---Ring	---SPT	---Small Bulk	---Large Bulk	---No Recovery	---Water Table	
	Lab testing:	AL = Atterberg Limits	EI = Expansion Index	SA = Sieve Analysis	RV = R-Value Test	SR = Sulfate/Resistivity Test	SH = Shear Test	HC = Consolidation

GeoTek, Inc.
LOG OF EXPLORATORY BORING

CLIENT: Pacific Communities Builder, Inc.	DRILLER: 2R Drilling Inc.	LOGGED BY: DRW
PROJECT NAME: Tract 31304	DRILL METHOD: Hollow Stem Auger	OPERATOR: Jeff
PROJECT NO.: 2359-CR	HAMMER: 140lbs/30in.	RIG TYPE: CME 75
LOCATION: See Exploration Location Map		DATE: 4/28/2020

Depth (ft)	SAMPLES			USCS Symbol	BORING NO.: I-2 MATERIAL DESCRIPTION AND COMMENTS	Laboratory Testing		
	Sample Type	Blows/ 6 in	Sample Number			Water Content (%)	Dry Density (pcf)	Others
5		7 26		SC	Older Alluvium: Clayey f-c SAND, dark brown to brown, very moist Perched groundwater at 3.75 feet Same as above			
		50/4"			Granitic Bedrock: TONALITE, gray, moist to very moist, very weathered			
10		50/6"			BORING TERMINATED AT 10 FEET Perched groundwater encountered at 3.75 feet below ground surface Boring backfilled with soil cuttings			
15								
20								
25								
30								

LEGEND	Sample type:	---Ring	---SPT	---Small Bulk	---Large Bulk	---No Recovery	---Water Table	
	Lab testing:	AL = Atterberg Limits	EI = Expansion Index	SA = Sieve Analysis	RV = R-Value Test	SR = Sulfate/Resistivity Test	SH = Shear Test	HC = Consolidation

GeoTek, Inc.
LOG OF EXPLORATORY BORING

CLIENT: Pacific Communities Builder, Inc.
PROJECT NAME: Tract 31304
PROJECT NO.: 2359-CR
LOCATION: See Exploration Location Map

DRILLER: 2R Drilling Inc.
DRILL METHOD: Hollow Stem Auger
HAMMER: 140lbs/30in.

LOGGED BY: DRW
OPERATOR: Jeff
RIG TYPE: CME 75
DATE: 4/28/2020

Depth (ft)	SAMPLES				USCS Symbol	BORING NO.: I-3 MATERIAL DESCRIPTION AND COMMENTS	Laboratory Testing		
	Sample Type	Blows/ 6 in	Sample Number	Sample Number			Water Content (%)	Dry Density (pcf)	Others
0					SM	Older Alluvium: Silty f-c SAND, brown, moist to very moist Perched groundwater at 3.5 feet			
5		40 50/3"				Granitic Bedrock: TONALITE, gray, moist to very moist, very weathered Becomes indurated			
10		50/3"				Same as above			
10						BORING TERMINATED AT 10 FEET Perched groundwater encountered at 3.5 feet below ground surface Boring backfilled with soil cuttings			
15									
20									
25									
30									

LEGEND	Sample type:	---Ring	---SPT	---Small Bulk	---Large Bulk	---No Recovery	---Water Table	
	Lab testing:	AL = Atterberg Limits	EI = Expansion Index	SA = Sieve Analysis	RV = R-Value Test	SR = Sulfate/Resistivity Test	SH = Shear Test	HC = Consolidation

GeoTek, Inc.
LOG OF EXPLORATORY BORING

CLIENT: Pacific Communities Builder, Inc.
PROJECT NAME: Tract 31304
PROJECT NO.: 2359-CR
LOCATION: See Exploration Location Map

DRILLER: 2R Drilling Inc.
DRILL METHOD: Hollow Stem Auger
HAMMER: 140lbs/30in.

LOGGED BY: DRW
OPERATOR: Jeff
RIG TYPE: CME 75
DATE: 4/28/2020

Depth (ft)	SAMPLES				USCS Symbol	BORING NO.: I-4 MATERIAL DESCRIPTION AND COMMENTS	Laboratory Testing		
	Sample Type	Blows/ 6 in	Sample Number	Sample Number			Water Content (%)	Dry Density (pcf)	Others
0					SC	Older Alluvium: Clayey f-c SAND, dark brown to brown, very moist Perched groundwater at 3.75 feet			
5		30 50/3"				Granitic Bedrock: TONALITE, gray, moist to very moist, very weathered Becomes indurated			
10		50/4"				Same as above			
10						BORING TERMINATED AT 10 FEET			
15						Perched groundwater encountered at 3.75 feet below ground surface Boring backfilled with soil cuttings			
20									
25									
30									

LEGEND	Sample type:	---Ring	---SPT	---Small Bulk	---Large Bulk	---No Recovery	---Water Table	
	Lab testing:	AL = Atterberg Limits	EI = Expansion Index	SA = Sieve Analysis	RV = R-Value Test	SR = Sulfate/Resistivity Test	SH = Shear Test	HC = Consolidation

APPENDIX C

SEISMIC REFRACTION SURVEY RESULTS

**Updated Geotechnical and Infiltration Evaluation
Tract No. 31304, Perris, Riverside County, California
Project No. 2359-CR**





Subsurface Surveys & Associates, Inc.
2075 Corte Del Nogal, Suite W Carlsbad, CA 92011
Phone: (760) 476-0492 Fax: (760) 476-0493

Geotek, Inc.
1548 N. Maple Street
Corona, California

May 5, 2020

Attn: Gaby Bogdanoff

Re: Seismic Survey Summary Report
Project No. 2359-CR

This report covers the results of a seismic refraction survey performed at the Pacific Community Builder development site in Perris, California. The purpose of the survey was to measure the compressional wave velocity of bedrock for rippability assessment and to provide cross sections showing thickness of the weathered zone and depth to the unweathered interface. This should be useful for planning cuts and other earthwork.

The field work was conducted on April 21, 2020. Seven seismic lines were recorded at locations selected by Geotek. A survey location map is provided on Figure 1 that shows the position and orientation of the traverses.

GEOLOGIC SETTING

A review of the "Geologic Map of the San Bernardino and Santa Ana 30' x 60' quadrangles, California", (USGS Open File Report 2006-1217, 2006) indicates the survey area is underlain by Val Verde tonalite (Kvt) of Cretaceous age. Surface deposits are mapped as old alluvium (Qvoa).

DATA ACQUISITION AND FIELD METHODS

Seismic refraction data were recorded with a Bison 9024 signal enhancement seismograph and 30 Hz geophones. The standard spread layout used 24 geophones with a 5-foot spacing. Each spread used five shotpoints, one off each end (5-foot offset) and three within the interior of the spread. Depth of investigation was approximately 30 feet.

Compressional wave energy was created by sledge hammer impacts on a metal plate. The signal enhancement feature of the seismograph allowed returns from repeated hits to be stacked, thus improving the signal. Each record was stored digitally on an internal hard disk and printed copies of each seismogram were made in the field on thermal paper. Example seismic records from this survey are shown on Figure 2.

Relative elevations of all shotpoints and geophones were determined by differential leveling with a hand level. Geophone 1 (distance = 0 ft.) at the beginning of each line was assigned a elevation value of 0.0 feet. This datum point served as the reference elevation for all other measurements.

Labeled wooden stakes were placed at the beginning and end of each traverse and a Garmin handheld GPS receiver was used to record the latitude and longitude coordinates of the stakes. The coordinates were used to make the location map shown on Figure 1.

SEISMIC REFRACTION METHOD

The refraction method involves measuring the total time for compressional waves to travel from a shotpoint through the subsurface to a set of geophones placed linearly along the ground. Based on Snell's Law, when two or more layers are present with increasingly higher acoustic velocity, waves become critically refracted across the layer boundaries and begin traveling at the speed of the underlying layer. The advancing waves then generate new wavefronts back to the ground surface. The first surge of energy hitting the geophone is termed the "first arrival" and is depicted on the seismogram as a high angle deflection along each trace. Example field records from this survey that show the first arriving energy are provided on Figure 2.

Recognition of direct wave arrivals (non-refracted) versus refracted waves is a key element of refraction interpretation. To assist this process, the first arrival times measured from the seismic records are plotted on graphs of time versus distance called Time-Distance graphs. An example T-D graph from Line 6 is shown on Figure 3. Based on changes in slope on the graphs, a preliminary layer number (i.e. 1, 2, 3) is assigned to each segment of the graph. The layer assignments together with time, distance and elevation data are input to a computer for additional processing.

DATA REDUCTION AND VELOCITY DETERMINATION

Processing and interpretation of this data set was accomplished with "SIPT2", an interactive inversion modeling program developed by James Scott for the U.S. Bureau of Mines. The inversion algorithm uses the delay time method to construct a first pass depth model. The model is then adjusted by an iterative ray tracing process that attempts to minimize the discrepancies between the total travel times calculated along ray paths and the observed travel times measured in the field.

This program calculates refractor velocity in two ways. First, apparent velocities from each shot are determined by the inverse slope of a best fit (least squares) line through datum-corrected travel times. True velocity is estimated from the apparent velocities by using the following equation:

$$V_t = 2(V_u \times V_d) / (V_u + V_d)$$

where V_t = true velocity
 V_u = apparent up dip velocity
 V_d = apparent down dip velocity

The second method uses a more sophisticated set of equations (the Hobson-Overton formula) developed by the Canadian Geological Survey. The final velocity assigned to the refractor is a weighted average of the results of the two methods. The weighting is based on the number of arrival times used in the computations.

SUMMARY OF RESULTS

Results from refraction analysis show a three layer solution beneath all lines (see Figures 5-11). Velocities posted on the cross sections represent averages as described in the previous section. Therefore, minor localized changes in velocity may occur along any profile. A description of the layers is provided below and a cross section summary is shown in Table 1.

Layer 1 - is mostly older alluvium. Thickness is generally less than 5 feet, except for Line 4, where the maximum thickness is 10 feet.

Layer 2 - is interpreted to be highly weathered and decomposed bedrock. The velocity range is 2685-3251 ft/sec and is considered easily rippable with a D-9 Cat.

Layer 3 - represents weathered bedrock. Note: the velocity of layer 3 beneath Line 6 is 8677 ft/s and is interpreted as hard unweathered rock.

Table 1. Cross Section Summary Velocity in (ft/sec), Depth in (feet)

<u>Line</u>	<u>Velocity Layer 1</u>	<u>Velocity Layer 2</u>	<u>Velocity Layer 3</u>	<u>Depth Range Layer 2/3 Interface</u>
1	1117	2780	3699	6 - 9
2	1144	3251	4644	8 - 13
3	1163	2685	5676	11 - 18
4	1112	2721	5679	13 - 23
5	1180	2470	3437	5 - 11
6	1297	2942	8677	21 - 25
7	1226	2918	6083	16 - 20

Weathering tends to be gradational for most granitic rock types and usually produces a gradual increase in velocity with depth. Consequently, variation of $\pm 15\%$ from the posted averages may occur between the top and bottom of weathered layers.

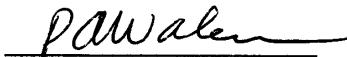
Clusters of large boulders were observed across the ground surface at various locations. Core stones and boulders are fairly common in granitic terrain where chemical and mechanical processes produce spheroidal weathering and exfoliation of the granitic basement rock. The result is remnant large dense spheroids surrounded by a matrix of weathered bedrock. An example photo of core stones exposed in a road cut in the Escondido area is shown on Figure 12.

Evidence of suspected buried core stones, at depths of 15 feet or less, was found beneath Lines 3 and 7. The modeling software used to prepare the layered models tends to flatten and smooth structures with high dip angles and steep sides. The interpreted edges of the core stones are annotated on the cross sections to better define the width of these features.

Figure 4 presents a rippability chart (courtesy of Caterpillar Tractor Co.) for a D9R Ripper. Bar graphs show the relationship between seismic compressional wave velocity and ripper performance for various rock types in three categories: rippable, marginal, and non-rippable. Granite is listed as marginally rippable at approximately 6700 ft/sec and is considered non-rippable above 8000 ft/sec. This chart is provided only as a guide and should not be considered absolute. Other geologic factors that may influence bedrock rippability at this site include changes in composition of the bedrock and the presence of fractures and joints.

All data acquired during this survey is considered confidential and is available for review by your staff at any time. We appreciate the opportunity to participate in this project.

Please call if there are any questions.



Phillip A. Walen
Senior Geophysicist
CA Registration No. GP917

Seismic Survey Location Map

Tract Map No. 31304 -- Perris, Riverside County, California



Figure 1

Example Seismic Field Records

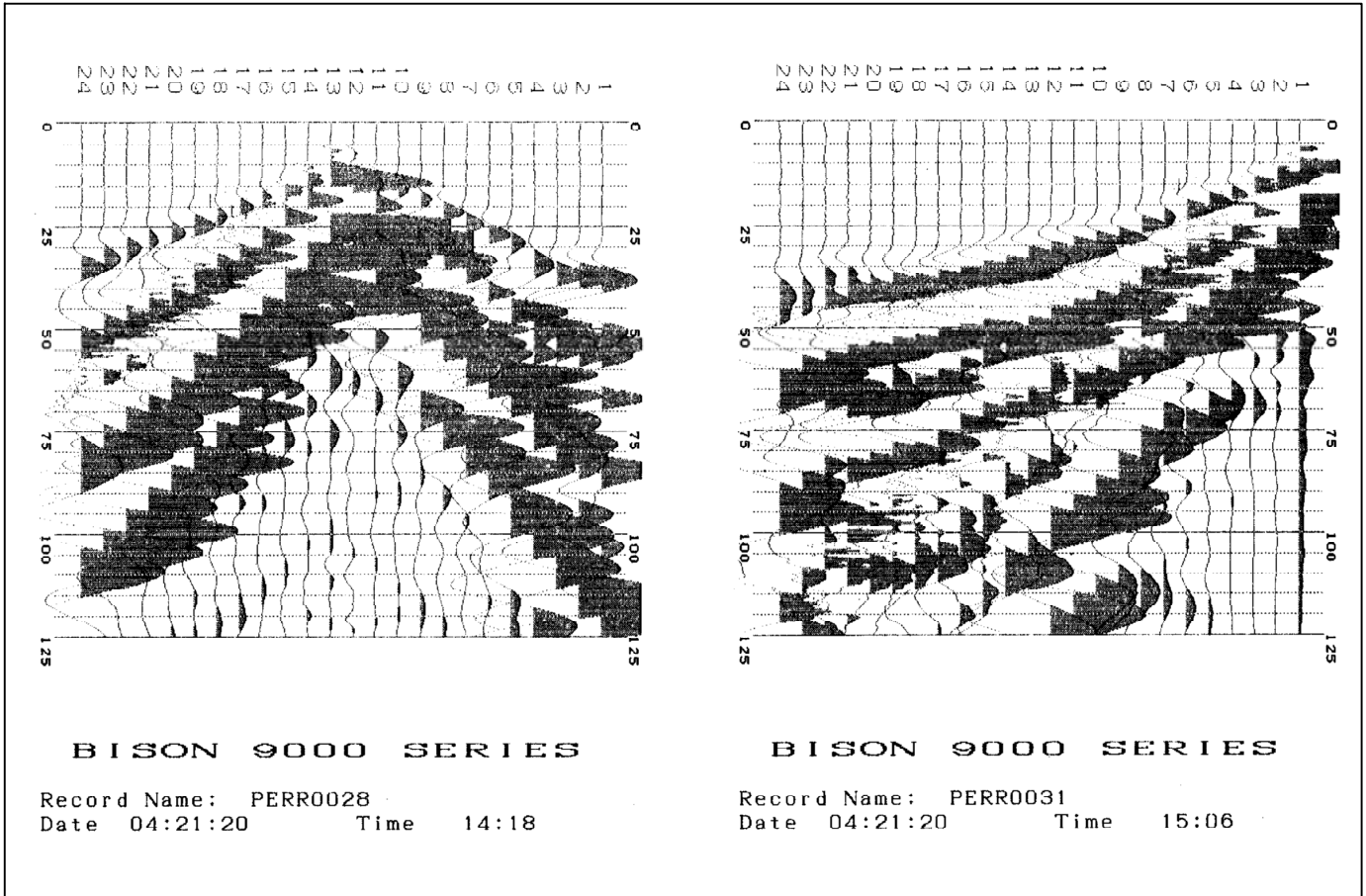
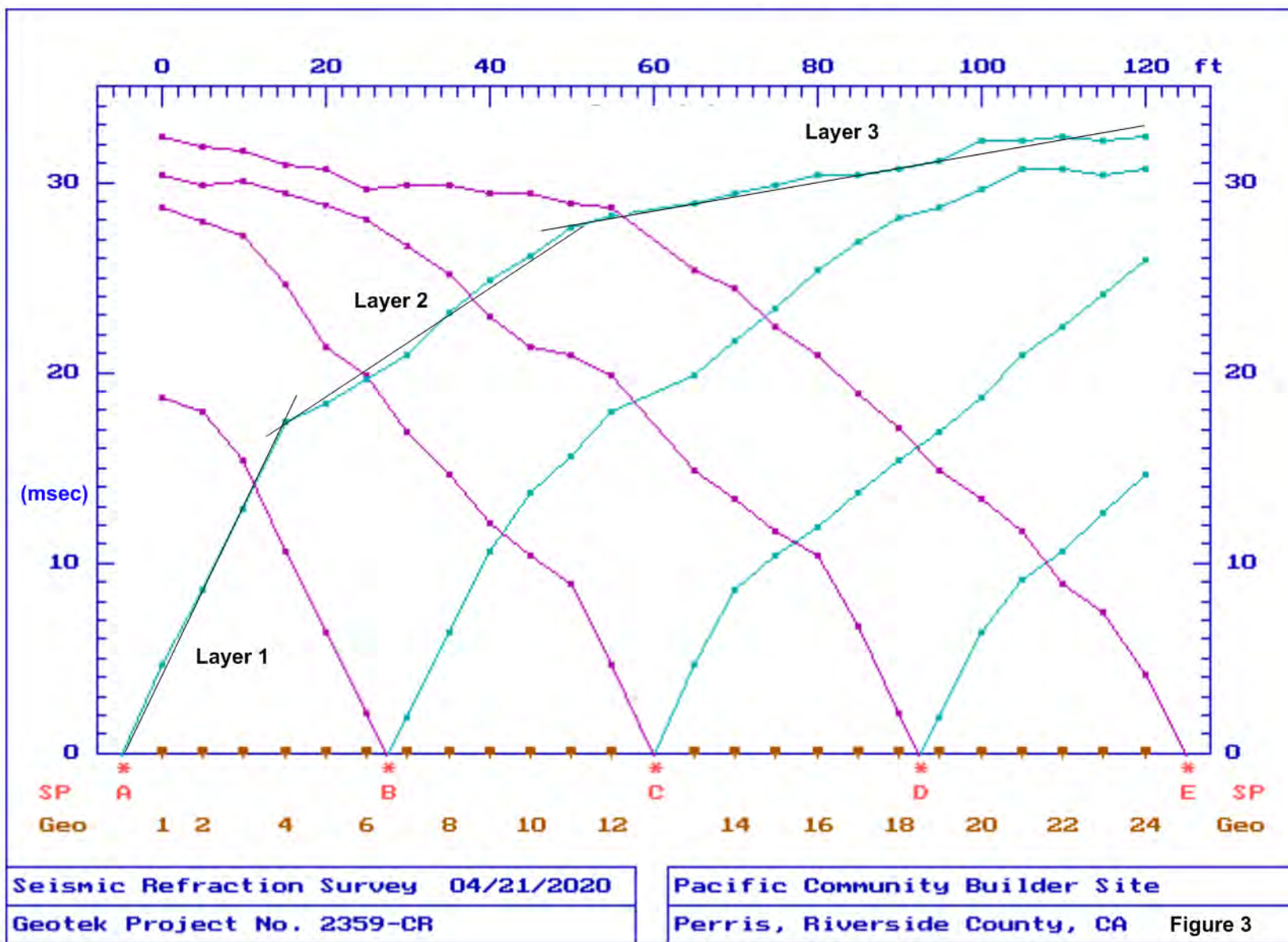


Figure 2

Example Time-Distance Graph -- Line 6



Rippers

Ripper Performance • D9R/D9T

D9R/D9T

- Multi or Single Shank No. 9 Ripper
- Estimated by Seismic Wave Velocities

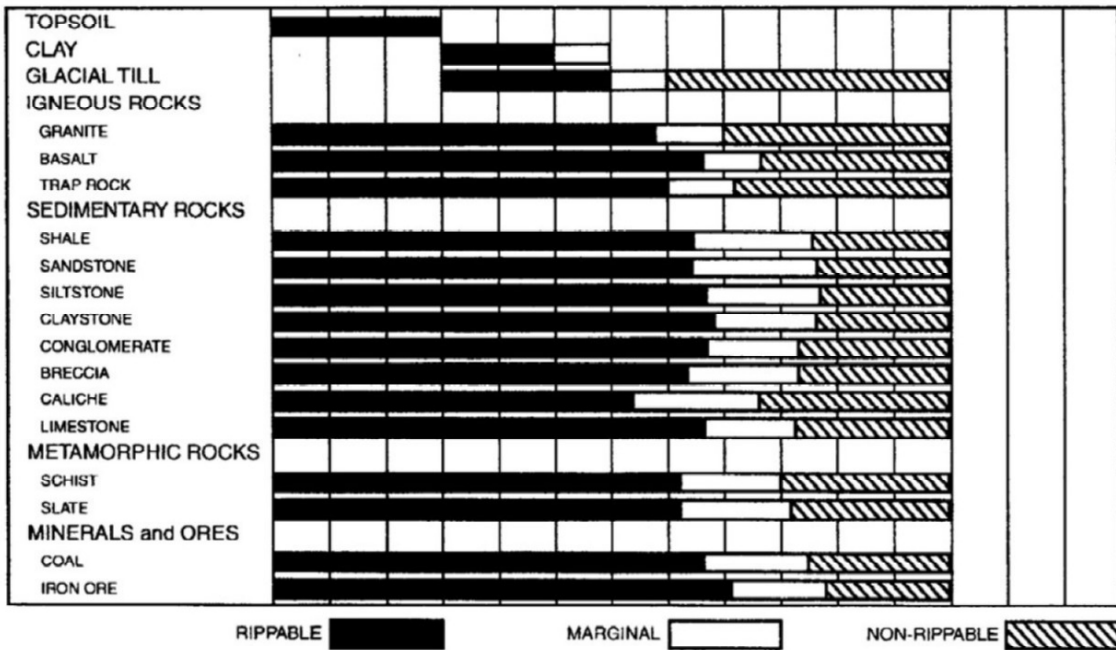
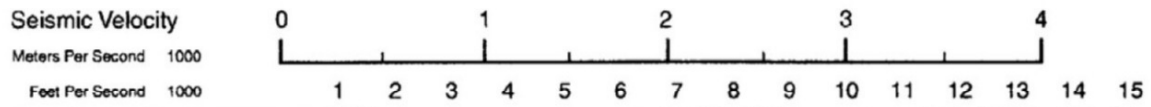
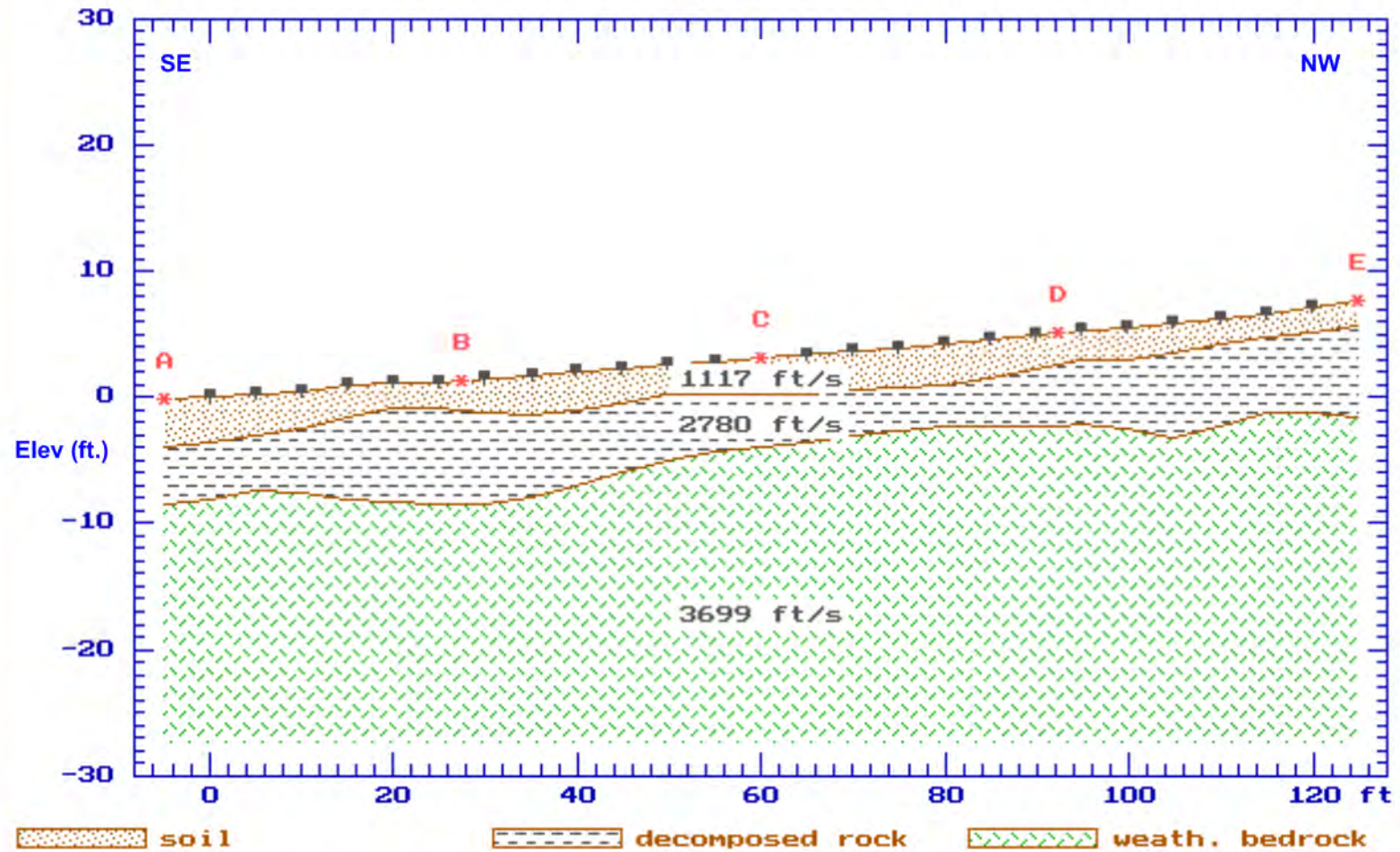


Figure 4

Line 1



Seismic Refraction Survey 04/21/2020

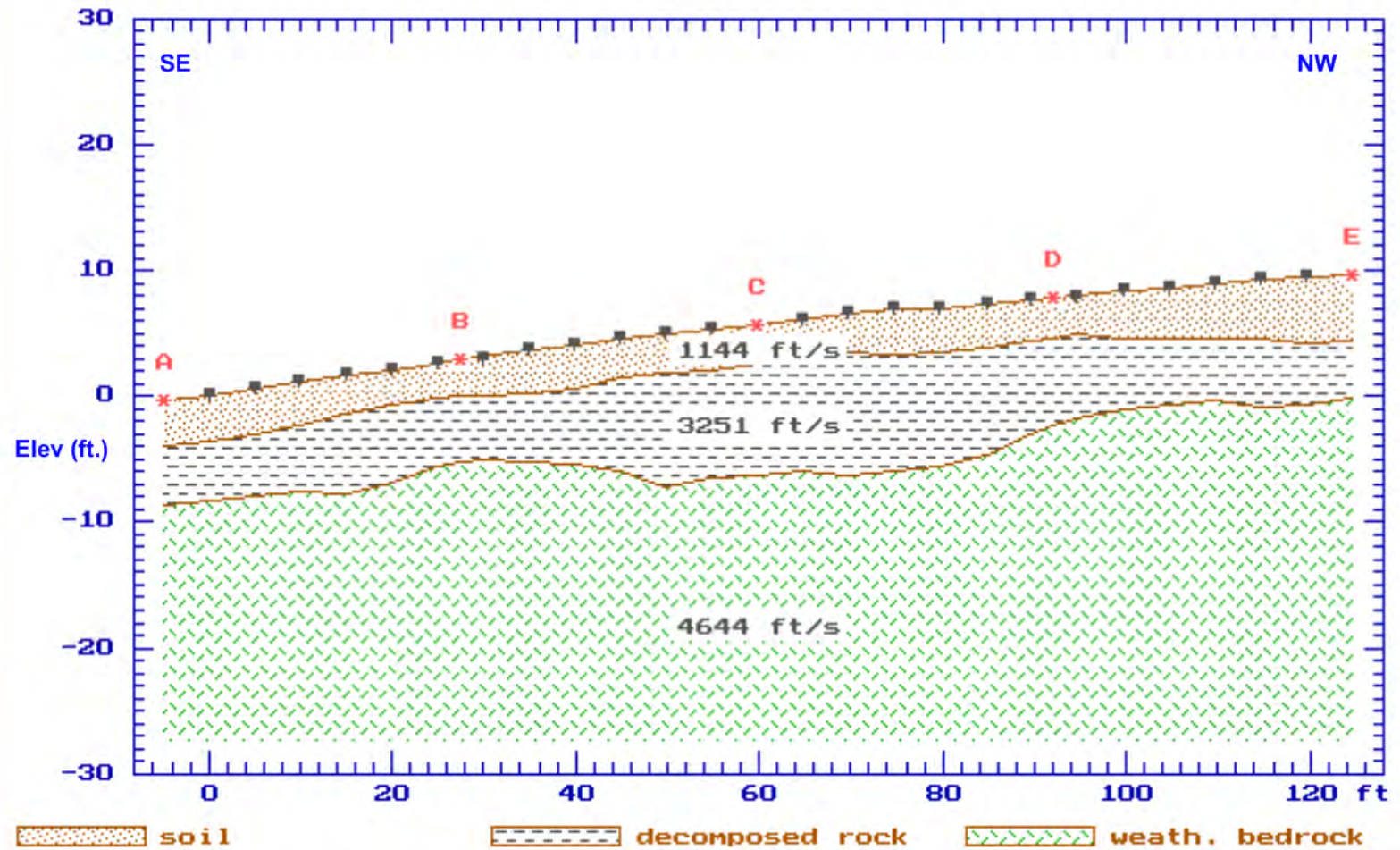
Geotek Project No. 2359-CR

Pacific Community Builder Site

Perris, Riverside County, CA

Figure 5

Line 2



Seismic Refraction Survey 04/21/2020

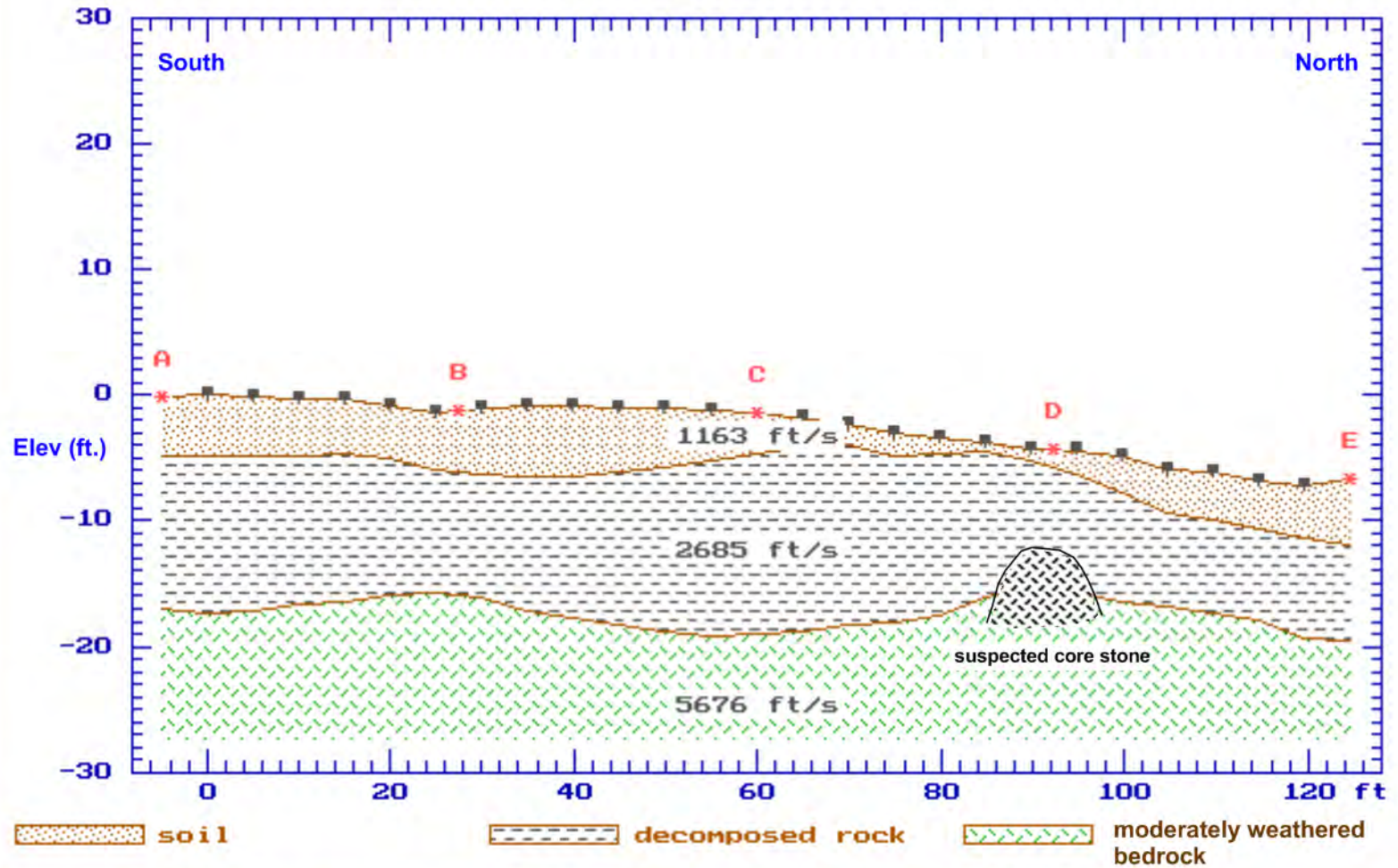
Geotek Project No. 2359-CR

Pacific Community Builder Site

Perris, Riverside County, CA

Figure 6

Line 3



Seismic Refraction Survey 04/21/2020

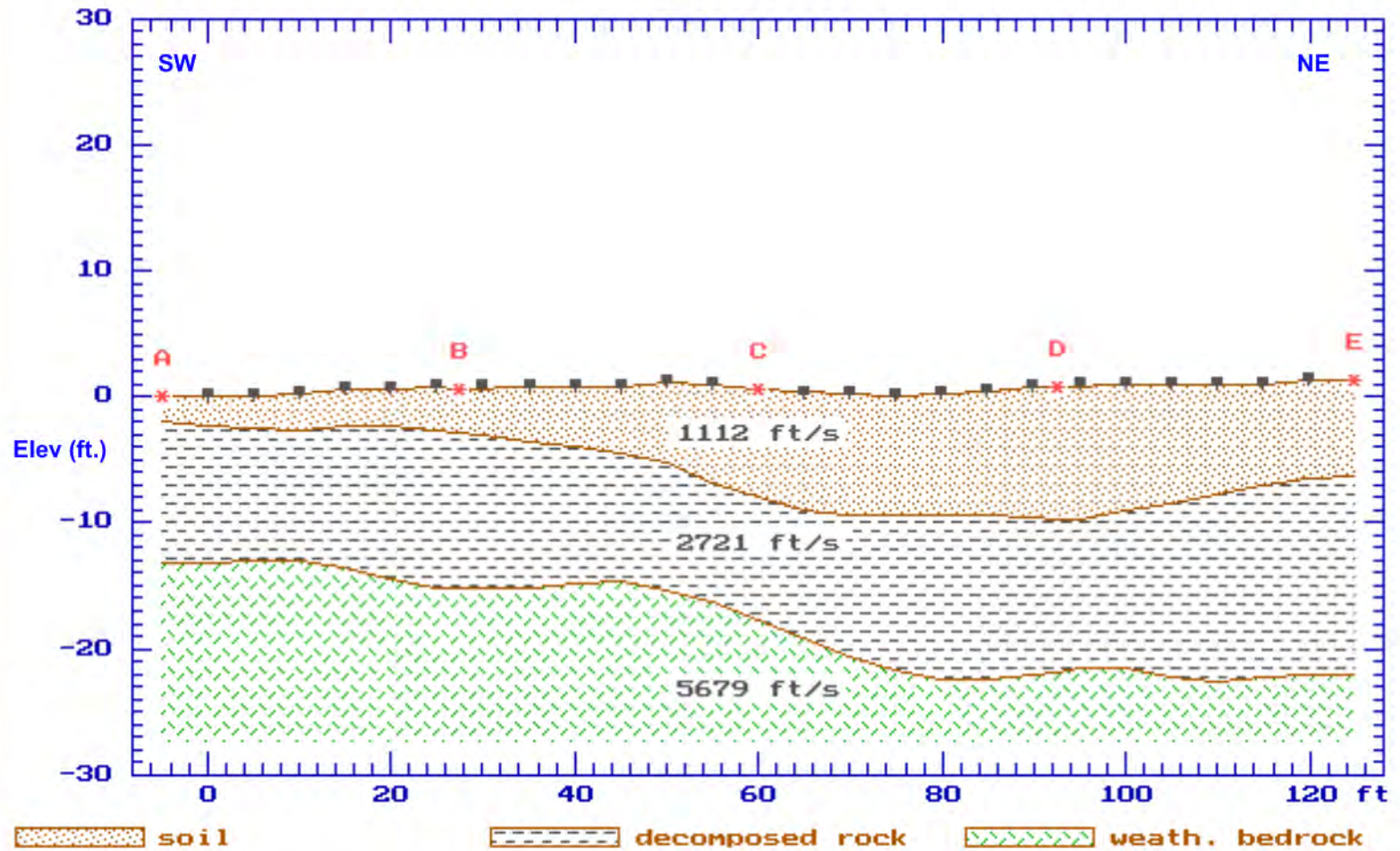
Geotek Project No. 2359-CR

Pacific Community Builder Site

Perris, Riverside County, CA

Figure 7

Line 4



Seismic Refraction Survey 04/21/2020

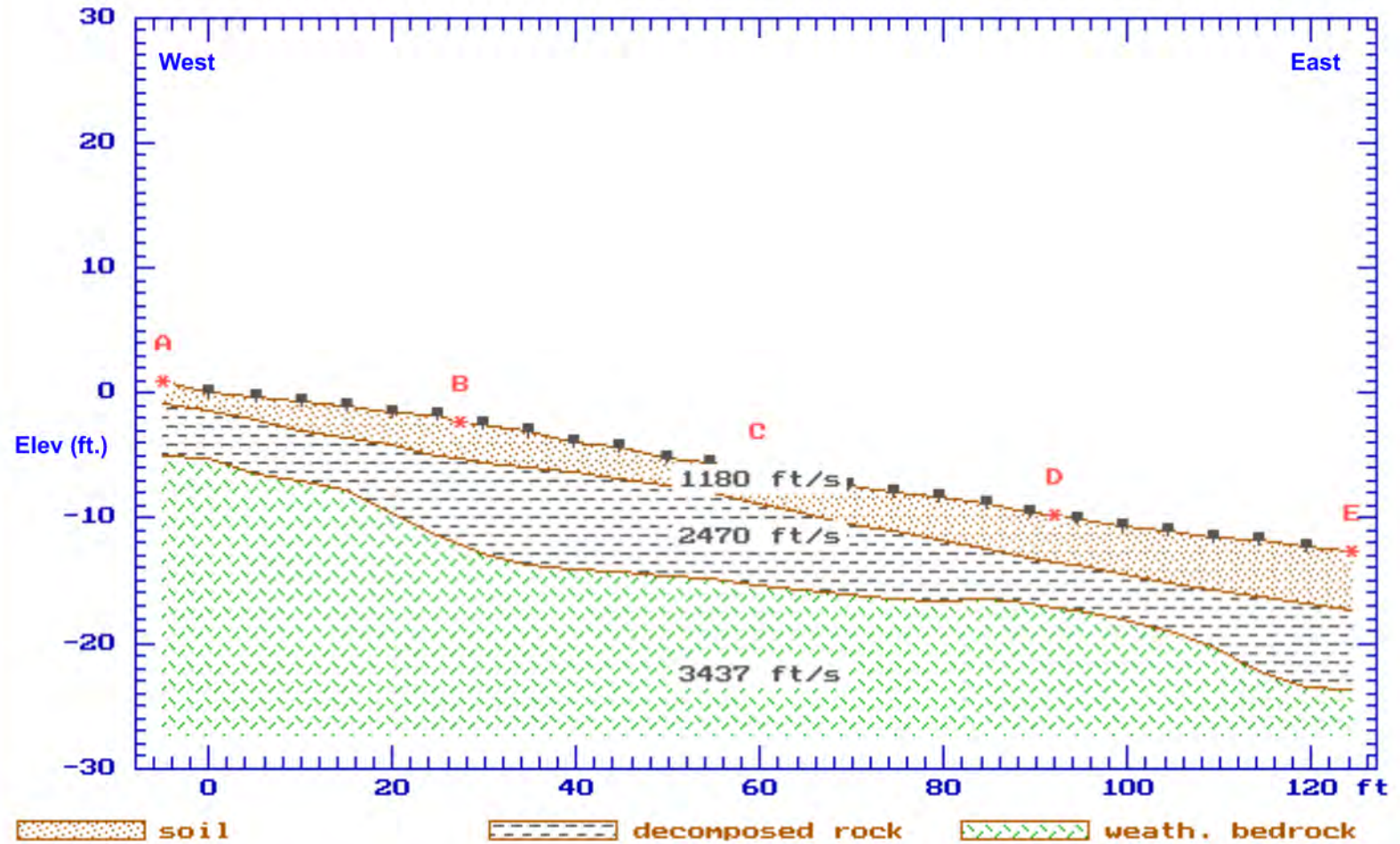
Geotek Project No. 2359-CR

Pacific Community Builder Site

Perris, Riverside County, CA

Figure 8

Line 5



Seismic Refraction Survey 04/21/2020

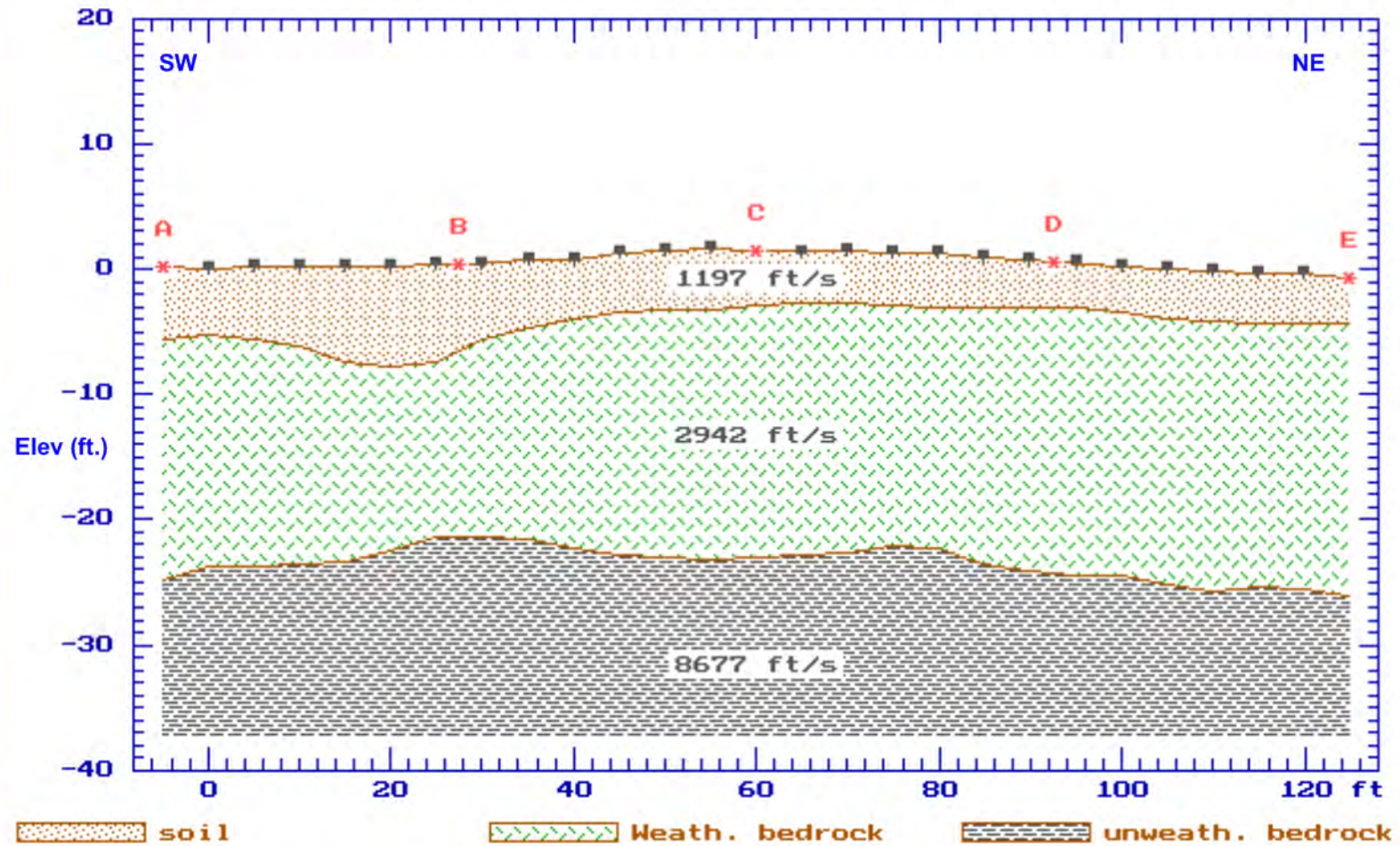
Geotek Project No. 2359-CR

Pacific Community Builder Site

Perris, Riverside County, CA

Figure 9

Line 6



Seismic Refraction Survey 04/21/2020

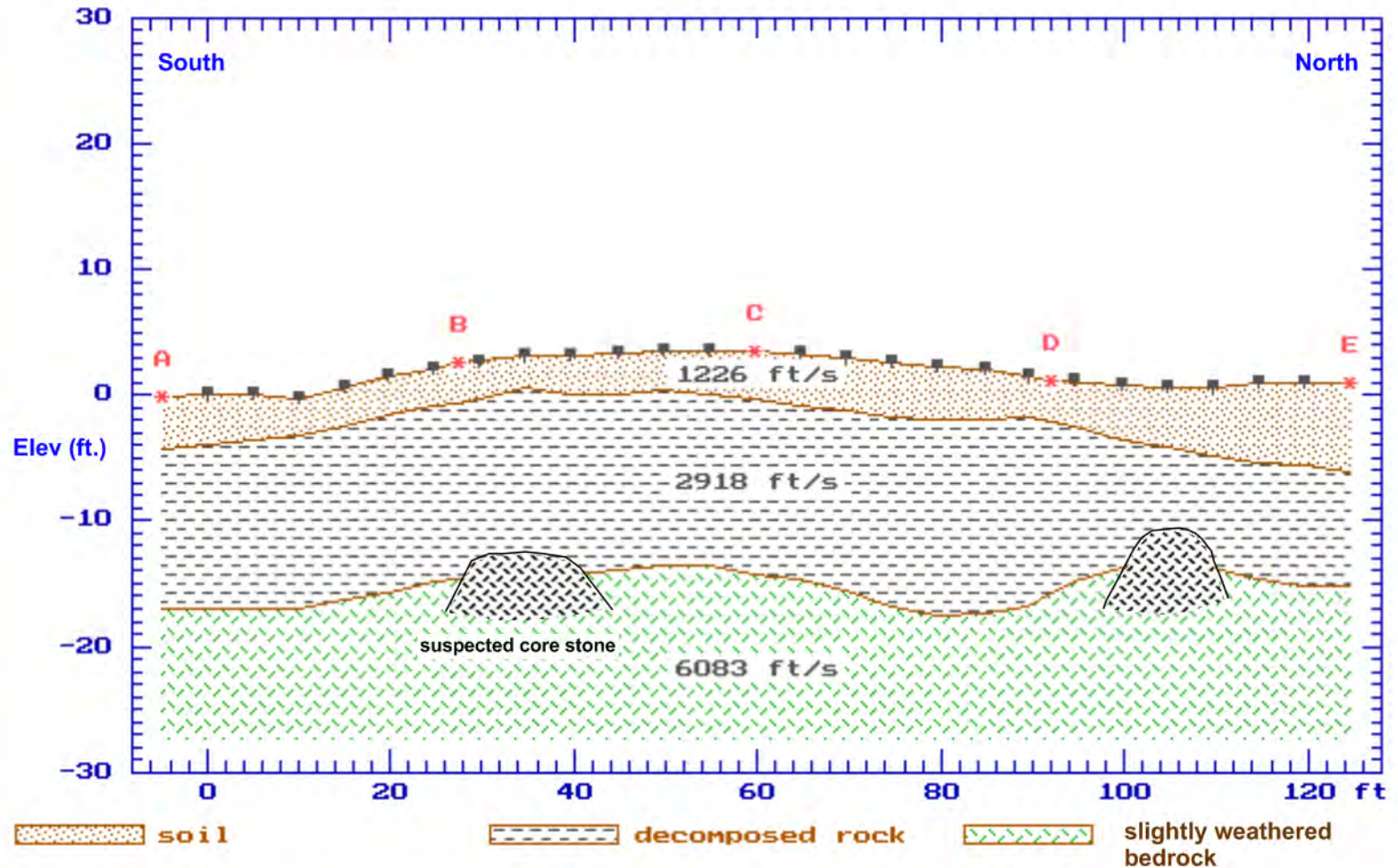
Geotek Project No. 2359-CR

Pacific Community Builder Site

Perris, Riverside County, CA

Figure 10

Line 7



Seismic Refraction Survey 04/21/2020

Geotek Project No. 2359-CR

Pacific Community Builder Site

Perris, Riverside County, CA

Figure 11

Core stones in weathered bedrock

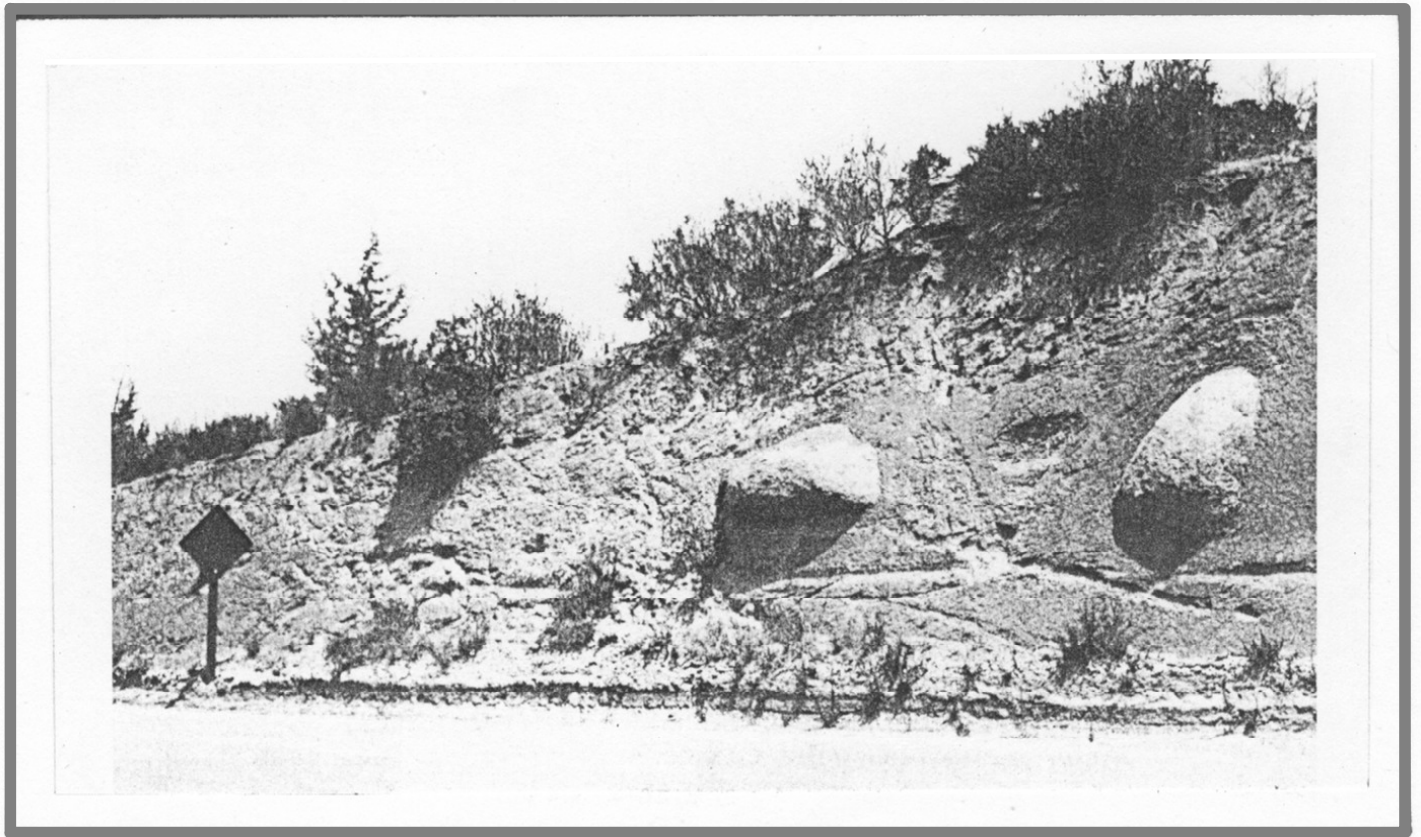


Figure 12

APPENDIX D

RESULTS OF LABORATORY TESTING BY GEOTEK

**Updated Geotechnical and Infiltration Evaluation
Tract No. 31304, Perris, Riverside County, California
Project No. 2359-CR**



SUMMARY OF LABORATORY TESTING

Classification

Soils were classified visually in general accordance to the Unified Soil Classification System (ASTM Test Method D 2487). The soil classifications are shown on the logs of trenches and borings in Appendix B.

Moisture-Density Relationship

Laboratory testing was performed on two samples obtained during the subsurface exploration. The laboratory maximum dry density and optimum moisture content was determined in general accordance with ASTM D 1557. The results of the testing are provided herein.

Direct Shear

Shear testing was performed in a direct shear machine of the strain-control type in general accordance with ASTM Test Method D 3080. The rate of deformation was approximately 0.035 inch per minute. The samples were sheared under varying confining loads in order to determine the coulomb shear strength parameters, angle of internal friction and cohesion. Testing was performed on remolded soil samples (90% of the maximum dry density per ASTM D 1557). The shear test results are presented herein.

Expansion Index

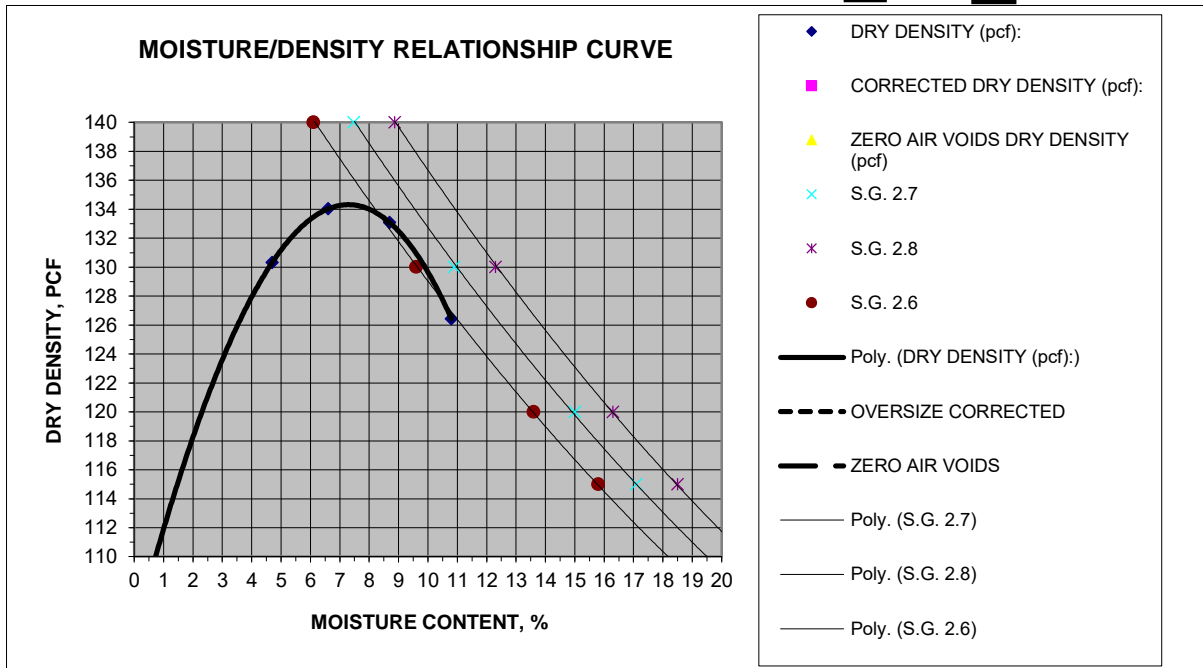
Expansion Index testing was performed on two soil samples. Testing was performed in general accordance with ASTM Test Method D 4829. The results of the testing are provided herein.



MOISTURE/DENSITY RELATIONSHIP

Client: Pacific Communities Builder Project: TR 31304 Location: Perris Material Type: Dark Brown Silty F - C Sand Material Supplier: - Material Source: - Sample Location: B-1 @ 0 - 1 ft Sampled By: KM Received By: DLI Tested By: DLI Reviewed By: -	Job No.: 2359-CR Lab No.: Corona Date Sampled: 4/13/2020 Date Received: 4/14/2020 Date Tested: 4/20/2020 Date Reviewed: -
--	--

Test Procedure: ASTM D1557 **Method:** A
Oversized Material (%): 0.8 **Correction Required:** yes no



MATERIAL DESCRIPTION

Grain Size Distribution:

	% Gravel (retained on No. 4)
	% Sand (Passing No. 4, Retained on No. 200)
	% Silt and Clay (Passing No. 200)

Classification:

Unified Soils Classification: _____
 AASHTO Soils Classification: _____

Atterberg Limits:

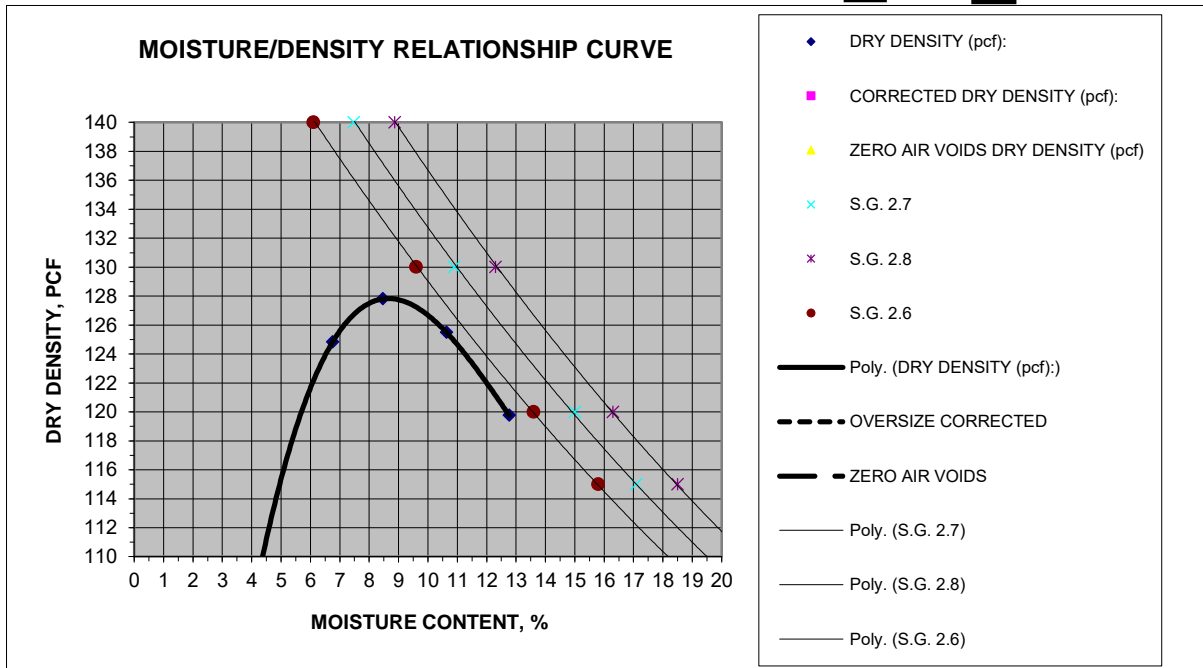
	Liquid Limit, %
	Plastic Limit, %
	Plasticity Index, %



MOISTURE/DENSITY RELATIONSHIP

Client: Pacific Communities Builder Project: TR 31304 Location: Perris Material Type: Dark Brown Silty F - C Sand Material Supplier: - Material Source: - Sample Location: T-7 @ 0 - 1 ft Sampled By: KM Received By: DLI Tested By: DLI Reviewed By: -	Job No.: 2359-CR Lab No.: Corona Date Sampled: 4/13/2020 Date Received: 4/14/2020 Date Tested: 4/20/2020 Date Reviewed: -
--	--

Test Procedure: ASTM D1557 **Method:** A
Oversized Material (%): 1.0 **Correction Required:** yes no



MOISTURE DENSITY RELATIONSHIP VALUES

Maximum Dry Density, pcf	128.0	@ Optimum Moisture, %	9.0
Corrected Maximum Dry Density, pcf		@ Optimum Moisture, %	

MATERIAL DESCRIPTION

Grain Size Distribution:

	% Gravel (retained on No. 4)
	% Sand (Passing No. 4, Retained on No. 200)
	% Silt and Clay (Passing No. 200)

Classification:

Unified Soils Classification: _____
 AASHTO Soils Classification: _____

Atterberg Limits:

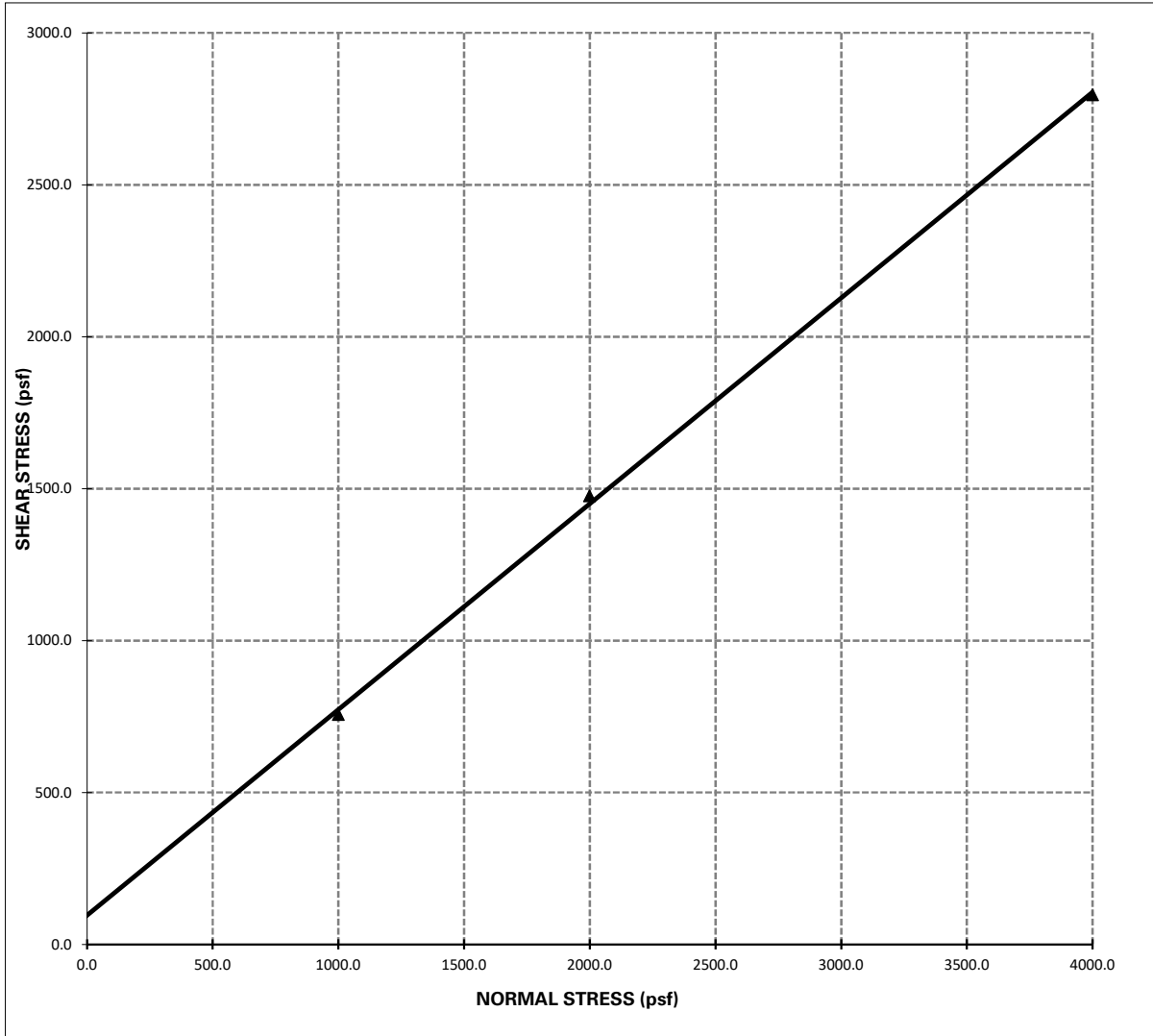
	Liquid Limit, %
	Plastic Limit, %
	Plasticity Index, %



DIRECT SHEAR TEST

Project Name: TR 31304, Perris
Project Number: 2359-CR

Sample Location: B-1 @ 0 - 1 ft
Date Tested: 4/28/2020



Shear Strength: $\Phi = 34.1^\circ$; **C = 96.00 psf**

- Notes:**
- 1 - The soil specimen used in the shear box was a ring sample remolded to approximately 90% relative compaction from a bulk sample collected during the field investigation.
 - 2 - The above reflect direct shear strength at saturated conditions.
 - 3 - The tests were run at a shear rate of 0.035 in/min.



EXPANSION INDEX TEST

(ASTM D4829)

Client: Pacific Communities Builder
Project Number: 2359-CR
Project Location: TR 31304, Perris

Tested/ Checked By: DA Lab No Corona
Date Tested: 4/22/2020
Sample Source: B-1 @ 0 - 1 ft
Sample Description:

Ring #: _____ Ring Dia. : 4.01" Ring Ht..1"

DENSITY DETERMINATION

A	Weight of compacted sample & ring (gm)	791.0
B	Weight of ring (gm)	366.7
C	Net weight of sample (gm)	424.3
D	Wet Density, lb / ft3 (C*0.3016)	128.0
E	Dry Density, lb / ft3 (D/1.F)	119.0

SATURATION DETERMINATION

F	Moisture Content, %	7.5
G	Specific Gravity, assumed	2.70
H	Unit Wt. of Water @ 20 °C, (pcf)	62.4
I	% Saturation	48.8

READINGS		
DATE	TIME	READING
4/22/2020	12:26	0.4800
	12:36	0.4800
4/23/2020	12:36	0.4810

Initial
10 min/Dry
Final

FINAL MOISTURE

Final Weight of wet sample & tare	% Moisture
811.4	12.3

EXPANSION INDEX = 1



EXPANSION INDEX TEST

(ASTM D4829)

Client: Pacific Communities Builder
Project Number: 2359-CR
Project Location: TR 31304, Perris

Tested/ Checked By: DI Lab No Corona
Date Tested: 4/21/2020
Sample Source: T-7 @ 0 - 1 ft
Sample Description:

Ring #: _____ Ring Dia. : 4.01" Ring Ht..1"

DENSITY DETERMINATION

A	Weight of compacted sample & ring (gm)	771.8
B	Weight of ring (gm)	363.1
C	Net weight of sample (gm)	408.7
D	Wet Density, lb / ft3 (C*0.3016)	123.3
E	Dry Density, lb / ft3 (D/1.F)	113.3

SATURATION DETERMINATION

F	Moisture Content, %	8.8
G	Specific Gravity, assumed	2.70
H	Unit Wt. of Water @ 20 °C, (pcf)	62.4
I	% Saturation	48.8

READINGS		
DATE	TIME	READING
4/21/2020	4:08	0.2220
	4:18	0.2210
4/22/2020	4:18	0.2260

Initial
10 min/Dry

Final

FINAL MOISTURE

Final Weight of wet sample & tare	% Moisture
797.0	15.0

EXPANSION INDEX = 5

APPENDIX E

SOIL CORROSIVITY STUDY

**Updated Geotechnical and Infiltration Evaluation
Tract No. 31304, Perris, Riverside County, California
Project No. 2359-CR**





April 27, 2020

via email: gbogdanoff@geotekusa.com

GEOTEK, INC.
1548 N. Maple St.
Corona, CA 92880

Attention: Ms. Gaby Bogdanoff, PE, GE

Re: Soil Corrosivity Study
PCB-Tr. 31304
Perris, CA
HDR #20-0223SCS, GI# 2359.CR

Introduction

Laboratory tests have been completed on 10 soil samples provided for the referenced project. The purpose of these tests was to determine if the soils might have deleterious effects on underground utility piping and concrete structures. HDR Engineering, Inc. (HDR) assumes that the samples provided are representative of the most corrosive soils at the site.

The proposed project consists of a single-family residential development with one to two stories and no subterranean levels. The site is located northeast of McPherson Road and Mountain Avenue in Perris, California, and the water table is reportedly greater than 15 feet deep.

The scope of this study is limited to a determination of soil corrosivity and general corrosion control recommendations for materials likely to be used for construction. HDR's recommendations do not constitute, and are not meant as a substitute for, design documents for the purpose of construction. If the architects and/or engineers desire more specific information, designs, specifications, or review of design, HDR will be happy to work with them as a separate phase of this project.

Laboratory Soil Corrosivity Tests

The electrical resistivity of each sample was measured in a soil box per ASTM G187 in its as-received condition and again after saturation with distilled water. Resistivities are at about their lowest value when the soil is saturated. The pH of the saturated samples was measured per ASTM G51. A 5:1 water:soil extract from each sample was chemically analyzed for the major soluble salts commonly found in soil per ASTM D4327, ASTM D6919, and Standard Method 2320-B. Total acidity was performed per NBS Circular 579 on two samples where the pH was found to 5.5 or lower. Laboratory test results are shown in the attached Table 1.

Soil Corrosivity

A major factor in determining soil corrosivity is electrical resistivity. The electrical resistivity of a soil is a measure of its resistance to the flow of electrical current. Corrosion of buried metal is an electrochemical process in which the amount of metal loss due to corrosion is directly proportional to the flow of electrical current (DC) from the metal into the soil. Corrosion currents, following Ohm's Law, are inversely proportional to soil resistivity. Lower electrical resistivities result from higher moisture and soluble salt contents and indicate corrosive soil.

A correlation between electrical resistivity and corrosivity toward ferrous metals is:¹

Soil Resistivity in ohm-centimeters	Corrosivity Category
Greater than 10,000	Mildly Corrosive
2,001 to 10,000	Moderately Corrosive
1,001 to 2,000	Corrosive
0 to 1,000	Severely Corrosive

Other soil characteristics that may influence corrosivity towards metals are pH, soluble salt content, soil types, aeration, anaerobic conditions, and site drainage.

¹ Romanoff, Melvin. *Underground Corrosion*, NBS Circular 579. Reprinted by NACE. Houston, TX, 1989, pp. 166–167.

Electrical resistivities were in the mildly to moderately corrosive categories with as-received moisture. When saturated, the resistivities were in the mildly to severely corrosive categories. Variation in soil resistivity of an order of magnitude or more can create differential-concentration corrosion cells that would increase corrosion rates for all metals above what would be expected from the chemical characteristics alone.

Soil pH values varied from 4.9 to 7.1. This range is very strongly acidic to neutral.² Total acidity was performed on sample COR-4 and COR-8. The results, 28 and 33 mmol H¹⁺/kg, is not high enough to warrant concern of acid attack to concrete. Soil with a pH less than 5.5 is considered aggressive to copper.

The soluble salt content of the samples ranged from low to moderate. Chloride and sulfate were found at low concentrations.

Some nitrate concentrations were high enough to be aggressive to copper. Ammonium was detected in low concentrations.

Tests were not made for sulfide and oxidation-reduction (redox) potential because these samples did not exhibit characteristics typically associated with anaerobic conditions.

Variation in soil resistivity of an order of magnitude or more can create differential-concentration corrosion cells that would affect all metals.

This soil is classified as severely corrosive to ferrous metals and aggressive to copper.

Corrosion Control Recommendations

The life of buried materials depends on thickness, strength, loads, construction details, soil moisture, etc., in addition to soil corrosivity, and is, therefore, difficult to predict. Of more practical value are corrosion control methods that will increase the life of materials that would be subject to significant corrosion.

The following recommendations are based on the soil conditions discussed in the Soil Corrosivity section above. Unless otherwise indicated, these recommendations apply to the entire site or alignment.

² Romanoff, Melvin. *Underground Corrosion*, NBS Circular 579. Reprinted by NACE. Houston, TX, 1989, p. 8.

Steel Pipe

1. Underground steel pipe with rubber gasketed, mechanical, grooved end, or other nonconductive type joints should be bonded for electrical continuity. Electrical continuity is necessary for corrosion monitoring and cathodic protection.
2. Install corrosion monitoring test stations to facilitate corrosion monitoring and the application of cathodic protection:
 - a. At each end of the pipeline.
 - b. At each end of all casings.
 - c. Other locations as necessary so the interval between test stations does not exceed 1,200 feet.
3. To prevent dissimilar metal corrosion cells and to facilitate the application of cathodic protection, electrically isolate each buried steel pipeline per NACE SP0286 from:
 - a. Dissimilar metals.
 - b. Dissimilarly coated piping (cement-mortar vs. dielectric).
 - c. Above ground steel pipe.
 - d. All existing piping.
4. Choose one of the following corrosion control options:

OPTION 1

- a. Apply a suitable dielectric coating intended for underground use such as:
 - i. Polyurethane per AWWA C222 *or*
 - ii. Extruded polyethylene per AWWA C215 *or*
 - iii. A tape coating system per AWWA C214 *or*
 - iv. Hot applied coal tar enamel per AWWA C203 *or*
 - v. Fusion bonded epoxy per AWWA C213.

- b. Apply cathodic protection to steel piping as per NACE SP0169.

OPTION 2

As an alternative to dielectric coating and cathodic protection, apply a $\frac{3}{4}$ -inch cement mortar coating per AWWA C205 or encase in concrete three inches thick, using any type of ASTM C150 cement. Joint bonds, test stations, and insulated joints are still recommended for this alternative.

NOTE: Some steel piping systems, such as for oil, gas, and high-pressure piping systems, have special corrosion and cathodic protection requirements that must be evaluated for each specific application.

Ductile Iron Pipe

1. To prevent dissimilar metal corrosion cells and to facilitate the application of cathodic protection, electrically insulate underground iron pipe from dissimilar metals and from above ground iron pipe with insulating joints per NACE SP0286.
2. Bond all nonconductive type joints for electrical continuity. Electrical continuity is necessary for corrosion monitoring and cathodic protection.
3. Install corrosion monitoring test stations to facilitate corrosion monitoring and the application of cathodic protection:
 - a. At each end of the pipeline.
 - b. At each end of any casings.
 - c. Other locations as necessary so the interval between test stations does not exceed 1,200 feet.
4. Choose one of the following corrosion control options:

OPTION 1

- a. Apply a suitable coating intended for underground use such as:
 - i. Polyethylene encasement per AWWA C105; *or*
 - ii. Epoxy coating; *or*

iii. Polyurethane; *or*

iv. Wax tape.

NOTE: The thin factory-applied asphaltic coating applied to ductile iron pipe for transportation and aesthetic purposes does not constitute a corrosion control coating.

- b. Apply cathodic protection to cast and ductile iron piping as per NACE SP0169.

OPTION 2

As an alternative to the coating systems described in Option 1 and cathodic protection, concrete encase all buried portions of metallic piping so that there is a minimum of three inches of concrete cover provided over and around surfaces of pipe, fittings, and valves using any type of ASTM C150 cement.

NOTE: Some iron piping systems, such as for fire water piping, have special corrosion and cathodic protection requirements that must be evaluated for each specific application.

Cast Iron Soil Pipe

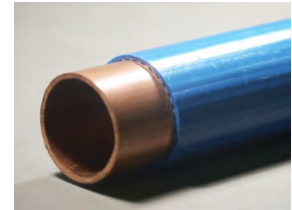
1. Protect cast iron soil pipe with either a double wrap 4-mil or single wrap 8-mil polyethylene encasement per AWWA C105.
2. It is not necessary to bond the pipe joints or apply cathodic protection.
3. Provide six inches of clean sand backfill all around the pipe.

Clean Sand Backfill

1. Clean sand backfill must have the following parameters:
 - a. Minimum saturated resistivity of no less than 3,000 ohm-cm; *and*
 - b. pH between 6.0 and 8.0.
2. All backfill testing should be performed by a corrosion engineering laboratory.

Copper Tubing

1. Electrically insulate underground copper pipe from dissimilar metals and from above ground copper pipe with insulating devices per NACE SP0286.
2. Electrically insulate cold water piping from hot water piping systems.
3. Protect buried copper tubing by one of the following measures:
 - a. Prevention of soil contact. Soil contact may be prevented by placing the tubing above ground or encasing the tubing using PVC pipe with solvent-welded joints.
 - b. Installation of a factory-coated copper pipe with a minimum 25-mil thickness such as Kamco's Aqua Shield™, Mueller's Streamline Protec™, or equal. The coating must be continuous with no cuts or defects.
 - c. Installation of 12-mil polyethylene pipe wrapping tape with butyl rubber mastic over a suitable primer. Protect wrapped copper tubing by applying cathodic protection per NACE SP0169.



Plastic and Vitrified Clay Pipe

1. No special corrosion control measures are required for plastic and vitrified clay piping placed underground.
2. Protect all metallic fittings and valves with wax tape per AWWA C217, or with epoxy and appropriately sized cathodic protection per NACE SP0169.

All Pipe

1. On all pipes, appurtenances, and fittings not protected by cathodic protection, coat bare metal such as valves, bolts, flange joints, joint harnesses, and flexible couplings with wax tape per AWWA C217 after assembly.
2. Where metallic pipelines penetrate concrete structures such as building floors, vault walls, and thrust blocks use plastic sleeves, rubber seals, or other dielectric material to prevent pipe contact with the concrete and reinforcing steel.

Concrete Structures and Pipe

1. From a corrosion standpoint, any type of ASTM C150 cement may be used for concrete structures and pipe because the sulfate concentration is negligible, from 0 to 0.10 percent.^{3,4,5}
2. Standard concrete cover over reinforcing steel may be used for concrete structures and pipe in contact with these soils due to the low chloride concentrations⁶ found onsite. Limit the water-soluble chloride ion content in the concrete mix design to less than 0.3 percent by weight of cement.

Post-Tensioned Slabs: Unbonded Single-Stranded Tendons and Anchors

Soil is considered an aggressive environment for post-tensioning strands and anchors. Protect post-tensioning strands and anchors against corrosion by implementing all the following measures:^{7,8,9}

1. Limit the water-soluble chloride ion content in the concrete mix design to less than 0.06 percent by weight of cement.
2. All tendons should be designed to prevent ingress of moisture. A corrosion-inhibiting coating should be incorporated into the tendon sheaths.
3. Use non-shrink grout mixes for all post-tensioning pockets.

³ 2015 International Building Code (IBC) which refers to American Concrete Institute (ACI) 318-14 Table 19.3.2.1

⁴ 2015 International Residential Code (IRC) which refers to American Concrete Institute (ACI) 318-14 Table 19.3.2.1

⁵ 2016 California Building Code (CBC) which refers to American Concrete Institute (ACI) 318-14 Table 19.3.2.1

⁶ Design Manual 303: Concrete Cylinder Pipe. Ameron. p.65

⁷ Post-Tensioning Manual, sixth edition. Post-Tensioning Institute (PTI), Phoenix, AZ, 2006.

⁸ PTI M10.2-00: Specification for Unbonded Single Strand Tendons. Post-Tensioning Institute (PTI), Phoenix, AZ, 2000.

⁹ ACI 423.6-01: Specification for Unbonded Single Strand Tendons. American Concrete Institute (ACI), 2001

4. Prior to grouting the pocket, apply a corrosion protection cap filled with corrosion protection material that provides a watertight seal for the strand end and wedge cavity, such as Tiger Industries' PocketCap or equal. Ensure the cap fully seats against the face of the standard anchor at the live end.
5. All components exposed to the job site should be protected within one working day after their exposure during installation.
6. Ensure the minimum concrete cover over the tendon tail is 1 inch, or greater if required by the applicable building code.
7. Caps should be installed within one working day after the cutting of the tendon tails and acceptance of the elongation records by the engineer.
8. Limit the access of direct runoff onto the anchorage area by designing proper drainage. Do not allow water to pond against anchors.
9. Provide at least two inches of space between finish grade and the anchorage area, or more if required by applicable building codes.

Expanded Analysis

1. Because a limited number of samples were submitted for soil corrosivity analysis, recommendations are based on a worst-case scenario. However, only 2 of the 10 submitted samples (COR-4 and COR-8) indicate low pH and corrosive conditions that require additional corrosion control. The owner may find it advantageous to consider retesting the site more extensively in order to allow for the appropriate scaling of mitigative measures to match the corrosivity of the various regions of the site, thereby removing the alternate need of applying the worst-case corrosivity to the entire site.

Closure

The analysis and recommendations presented in this report are based upon data obtained from the laboratory samples. This report does not reflect variations that may occur across the site or due to the modifying effects of construction. If variations appear, HDR should be notified immediately so that further evaluation and supplemental recommendations can be provided.

HDR's services have been performed with the usual thoroughness and competence of the engineering profession. No other warranty or representation, either expressed or implied, is included or intended.

Please call if you have any questions.

Respectfully Submitted,
HDR Engineering, Inc.



James Keegan

Enc: Table 1



Sean O. Hoss, PE



Table 1 - Laboratory Tests on Soil Samples

Geotek, Inc.
PCB-Tr. 31304
Your #2359.CR, HDR Lab #20-0223SCS
24-Apr-20

Sample ID

			COR-1 @ 0-1'	COR-2 @ 0-1'	COR-3 @ 0-1'	COR-4 @ 0-1'	COR-5 @ 0-1'
Resistivity	Units						
as-received	ohm-cm		13,200	19,200	10,400	2,800	11,200
saturated	ohm-cm		5,200	8,400	4,800	880	7,200
pH			7.1	5.8	6.6	5.5	6.4
Electrical							
Conductivity	mS/cm		0.10	0.09	0.16	0.48	0.14
Chemical Analyses							
Cations							
calcium	Ca ²⁺	mg/kg	30	38	43	176	52
magnesium	Mg ²⁺	mg/kg	13	15	16	48	18
sodium	Na ¹⁺	mg/kg	28	17	57	66	11
potassium	K ¹⁺	mg/kg	91	88	128	295	142
Anions							
carbonate	CO ₃ ²⁻	mg/kg	ND	ND	ND	ND	ND
bicarbonate	HCO ₃ ¹⁻	mg/kg	131	180	195	122	174
fluoride	F ¹⁻	mg/kg	7.7	15	11	12	7.6
chloride	Cl ¹⁻	mg/kg	14	10	21	174	29
sulfate	SO ₄ ²⁻	mg/kg	52	19	109	145	20
phosphate	PO ₄ ³⁻	mg/kg	27	30	40	29	22
Other Tests							
ammonium	NH ₄ ¹⁺	mg/kg	2.3	2.4	3.2	6.4	5.9
nitrate	NO ₃ ¹⁻	mg/kg	37	38	59	781	40
total acidity	H ¹⁺	mmol/kg	na	na	na	28	na
Redox		mV	na	na	na	na	na

Resistivity per ASTM G187, Cations per ASTM D6919, Anions per ASTM D4327, and Alkalinity per APHA 2320-B.

Electrical conductivity in millisiemens/cm and chemical analyses were made on a 1:5 soil-to-water extract.

mg/kg = milligrams per kilogram (parts per million) of dry soil.

Redox = oxidation-reduction potential in millivolts

ND = not detected

na = not analyzed



Table 1 - Laboratory Tests on Soil Samples

Geotek, Inc.
PCB-Tr. 31304
Your #2359.CR, HDR Lab #20-0223SCS
24-Apr-20

Sample ID

			COR-6 @ 0-1'	COR-7 @ 0-1'	COR-8 @ 0-1'	COR-9 @ 0-1'	COR-10 @ 0-1'
Resistivity	Units						
as-received	ohm-cm		88,000	29,600	4,800	17,600	33,200
saturated	ohm-cm		19,200	12,400	1,680	10,000	17,200
pH			6.5	6.3	4.9	6.4	6.4
Electrical							
Conductivity	mS/cm		0.03	0.05	0.30	0.06	0.05
Chemical Analyses							
Cations							
calcium	Ca ²⁺	mg/kg	18	29	110	19	23
magnesium	Mg ²⁺	mg/kg	11	13	28	12	13
sodium	Na ¹⁺	mg/kg	12	21	41	21	13
potassium	K ¹⁺	mg/kg	20	28	203	61	41
Anions							
carbonate	CO ₃ ²⁻	mg/kg	ND	ND	ND	ND	ND
bicarbonate	HCO ₃ ¹⁻	mg/kg	104	159	134	125	119
fluoride	F ¹⁻	mg/kg	5.8	4.3	14	2.7	4.0
chloride	Cl ¹⁻	mg/kg	9.6	6.8	42	6.9	6.2
sulfate	SO ₄ ²⁻	mg/kg	7.1	2.1	80	13	7.0
phosphate	PO ₄ ³⁻	mg/kg	8.5	10	35	22	14
Other Tests							
ammonium	NH ₄ ¹⁺	mg/kg	1.1	2.8	5.0	2.1	1.1
nitrate	NO ₃ ¹⁻	mg/kg	9.5	8.8	511	25	12
total acidity	H ¹⁺	mmol/kg	na	na	33	na	na
Redox		mV	na	na	na	na	na

Resistivity per ASTM G187, Cations per ASTM D6919, Anions per ASTM D4327, and Alkalinity per APHA 2320-B.

Electrical conductivity in millisiemens/cm and chemical analyses were made on a 1:5 soil-to-water extract.

mg/kg = milligrams per kilogram (parts per million) of dry soil.

Redox = oxidation-reduction potential in millivolts

ND = not detected

na = not analyzed

APPENDIX F

GENERAL GRADING GUIDELINES

**Updated Geotechnical and Infiltration Evaluation
Tract No. 31304, Perris, Riverside County, California
Project No. 2359-CR**



GENERAL GRADING GUIDELINES

Guidelines presented herein are intended to address general construction procedures for earthwork construction. Specific situations and conditions often arise which cannot reasonably be discussed in general guidelines, when anticipated these are discussed in the text of the report. Often unanticipated conditions are encountered which may necessitate modification or changes to these guidelines. It is our hope that these will assist the contractor to more efficiently complete the project by providing a reasonable understanding of the procedures that would be expected during earthwork and the testing and observation used to evaluate those procedures.

General

Grading should be performed to at least the minimum requirements of governing agencies, Chapters 18 and 33 of the Uniform Building Code, CBC (2019) and the guidelines presented below.

Preconstruction Meeting

A preconstruction meeting should be held prior to site earthwork. Any questions the contractor has regarding our recommendations, general site conditions, apparent discrepancies between reported and actual conditions and/or differences in procedures the contractor intends to use should be brought up at that meeting. The contractor (including the main onsite representative) should review our report and these guidelines in advance of the meeting. Any comments the contractor may have regarding these guidelines should be brought up at that meeting.

Grading Observation and Testing

1. Observation of the fill placement should be provided by our representative during grading. Verbal communication during the course of each day will be used to inform the contractor of test results. The contractor should receive a copy of the "Daily Field Report" indicating results of field density tests that day. If our representative does not provide the contractor with these reports, our office should be notified.
2. Testing and observation procedures are, by their nature, specific to the work or area observed and location of the tests taken, variability may occur in other locations. The contractor is responsible for the uniformity of the grading operations; our observations and test results are intended to evaluate the contractor's overall level of efforts during grading. The contractor's personnel are the only individuals participating in all aspect of site work. Compaction testing and observation should not be considered as relieving the contractor's responsibility to properly compact the fill.
3. Cleanouts, processed ground to receive fill, key excavations, and subdrains should be observed by our representative prior to placing any fill. It will be the contractor's responsibility to notify our representative or office when such areas are ready for observation.



4. Density tests may be made on the surface material to receive fill, as considered warranted by this firm.
5. In general, density tests would be made at maximum intervals of two feet of fill height or every 1,000 cubic yards of fill placed. Criteria will vary depending on soil conditions and size of the fill. More frequent testing may be performed. In any case, an adequate number of field density tests should be made to evaluate the required compaction and moisture content is generally being obtained.
6. Laboratory testing to support field test procedures will be performed, as considered warranted, based on conditions encountered (e.g. change of material sources, types, etc.) Every effort will be made to process samples in the laboratory as quickly as possible and in progress construction projects are our first priority. However, laboratory workloads may cause in delays and some soils may require a **minimum of 48 to 72 hours to complete test procedures**. Whenever possible, our representative(s) should be informed in advance of operational changes that might result in different source areas for materials.
7. Procedures for testing of fill slopes are as follows:
 - a) Density tests should be taken periodically during grading on the flat surface of the fill, three to five feet horizontally from the face of the slope.
 - b) If a method other than over building and cutting back to the compacted core is to be employed, slope compaction testing during construction should include testing the outer six inches to three feet in the slope face to determine if the required compaction is being achieved.
8. Finish grade testing of slopes and pad surfaces should be performed after construction is complete.

Site Clearing

1. All vegetation, and other deleterious materials, should be removed from the site. If material is not immediately removed from the site it should be stockpiled in a designated area(s) well outside of all current work areas and delineated with flagging or other means. Site clearing should be performed in advance of any grading in a specific area.
2. Efforts should be made by the contractor to remove all organic or other deleterious material from the fill, as even the most diligent efforts may result in the incorporation of some materials. This is especially important when grading is occurring near the natural grade. All equipment operators should be aware of these efforts. Laborers may be required as root pickers.
3. Nonorganic debris or concrete may be placed in deeper fill areas provided the procedures used are observed and found acceptable by our representative.

Treatment of Existing Ground

1. Following site clearing, all surficial deposits of alluvium and colluvium as well as weathered or creep affected bedrock, should be removed unless otherwise specifically indicated in the text of this report.
2. In some cases, removal may be recommended to a specified depth (e.g. flat sites where partial alluvial removals may be sufficient). The contractor should not exceed these depths unless directed otherwise by our representative.
3. Groundwater existing in alluvial areas may make excavation difficult. Deeper removals than indicated in the text of the report may be necessary due to saturation during winter months.
4. Subsequent to removals, the natural ground should be processed to a depth of six inches, moistened to near optimum moisture conditions and compacted to fill standards.
5. Exploratory back hoe or dozer trenches still remaining after site removal should be excavated and filled with compacted fill if they can be located.

Fill Placement

1. Unless otherwise indicated, all site soil and bedrock may be reused for compacted fill; however, some special processing or handling may be required (see text of report).
2. Material used in the compacting process should be evenly spread, moisture conditioned, processed, and compacted in thin lifts six (6) to eight (8) inches in compacted thickness to obtain a uniformly dense layer. The fill should be placed and compacted on a nearly horizontal plane, unless otherwise found acceptable by our representative.
3. If the moisture content or relative density varies from that recommended by this firm, the contractor should rework the fill until it is in accordance with the following:
 - a) Moisture content of the fill should be at or above optimum moisture. Moisture should be evenly distributed without wet and dry pockets. Pre-watering of cut or removal areas should be considered in addition to watering during fill placement, particularly in clay or dry surficial soils. The ability of the contractor to obtain the proper moisture content will control production rates.
 - b) Each six-inch layer should be compacted to at least 90 percent of the maximum dry density in compliance with the testing method specified by the controlling governmental agency. In most cases, the testing method is ASTM Test Designation D 1557.
4. Rock fragments less than eight inches in diameter may be utilized in the fill, provided:
 - a) They are not placed in concentrated pockets;
 - b) There is a sufficient percentage of fine-grained material to surround the rocks;
 - c) The distribution of the rocks is observed by, and acceptable to, our representative.

5. Rocks exceeding eight (8) inches in diameter should be taken off site, broken into smaller fragments, or placed in accordance with recommendations of this firm in areas designated suitable for rock disposal. On projects where significant large quantities of oversized materials are anticipated, alternate guidelines for placement may be included. If significant oversize materials are encountered during construction, these guidelines should be requested.
6. In clay soil, dry or large chunks or blocks are common. If in excess of eight (8) inches minimum dimension, then they are considered as oversized. Sheepsfoot compactors or other suitable methods should be used to break up blocks. When dry, they should be moisture conditioned to provide a uniform condition with the surrounding fill.

Slope Construction

1. The contractor should obtain a minimum relative compaction of 90 percent out to the finished slope face of fill slopes. This may be achieved by either overbuilding the slope and cutting back to the compacted core, or by direct compaction of the slope face with suitable equipment.
2. Slopes trimmed to the compacted core should be overbuilt by at least three (3) feet with compaction efforts out to the edge of the false slope. Failure to properly compact the outer edge results in trimming not exposing the compacted core and additional compaction after trimming may be necessary.
3. If fill slopes are built "at grade" using direct compaction methods, then the slope construction should be performed so that a constant gradient is maintained throughout construction. Soil should not be "spilled" over the slope face nor should slopes be "pushed out" to obtain grades. Compaction equipment should compact each lift along the immediate top of slope. Slopes should be back rolled or otherwise compacted at approximately every 4 feet vertically as the slope is built.
4. Corners and bends in slopes should have special attention during construction as these are the most difficult areas to obtain proper compaction.
5. Cut slopes should be cut to the finished surface. Excessive undercutting and smoothing of the face with fill may necessitate stabilization.

UTILITY TRENCH CONSTRUCTION AND BACKFILL

Utility trench excavation and backfill is the contractors responsibility. The geotechnical consultant typically provides periodic observation and testing of these operations. While efforts are made to make sufficient observations and tests to verify that the contractors' methods and procedures are adequate to achieve proper compaction, it is typically impractical to observe all backfill procedures. As such, it is critical that the contractor use consistent backfill procedures.



Compaction methods vary for trench compaction and experience indicates many methods can be successful. However, procedures that “worked” on previous projects may or may not prove effective on a given site. The contractor(s) should outline the procedures proposed, so that we may discuss them **prior** to construction. We will offer comments based on our knowledge of site conditions and experience.

1. Utility trench backfill in slopes, structural areas, in streets and beneath flat work or hardscape should be brought to at least optimum moisture and compacted to at least 90 percent of the laboratory standard. Soil should be moisture conditioned prior to placing in the trench.
2. Flooding and jetting are not typically recommended or acceptable for native soils. Flooding or jetting may be used with select sand having a Sand Equivalent (SE) of 30 or higher. This is typically limited to the following uses:

- a) shallow (12 + inches) under slab interior trenches and,
- b) as bedding in pipe zone.

The water should be allowed to dissipate prior to pouring slabs or completing trench compaction.

3. Care should be taken not to place soils at high moisture content within the upper three feet of the trench backfill in street areas, as overly wet soils may impact subgrade preparation. Moisture may be reduced to 2% below optimum moisture in areas to be paved within the upper three feet below sub grade.
4. Sand backfill should not be allowed in exterior trenches adjacent to and within an area extending below a 1:1 projection from the outside bottom edge of a footing, unless it is similar to the surrounding soil.
5. Trench compaction testing is generally at the discretion of the geotechnical consultant. Testing frequency will be based on trench depth and the contractors procedures. A probing rod would be used to assess the consistency of compaction between tested areas and untested areas. If zones are found that are considered less compact than other areas, this would be brought to the contractors attention.

JOB SAFETY

General

Personnel safety is a primary concern on all job sites. The following summaries are safety considerations for use by all our employees on multi-employer construction sites. On ground personnel are at highest risk of injury and possible fatality on grading construction projects. The company recognizes that construction activities will vary on each site and that job site safety is the contractor's responsibility. However, it is, imperative that all personnel be safety conscious to avoid accidents and potential injury.



In an effort to minimize risks associated with geotechnical testing and observation, the following precautions are to be implemented for the safety of our field personnel on grading and construction projects.

1. **Safety Meetings:** Our field personnel are directed to attend the contractor's regularly scheduled safety meetings.
2. **Safety Vests:** Safety vests are provided for and are to be worn by our personnel while on the job site.
3. **Safety Flags:** Safety flags are provided to our field technicians; one is to be affixed to the vehicle when on site, the other is to be placed atop the spoil pile on all test pits.

In the event that the contractor's representative observes any of our personnel not following the above, we request that it be brought to the attention of our office.

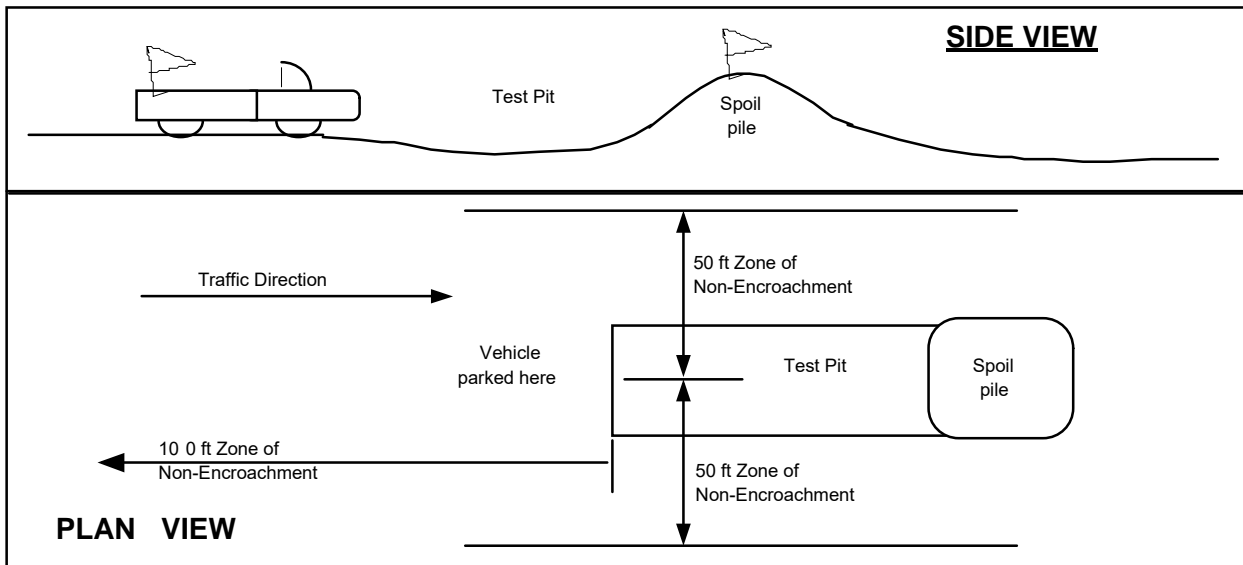
Test Pits Location, Orientation and Clearance

The technician is responsible for selecting test pit locations. The primary concern is the technician's safety. However, it is necessary to take sufficient tests at various locations to obtain a representative sampling of the fill. As such, efforts will be made to coordinate locations with the grading contractors authorized representatives (e.g. dump man, operator, supervisor, grade checker, etc.), and to select locations following or behind the established traffic pattern, preferably outside of current traffic. The contractors authorized representative should direct excavation of the pit and safety during the test period. Again, safety is the paramount concern.

Test pits should be excavated so that the spoil pile is placed away from oncoming traffic. The technician's vehicle is to be placed next to the test pit, opposite the spoil pile. This necessitates that the fill be maintained in a drivable condition. Alternatively, the contractor may opt to park a piece of equipment in front of test pits, particularly in small fill areas or those with limited access.

A zone of non-encroachment should be established for all test pits (see diagram below). No grading equipment should enter this zone during the test procedure. The zone should extend outward to the sides approximately 50 feet from the center of the test pit and 100 feet in the direction of traffic flow. This zone is established both for safety and to avoid excessive ground vibration, which typically decreases test results.

TEST PIT SAFETY PLAN



Slope Tests

When taking slope tests, the technician should park their vehicle directly above or below the test location on the slope. The contractor's representative should effectively keep all equipment at a safe operation distance (e.g. 50 feet) away from the slope during testing.

The technician is directed to withdraw from the active portion of the fill as soon as possible following testing. The technician's vehicle should be parked at the perimeter of the fill in a highly visible location.

Trench Safety

It is the contractor's responsibility to provide safe access into trenches where compaction testing is needed. Trenches for all utilities should be excavated in accordance with CAL-OSHA and any other applicable safety standards. Safe conditions will be required to enable compaction testing of the trench backfill.

All utility trench excavations in excess of 5 feet deep, which a person enters, are to be shored or laid back. Trench access should be provided in accordance with OSHA standards. Our personnel are directed not to enter any trench by being lowered or "riding down" on the equipment.

Our personnel are directed not to enter any excavation which;

1. is 5 feet or deeper unless shored or laid back,
2. exit points or ladders are not provided,
3. displays any evidence of instability, has any loose rock or other debris which could fall into the trench, or

4. displays any other evidence of any unsafe conditions regardless of depth.

If the contractor fails to provide safe access to trenches for compaction testing, our company policy requires that the soil technician withdraws and notifies their supervisor. The contractor's representative will then be contacted in an effort to effect a solution. All backfill not tested due to safety concerns or other reasons is subject to reprocessing and/or removal.

Procedures

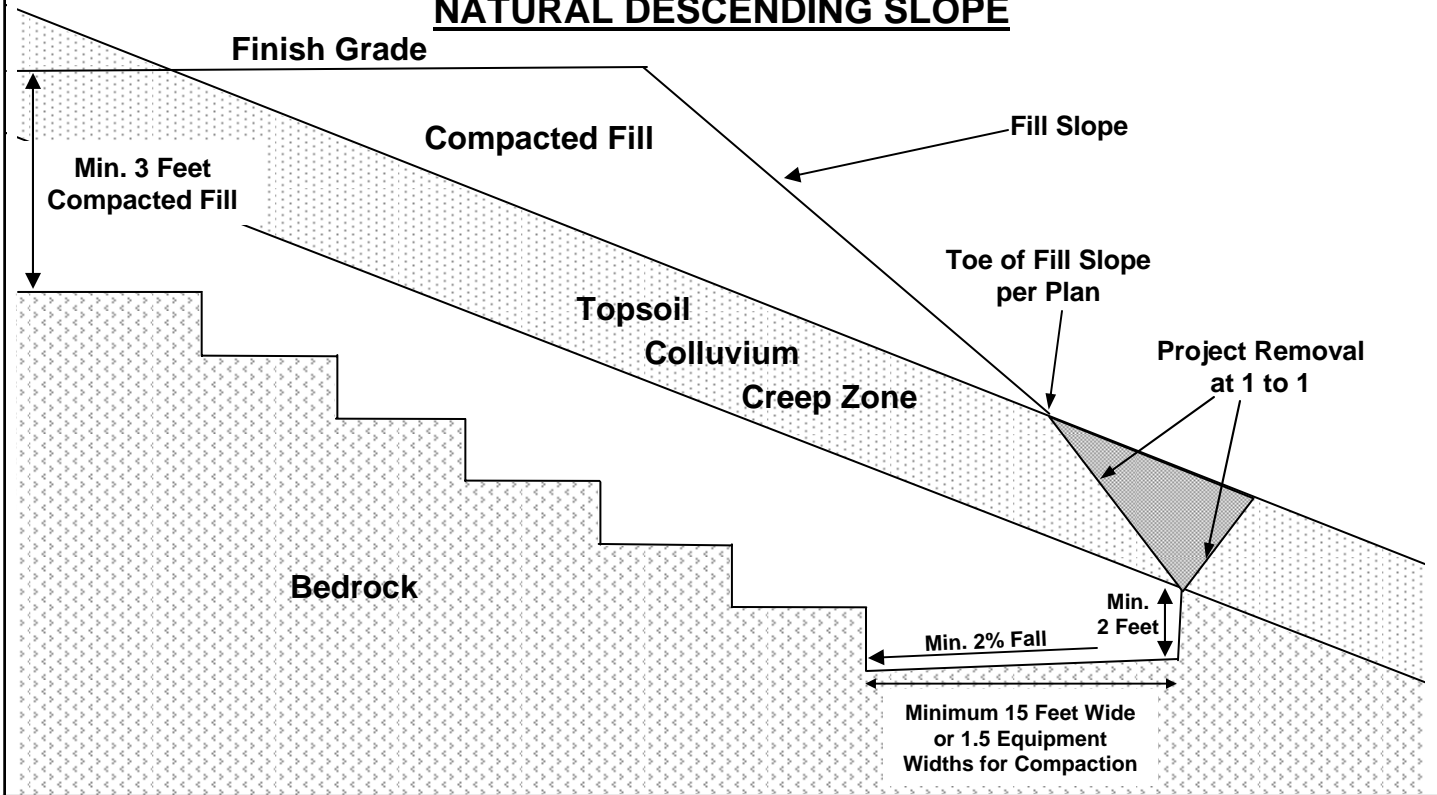
In the event that the technician's safety is jeopardized or compromised as a result of the contractor's failure to comply with any of the above, the technician is directed to inform both the developer's and contractor's representatives. If the condition is not rectified, the technician is required, by company policy, to immediately withdraw and notify their supervisor. The contractor's representative will then be contacted in an effort to effect a solution. No further testing will be performed until the situation is rectified. Any fill placed in the interim can be considered unacceptable and subject to reprocessing, recompaction or removal.

In the event that the soil technician does not comply with the above or other established safety guidelines, we request that the contractor bring this to technicians attention and notify our project manager or office. Effective communication and coordination between the contractor's representative and the field technician(s) is strongly encouraged in order to implement the above safety program and safety in general.

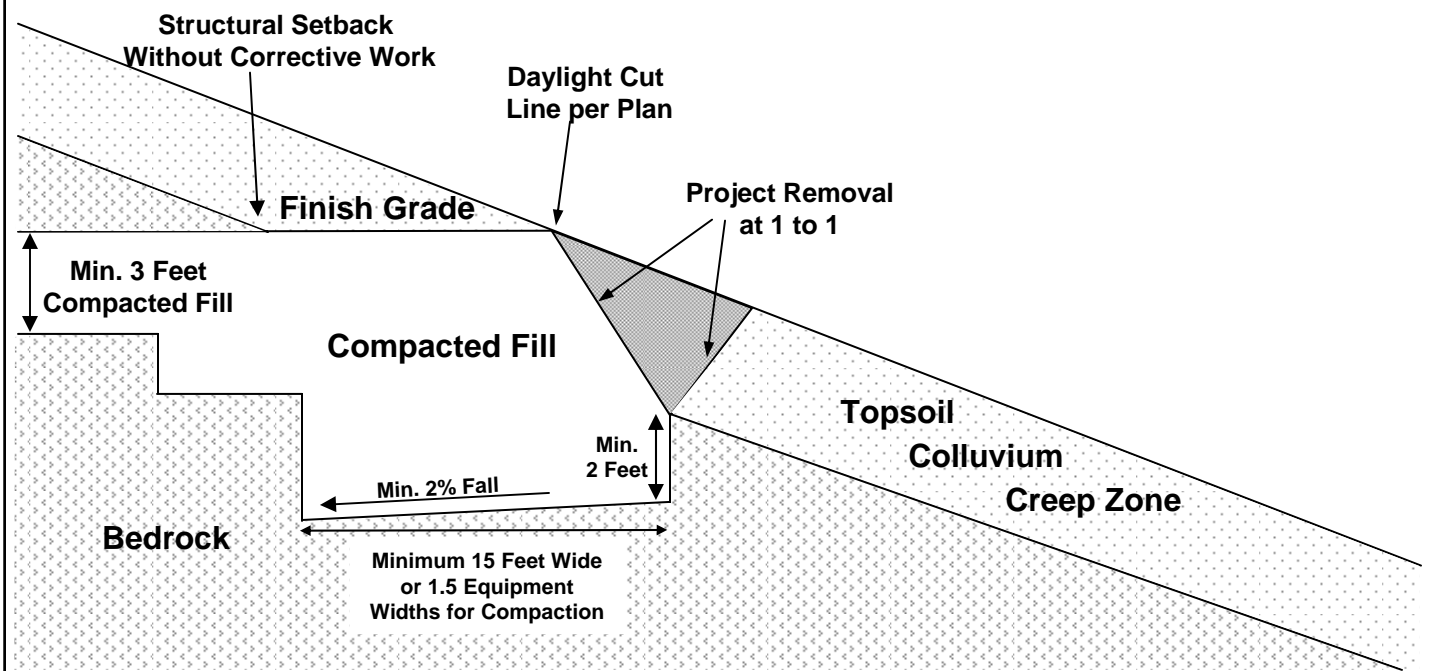
The safety procedures outlined above should be discussed at the contractor's safety meetings. This will serve to inform and remind equipment operators of these safety procedures particularly the zone of non-encroachment.

The safety procedures outlined above should be discussed at the contractor's safety meetings. This will serve to inform and remind equipment operators of these safety procedures particularly the zone of non-encroachment.

TYPICAL FILL SLOPE OVER NATURAL DESCENDING SLOPE



DAYLIGHT CUT AREA OVER NATURAL DESCENDING SLOPE



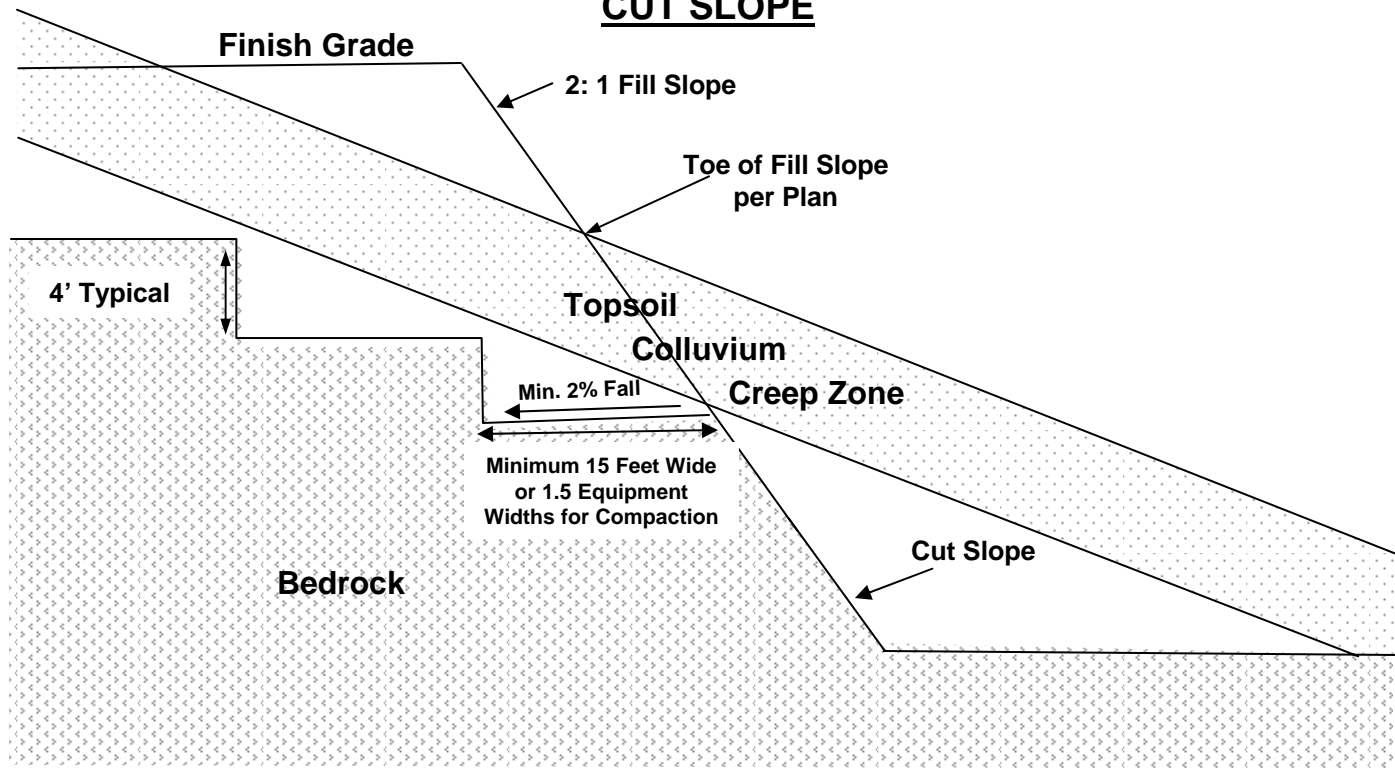
1548 North Maple Street
Corona, California 92880

TREATMENT ABOVE
NATURAL SLOPES

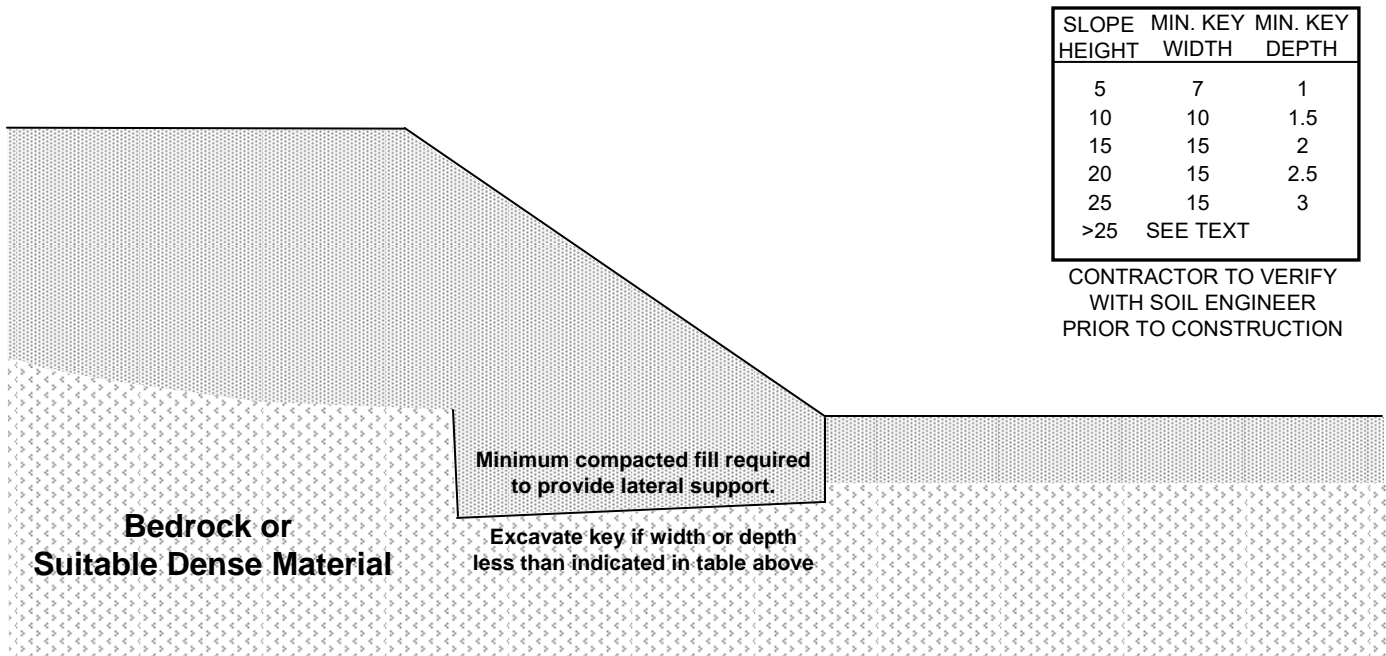
STANDARD GRADING
GUIDELINES

PLATE F-1

TYPICAL FILL SLOPE OVER CUT SLOPE



TYPICAL FILL SLOPE



SLOPE HEIGHT	MIN. KEY WIDTH	MIN. KEY DEPTH
5	7	1
10	10	1.5
15	15	2
20	15	2.5
25	15	3
>25	SEE TEXT	

CONTRACTOR TO VERIFY
WITH SOIL ENGINEER
PRIOR TO CONSTRUCTION

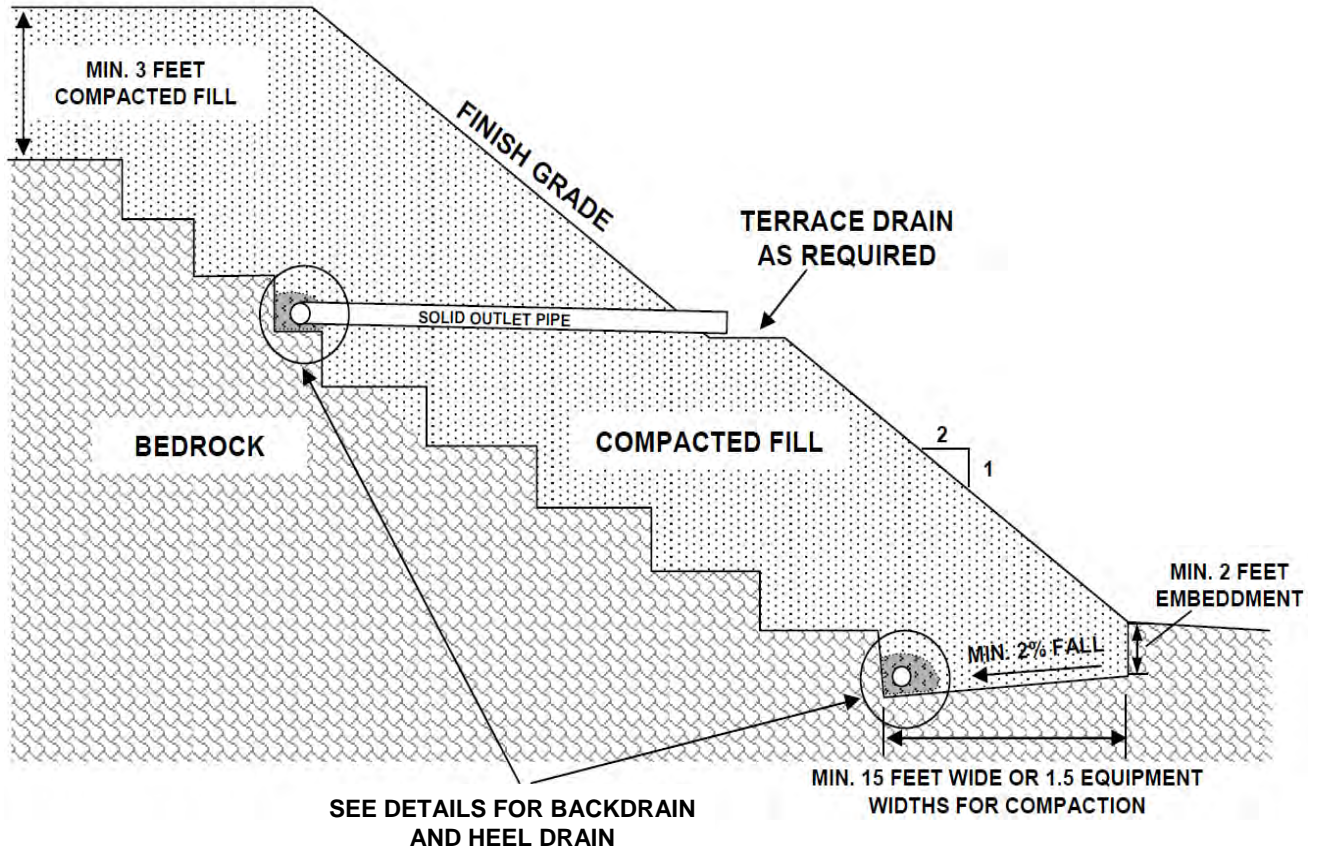


1548 North Maple Street
Corona, California 92880

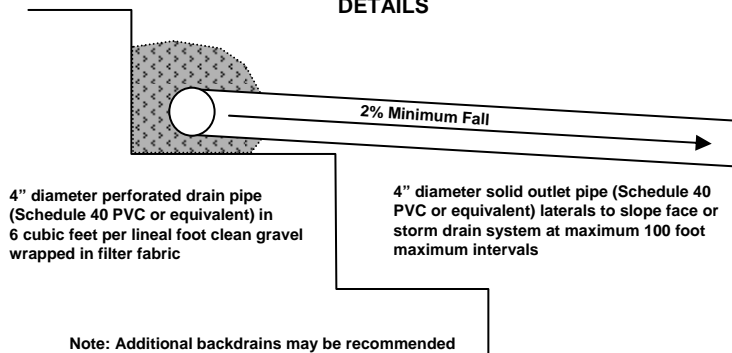
COMMON FILL
SLOPE KEYS

STANDARD GRADING
GUIDELINES

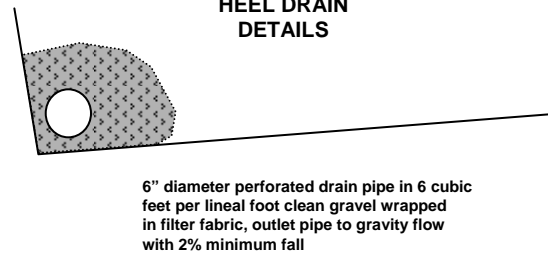
PLATE F-2



BACKDRAIN DETAILS



HEEL DRAIN DETAILS



1548 North Maple Street
Corona, California 92880

TYPICAL BUTTRESS AND
STABILIZATION FILL

STANDARD GRADING
GUIDELINES

PLATE F-3

PALEONTOLOGICAL TECHNICAL STUDY

PACIFIC EMERALD RESIDENTIAL DEVELOPMENT PROJECT, CITY OF PERRIS, RIVERSIDE COUNTY, CALIFORNIA



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PSI Report: CA21RiversidePAC01R

January 2021



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1.0 EXECUTIVE SUMMARY

This report presents the results of the paleontological technical study conducted by Paleo Solutions, Inc. (Paleo Solutions) in support of the Pacific Emerald Residential Development Project (Project) located in the City of Perris in Riverside County, California, within the Peninsular Ranges Geomorphic Province (Figures 1 and 2). Paleo Solutions was contracted by Pacific Communities Builder, Inc. (Pacific Communities) to conduct an analysis of existing paleontological data and to provide recommendations for mitigation based on the geological and paleontological data. This work was required by the City of Perris (the City) to meet their requirements as the lead agency under the California Environmental Quality Act (CEQA). All paleontological work was completed in compliance with CEQA, local guidelines, and best practices in mitigation paleontology (Murphey et al., 2019). See Table 1 for a Project summary.

The Project consists of construction of a residential development located in the City of Perris. The Project area encompasses an approximately 40.40-acre parcel located at the northeast corner of the intersection of Mountain Avenue and McPherson Road. Geologic mapping by T.W. Dibblee and J.A. Minch (2003) indicates that the Project area is entirely underlain by Cretaceous-age quartz diorite (qdi) (Figure 3). Holocene-age alluvial sand and clay of valley areas (Qa) is also mapped within the Project vicinity, within a half mile buffer (Dibblee and Minch, 2003; Figure 3). However, since these sediments are not located at the surface within the Project area boundaries and will also not be encountered within the Project area beneath the Cretaceous-age quartz diorite (qdi) due to the stratigraphic relationship of the two geologic units, the Holocene-age alluvial sand and clay of valley areas (Qa) is not discussed in this report.

The Project area was evaluated based on an analysis of existing paleontological data, including a geologic map review, literature search, and institutional records search. Using the analysis of existing data, the geologic unit was evaluated on its potential for producing significant paleontological resources. Paleontological sensitivity assignments were developed following the Potential Fossil Yield Classification (PFYC) system (Bureau of Land Management [BLM], 2016) and best practices in mitigation paleontology (Murphey et al., 2019). Cretaceous-age quartz diorite (qdi) consists of plutonic rocks, which are formed at high temperatures and pressures not conducive to fossil preservation. Cretaceous-age quartz diorite (qdi), therefore, has a very low paleontological potential (PFYC 1).

Due to the very low paleontological potential (PFYC 1) of the Cretaceous-age quartz diorite (qdi) that is located throughout the entirety of the Project area, further paleontological mitigation is not recommended.



2.0 INTRODUCTION

This report presents the results of the paleontological technical study conducted by Paleo Solutions during construction of the Pacific Emerald Residential Development Project located in Riverside County, California, within the Peninsular Ranges Geomorphic Province. Paleo Solutions was contracted by Pacific Communities to conduct an analysis of existing paleontological data and to provide recommendations for mitigation based on the geological and paleontological data. This work was required by the City in order to fulfill their responsibilities as the lead agency under CEQA. All paleontological work was completed in compliance with CEQA, local guidelines, and best practices in mitigation paleontology (Murphey et al., 2019). See Table 1 for a Project summary.

2.1 Project Description and Location

The Project consists of construction of a residential development located in the City of Perris. The Project area encompasses an approximately 40.40-acre parcel located at the northeast corner of the intersection of Mountain Avenue and McPherson Road. The Project will be approximately 201 lots of detached, single-family, one-story homes for an age restricted (55+) community. Additionally, there will be three recreational areas on 0.96 acre, 1.66 acres of open space, and a 0.59-acre detention basin.

The Project area is mapped on the USGS Perris (1967) 7.5' Topographic Quadrangle and is situated entirely on privately-owned lands in the Southeast-Northwest, Southwest-Northeast, Northeast-Northwest and Northwest-Northeast quarter-quarters, of Section 1, Township 5 South, Range 4 West. Geologic mapping by T.W. Dibblee and J.A. Minch (2003) indicates that the Project area is entirely underlain by Cretaceous-age quartz diorite (qdi) (Figure 3).

Table 1. Pacific Emerald Residential Development Project Summary

Project Name	Pacific Emerald Residential Development Project			
Project Description	The Project consists of a residential development with approximately 201 lots of detached, single-family, one-story homes for an age restricted (55+) community.			
Project Area	The Project is located in the City of Perris in Riverside County, California at the northeast corner of the intersection of Mountain Avenue and McPherson Road.			
Total Acreage	Approximately 40.40 acres			
Location (PLSS)	Quarter-Quarter	Section	Township	Range
	SENE, SWNE, NENE, NWNE	1	T5S	R4W
Land Owner / Surface Management Agency	Private			
Topographic Map(s)	USGS Perris 7.5-minute quadrangle			
Geologic Map(s)	Geologic Map of the Perris Quadrangle, Riverside County, California (Dibblee and Minch, 2003)			
Mapped Geologic Unit(s) and Age	Geologic Units	Age	Paleontological Sensitivity (PFYC [BLM, 2016])	
	Alluvial sand and clay of valley areas (Qa)	Holocene	2 (Low)	
	Quartz diorite (qdi)	Cretaceous	1 (Very Low)	



Previously Documented Fossil Localities in Project Area	None
Recommendation(s)	Due to the very low paleontological potential (PFYC 1) of the Cretaceous-age quartz diorite (qdi) that is located throughout the entirety of the Project area, further paleontological mitigation is not recommended.



Figure 1. Project Location Map.



Figure 2. Project Overview Map.



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 the 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 applied 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 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 again 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 Resource 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, 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.

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.

The City of Perris paleontological sensitivity map (2005) indicates that the Project area is in Zone 3, which has low sensitivity California batholith granitics and tonalite.

5.0 METHODS

The paleontological analysis of existing data included a geologic map review and a literature search. An institutional records search was requested from the WSC. The goal of this report is to identify 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 construction. Paleontological sensitivity assignments were determined using the PFYC system (BLM, 2016) and best practices in mitigation paleontology (Murphey et al., 2019). Vincent Zhao, M.S., completed the background research and authored this report. Courtney Richards, M.S., performed the technical review of this report. GIS maps were prepared by Robert Fritz, B.S.



Copies of this report will be submitted to be the City and Pacific Communities. Paleo Solutions will retain an archival copy of all project information including maps and other data.

5.1 Analysis of Existing Data

Paleo Solutions reviewed geologic mapping of the Project area and half-mile buffer by T.W. Dibblee and J.A. Minch (2003). The literature reviewed included published and unpublished scientific papers. A paleontological museum record search was requested from the Western Science Center (WSC), and was completed by the Collections Manager, Darla Radford (Appendix A).

5.2 Criteria for Evaluating Paleontological Potential

The PFYC system was developed by the BLM (BLM, 2016). Because of its demonstrated usefulness as a resource management tool, the PFYC has been utilized for many years for projects across the country, regardless of land ownership. It is a predictive resource management tool that classifies geologic units on their likelihood to contain paleontological resources on a scale of 1 (very low potential) to 5 (very high potential). This system is intended to aid in predicting, assessing, and mitigating paleontological resources. The PFYC ranking system is summarized in Table 2, along with the Riverside County guidelines paleontological sensitivity rankings, which are included for a comparison of the two systems.

Table 2. Summary of Comparison between PFYC System and Riverside County Paleontological Sensitivity Rankings.

BLM PFYC Designation	*Riverside County Paleontological Sensitivity	Assignment Criteria Guidelines and Management Summary (PFYC System)
1 = Very Low Potential	Low Sensitivity	Geologic units are not likely to contain recognizable paleontological resources.
		Units are igneous or metamorphic, excluding air-fall and reworked volcanic ash units.
		Units are Precambrian in age.
		Management concern is usually negligible, and impact mitigation is unnecessary except in rare or isolated circumstances.
2 = Low Potential	High B Sensitivity	Geologic units are not likely to contain paleontological resources.
		Field surveys have verified that significant paleontological resources are not present or are very rare.
		Units are generally younger than 10,000 years before present.
		Recent eolian deposits.
		Sediments exhibit significant physical and chemical changes (i.e., diagenetic alteration) that make fossil preservation unlikely.
		Management concern is generally low, and impact mitigation is usually unnecessary except in occasional or isolated circumstances.
3 = Moderate Potential	High A Sensitivity	Sedimentary geologic units where fossil content varies in significance, abundance, and predictable occurrence.
		Marine in origin with sporadic known occurrences of paleontological resources.
		Paleontological resources may occur intermittently, but these occurrences are widely scattered.
		The potential for authorized land use to impact a significant paleontological resource is known to be low-to-moderate.
		Management concerns are moderate. Management options could include record searches, pre-disturbance surveys, monitoring, mitigation, or avoidance. Opportunities may exist for hobby collecting. Surface-disturbing activities may require sufficient assessment to determine whether significant paleontological resources occur in the area of a proposed action and whether the action could affect the paleontological resources.



BLM PFYC Designation	*Riverside County Paleontological Sensitivity	Assignment Criteria Guidelines and Management Summary (PFYC System)
4 = High Potential	High A Sensitivity	Geologic units that are known to contain a high occurrence of paleontological resources.
		Significant paleontological resources have been documented but may vary in occurrence and predictability.
		Surface-disturbing activities may adversely affect paleontological resources.
		Rare or uncommon fossils, including nonvertebrate (such as soft body preservation) or unusual plant fossils, may be present.
		Illegal collecting activities may impact some areas.
		Management concern is moderate to high depending on the proposed action. A field survey by a qualified paleontologist is often needed to assess local conditions. On-site monitoring or spot-checking may be necessary during land disturbing activities. Avoidance of known paleontological resources may be necessary.
5 = Very High Potential	High A Sensitivity	Highly fossiliferous geologic units that consistently and predictably produce significant paleontological resources.
		Significant paleontological resources have been documented and occur consistently.
		Paleontological resources are highly susceptible to adverse impacts from surface disturbing activities.
		Unit is frequently the focus of illegal collecting activities.
		Management concern is high to very high. A field survey by a qualified paleontologist is almost always needed and on-site monitoring may be necessary during land use activities. Avoidance or resource preservation through controlled access, designation of areas of avoidance, or special management designations should be considered.
U = Unknown Potential	Undetermined Sensitivity	Geologic units that cannot receive an informed PFYC assignment.
		Geological units may exhibit features or preservational conditions that suggest significant paleontological resources could be present, but little information about the actual paleontological resources of the unit or area is unknown.
		Geologic units represented on a map are based on lithologic character or basis of origin, but have not been studied in detail.
		Scientific literature does not exist or does not reveal the nature of paleontological resources.
		Reports of paleontological resources are anecdotal or have not been verified.
		Area or geologic unit is poorly or under-studied.
		BLM staff has not yet been able to assess the nature of the geologic unit.
		Until a provisional assignment is made, geologic units with unknown potential have medium to high management concerns. Field surveys are normally necessary, especially prior to authorizing a ground-disturbing activity.

*Riverside County guidelines paleontological sensitivity rankings comparison to BLM PFYC rankings. This comparison does not denote an absolute correlation between the rankings.

**Sensitivity may increase with depth.



6.0 ANALYSIS OF EXISTING DATA

The Project area is located within the Peninsular Ranges Geomorphic Province (Harden, 2004). A geomorphic province is a geographical area of distinct landscape character, with related geophysical features, including relief, landforms, orientations of valleys and mountains, type of vegetation, and other geomorphic attributes (Harden, 2004). Attributes of the Peninsular Ranges Geomorphic Province consist of northwest-southeast-trending, fault-bounded discrete blocks, with mountain ranges, broad intervening valleys, and low-lying coast plains (Yerkes et al., 1965; Norris and Webb, 1990). Within California, the province extends approximately 125 miles from the Transverse Ranges and the Los Angeles Basin south to the Mexican border, extending southward approximately 775 miles toward to the tip of Baja California, and it is bound on the east by the right-slip San Andreas Fault Zone, the Eastern Transverse Ranges, and the Colorado Desert (Norris and Webb, 1990; Hall, 2007). Most of the geomorphic province is located offshore and includes the Santa Catalina and San Clemente islands (Hall, 2007). Topographically on the mainland, the Peninsular Ranges are steeper on the eastern slopes, where they are truncated by normal faults like the Elsinore or San Jacinto faults, and are more gradual on their western slopes toward the Pacific Ocean, similar to the topography of the Sierra Nevada (Norris and Webb, 1990; Prothero, 2017). Within the province, the highest elevations are found in the eastern-most block, with San Jacinto Peak reaching approximately 10,805 feet in elevation and various summits of the Santa Rosa Mountains averaging 6,000 feet in elevation (Norris and Webb, 1990). Westward toward the coast, elevations are less dramatic.

The pre-Phanerozoic history of the Peninsular Ranges is not represented within the province, and few locations contain rocks older than the Mesozoic (Norris and Webb, 1990), and sparse Paleozoic strata within the Peninsular Ranges is in stark contrast to the Sierra Nevada, which contains thick sections of Paleozoic rocks. The oldest pre-batholithic rocks in the Peninsular Ranges are Paleozoic in age and consist of metamorphosed remnants of a stable carbonate platform (now marble and schist) on a passive continental margin that existed along western North America at that time (Harden, 2004). Moreover, late Paleozoic limestone is present near Riverside (Norris and Webb, 1990), further supporting the presence of a shallow marine environment prior to the Mesozoic. Most of the geologic history of the Peninsular Ranges is represented by Mesozoic-age plutonic rocks and Cenozoic-age uplift, erosion, and sedimentary deposition in basins (Sylvester and O'Black Gans, 2016).

During the Triassic and Jurassic, marine sedimentary rocks composed of sandstone and shale were deposited in turbidite sequences along a submarine fan (Harden, 2004). Throughout the Jurassic and Cretaceous, the continental margin became active as the Farallon Plate, which ferried old island arcs, subducted beneath the North American Plate, creating a large pluton complex (i.e., batholith) beneath the surface that rose into the upper crust and intruded into Paleozoic and Mesozoic sedimentary and volcanic rocks (Harden, 2004; Sylvester and O'Black Gans, 2016). The large complex of batholiths resulted in the formation of the San Marcos Gabbro, Bonsall Tonalite, and Woodson Mountain Granodiorite among others in the Peninsular Ranges (Norris and Webb, 1990). Contact metamorphism from the plutons metamorphosed older sedimentary and volcanic rocks into marble, slate, schist, quartzite, gneiss, and metavolcanic rocks (Sylvester and O'Black Gans, 2016). The timing of the Peninsular Ranges Batholith is similar to that of the Sierra Nevada, ranging in age from 70 to 120 million years ago (Norris and Webb, 1990). The batholith complex originally formed south of the Mexican border but has since moved along the right-slip San Andreas Fault over the past 40 million years (Prothero, 2017). During the Late Cretaceous through the Paleogene, the Peninsular Ranges Batholith was uplifted and eroded into a broad plain, where fluvial systems transported sediments westward across the plain and onto the seafloor (Sylvester and O'Black Gans, 2016). Sedimentary rocks were deposited in a forearc basin by turbidity currents representing both deep and shallow marine and nonmarine environments, including the marine Williams, Ladd, and Rosario formations and the nonmarine Trabuco Formation, with extensive exposures in the western flank of the Santa Ana Mountains (Norris and Webb, 1990; Harden, 2004).



Throughout the Cenozoic, thick sections of sedimentary rocks were deposited in large basins, such as the Los Angeles, Imperial, and offshore basins, due to erosion (Norris and Webb, 1990). Most exposures of early Tertiary strata are restricted to the coastal margins, with a maximum thickness of approximately 4,500 feet in the Santa Ana Mountains (Norris and Webb, 1990). Most Cenozoic strata represent nonmarine depositional environments; however, approximately 600 feet of marine sediments are present near San Diego (Norris and Webb, 1990). Thick nonmarine deposits formed during the Oligocene, followed by a pause of sedimentation at the end of the Oligocene due to tectonic uplift (Norris and Webb, 1990). By the beginning of the Miocene, most of the Farallon Plate had been subducted beneath the North American Plate, and the Pacific Plate came into contact with the North American Plate (Sylvester and O'Black Gans, 2016). As the Pacific Plate slid northwest along the North American Plate, a section of forearc basin was rafted, rotated clockwise approximately 110 degrees, and carried north approximately 130 miles; while carried northward, the forearc basin was compressed and formed the Transverse Ranges located immediately north of the Peninsular Ranges (Sylvester and O'Black Gans, 2016). Additionally, movement along the San Jacinto Fault Zone, which bifurcates from the San Andreas Fault Zone in an area north of the Peninsular Ranges, occurred in the middle to late Tertiary through the Quaternary, with a right-slip and vertical motion resulting in approximately 18 miles of lateral displacement (Norris and Webb, 1990). During this time, thick accumulations of nonmarine sediments filled basins, as well as coastal and offshore areas, in the northern Peninsular Ranges during the Pliocene, with up to 7,000-foot thick sections of siltstone, sandstone, and conglomerate in the Mount Eden and San Timoteo canyons (Norris and Webb, 1990). Despite widespread volcanism elsewhere in southern California during the late Tertiary, little volcanism occurred within the Peninsular Ranges during this time (Norris and Webb, 1990). Throughout the Quaternary, fluvial and lacustrine sediments continued to fill basins within the province, with restricted volcanic and marine terrace deposits along the coast (Norris and Webb, 1990).

The Project area is situated in the Perris Block, which is a fault-bounded block comprising part of the northern Peninsular Ranges. The block lies between the Los Angeles Basin and the San Jacinto Mountains and is bounded by the San Jacinto and Elsinore-Chino Fault zones and the Cucamonga Fault (Woodford et al., 1971). During the Pliocene and Pleistocene, deep isostatic flow caused the Perris Block to oscillate vertically as the Los Angeles Basin sank and the San Jacinto Mountains rose (Woodford et al., 1971). The oscillations resulted in deposition of deep valley continental sediments as well as volcanic rocks, which were emplaced on top of the dominantly crystalline basement, and multiple erosional surfaces (Woodford et al., 1971).

6.1 Geologic Map and Literature Review

Geologic mapping by T.W. Dibblee and J.A. Minch (2003) indicates that the Project area is entirely underlain by Cretaceous-age quartz diorite (qdi) (Figure 3). Holocene-age alluvial sand and clay of valley areas (Qa) is also mapped within the Project vicinity, within a half mile buffer (Dibblee and Minch, 2003; Figure 3). However, since these sediments are not located at the surface within the Project area boundaries and will also not be encountered within the Project area beneath the Cretaceous-age quartz diorite (qdi) due to the stratigraphic relationship of the two geologic units, the Holocene-age alluvial sand and clay of valley areas (Qa) is not discussed in this report.

6.1.1 Quartz Diorite (qdi) (Cretaceous)

Cretaceous-age quartz diorite (qdi) is mapped at the surface of the entire Project area (Dibblee and Minch, 2003; Figure 3). Plutonic rocks formed deep within the Earth's surface at high temperatures and high pressures and lack fossil resources. Cretaceous-age quartz diorite (qdi) is therefore considered to have very low paleontological potential (PFYC 1) using BLM (2016) guidelines.

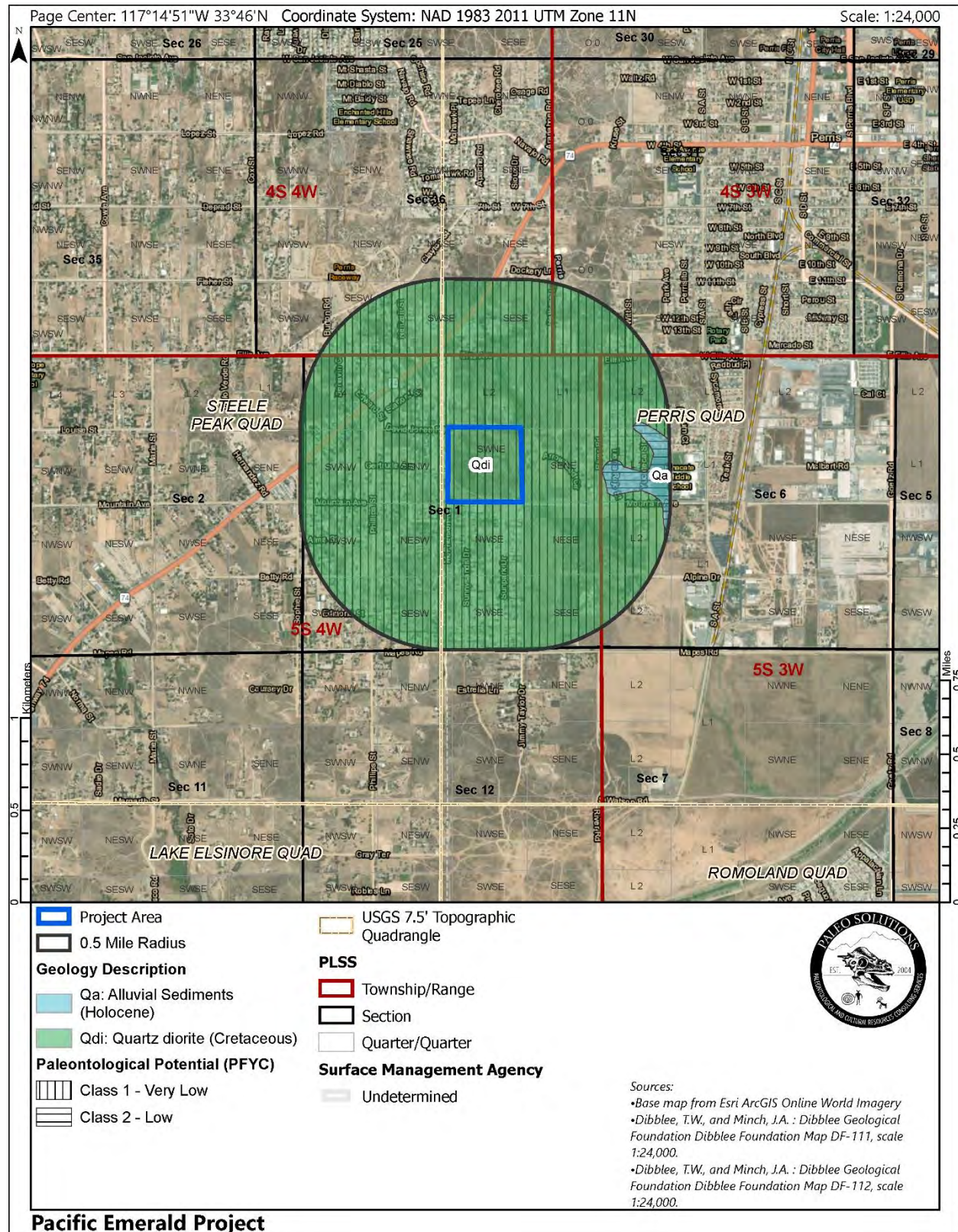


Figure 3. Project Geologic Map.



6.2 Paleontological Record Search Results

Paleo Solutions requested a paleontological search of records maintained by the WSC. The museum responded on January 5, 2021 that they have no recorded fossil localities from within the Project area or a one-mile radius and that it is unlikely that fossil material will be present due to the geologic makeup of the sediment underlying the Project area (Appendix A).

7.0 IMPACT 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.

Plutonic rocks, such as the quartz diorite (qdi) of the Project area, formed deep within the Earth's surface at high temperatures and high pressures and lack fossil resources. Therefore, Project construction and operation are not anticipated to result in any direct, indirect, or cumulative impacts on paleontological resources.

8.0 CONCLUSIONS AND RECOMMENDATIONS

Due to the very low paleontological potential (PFYC 1) of the Cretaceous-age quartz diorite (qdi) that is located throughout the entirety of the Project area at both the surface and at depth, further paleontological mitigation is not recommended.



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APPENDIX A

Museum Paleontological Record Search Results



Paleo Solutions
Robert Fritz
911 S. Primrose Ave., Unit N
Monrovia, CA 91016

January 5, 2021

Dear Mr. Fritz,

This letter presents the results of a record search conducted for the Pacific Communities: Pacific Emerald Residential Project in Riverside County, California. The project site is located north of Mountain Avenue, south of David Jones Road, and east of McPherson Road at the intersection in Township 5 South, Range 4 West in Section 1 on the Perris CA USGS 7.5 minute quadrangle.

The geologic units underlying this project are mapped entirely as Val Verde tonalite deposits dating from the Cretaceous period (Morton, 1996). A map showing geologic mapping for the area has been included for your reference. Cretaceous tonalite units are considered to be of low paleontological sensitivity and are not known to produce fossil material within the region. The Western Science Center does not have localities within the project area or within a one mile radius.

Given the geologic makeup of sediments underlying the project area, it is unlikely that fossil material will be present. If you have any questions or would like further information, please feel free to contact me at dradford@westerncentermuseum.org

Sincerely,

A handwritten signature in black ink, appearing to read 'Darla Radford', written in a cursive style.

Darla Radford
Collections Manager

**PHASE I ENVIRONMENTAL SITE ASSESSMENT
TRACT NO. 31304 (FUTURE TENTATIVE TRACT MAP 37904)
ASSESSOR'S PARCELS NUMBERS (APNS) 342-080-039, -040, -041, AND -042
NORTHEAST CORNER OF MCPHERSON ROAD AND MOUNTAIN AVENUE
PERRIS, RIVERSIDE COUNTY, CALIFORNIA**

December 10, 2020
Project No. 2359-CR

Prepared For:

**PACIFIC COMMUNITIES BUILDER, INC.
2251 DOUGLAS BOULEVARD #110
ROSEVILLE, CALIFORNIA 95661**





GeoTek, Inc.
1548 North Maple Street, Corona, California 92880
(951) 710-1160 Office (951) 710-1167 Fax www.geotekusa.com

December 10, 2020
Project No. 2359-CR

Pacific Communities Builder, Inc.
1000 Dove Street, Suite 300
Irvine, California 92660

Attention: Mr. Anthony Arnest

Subject: Phase I Environmental Site Assessment
Tract 31304 (Future Tentative Tract Map 37904)
Assessor's Parcels Numbers (APNS) 342-080-039, -040, -041, and -042
Northeast Corner of McPherson Road and Mountain Avenue
Perris, Riverside County, California

Dear Mr. Arnest:

GEOTEK, INC. (GEOTEK) is pleased to present this Phase I Environmental Site Assessment for the above-referenced subject Site. Services were conducted in substantial conformance with the scope and limitations of the American Society of Testing and Materials E 1527-13, "*Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process*," which is approved to meet the requirements of the federal All Appropriate Inquiries (AAI) standards as set forth in the Code of Federal Regulations, Title 40, Section 312 (40 CFR 312), and GEOTEK's Proposal No. P-1200420-CR, dated December 1, 2020.

This Phase I Environmental Site Assessment has not revealed evidence of a recognized environmental condition or concern at the subject Site. No further investigation is required at this time.

We appreciate this opportunity to be of service. If you have any questions, or if we can be of further service, please contact us at (951) 710-1160.

Sincerely,
GEOTEK, INC.



Edward H. LaMont
Principal Geologist, CEG 1892
Expires 07/31/2020

J. Michael Batten, CEM, REPA
Environmental Services Manager
Registered Environmental Property
Assessor No. 113162
Expires 06/15/2021



Kyle R. McHargue
Project Geologist, PG 9790
Expires 02/28/2022

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I.0 EXECUTIVE SUMMARY

GEO TEK, INC. (GEO TEK) has performed a Phase I Environmental Site Assessment (ESA) for the subject property: Tract No. 31304 (the “Site”), located in the city of Perris, Riverside County, California. Our services were conducted in substantial conformance with the scope and limitations of the American Society of Testing and Materials (ASTM) E 1527-13, “*Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process*”, which is approved to meet the requirements of the federal All Appropriate Inquiries (AAI) standards as set forth in the Code of Federal Regulations, Title 40, Section 312 (40 CFR 312), and GEO TEK Proposal No. P-1200420-CR, dated December 1, 2020. Any additions or deletions from our scope of services are discussed in the appropriate sections of this assessment.

A representative of GEO TEK conducted a Site reconnaissance on December 4, 2020. The weather was warm and the sky was clear. The square shaped Site is currently comprised of four parcels of land (identified as Riverside County Assessor’s Parcels Numbers [APNS] 342-080-039, -040, -041, and -042), encompassing an area of about 40.4 acres. The Site can generally be accessed from Mountain Avenue to the south.

The Site is currently vacant land. There is a light to moderate growth of dry weeds and brush and numerous granitic boulders (corestones) throughout the site. Visual evidence of hazardous substances and wastes was not observed during our Site reconnaissance. Visual indication of spills, leaks and stains was not observed. No pungent or acrid odors were observed emanating from the Site.

The site is bounded by Mountain Avenue (a paved roadway) and scattered residences to the south; McPherson Road (a dirt roadway) and dispersed residences to the west; David Jones Road (a dirt roadway) with scattered residences to the north; and vacant land with scattered residences to the east.

Based on readily available historic information, the Site has been vacant land from at least 1938 to the present. An east-west trending dirt roadway first appears to transect the central portion of the Site in the 1974 aerial photograph. Additional dirt roadways appear throughout the Site in the 1985, 1989, 1997 and 2002 aerial photographs. There are no significant changes from 2006 to the present. The surrounding area has been vacant land with sporadic residences to the west and north from at least 1938 to 1967. Increased residential development in the surrounding areas is visible from at least 1974 to 2002. There are no significant changes in the surrounding areas from 2006 to the present.



The Site does not appear on the database report obtained for this assessment. None of the adjacent properties appears on the database report. There are four (4) facilities listed on the database report within the various search distances specified by ASTM E 1527-13. Due to their status listings, distances and/or locations (hydro-geologically down), these facilities do not represent an environmental concern to the Site.

This Phase I Environmental Site Assessment has not revealed evidence of a recognized environmental condition or concern at the subject Site. No further investigation is required at this time.

This executive summary does not contain all the information that is found in the full report. The report should be read in its entirety to obtain a more complete understanding of the information provided and to aid in any decisions made or actions taken based on this information.

2.0 INTRODUCTION

GEO TEK, INC. (GEO TEK) has performed a Phase I Environmental Site Assessment (ESA) for Tract No. 31304 (the “Site”), located in the city of Perris, Riverside County, California.

2.1 PURPOSE

The purpose of this Phase I ESA was to identify and evaluate actual and potential environmental conditions involving the subject Site. It was not the purpose of this assessment to determine the degree or extent of contamination, if any, but rather the potential for contamination.

2.2 SCOPE OF WORK

The Phase I ESA is a general characterization of environmental concerns based on reasonably ascertainable information and observations. GEO TEK performed the Phase I ESA in substantial accordance with ASTM E 1527-13. The following services were provided for the assessment:

- A reconnaissance of the Site and surrounding properties to visually assess current utilization and indications of potential surface contamination. This was accomplished by driving the Site boundaries, and then traversing the Site until the entire Site had been looked over.
- A reconnaissance of the surrounding area for approximately one-half mile was conducted, without entering the properties, making observations concerning property uses, conditions, and housekeeping.
- A review of the geologic and hydro-geologic settings was conducted using reasonably ascertainable public records and documents.
- An environmental database report was obtained from a data service provider. This database report compiles and locates documented “hazardous waste” facilities within specific minimum search distances as defined by ASTM E 1527-13. If necessary, additional information on identified facilities was gathered by a file review at the appropriate federal, state, local, and/or tribal regulatory agency.

- A review of reasonably ascertainable historical records (including aerial photographs, topographic maps, building records and city directories) was conducted to assess the historical land utilization and indications of potential contamination or sources of contamination for the Site.
- This report was prepared, which relates the findings of this study and presents our conclusions and recommendations.

Specific items not included in this Scope of Services are soil analysis, water analysis, asbestos containing materials analysis, radon analysis, lead-based paint analysis, lead in drinking water, wetlands, regulatory compliance, cultural and historic resources, industrial hygiene, health and safety, ecological resources, endangered species, indoor air quality, vapor intrusion testing, high voltage power lines, and other items not within the scope of ASTM E 1527-13.

2.3 SIGNIFICANT ASSUMPTIONS

Specific assumptions by GEOTEK for this assessment include:

- GEOTEK had permission to access the Site grounds;
- The client has provided GEOTEK with available geotechnical or environmental reports for the Site;
- The client has provided GEOTEK with known current or historic uses of hazardous materials at the Site, or with other specialized knowledge of the environmental history of the Site and surrounding area;
- The client is not the sole and absolute source of information;
- Seller has provided proper and complete access to their knowledge, both written and verbal, and GEOTEK can rely on the information.

2.4 LIMITATIONS AND EXCEPTIONS

GEOTEK conducted a Phase I Environmental Site Assessment in substantial accordance with ASTM E 1527-13 and as authorized by Pacific Communities Builder, Inc. This study does not include sampling of soil, groundwater and/or materials on-site for environmental testing. This report is

intended for the use of Pacific Communities Builder, Inc. The contents should not be relied upon by any party other than the aforementioned without the express written consent of GEOTEK.

The findings, conclusions, and recommendations made in this report are based on the information that was made available to GEOTEK, in most instances from public records. The information is relevant to the date of our site work and should not be relied on to represent conditions at any later date. The opinions and conclusions expressed herein are based on information obtained during our assessment and on our experience and current standards of technical practice. GEOTEK makes no other warranties, either express or implied, concerning the completeness of the data furnished to us. GEOTEK cannot be responsible for conditions or consequences arising from relevant facts that were concealed, withheld, or not fully disclosed at the time our assessment was undertaken. GEOTEK is not responsible, nor liable for work, testing or recommendations performed or provided by others. This Phase I Environmental Site Assessment is not and should not be construed as a warranty or guarantee about the presence or absence of environmental hazards or contaminants, which may affect the subject Site. Facts, conditions, and acceptable risk factors change with time; accordingly, this report should be viewed within this context.

Specific limitations to the scope of ASTM E 1527-13 due to contract limitations, availability of resources, and/or encountered Site conditions are discussed in the appropriate section(s) of this report.

2.5 SPECIAL TERMS AND CONDITIONS

This assessment report is presented as fulfilling the standard requirements of most financial institutions, governmental regulatory agencies, ASTM, and generally accepted industry standards and practices. Please refer to GEOTEK Proposal No. P-1200420-CR for complete terms and conditions for this assessment.

2.6 RELIANCE

This assessment has been prepared for the exclusive use and may be relied upon by Pacific Communities Builder, Inc. and the successors and assignees. Third party reliance letters may be issued upon request and upon the payment of the, then current, fee for such letters. All third parties relying on this report, by such reliance, agree to be bound by the General Conditions and Limitations agreed to Pacific Communities Builder, Inc. No reliance by any party is permitted without such agreement, regardless of the content of the reliance letter itself.

3.0 DESCRIPTION OF SITE AND SURROUNDING AREA

The objective of describing the Site and surrounding area is to document current conditions as observed and to obtain information which would indicate the likelihood of a recognized environmental condition in connection with the Site. A representative of GEOTEK conducted a Site reconnaissance on December 4, 2020. The weather was warm and the sky was mostly clear. The Site can generally be accessed from Jefferson Street to the east of the Site.

3.1 SITE LOCATION AND LEGAL DESCRIPTION

The Site is located west of Jefferson Street in the city of Perris, Riverside County, California. According to the U.S. Geological Survey (USGS) Perris Quadrangle topographic map sheet (7.5-minute series), the Site is located in the northeast portion of Section 1, Township 5 South, Range 4 West, San Bernardino Baseline and Meridian (see Figure 1 in Appendix A and documents in Appendix B). The square shaped Site is currently comprised of four parcels of land (identified as Riverside County Assessor's Parcels Numbers [APNS] 342-080-039, -040, -041, and -042), encompassing an area of about 40.4 acres. The Site can generally be accessed from Mountain Avenue to the south. A Property Tax Map Report is also included in Appendix B.

3.2 SITE AND VICINITY GENERAL CHARACTERISTICS

The Site is currently vacant land. The area largely characterized by residential development and vacant land.

3.3 CURRENT PROPERTY USE

The Site is currently vacant land.

3.4 SITE IMPROVEMENTS

The Site is currently vacant land. Photographs of the Site are included in Appendix C.

3.4.1 HAZARDOUS SUBSTANCES

Visual evidence of hazardous substances or wastes was not observed during our Site reconnaissance. No pungent or acrid odors were observed emanating from the Site.

3.4.2 STORAGE TANKS

GEO TEK did not observe evidence of underground ground storage tanks (such as vent pipes, fill pipes, regular-shaped depressions, etc.) on the Site.

3.4.3 POLY-CHLORINATED BIPHENYLS (PCBs)

GEO TEK did not observe suspect equipment (transformers, elevators, hydraulic lift mechanisms, trash compactors, etc.) which may contain PCBs on the Site.

3.4.4 CONTROLLED SUBSTANCES

GEO TEK consulted the U.S. Drug Enforcement Agency (DEA) website to cross-check the Site address against published facilities subject to DEA enforcement. The Site did not appear on the list of published facilities, based on cross-streets. A list of the published facilities has been included in Appendix B.

GEO TEK did not observe evidence of illegal or controlled substances being used or manufactured at the Site.

3.4.5 INDICATIONS OF SOLID WASTE DISPOSAL

Waste disposal for the Site and Site area is provided by CR&R Waste Services. There is some scattered household debris and trash throughout the Site (See Appendix C). These materials are considered *di minimis* in nature and do not represent a recognized environmental condition or concern to the Site. This household debris and trash should be removed prior to earthwork.

3.4.6 UTILITY SUPPLY

Water and sewer services for the Site is provided by Eastern Municipal Water District. Electric service for the Site and area is provided by Southern California Edison. Natural gas is provided for the Site and area by the Southern California Gas Company.

3.4.7 DRAINAGE

Natural drainage at the Site is generally interpreted to be toward the southeast conforming to the natural topography in the area. Standing water was not observed on the Site during our reconnaissance.

3.4.8 OTHER CONDITIONS OF CONCERN

No visual indication of dry wells, cesspools, or other conditions of concern that would indicate a recognized environmental condition were observed during the Site reconnaissance.

3.4.9 INTERVIEWS

GEOTEK interviewed the following individuals while performing this assessment:

- Mr. Anthony Arnest (a representative of the future Site owner) completed a User Questionnaire.

Information from this interview is incorporated into the appropriate sections of this report.

3.5 CURRENT ADJOINING PROPERTY USE

The site is bounded by Mountain Avenue (a paved roadway) and scattered residences to the south; McPherson Road (a dirt roadway) and dispersed residences to the west; David Jones Road (a dirt roadway) with scattered residences to the north; and vacant land with scattered residences to the east.

4.0 CLIENT PROVIDED INFORMATION

As a form of interview, a representative of the current Site owner completed a “User Questionnaire” for the Site in accordance with ASTM E 1527-13. A copy of the completed questionnaire is included in Appendix B.

4.1 ENVIRONMENTAL CLEAN UP LIENS

Mr. Anthony Arnest is not aware of any environmental clean-up liens at the Site.

4.2 ACTIVITY AND USE LIMITATIONS

Mr. Anthony Arnest is not aware of any activity use limitations at the Site.

4.3 SPECIALIZED KNOWLEDGE

Mr. Anthony Arnest is not aware of any specialized knowledge of the Site or nearby properties.

4.4 PURCHASE PRICE

Mr. Anthony Arnest states that the purchase price being paid for the Site reasonably reflects the fair market value of the property. Me Arnest additionally states that “Nelson has owned this property for many years.”

4.5 COMMONLY KNOWN INFORMATION

Mr. Anthony Arnest states that she is not aware of commonly known or reasonably ascertainable information for the Site.

4.6 OBVIOUS INDICATORS OF CONTAMINATION

Mr. Anthony Arnest states that she is not aware of obvious indicators of a likely environmental impact at the Site.

4.7 OWNER, PROPERTY MANAGER AND OCCUPANT INFORMATION

At the time of this reporting, it is unknown owns and manages the Site. The Site is currently vacant land with no occupants.

4.8 REASON FOR PERFORMING PHASE I ESA

This Phase I ESA was performed at the request of Pacific Communities Builder, Inc. as part of their due diligence for possible future improvements on the Site and in order to qualify for one of the Landowner Liability Protections offered by the Small Business Liability Relief and Brownfields Revitalization Act of 2002.

4.9 OTHER USER PROVIDED INFORMATION

GEO TEK was provided with a previous Phase I Environmental Site Assessment report for the Site by Pacific Communities Builder, Inc. The report prepared by CERES Technologies, Inc. (CERES) is titled, "Phase I Environmental Site Assessment, Undeveloped Property, Northeastern Corner of Mountain Avenue and McPherson Road, APNs 342-080-039, 342-080-040, 342-080-041, 342-080-042, Perris, California" and dated, October 20, 2003. CERES states that they performed the Phase I ESA in conformance with the scope and limitations of ASTM E1527-00. CERES states, "this assessment has revealed no evidence of recognized environmental conditions in connection with the Property." CERES did not recommend additional assessment of the Site. Additional pertinent information has been included in this report. GEO TEK concurs with the conclusions of this report.

5.0 PROPERTY PHYSICAL SETTING

Surface and subsurface environments are of interest because they control the movement of water-borne contaminants, which could be transported to and from the subject Site. GEOTEK reviewed information regarding the physical setting of the subject Site and immediately surrounding area.

5.1 REGIONAL GEOLOGY

The subject property is situated in the Peninsular Ranges geomorphic province. The Peninsular Ranges province is one of the largest geomorphic units in western North America. It extends from the point of contact with the Transverse Ranges geomorphic province, southerly to the tip of Baja California. This province varies in width from about 30 to 100 miles. It is bounded on the west by the Pacific Ocean, on the south by the Gulf of California and on the east by the Colorado Desert Province.

The Peninsular Ranges are essentially a series of northwest-southeast oriented fault blocks. Several major fault zones are found in this province. The Elsinore Fault zone and the San Jacinto Fault zone trend northwest-southeast and are mostly found near the middle of the province. The San Andreas Fault zone borders the northeasterly margin of the province, and the San Jacinto fault borders the province adjacent the Colorado Desert province.

5.2 LOCAL GEOLOGIC SETTING AND TOPOGRAPHY

The Site and surrounding areas are located in an area geologically mapped by others to be underlain by tonalite bedrock (Dibblee, T.W. and Minch, J.A., 2003).

Additional data regarding soil survey information for the Site and Site area are also included in Appendix B.

The Site and Site area can be considered as having gently sloping terrain. Based on the USGS topographic map for the area and other documents reviewed for this report, the elevation of the subject Site ranges from approximately 1,572 feet above mean sea level (amsl) located in the northwestern edge of the Site to 1,495 feet amsl towards the southeastern corner.

5.3 VICINITY SURFACE DRAINAGE

Natural drainage at the Site is interpreted to be dominantly directed toward the southeast, conforming to the natural topography in the area.

According to the Federal Emergency Management Agency (FEMA), the Site is not located in a 100-year or 500-year flood zone (Community Panel Nos. 06065C-I440H, dated August 18, 2014).

5.4 HYDROGEOLOGY

According to a review of historical groundwater data (California Department of Water Resources and California State Water Resources Control Board groundwater well data [<http://wdl.water.ca.gov> and <http://geotracker.waterboards.ca.gov>]) and in-house information, depth to groundwater is approximately 40 feet to 50 feet below ground surface (bgs) in the general Site area.

6.0 ENVIRONMENTAL REGULATORY RECORDS REVIEW

The records review is conducted to help identify known recognized environmental conditions at the Site and/or on adjacent or nearby properties which may have impacted the subject Site.

6.1 ENVIRONMENTAL DATABASE RECORDS SEARCH

GEOTEK obtained and reviewed an environmental database report of the federal and state environmental records specified by ASTM E 1527-13. The database report was provided by Environmental Data Resources, Inc. (EDR) of Shelton, Connecticut. Additionally, orphan or un-mappable sites listed by EDR were reviewed for the approximate minimum search distances noted and included in our discussion, if applicable. Refer to Appendix E for a copy of the database report.

ENVIRONMENTAL DATABASE	MINIMUM SEARCH DISTANCE	SITE	ADJACENT	TOTAL LISTED
U.S. Environmental Protection Agency (EPA) - National Priorities List (NPL), including delisted NPL	1.0 Mile	No	0	0
EPA – Superfund Enterprise Management System (SEMS), including archived sites (formerly CERCLIS)	0.5 Mile	No	0	0
EPA – Resource Conservation and Recovery Act (RCRA), Corrective Action Facilities (CORRACTS)	1.0 Mile	No	0	1
EPA – RCRA, Transportation, Storage, and Disposal facilities (TSD)	0.5 Mile	No	0	0
EPA - RCRA Generators	Site and Adjacent	No	0	0
EPA – Emergency Response Notification System (ERNS)	Site	No	N/A	0
Federal institutional control/engineering control registries	Site	No	0	0
California Environmental Protection Agency (CEPA) – State Response Sites (Response, formerly Annual Work Plan and Bond Expenditure Plan)	1.0 Mile	No	0	1

ENVIRONMENTAL DATABASE	MINIMUM SEARCH DISTANCE	SITE	ADJACENT	TOTAL LISTED
CEPA – EnviroStor Database (formerly CALSITES)	0.5 Mile	No	0	0
CEPA – CHMIRS - California Hazardous Materials Information Reporting System	Site	No	0	0
CEPA - Solid Waste Fill/Landfill (SWF/LF), Solid Waste Assessment Test (SWAT)/Waste Management Unit Database System (WMUDS) and Recycling Facilities (SWRCY)	0.5 Mile	No	0	0
CEPA – Leaking Underground Storage Tanks (LUST)	0.5 Mile	No	0	0
CEPA – Underground Storage Tanks (UST), including historic USTs	Site and Adjacent	No	0	0
CEPA – Spills, Leaks, Investigations & Cleanup Cost Recovery Listing (SLIC)	0.5 Mile	No	0	0
State institutional control/engineering control registries	Site	No	N/A	0
Local and/or Tribal databases	Up To 1.0 Mile	No	0	0
Drycleaners	0.25 Mile	No	0	0
Other databases	Up to 1.0 Mile	No	0	1
Unmappable facilities	Up to 1.0 Mile	No	0	0

N/A – Not Applicable

6.2 DISCUSSION OF REGULATORY RECORDS

6.2.1 NATIONAL PRIORITY LIST

The National Priority List (NPL) is the EPA's list of confirmed or proposed Superfund sites. Our review of this data includes sites which have been delisted from the NPL. The NPL is searched for a 1.0-mile distance.

The Site does not appear on the NPL. There are no facilities on the NPL within 1.0-mile of the Site.

6.2.2 SUPERFUND ENTERPRISE MANAGEMENT SYSTEM

The Superfund Enterprise Management System (SEMS, formerly CERCLIS) is a compilation of sites that the EPA has investigated or is currently investigating for a release or threatened release



of hazardous substances. Our review of SEMS sites includes archive (no further remedial action planned) facilities. The SEMS list is searched for a 0.5-mile distance.

The Site does not appear on the SEMS list. There are no facilities on the SEMS list within 0.5-mile of the Site.

6.2.3 RESOURCE CONSERVATION AND RECOVERY ACT

The Resource Conservation and Recovery Act compile selective information on facilities which generate, transport, store, treat and or dispose of hazardous waste. RCRA facilities can be listed on one of three databases:

- *Corrective Action Facilities (CORRACTS)* are facilities undergoing corrective action. A corrective action order is issued pursuant to RCRA Section 3008(h) when there has been a release of hazardous waste or constituents into the environment from a RCRA facility. The CORRACTS list is searched for a 1.0-mile distance.

The Site does not appear on the CORRACTS list. There is one (1) facility on the CORRACTS list within 1.0-mile of the Site.

The facility is listed as Techalloy Western Inc., addressed as 2500 South A Street, located approximately 0.985 mile southeast of the Site. There is very little pertinent information provided on the CORRACTS list. However, the Land Disposal Site (LDS) listing describes the Site history as “Techalloy Company, Inc. operates a steel wire manufacturing facility in Perris, CA from 1966 to 1979. Techalloy discharged acidic hazardous wastes (containing high levels of chromium, nickel, fluoride, copper, and nitrate) to three lined surface impoundments at the site under Board Order No. 88-66 and Resolution No. 66-38. In October 1984, during removal of residual solid wastes from the impoundments, a liner puncture was discovered. Subsurface investigations (13 soil boreholes and 23 monitoring wells) performed in 1985 and 1986 concluded that groundwater contamination by total dissolved solids and heavy metals. Groundwater monitoring wells were installed in June 1990 to investigate the extent of contaminant plumes. The site closure plan was approved by the Regional Board, State Dept. of Toxic Substances Control (DTSC), and the USEPA. Installation of a low permeability closure cap over the three surface impoundments was completed in July 1989. The Regional Board issued Order No. 90-145 for post-closure groundwater monitoring at the site on October 9, 1990. Since this is a hazardous waste facility, DTSC is the lead agency for site closure and groundwater monitoring program for the site. In May 1996, DTSC issued a hazardous waste post-closure facility permit for this facility. The Regional Board is a responsible

agency (but a lead agency in enforcing the requirements in Order No. 90-145) and requests that a copy of the groundwater monitoring report be submitted as well. Techalloy is conducting post-closure groundwater monitoring and cap inspection and maintenance as directed by DTSC under a Post-closure Facility Permit (EnviroStor ID 80001433). The Regional Board rescinded Order No. 90-145 on December 6, 2013.” The status is now listed as “completed-case closed” with a date listed as December 06, 2013. Additional detailed records provided by GeoTracker have been included in Appendix B.

Due to the nature of the facility listing, facility status, and distances from the Site, it is our opinion that this facility does not represent a recognized environmental condition or environmental concern to the Site.

- *Transportation, Storage, and Disposal Facilities (TSD)* includes facilities that transport, store or dispose of hazardous waste and are not listed on the RCRA Generators list. The TSD is searched for a 0.5-mile distance.

The Site does not appear on the RCRA TSD list. There are no facilities on the RCRA TSD list within 0.5-mile of the Site.

- *Generators List* identifies and tracks hazardous waste from the point of generation to the point of disposal. The RCRA Generators database is a compilation by the EPA of reporting facilities that generate hazardous waste. The RCRA generators list is searched for the Site and adjacent properties.

The Site does not appear on the RCRA Generators list. None of the adjacent facilities appears on the RCRA generators list.

6.2.4 EMERGENCY RESPONSE NOTIFICATION SYSTEM

The Emergency Response Notification System (ERNS) is a national database used to collect information on reported releases of oil or hazardous substances. The ERNS list is searched for the Site. The Site does not appear on the ERNS list.

6.2.5 FEDERAL INSTITUTIONAL CONTROL/ENGINEERING CONTROL REGISTRIES

The EPA maintains three databases that list sites that have institutional and/or engineering controls in place as part of their operations. These databases are searched for a 0.5-mile distance.

The Site does not appear on these databases. There are no facilities that are listed on these databases within 0.5-mile of the Site.

6.2.6 STATE RESPONSE SITES

The State Response Sites (RESPONSE) records are the state equivalent to the federal National Priorities List (NPL) database. The RESPONSE is searched for a 1.0-mile distance.

The Site does not appear on the on the RESPONSE. There is one (1) RESPONSE facility listed within a 1.0-mile distance of the Site. The facility is a redundant listing of Techalloy Western facility previously discussed in section 6.2.3.

6.2.7 ENVIROSTOR DATABASE

The EnviroStor Database (EnviroStor, formerly CALSITES) records are the state equivalent to the federal SEMS database. EnviroStor is searched for a 0.5-mile distance.

The Site does not appear on the EnviroStor database. There are no EnviroStor facilities within 0.5 mile of the Site.

6.2.8 CALIFORNIA HAZARDOUS MATERIAL INCIDENT REPORT SYSTEM

The California Hazardous Material Incident Report Systems (CHMIRS) is a state database used to collect information on reported hazardous materials incidents (accidental leaks and spills). The CHMIRS list is searched for a 0.25-mile distance.

The Site does not appear on the CHMIRS list. There are no CHMIRS facilities located within 0.25 mile of the Site.

6.2.9 SOLID WASTE FACILITIES LIST

The Solid Waste Fill/Landfill (SWF/LF), Waste Management Unit Database System (WMUDS)/Solid Waste Assessment Test (SWAT), and Solid Waste Recycling Facilities (SWRCY) databases includes information pertaining to closed and open solid waste facilities operating in the state of California. The SWF/LF, WMUDS/SWAT and SWRCY databases are searched for a 0.5-mile distance.

The Site does not appear on the SWF/LF, WMUDS/SWAT or SWRCY lists.

There are no facilities on the SWF/LF, WMUDS/SWAT or SWRCY lists within 0.5-mile of the subject Site.

6.2.10 LEAKING UNDERGROUND STORAGE TANKS LIST

The California Leaking Underground Storage Tanks (LUST) list is a compilation of petroleum storage tank sites that have reported a release. The LUST list is searched for a 0.5-mile distance.

The Site did not appear on the LUST list. There are no LUST facilities within 0.5 mile of the Site.

6.2.11 UNDERGROUND STORAGE TANKS LIST

The California Underground Storage Tank (UST) list is a compilation of petroleum storage tank sites that are registered with the state of California. For the purpose of this assessment, we are including historic USTs and Statewide Environmental Evaluation and Planning System (SWEEPS) USTs in this section. The UST lists are searched for the Site and adjacent properties.

The Site did not appear on the UST lists.

None of the adjacent properties appears on the UST lists.

6.2.12 SPILLS, LEAKS, INVESTIGATION AND CLEANUP COST RECOVERY LISTING (SLIC)

The SLIC database is compiled by the CEPA California Regional Water Quality Control Board, Santa Ana Region. It is designed to protect and restore water quality from spills, leaks, and similar discharges.

The SLIC is searched for a 0.5-mile distance.

The Site does not appear on the SLIC. There is no SLIC facilities listed within a 0.5-mile distance of the Site.

6.2.13 STATE INSTITUTIONAL CONTROL/ENGINEERING CONTROL REGISTRIES

The State of California maintains institutional and engineering control databases or registries. This lists sites with engineering or institutional controls in place. Institutional controls include administrative measures intended to prevent exposure to contaminants remaining on site.

Engineering controls include various forms of caps, building foundations, liners, and treatment methods. The State Institutional Control/Engineering Control Registries is searched for the Site.

The subject Site does not appear on the State Institutional Control/Engineering Control Registries.

6.2.14 TRIBAL DATABASES

Tribal governments are under the jurisdiction of the EPA for environmental concerns. Currently, the EPA Region 9 publishes LUST and UST information for tribes in Arizona, California, Hawaii, Nevada, and the Pacific Territories. The LUST database is searched for 0.5 mile, and the UST database is searched for 0.25 mile.

The Site does not appear on the Tribal LUST or UST databases. No facilities were identified on the Tribal LUST or UST databases within 0.5 mile of the Site.

6.2.15 OTHER DATABASES

EDR compiles information from multiple federal, state, local, and proprietary databases. Most are secondary or tertiary or redundant. Facilities compiled on these other databases are evaluated based on the severity of the listing, distance and location.

The Site does not appear on any other database report. None of the adjacent properties appears on the database report.

One (1) facility appears on the Schools (SCH), California Hazardous Materials Identification Reporting System (CHMIRS), National Pollutant Discharge Elimination System (NPDES) and California Integrated Water Quality System (CIWQS) databases. The facility is listed as Pinacte Middle School located at 1990 South A Street, located approximately 0.63 mile east-southeast of the Site. The site type is listed as “school investigation” and the facility status is listed as “no further action”. The CHMIRS database describes an incident on July 10, 2005 with the following details, approximately 90 gallons of mineral oil was spilled from an overhead transformer that failed. The contaminant is listed as contained. The NPDES and CIWQS listings pertain to stormwater construction activities and were terminated October 15, 2015 and October 2, 2015, respectively.

Due to the nature of the facility listings, facility status, and distance from the Site, it is our opinion that this facility does not represent a recognized environmental condition or environmental concern to the Site.

6.2.16 DRY CLEANERS

The DRYCLEANERS list is compiled and provided by EDR. The DRYCLEANER database is searched for a 0.25-mile distance.

The Site does not appear on the DRYCLEANER list. No facilities are listed within 0.25-mile of the Site.

6.2.17 UNMAPPABLE FACILITIES

GEO TEK reviewed the listing of “orphan” or unmappable facilities in the database report. There are no unmapped facilities listed within 1-mile of the Site.

6.3 LOCAL REGULATORY AGENCY RECORDS

GEO TEK contacted the City of Perris Fire and Police Department regarding underground or above ground storage tanks, hazardous material permits or business plans, emergency responses, spills, inspections, or other information of an environmental or hazardous nature.

At the time of this report, no records have been issued for review.

7.0 VAPOR ENCROACHMENT SCREEN

The purpose of a Vapor Encroachment Screen (VES) is to identify, to the extent feasible, if a Vapor Encroachment Condition (VEC) exists at the Site.

A Vapor Encroachment Screen Report was generated for the Site and Site area utilizing EDR's Vapor Encroachment Worksheet (see Appendix B). It was determined that there are no historical dry cleaners or auto stations within 600 feet and/or up gradient from the Site.

It is our opinion that a VEC is not likely to exist at the subject Site. The Vapor Encroachment Screen report is included in Appendix D.

8.0 SITE AND SURROUNDING AREA HISTORY

In order to construct the history of the Site and the surrounding area, GEOTEK reviewed reasonably ascertainable public documents, including aerial photographs, topographic maps, building records, city directories, fire insurance maps, and county assessor history records.

8.1 HISTORICAL SITE USAGE

8.1.1 AERIAL PHOTOGRAPH REVIEW

GEOTEK reviewed aerial photographs dated 1938, 1949, 1953, 1961, 1967, 1974, 1978, 1985, 1989, 1990, 1997, 2002, 2006, 2009, 2012, 2016 and 2019 (see Appendix B).

Based on readily available historic information, the Site has been vacant land from at least 1938 to the present.

An east-west trending dirt roadway first appears to transect the central portion of the Site in the 1974 aerial photograph.

Additional dirt roadways appear throughout the Site in the 1985, 1989, 1997 and 2002 aerial photographs.

There are no significant changes from 2006 to the present.

A 2019 aerial photograph is utilized for Figure 2 (Appendix A).

8.1.2 TOPOGRAPHIC MAP REVIEW

GEOTEK reviewed the Riverside Quadrangles (15-minute series), dated 1901, 1942, and 1947; the Perris Quadrangles (15-minute and 7.5-minute series), dated 1942, 1943, 1953, 1967, 1973, 1979 and 2012; the Murrieta Quadrangles (15-minute series) dated 1942, 1943 and 1947; the Romoland Quadrangles (7.5-minute series) dated 1953, 1973, 1979 and 2012; the Elsinore Quadrangles (7.5-minute series) dated 1953 and 1973; the Steele Peak Quadrangles (7.5-minute series), dated 1953, 1967, 1973, 1978 and 2012; and the Lake Elsinore Quadrangles (7.5-minute series), dated 1978, 1979, 1982 and 2012. (see Appendix B).

The Site appears to be unmapped on the 1901, 1947, 1978, topographic map sheets.

The Site appears vacant on the 1942, 1943, 1953, 1967, 1973, 1979, 1982 and 2012 topographic map sheets.

The 2012 maps show little detail other than streets in the vicinity. A 2012 topographic map sheet is utilized for Figure I (Appendix A).

8.1.3 BUILDING DEPARTMENT RECORDS

The City of Perris Building Department was contacted regarding permitting, projects or properties for APNS 342-080-039, -040, -041, and -042. No records were available for our review.

8.1.4 CITY DIRECTORY REVIEW

GEOTEK reviewed The EDR – City Directory Image Report, as obtained from and provided by EDR, and included in Appendix B. The City Directory Image report provides information on the Site address and numerous nearby addresses. The Site does not have an address; however, McPherson Road and Mountain Avenue did have listings between the years of 1973 and 2017. These listings are generally residential in nature and do not appear to present an environmental concern to the Site.

8.1.5 SANBORN MAP REVIEW

Sanborn Fire Insurance Maps for the parcels were requested from EDR-Sanborn, which owns and maintains the largest and most complete collection of the maps. Source sheets were not available for the Site. The Sanborn Map Report is included in Appendix B.

8.1.6 CHAIN OF TITLE

GEOTEK has not received, nor was authorized to obtain Chain-of-Title documents for the Site.

8.2 HISTORICAL IMMEDIATELY SURROUNDING PROPERTY USAGE

8.2.1 AERIAL PHOTOGRAPH REVIEW

GEOTEK reviewed aerial photographs dated 1938, 1949, 1953, 1961, 1967, 1974, 1978, 1985, 1989, 1990, 1997, 2002, 2006, 2009, 2012, 2016 and 2019 (see Appendix B).

Based on readily available historic information the surrounding area has been vacant land with sporadic residences to the west and north in the 1938, 1949, 1953, 1967 aerial photographs.

Increased residential development in the surrounding areas is visible in the 1974, 1978, 1985, 1989, 1990, 1997 and 2002 aerial photographs.

There are no significant changes from 2006 to the present.

A 2018 aerial photograph is utilized for Figure 2 (Appendix A).

8.2.2 TOPOGRAPHIC MAP REVIEW

GEO TEK reviewed the Riverside Quadrangles (15-minute series), dated 1901, 1942, and 1947; the Perris Quadrangles (15-minute and 7.5-minute series), dated 1942, 1943, 1953, 1967, 1973, 1979 and 2012; the Murrieta Quadrangles (15-minute series) dated 1942, 1943 and 1947; the Romoland Quadrangles (7.5-minute series) dated 1953, 1973, 1979 and 2012; the Elsinore Quadrangles (7.5-minute series) dated 1953 and 1973; the Steele Peak Quadrangles (7.5-minute series), dated 1953, 1967, 1973, 1978 and 2012; and the Lake Elsinore Quadrangles (7.5-minute series), dated 1978, 1979, 1982 and 2012. (see Appendix B).

The surrounding area appears vacant and/or unmapped on the 1904, 1943, 1947, 1978, 1979, 1982 topographic map sheet.

The surrounding area appears mostly vacant with some residential development to the northeast on the 1942 topographic map sheet.

There are no significant changes on the 1953 and 1967 topographic map sheets.

There appears to be increased residential development to the north and west of the Site on the 1973 topographic map sheet.

The 2012 maps show little detail other than streets in the vicinity. A 2012 topographic map sheet is utilized for Figure 1 (Appendix A).

8.2.3 CITY DIRECTORIES

GEO TEK reviewed The EDR – City Directory Image Report, as obtained from and provided by EDR, and included in Appendix B. The City Directory Image report provides information on the

Site address and numerous nearby addresses. McPherson Road and Mountain Avenue have listings between the years of 1973 and 2017. These listings are generally residential in nature and do not appear to present an environmental concern to the Site.

8.2.4 SANBORN MAP REVIEW

Sanborn Maps for the Site were requested from EDR-Sanborn, which owns and maintains the largest and most complete collection of the maps. According to EDR, source sheets were not available for the property; therefore, it is not likely that source sheets would be available for the adjoining properties. The Sanborn Map Report is included in Appendix B.

8.3 HISTORICAL USE SUMMARY

Based on readily available historic information, the Site has been vacant land from at least 1938 to the present. An east-west trending dirt roadway first appears to transect the central portion of the Site in the 1974 aerial photograph. Additional dirt roadways appear throughout the Site in the 1985, 1989, 1997 and 2002 aerial photographs. There are no significant changes from 2006 to the present. The surrounding area has been vacant land with sporadic residences to the west and north from at least 1938 to 1967. Increased residential development in the surrounding areas is visible from at least 1974 to 2002. There are no significant changes in the surrounding areas from 2006 to the present.

Data gaps exist from 1901 to 1938, 1947 to 1953, 1953 to 1961, 1961 to 1967 and 1990 to 1997 due to the limited records which are reasonably ascertainable in the local area. However, it is our opinion that additional historic information, if it were to become available, is not likely to change the conclusions or recommendations of this assessment.

9.0 SIGNIFICANT DATA GAPS

No significant data gaps were discovered while performing this Phase I Environmental Site Assessment. Therefore, it is our opinion that sufficient information was obtained to identify current Site conditions and past Site usage.

Minor data gaps include:

- Data gaps exist from 1901 to 1938, 1947 to 1953, 1953 to 1961, 1961 to 1967 and 1990 to 1997,
- GEOTEK has not received nor reviewed Chain-of-Title documents for the Site.

It is our opinion that additional information, if it were to become available, is not likely to change the conclusions or recommendations of this assessment.

10.0 CONCLUSIONS AND RECOMMENDATIONS

GEOTEK has performed a Phase I Environmental Site Assessment (ESA) for the subject Site in substantial conformance with the scope and limitations of ASTM E 1527-13 and GEOTEK Proposal No. P-1200420-CR, dated December 1, 2020. Any exceptions to, or deletions from, this practice are described in the appropriate sections of this report.

This Phase I Environmental Site Assessment has not revealed evidence of a recognized environmental condition or concern at the subject Site. No further investigation is required at this time.

11.0 CERTIFICATIONS

I declare that, to the best of my professional knowledge and belief, I meet the definition of Environmental Professional as defined in 40 CFR 312. I have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the subject Site. I have developed and performed the all appropriate inquiries in conformance with the standards and practices set forth in 40 CFR 312.

The qualifications of the Project Team are included in Appendix F.

We appreciate this opportunity to be of service. If you have any questions, or if we can be of further service, please contact us at (951) 710-1160.

Sincerely,
GEOTEK, INC.



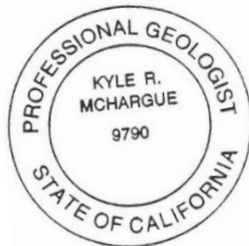
Edward H. LaMont
Principal Geologist, CEG 1892
Exp. 07/31/2022



J. Michael Batten, CEM, REPA
Environmental Services Manager
Registered Environmental Property
Assessor No. 113162
Expires 06/15/2021



Kyle R. McHargue
Project Geologist, PG 9790
Exp. 02/28/2022



12.0 REFERENCES

CALIFORNIA, STATE OF

- Dibblee, T.W. and Minch, J.A., 2003, "Geologic Map and Digital Database of the Perris 7.5 Minute Quadrangle, Riverside County, California, U.S. Geological Survey OF-2003-102, Scale 1:24,000.
- Water Resources, Department of Hydrologic Data

ENVIRONMENTAL DATA RESOURCES, INC.

- Aerial Photo Decade Package, Inquiry No. 6286613.8, dated December 3, 2020
- Certified Sanborn Map Report, Inquiry No. 6286613.3, dated December 2, 2020
- City Directory Image Report, Inquiry No. 6286613.5, dated December 3, 2020
- Historical Topo Map Report, Inquiry No. 6286613.4, dated December 2, 2020
- Radius Map Report, Inquiry No. 6286613.2s, dated December 2, 2020
- Vapor Encroachment Screen Report, Inquiry No. 6286613.2s, dated December 7, 2020

PERRIS, CITY OF

- Fire Department, Records Inquiry
- Police Department, Records Inquiry

RIVERSIDE, COUNTY OF

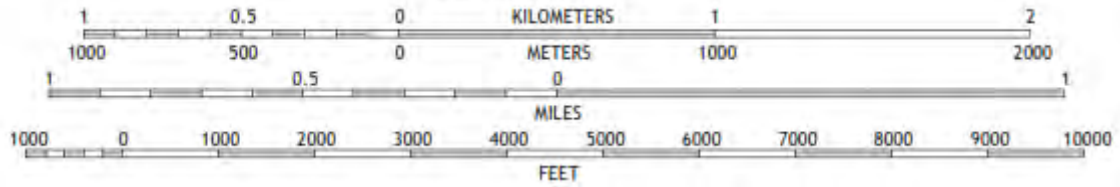
- Assessor's Office, Records Inquiry

U.S. GOVERNMENT

- Drug Enforcement Agency, Records inquiry (<http://www.dea.gov/clan-lab>)
- Federal Emergency Management Agency (FEMA)

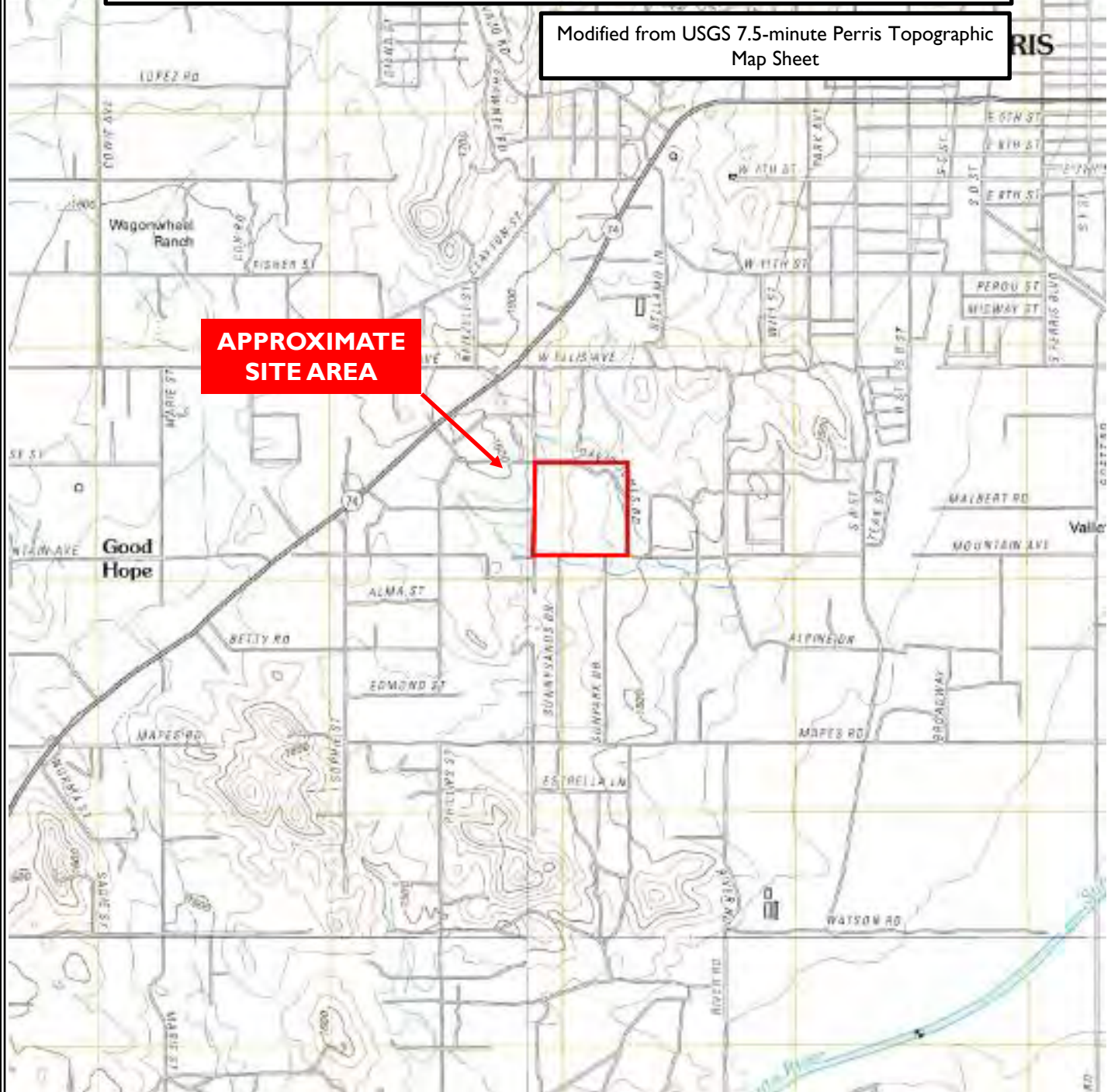
APPENDIX A

FIGURES



Modified from USGS 7.5-minute Perris Topographic Map Sheet

**APPROXIMATE
 SITE AREA**

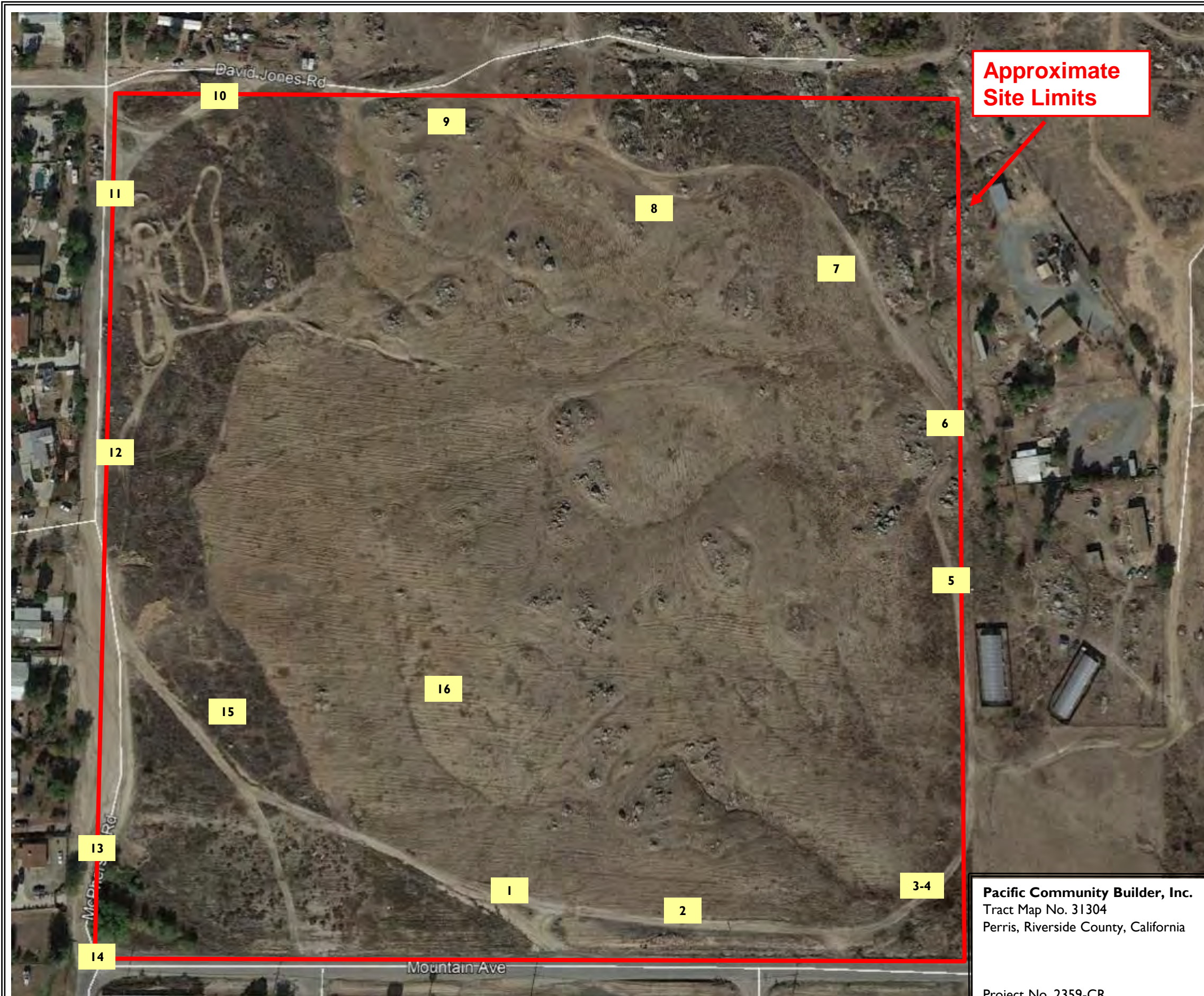


Pacific Community Builder, Inc.
 Tract Map No. 31304
 Perris, Riverside County, California
 Project No. 2359-CR



Figure I
**Site Location and
 General
 Topography
 Map**





Approximate Site Limits

Legend
(Locations are approximate)

16 - Photograph Location

250 FEET



Pacific Community Builder, Inc.
Tract Map No. 31304
Perris, Riverside County, California

Project No. 2359-CR



Plate I
Exploration Location Map

**PACIFIC COMMUNITIES BUILDER, INC.
TRACT No. 31304
PERRIS, RIVERSIDE COUNTY, CALIFORNIA**

**PROJECT No. 2359-CR
DECEMBER 10, 2020**

APPENDIX B

SUPPORTING DOCUMENTS





Tract 31304

Mountain Avenue/Mcpherson Road

Perris, CA 92570

Inquiry Number: 6286613.8

December 03, 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

12/03/20

Site Name:

Tract 31304
Mountain Avenue/Mcpherson F
Perris, CA 92570
EDR Inquiry # 6286613.8

Client Name:

Geotek
1548 North Maple Street
Corona, CA 92880
Contact: Kyle Mchargue



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:

<u>Year</u>	<u>Scale</u>	<u>Details</u>	<u>Source</u>
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: January 01, 2002	USGS/DOQQ
1997	1"=500'	Acquisition Date: January 01, 1997	USGS/DOQQ
1990	1"=500'	Flight Date: September 06, 1990	USDA
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
1974	1"=500'	Flight Date: November 06, 1974	USGS
1967	1"=500'	Flight Date: May 15, 1967	USDA
1961	1"=500'	Flight Date: June 14, 1961	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

When delivered electronically by EDR, the aerial photo images included with this report are for ONE TIME USE ONLY. Further reproduction of these aerial photo images is prohibited without permission from EDR. For more information contact your EDR Account Executive.

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INQUIRY #: 6286613.8

YEAR: 2016

— = 500'





INQUIRY #: 6286613.8

YEAR: 2012

— = 500'



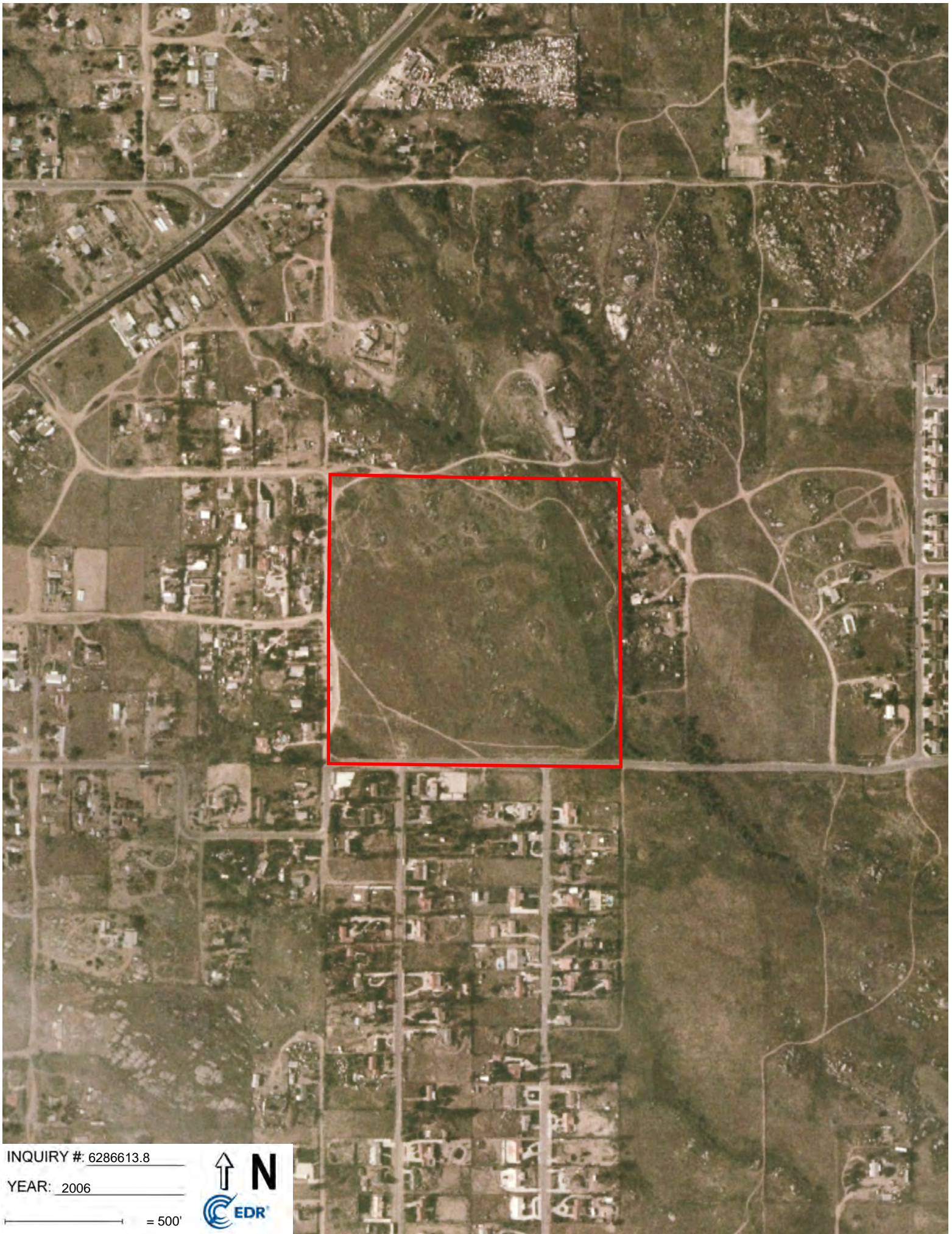


INQUIRY #: 6286613.8

YEAR: 2009

— = 500'



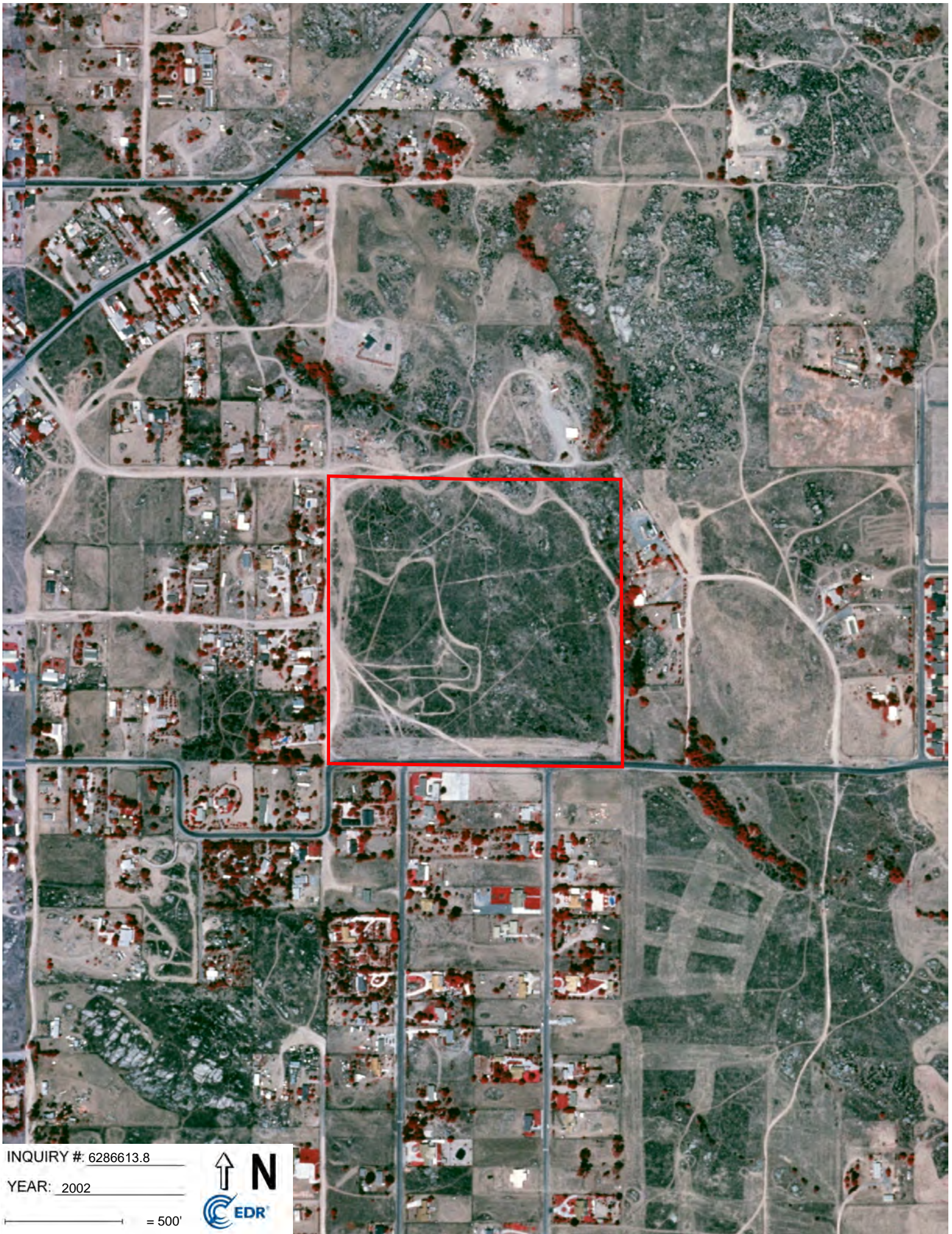


INQUIRY #: 6286613.8

YEAR: 2006

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INQUIRY #: 6286613.8

YEAR: 2002

— = 500'





INQUIRY #: 6286613.8

YEAR: 1997

— = 500'



Subject boundary not shown because it exceeds image extent or image is not georeferenced.

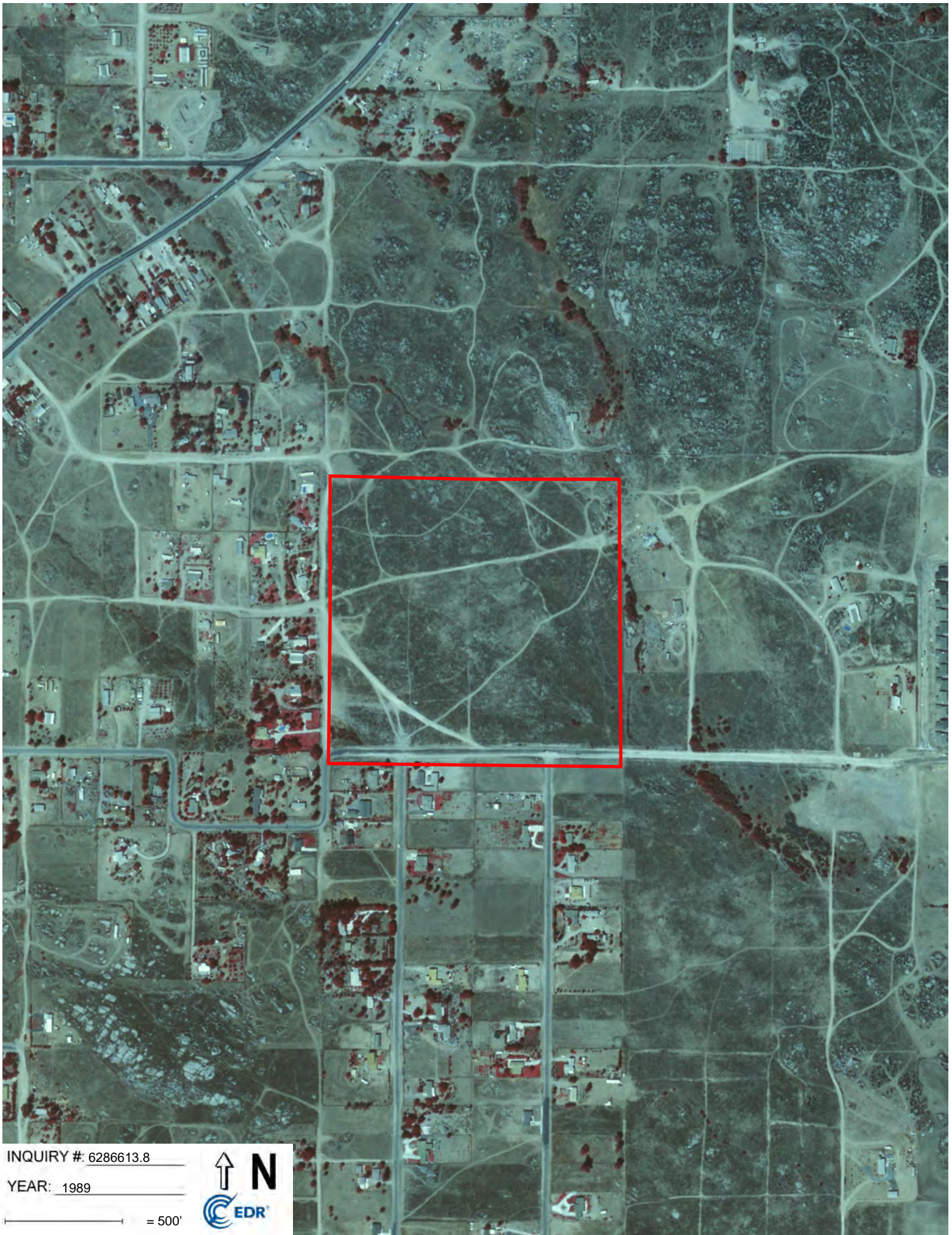


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YEAR: 1990

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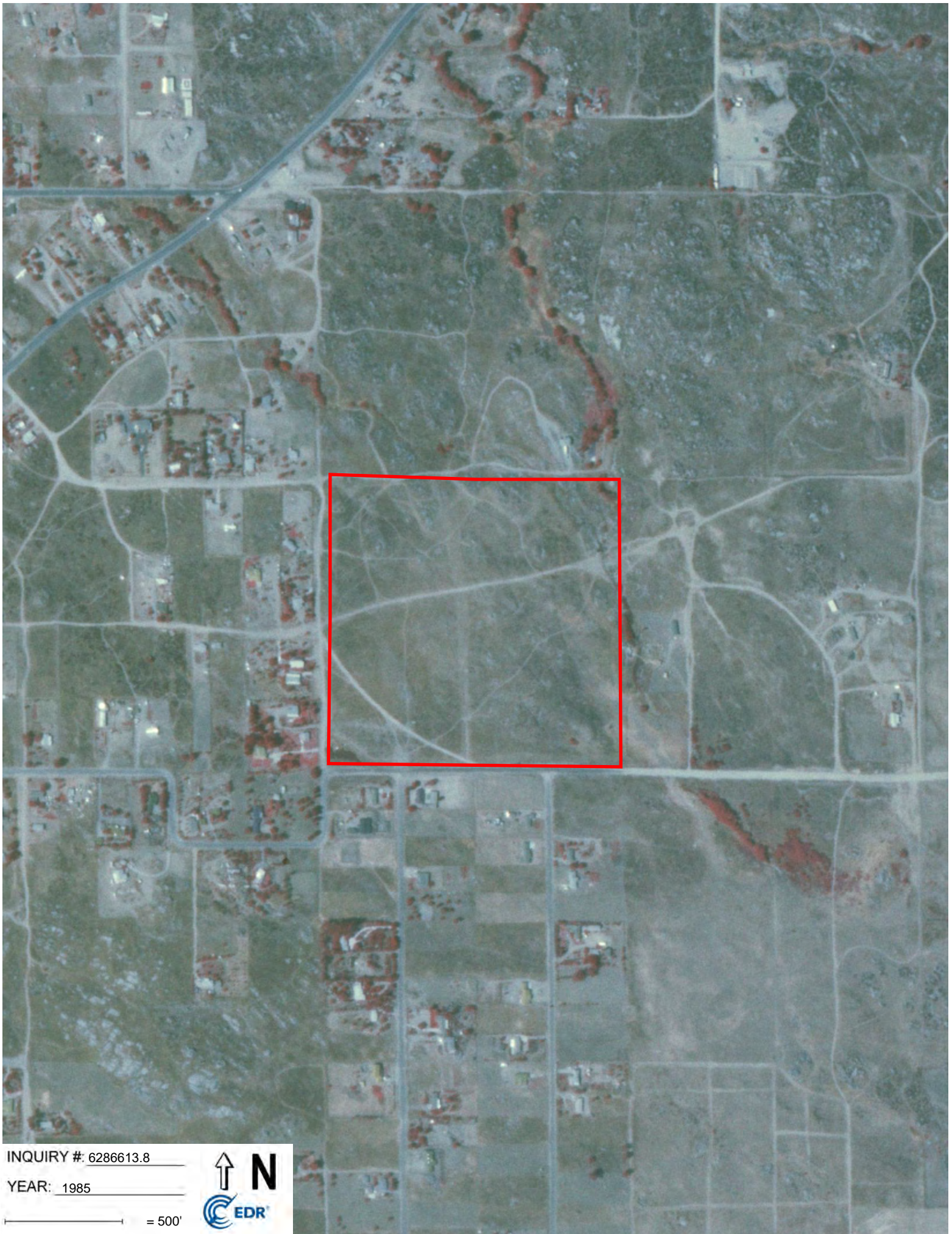


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YEAR: 1989

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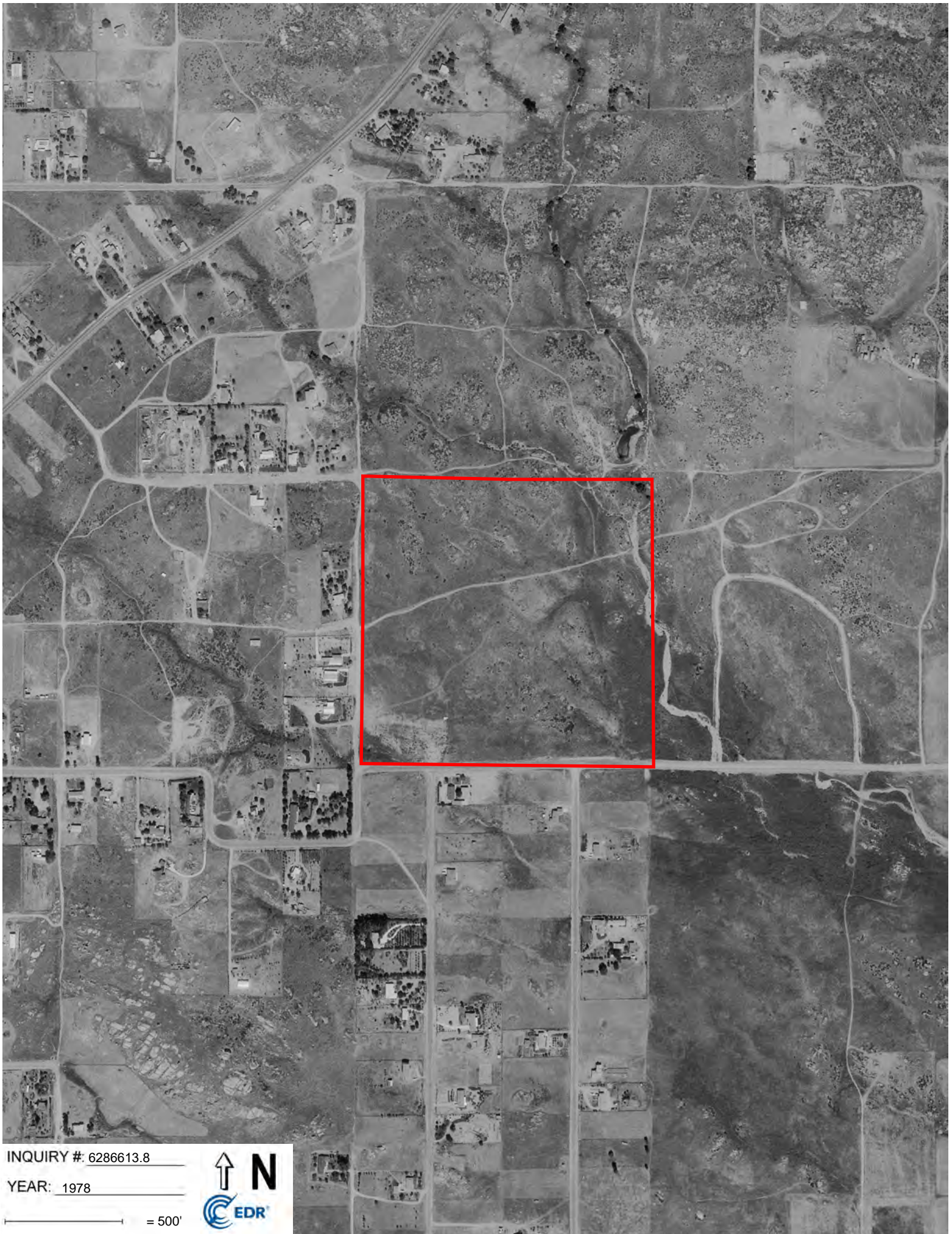


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YEAR: 1985

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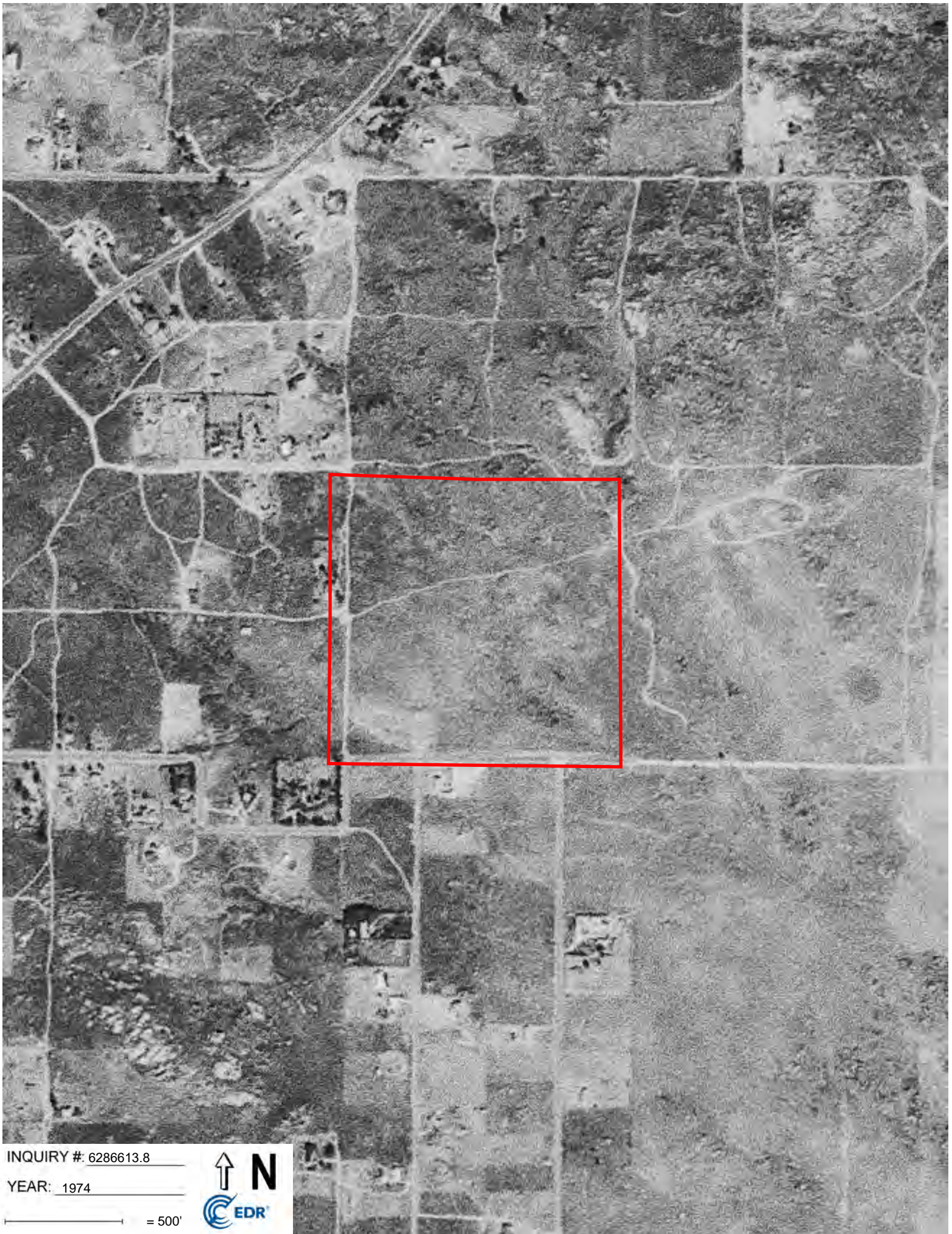


INQUIRY #: 6286613.8

YEAR: 1978

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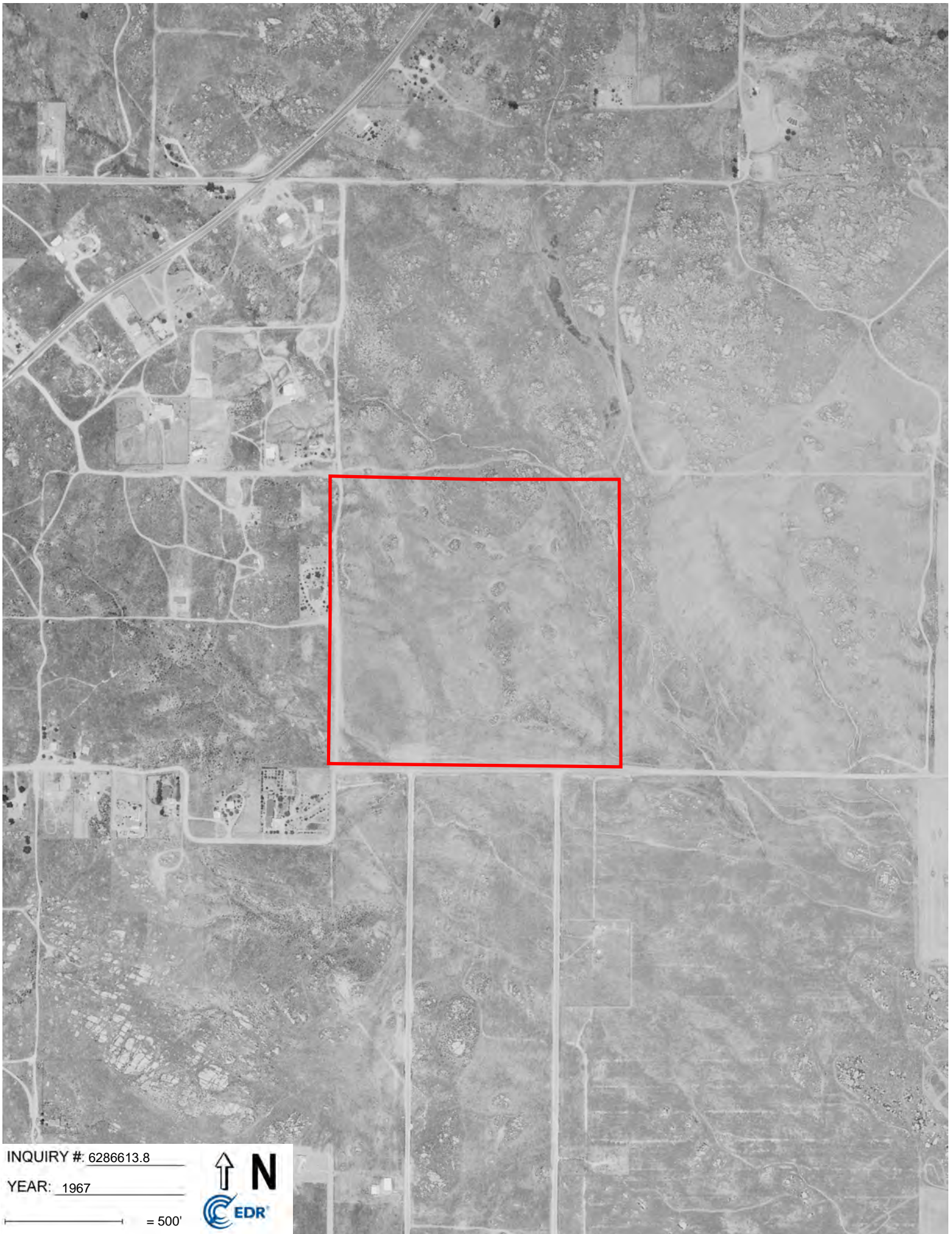


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INQUIRY #: 6286613.8

YEAR: 1967

— = 500'



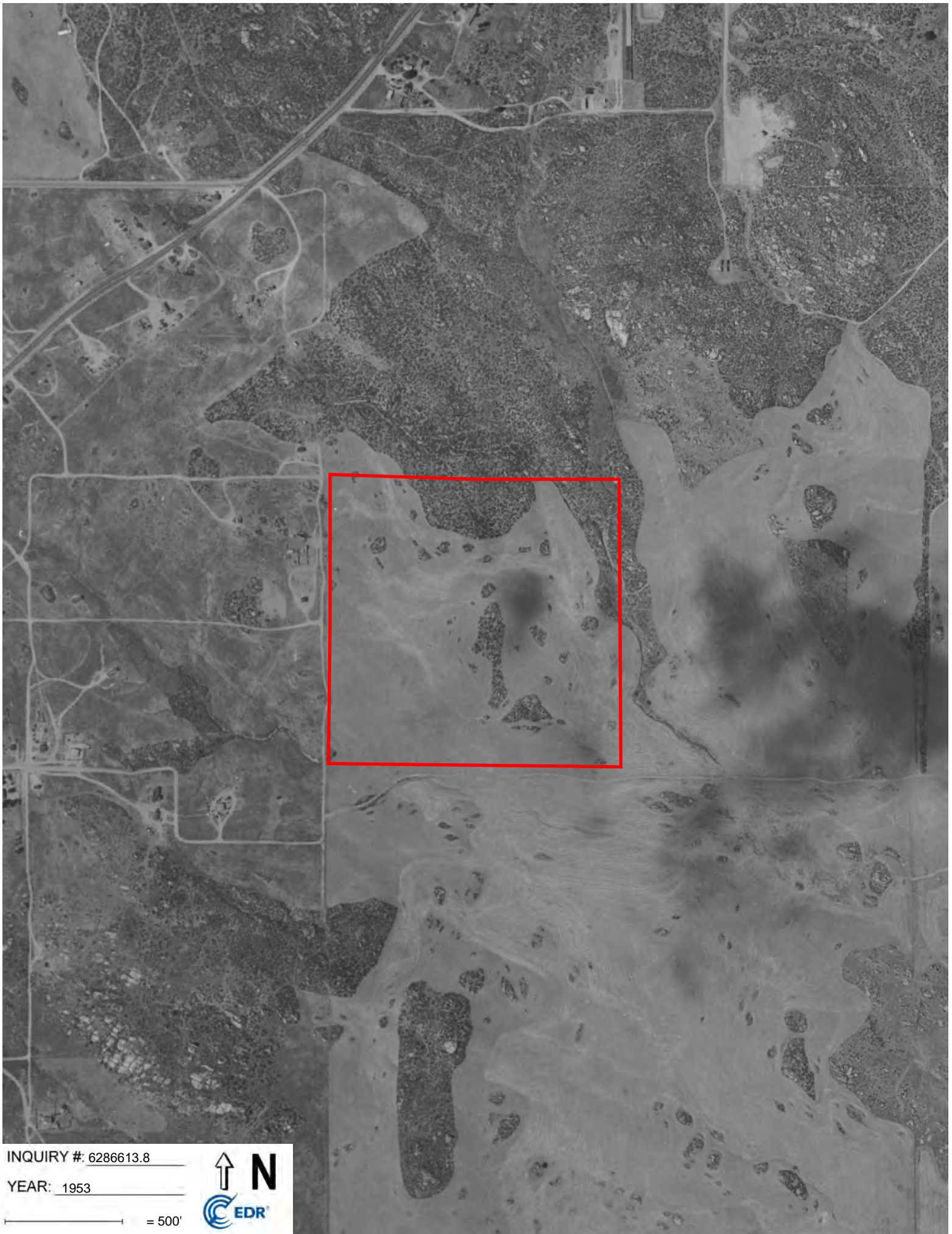


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YEAR: 1961

— = 500'



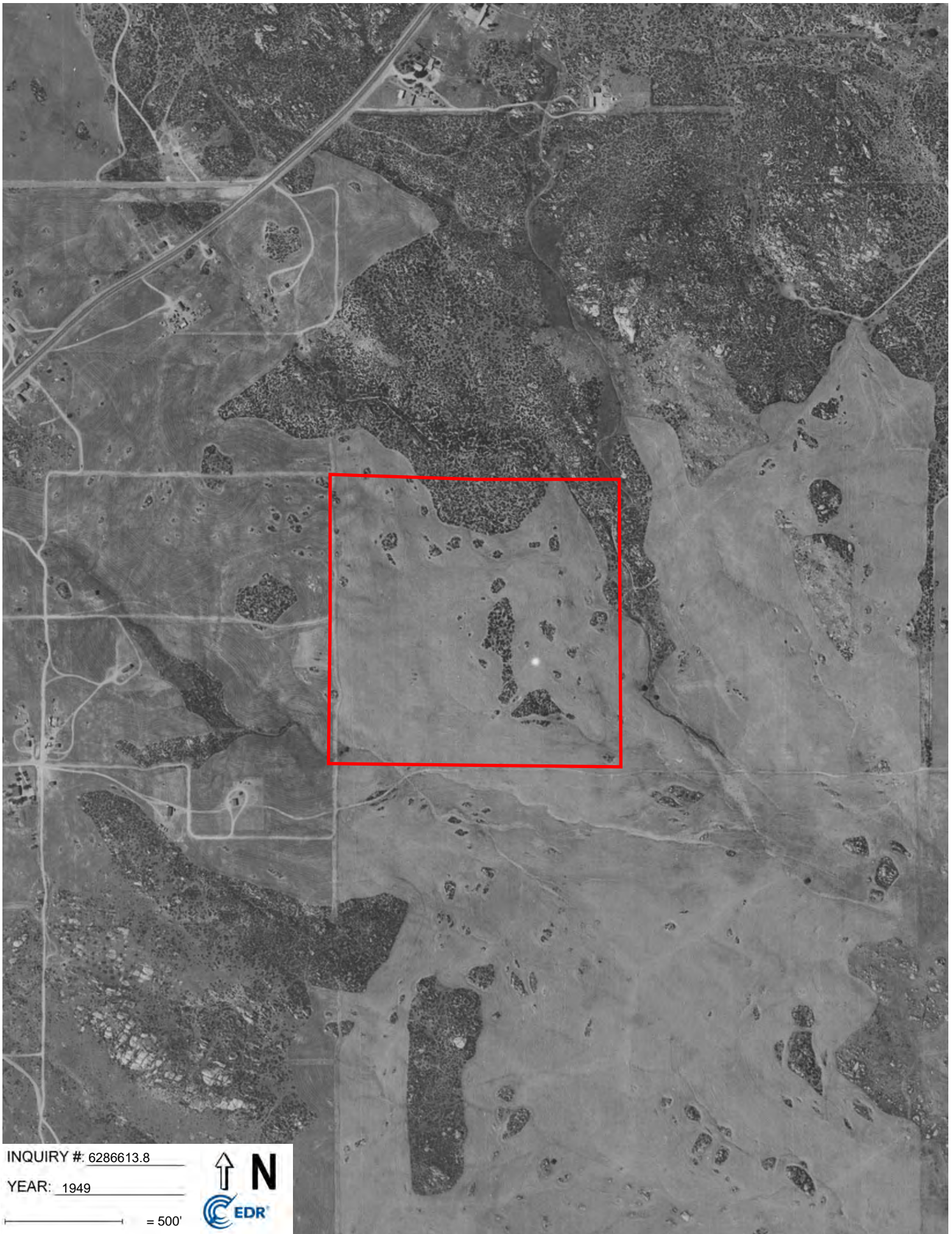


INQUIRY #: 6286613.8

YEAR: 1953

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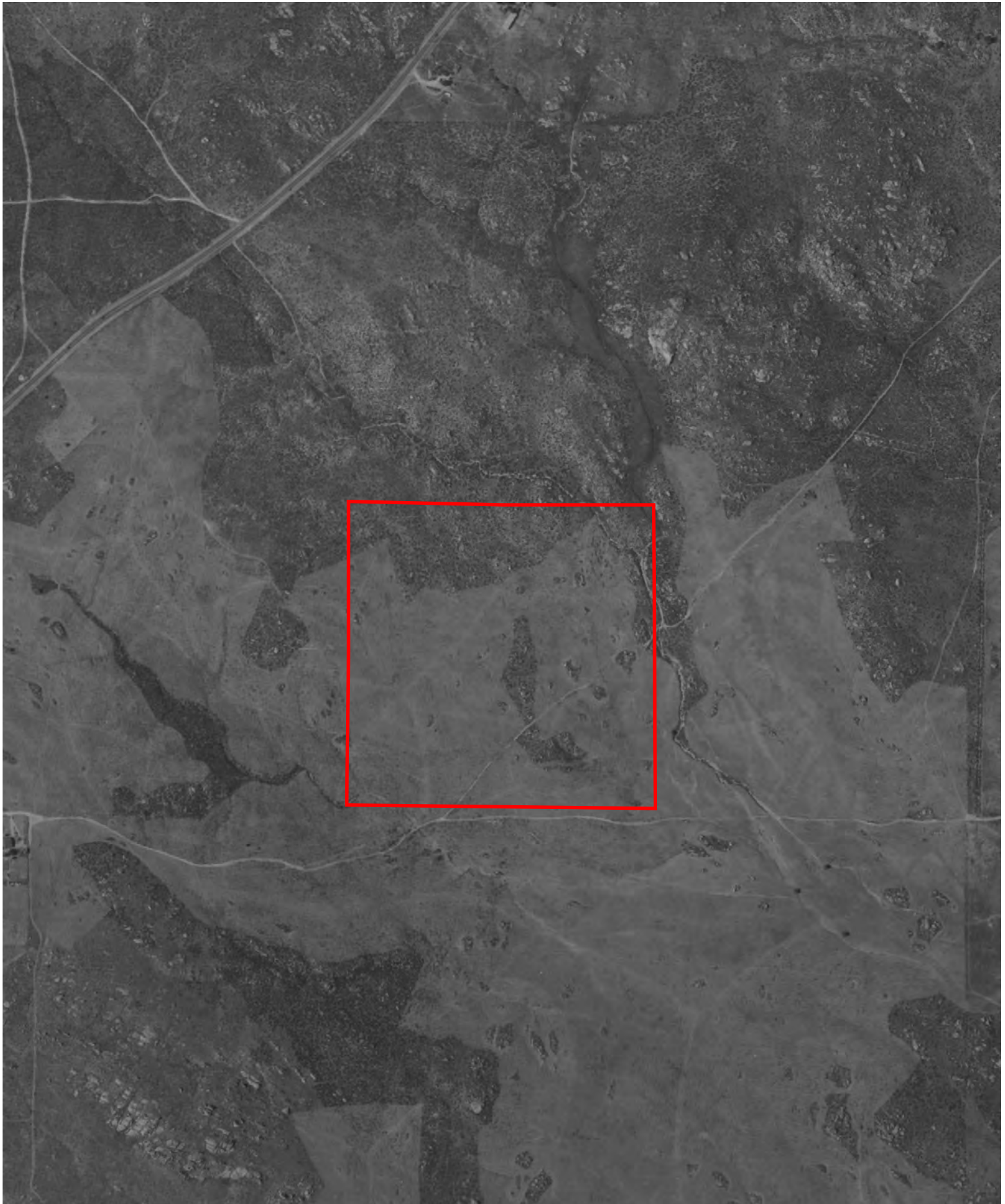


INQUIRY #: 6286613.8

YEAR: 1949

— = 500'





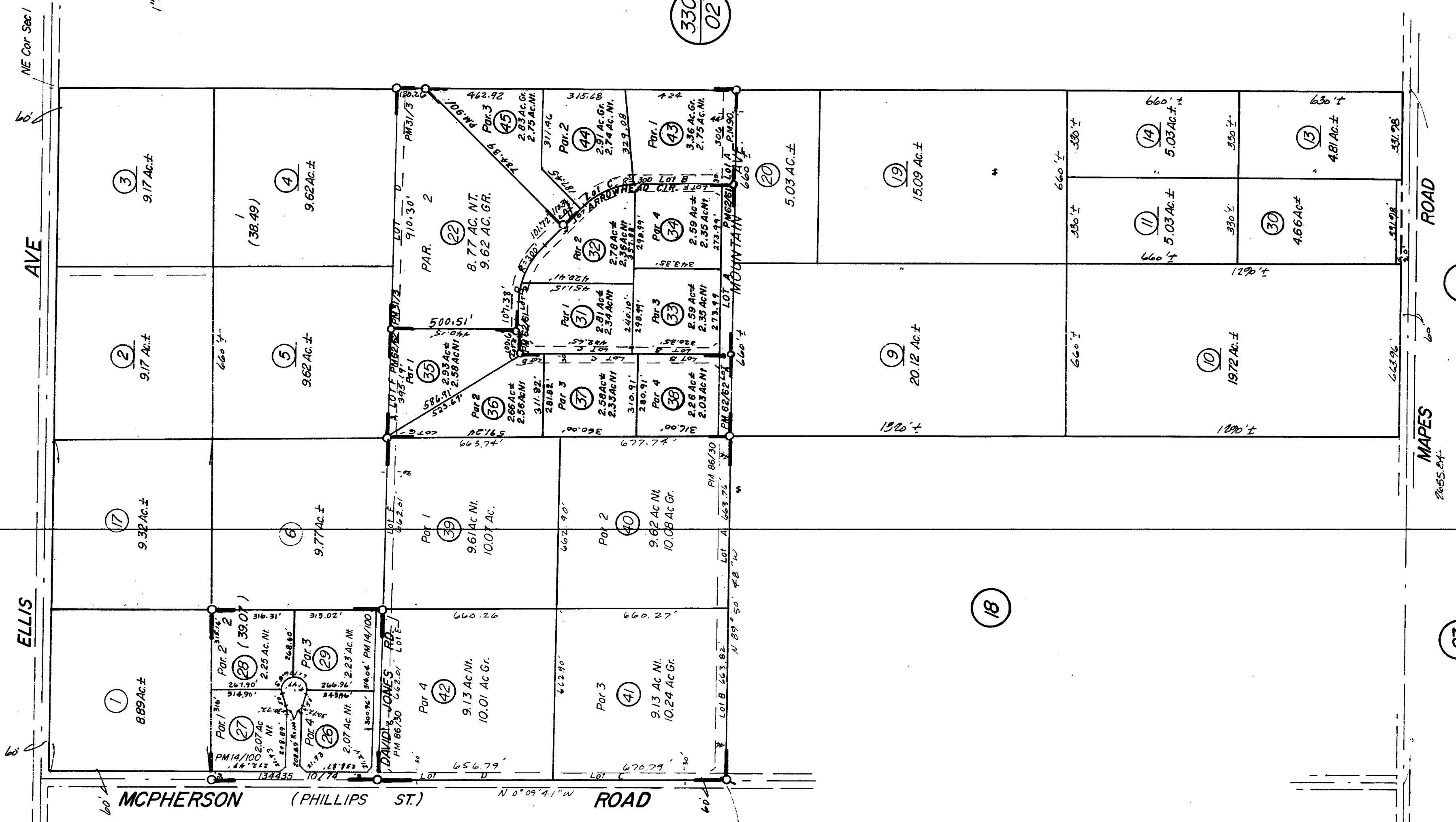
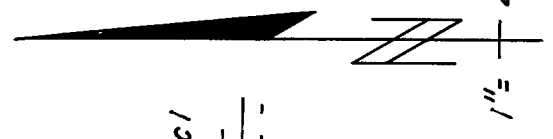
INQUIRY #: 6286613.8

YEAR: 1938

— = 500'



THIS MAP IS FOR ASSESSMENT PURPOSES ONLY



DATE	OLD No.	NEW No.
11/18/74	016	018
6/76	15	19,20
2/77	008	21-24
11/77	18	25,26
1/78	25	27-29
2/78	12	30,5T
4/79	24	31-34
"	21	35-38
1/81	7	39-42
5/81	23	43-45

APRIL 1972

4 P.M. 31/3 Parcel Map 7987
 P.M. 14/100 Parcel Map 5537
 " 62/61 " " 10750
 " 62/62 " " 9454
 " 86/30 " " 16059
 P.M. 90/59-60 " " 16890

Data : S.L.O.

Tract 31304

Mountain Avenue & Mcpherson Road
Perris, CA 92570

Inquiry Number: 6286613.5
December 08, 2020

The EDR-City Directory Image Report



Environmental Data Resources Inc

6 Armstrong Road
Shelton, CT 06484
800.352.0050
www.edrnet.com

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City Directory Images

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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.

<u>Year</u>	<u>Target Street</u>	<u>Cross Street</u>	<u>Source</u>
2017	<input checked="" type="checkbox"/>	<input type="checkbox"/>	EDR Digital Archive
2014	<input checked="" type="checkbox"/>	<input type="checkbox"/>	EDR Digital Archive
2010	<input checked="" type="checkbox"/>	<input type="checkbox"/>	EDR Digital Archive
2005	<input checked="" type="checkbox"/>	<input type="checkbox"/>	EDR Digital Archive
2000	<input checked="" type="checkbox"/>	<input type="checkbox"/>	EDR Digital Archive
1995	<input checked="" type="checkbox"/>	<input type="checkbox"/>	EDR Digital Archive
1992	<input checked="" type="checkbox"/>	<input type="checkbox"/>	EDR Digital Archive
1985	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Haines Criss-Cross Directory
1980	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Haines Criss-Cross Directory
1973	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Haines Criss-Cross Directory
1971	<input type="checkbox"/>	<input type="checkbox"/>	Haines Criss-Cross Directory

FINDINGS

TARGET PROPERTY STREET

Mountain Avenue & Mcpherson Road
Perris, CA 92570

Year CD Image Source

MCPHERSON RD

2017	pg A1	EDR Digital Archive	
2014	pg A5	EDR Digital Archive	
2010	pg A9	EDR Digital Archive	
2005	pg A13	EDR Digital Archive	
2000	pg A17	EDR Digital Archive	
1995	pg A20	EDR Digital Archive	
1992	pg A22	EDR Digital Archive	
1985	pg A24	Haines Criss-Cross Directory	
1980	pg A26	Haines Criss-Cross Directory	
1973	-	Haines Criss-Cross Directory	Street not listed in Source
1971	-	Haines Criss-Cross Directory	Street not listed in Source

MOUNTAIN AVE

2017	pg A2	EDR Digital Archive	
2014	pg A6	EDR Digital Archive	
2010	pg A10	EDR Digital Archive	
2005	pg A14	EDR Digital Archive	
2000	pg A18	EDR Digital Archive	
1995	pg A21	EDR Digital Archive	
1992	pg A23	EDR Digital Archive	
1985	pg A25	Haines Criss-Cross Directory	
1980	pg A27	Haines Criss-Cross Directory	
1980	pg A28	Haines Criss-Cross Directory	
1973	pg A29	Haines Criss-Cross Directory	
1973	pg A30	Haines Criss-Cross Directory	
1971	-	Haines Criss-Cross Directory	Street not listed in Source

FINDINGS

CROSS STREETS

No Cross Streets Identified

City Directory Images

MCPHERSON RD 2017

22011 CLAUSEN, LEON
22081 LEE, CHI H
22150 DANFORTH, DANNY J
22180 FARMER, BRYAN L
22210 LONG, TONN A
22389 AGUILAR, MARIA E
22500 VEGA, CARLOS
22654 REYES, TOMAS
24454 LINARES, MERCEDES
24455 RAZO, MAURICIO V
24755 OSUNA, MANUEL S
24805 GARCIA, ELOY G
24955 JIMINEZ, MARIO
26445 MACEDO, SERGIO
26485 HOLLIDAY, STEVEN

MOUNTAIN AVE 2017

152 STEVES TOWING
228 BROTHERS TOWING INC
660 RUVALCABA, JOSE G
20118 BIELEC, SHEPARD J
20182 HERNANDEZ, LEONARDO
20190 TREWIN, PATRICIA D
20220 RYAN, ROBERT C
20245 TOSCANO, ANTHONY C
20246 CHAVEZ, MARIO
20280 HILLIG, MARTIN E
20291 FEENEY, DONALD L
20325 AGUAYO, RUBEN
20343 ROUSSEAU, NANCY K
20368 URIARTE, ROSARIO U
20402 WILSON, CARL
20404 DELVILLAR, JULIAN
20447 SADIE, SADIE C
20450 GARCIA, CARLOS C
20520 GARIBAY, SALVADOR C
20525 PUTZIER, JACKIE L
20552 CHICAS, IRMA
20601 HODGES, JOAN E
20621 DIETZMAN, RICHARD A
20671 MATTHEWS, MATTHEW
20740 KENDRICK, SHERRY
21037 ROSITO, MARCELO F
21050 BEJARANO, AURELIANO S
21200 REYES, SALVADOR E
21202 AYALA, LOURDES
21285 LEDEZMA, MARTIN J
21313 CASTELLANOS, SYLVIA
21331 COMER, LONNIE T
21535 ESPINOZA, LAURA I
21641 RODRIGUEZ, ROBERTO
21660 SANCHEZ, ANITA
21661 ROGERS, JOANN
21686 MORALES, ERIK H
21701 RAMIREZ, JOSE M
21725 RAMIREZ, TRINIDAD E
21732 MARTINEZ, RICARDO
21752 COFFIN, LOUIS A
21761 LOPEZ, YOLANDA
21800 TAPIA, CARLOS D
21815 CARRILLO, SAMUEL
21820 DIAZ, JOEL
21900 BARRAGAN, ANGELICA
21905 OROZCO, NAZARIO
22020 MADERO, JACQUELINE
22023 FLOREZ, BEATRIZ
22050 KIRK, BRETT E

MOUNTAIN AVE 2017 (Cont'd)

22090	ARGUELLO, DULAR J
22095	PEREZ, FRANCISCO J
22100	PETERSEN, JESSE
22110	ENCARNACION, JAVIER F
22115	BARRAGAN, ESMERALDA M
22120	OROZCO, JOSE L
22151	NAGURSKI, LISA
22247	FLORES, JOSE J
22270	JOE, JEFFREY
22285	MCINTYRE, ARNOLD N
22295	MENDOZA, ANTONIO
22299	SEPULVEDA, ROY
22337	DUNSTON, WILLIAM
22338	BRENT, KENTON B
22347	HENDRICKSON, GEORGEANNE E
22381	TAPIA, FRANCISCO
22386	ELWOOD, THERON M
22420	ZAMORA, J
22449	RAMIREZ, RAUL A
22475	DIAZ, JESUS
22567	ZUNIGA, BENJAMIN
22580	MIRANDA, LUIS
22590	VASQUEZ, LUIS
22620	HERRERA, IGNACIO P
22640	BARRAGAN, MARGARITO
22667	DELATORRE, JORGE
22876	GOOD HOPE MISSIONARY BAPTIST CHURCH
22881	WELCH, PAULA D
22913	ANDRADE, HECTOR
22921	JAIMES, JESUS
22985	KEMP, TYWAN L
23044	SALDANA, VERONICA
23057	RODRIGUEZ, ROENNY
23069	SALCIDO, CARMEN A
23074	FLORES, ANASTACIO
23080	NEAL, DAVID N
23100	VALDEZ, MANUEL M
23150	BEELER, CYNTHIA F
23162	MILLNER, DAVID L
23164	OCHOA, ARNULFO L
23165	NABOA, GABRIELA
23166	WALKER, VANESSA M
23179	CURIEL, FERMIN
23201	SANABRIA, EDDIE
23242	LOPEZ, JAIME A
23243	MIRANDA, EUGENE F
23273	CARTER-SR, WILLIAM B
23274	HAUER-JR, ALVIN
23327	HEDRICK, KENDRA
23336	PEREZ, JOSEFINA D



-

MOUNTAIN AVE 2017 (Cont'd)

23370 MORA, JESSE Q
23375 MACIAS, ROBERTO
23390 RAYA, JESSIE G
23421 DIAZ, EDWIN R
23431 AVILA, EFREN O
23436 ESPARZA, ROBERTO M
23465 PORTILLO, ELISEO B
23480 MELCHOR, FILIBERTO
23491 BOURGEOIS, LIONEL

MCPHERSON RD 2014

1765	OCCUPANT UNKNOWN,
22010	OCCUPANT UNKNOWN,
22011	MORTON, MICHAEL J
22081	LEE, CHI H
22150	DANFORTH, DANNY J
22151	ESTRADA, PETE
22180	GOODSON, AMBER
	LOMELI, JOSE
22181	LONG, MORGAN W
22200	SINGH, ROUPWATIE
22210	OCCUPANT UNKNOWN,
22260	DIAZ, JOSE
22389	CHANG, GRACE
22500	RAMIREZ, ART
22654	GONZALEZ, MIRIAM
	GUERRERO, ANDREA
	REYES, TOMAS
22751	OCCUPANT UNKNOWN,
24476	HARRISON, HELEN I
	WELDON, MALCOLM K
	WILKERSON, MARVIS
24755	OSUNA, MANUEL S
24805	GARCIA, JASON J
24935	VAZQUEZ, ROBERTO M
24955	ROJO, LIZ A
26485	LUPTON, STEVE K

MOUNTAIN AVE 2014

152 STEVES TOWING
 STEVES TOWING INC
 204 OCCUPANT UNKNOWN,
 228 BROTHERS TOWING INC
 SPM HYDRALICS
 660 RUVALCABA, JOSE G
 20118 BIELEC, SHEPARD J
 20162 ALVARADO, KAY L
 20182 ALVARADO, MARTINA
 RAMOS, LAURA
 RUIZ, ZULAYDA
 20190 TREWIN, PATRICIA D
 20220 RYAN, GLENNA M
 20223 OCCUPANT UNKNOWN,
 20245 TOSCANO, MARTIN
 20246 BECKER, JOSHUA
 20247 OCCUPANT UNKNOWN,
 20280 HILLIG, MARTIN E
 20291 FEENEY, DONALD L
 20293 OCCUPANT UNKNOWN,
 20325 AGUAYO, RUBEN
 20368 URIARTE, ROSARIO U
 20402 WILSON, CARL
 20404 DELVILLAR, JULIAN
 20450 OCCUPANT UNKNOWN,
 20500 OCCUPANT UNKNOWN,
 20520 IRIARTE, BYRON R
 20525 PUTZIER, KEVIN R
 20550 PONCE, LUCIA P
 20552 MORALES, WILBERT
 20621 DIETZMAN, RICHARD
 20671 FERNANDEZ, FELIPE
 20740 KENDRICK, SHERRY
 MATA, STEVEN
 REYNOLDS, LARISSA L
 THOMPSON, DOUGLAS L
 20750 OCCUPANT UNKNOWN,
 21037 MCPIKE, DEAN
 ROSITO, MARCELO F
 21050 CALVILLO, AMADO
 21100 LOPEZ, AMALIA L
 21200 REYES, SALVADOR E
 21285 LEDESMA, JOSE F
 21313 MARTINEZ, GERMAN
 21327 ESPARZA, JULIO
 21331 COMER, LONNIE T
 21535 LLAMAS, ERNESTINA
 21588 MAQUIZ, ETHEL Y
 21641 OCCUPANT UNKNOWN,
 21660 MCADAMS, MARY L

MOUNTAIN AVE 2014 (Cont'd)

21661	LEE, JESSE M
21686	OCCUPANT UNKNOWN,
21701	RAMIREZ, JOSE M
21725	RAMIREZ, TRINIDAD M
21732	MARTINEZ, RICARDO
21752	ZEPEDA, FERNANDO
21761	MCCOOK, JIM R
21800	TAPIA, CARLOS D
21815	CARRILLO, SAMUEL
21820	DIAZ, JOEL
21900	BARRAGAN, ANGELICA
21905	OCCUPANT UNKNOWN,
21970	ERENAS, CORAHIMA
22020	CASTANEDA, JOEL
22023	FLOREZ, BEATRIZ
22050	KIRK, BRETT E
22075	MORGANO, JOSEPH F
22090	ARGUELLO, DULAR J
22095	PARKER, CLARENCE D
22100	PETERSEN, GUY W
22110	ENCARNACION, JAVIER
22115	BARRAGAN, JOSE L
22120	OROZCO, JOSE L
22151	RUSSELL, KEVIN
22222	CACERES, EVALYN
22247	ANDRES, LEONARDO
22270	CALLIER, TIMOTHY J
22285	OCCUPANT UNKNOWN,
22290	JONES, JOSEPH M
22295	MENDOZA, ANTONIO
22299	OCCUPANT UNKNOWN,
22337	DUNSTON, WILLIAM
22338	FONTENOT, FREEMAN A
22347	HENDRICKSON, GEORGEANNE E
22380	OCCUPANT UNKNOWN,
22381	TAPIA, FRANCISCO
22386	ELWOOD, THERON M
22420	ZAMORA, JOSE G
22449	RAMIREZ, RAUL A
22475	VALENCIA, ROSENDO
22560	OCCUPANT UNKNOWN,
22567	ZUNIGA, BENJAMIN
22580	MIRANDA, LUIS
22590	VELASQUEZ, LAWRENCE
22610	OCCUPANT UNKNOWN,
22620	HERRERA, IGNACIO P
22640	BARRAGAN, GRACIE
22667	DELATORRE, JORGE
22876	GOOD HOPE MISSIONARY BAPTIST CHURCH
22881	WELCH, PAULA D

MOUNTAIN AVE 2014 (Cont'd)

22913 ANDRADE, HECTOR
22921 JAIMES, JESUS
22950 FRANCO, MARVIN
22985 JACKSON, ARLENE E
23044 SALDANA, VERONICA
23057 RODRIGUEZ, JORGE
23069 OCCUPANT UNKNOWN,
23074 FLORES, MANUEL
23080 NEAL, DAVID N
23090 HARRIS, SUSIE
23100 ISREAL, JERRY
23130 CARR, MATTHEW
23150 BEELER, CYNTHIA F
23162 MILLNER, DAVID L
23164 IBARRA, JAIR
23165 OCCUPANT UNKNOWN,
23166 WALKER, VANESSA M
23179 TORRES, MARIA
23201 SANABRIA, GUADALUPE
23236 LOZANO, JUVENAL
23242 MOLINA, JESUS
23243 MIRANDA, JOE L
23272 ANDRADE, AGUSTINE G
23273 FANSLER, DANIEL B
23274 POWEL, ANTHONY D
23301 ANDRADE, AGUSTIN G
23327 COOK, ZAMINA
23336 PEREZ, JOSEFINA D
23370 MORA, JESSE Q
23375 MACIAS, ROBERTO
23390 SOLORZANO, FRANK M
23407 OCCUPANT UNKNOWN,
23421 OCCUPANT UNKNOWN,
23431 REYNOSO, VIRGINIA E
23436 WILLIAMSON, CRIST
23450 RIOS, MARIA
23465 PORTILLO, ELISEO B
23480 SANABRIA, GERARDO
23491 BOURGEOIS, WILLIE F

MCPHERSON RD 2010

1765	RASMUSSEN, DUANE
22010	SKINNER, BARBARA A
22011	JOHNSON, BILL
22081	LEE, CHI H
22150	OCCUPANT UNKNOWN,
22151	ESTRADA, PETE
22180	LOMELI, JOSE
	OCCUPANT UNKNOWN,
22181	LONG, MORGAN W
22200	SINGH, ROUPWATIE
22210	KIGHT, MICHAEL S
22260	OCCUPANT UNKNOWN,
22389	MADRID, MATEO
22510	LIPTRAP, LUPE G
22654	GONZALEZ, MIRIAM
22751	DELTORO, MICAELA
24021	LOZOYA, MARIA
24476	HARRISON, HELEN I
	WELDON, MALCOLM K
24755	OSUNA, MANUEL S
24805	GARCIA, JASON J
24935	VAZQUEZ, ROBERTO M
24955	CHACON, CARMEN A
26445	LUPTON, STEVEN K
26485	RICHARDSON, MACHELE M

MOUNTAIN AVE 2010

152 STEVES TOWING SVC
 204 OCCUPANT UNKNOWN,
 228 BROTHERS TOWING INC
 304 UNITED SITE SVC
 340 FIRST STUDENT INC
 20118 DRAKE, ANNIE A
 20162 PRADO, LAURA
 20182 MEZA, BRENDA
 RAMOS, LAURA
 20190 ALS MOBILE WINDSHIELD REPAIR
 TREWIN, ALLAN T
 20221 SALAZAR, TONY T
 20223 OCCUPANT UNKNOWN,
 20245 CRISTAN, JEFF P
 20246 CAZAREZ, ROSARIO N
 20247 OCCUPANT UNKNOWN,
 20280 HILLIG, MARTIN E
 20291 FEENEY, DONALD L
 20293 OCCUPANT UNKNOWN,
 20325 GONZALES, ISAURA
 20343 EVANS, JAMES
 20368 JAMES, PATRICIA A
 20404 MACHADO, ANGIE
 20440 GARCIA, EDITH
 20447 BUNIN, SIMON
 20450 OCCUPANT UNKNOWN,
 20520 OCCUPANT UNKNOWN,
 20525 PUTZIER, KEVIN R
 20550 PONCE, LUCIA P
 20552 CHICAS, CLAUDIA
 20621 DIETZMAN, RHONDA
 20671 REYNOLDS, LARISSA L
 20740 MATA, STEVEN
 PEREZ, MANUELA C
 THOMPSON, DOUGLAS L
 20750 OCCUPANT UNKNOWN,
 21037 CARDENAS, ELISA M
 21050 BEJARANO, AURELIANO S
 21100 MORALES, GERALDINA
 21200 APOSTOLOS, EDWARD C
 21285 LEDESMA, JOSE F
 21313 MARTINEZ, GERMAN
 21327 ESPARZA, JULIO
 21331 COMER, LONNIE T
 21535 ESPINOZA, LAURA A
 21638 SHAFFER, HERB
 21641 OCCUPANT UNKNOWN,
 21661 LEE, JESSIE M
 21686 OCCUPANT UNKNOWN,
 21701 RAMIREZ, MANUEL R

MOUNTAIN AVE 2010 (Cont'd)

21725 RAMIREZ, TRINIDAD M
21732 MARTINEZ, RICARDO
21761 MCCOOK, CANDY D
21800 TAPIA, CARLOS D
21815 CARRILLO, SAMUEL
21820 DIAZ, JOEL
21900 ARIAS, PAULINE
21905 VEGA, MIRIAM
21970 FRAGOSO, ERICKA
22020 MENDOZA, GABRIEL V
22023 RUVALCABA, JOSE
22050 OCCUPANT UNKNOWN,
22090 OCCUPANT UNKNOWN,
22095 PARKER, CLARENCE D
22100 PETERSEN, GUY W
22110 ENCARNACION, JAVIER
22115 OCCUPANT UNKNOWN,
22120 OROZCO, JOSE L
22151 BRHEL, MARTIN C
22222 TRAN, KHOA
22247 ESTALA, SOCCORO M
22270 CALLIER, TIMOTHY J
22285 MCINTYRE, CORINA S
22295 MENDOZA, ANTONIO
22299 AVALOS, MIGUEL
22337 SOTELLO, STANLEY
22338 FONTENOT, ERIC A
22347 OCCUPANT UNKNOWN,
22380 HARRIS, TRISTAN
22381 PACHECO, INOCENSIO
22386 ELWOOD, THERON M
22420 ZAMORA, JOSE G
22449 RAMIREZ, RAUL A
22475 DIAZ, JESUS
22560 ALSAYEH, AIDA A
22567 ZUNIGA, BENJAMIN
22580 MIRANDA, PRISCILLA
22590 DAVIS, RICHARD C
22620 HERRERA, MARTIN P
22640 BARRAGAN, MARGARITO
22667 TREVINO, FELIX
22881 WELCH, BOBBIE J
22913 ANDRADE, HECTOR
22921 JAIMES, JESUS
22950 GOMEZ, HECTOR
23011 GUDINO, JOSE L
23044 TOVAR, SALVADOR B
23057 RODRIGUEZ, EDGAR
23069 OCCUPANT UNKNOWN,
23074 FLORES, MANUEL

MOUNTAIN AVE 2010 (Cont'd)

23080 NEAL, DAVID N
23100 ISREAL, JERRY
23130 CARR, MATTHEW
23150 KANE, CRYSTAL
23164 OCHOA, ARNULFO L
23165 MUNOZ, TIMOTEO
23166 WALKER, VANESSA M
23179 GONZALES, ARMANDO
23201 OCCUPANT UNKNOWN,
23236 HERNANDEZ, A
23242 ARENAS, JOSEFINA
23243 LEDESMA, RAMON
23272 ANDRADE, AGUSTINE G
23273 BUCKINGHAM, ELIZABETH
23274 POWEL, ANTHONY D
23301 ANDRADE, AGUSTIN G
23327 OCCUPANT UNKNOWN,
23336 PEREZ, JOSEFINA D
23370 MORA, MANUEL Q
23375 OCCUPANT UNKNOWN,
23390 RAYA, RONALD J
23407 OCCUPANT UNKNOWN,
23421 THOMAS, RONALD J
23431 REYNOSO, VIRGINIA E
23436 ESPARZA, ROBERTO M
23450 PEREZ, GABINO
23465 SALAZAR, MARIA D
23480 RAMOS, ISABEL G
23491 BOURGEOIS, LIONEL G

MCPHERSON RD 2005

1765	RASMUSSEN, DUANE
22010	SKINNER, BARBARA A
22011	JOHNSON, BILL
22150	IVERSON, DALE
22151	ESTRADA, PETE
22180	BAUGH, RYAN D
22210	ESC REALITY KIGHT, MICHAEL S
22260	SINGH, ROUPWATIE
22389	RODRIGUEZ, PATRICIA N
22500	OCCUPANT UNKNOWN,
22654	MONTOYA, CRUZ A SPALDING, ANYA
22751	OCCUPANT UNKNOWN,
24271	AGUILERA, FRANK J
24421	WILKINS, MICHAEL V
24476	HARRISON, HELEN I WELDON, MALCOLM K
24721	AGUILERA, RITA M
24755	OROZCO, MANUEL
24935	OCCUPANT UNKNOWN,
24955	CHACON, CARMEN A
26485	BOWSER, EDWIN C

MOUNTAIN AVE 2005

120 BROTHERS TOWING
152 STEVES AUTO DISMANTLING
340 AMERICAN CLASSIC SANITATION
660 RUVALCABA, ISRAEL
20118 DRAKE, ANNIE A
20182 RAMOS, LAURA
20190 ALPHAOMEGA COMPUTERWORKS
TREWIN, ALLAN T
20200 CAROTHERS, SHIRLEY A
20220 CAROTHERS, SHIRLEY A
20221 SALAZAR, TONY T
20245 TOSCANO, MARTIN A
20246 CAZARES, HERMELINDA
20247 DAVIS, RICHARD
20280 HILLIG, MARTIN
20291 FEENEY, DONALD L
20293 OCCUPANT UNKNOWN,
20325 SANCHEZ, TERESA
20343 EVANS, JAMES
20368 OCCUPANT UNKNOWN,
20404 WICKHAM, KAREN F
20440 WALZ, RICK
20450 GARCIA, CARLOS C
20520 NELSON, DAVID A
20525 PUTZIER, KEVIN
20552 MORALES, JUAN C
20601 VOILES, FREDDIE L
20621 DIETZMAN, ARNO
20740 THOMPSON, DOUGLAS L
21037 COOK, BONNIE L
21050 BEJARANO, JOSE
21100 MORALES, TERESA
21200 NOVOA, FERNANDO
21285 LEDESMA, JOSE F
21313 DEPAZ, CELSO
21327 ESPARZA, JULIO
21331 COMER, LONNIE T
LONNIES ATM INSTALLIN SRVC
21588 MAQUIZ, FELICINDO R
21638 SHAFFER, HERB
21641 OCCUPANT UNKNOWN,
21660 TAYLOR, LEADELL
21661 OCCUPANT UNKNOWN,
21701 RAMIREZ, MANUEL R
21725 OCCUPANT UNKNOWN,
21732 SESSAM, ROBIN
21752 OROPEZA, MARIA G
21800 TAPIA, CARLOS D
21815 CARRILLO, ALVARO
21820 DIAZ, JOEL

MOUNTAIN AVE 2005 (Cont'd)

21900	ARIAS, PAULINE
21905	VEGA, MIRIAM
21970	BELLO, ALBERT
22020	MENDOZA, GABRIEL
22023	QUINTERO, MANUEL
22050	OCCUPANT UNKNOWN,
22075	MORGANO, JOSEPH J
22090	OCCUPANT UNKNOWN,
22095	PARKER, CLARENCE D
22100	WELCH, ROGER E
22120	SOTO, LETICIA
22151	BRHEL, MARTIN C
22222	FUKUYAMA, MIWA
22247	ESTALA, SOCORRO
22270	JACOBS, YOLANDA R
22285	PALMER, A
22290	OCCUPANT UNKNOWN,
22295	MENDOZA, ANTONIO
22337	LIGHTFOOT, ZELMA G
22338	FONTENOT, FREEMAN A
22347	YOUNG, TRACY M
22380	HARRIS, KARL N
22381	TAPIA, JUAN
22386	ELWOOD, THERON M
22420	ZAMORA, JOSE G
22449	RAMIREZ, RAUL
22475	OCCUPANT UNKNOWN,
22560	GRIMES, ALTON R
22567	ZUNIGA, BENJAMIN
22580	MIRANDA, MARCO A
22590	WHITE, CLIFFORD M
22667	SIERRAS, MIKE P
22876	GOOD HOPE MISSIONARY BAPTIST CHURCH
22881	WELCH, BOBBIE J
22913	OCCUPANT UNKNOWN,
22950	OCCUPANT UNKNOWN,
23011	FUGE, DONNA
	UP N RUNNING
23044	TOVAR, SALVADOR B
23057	RODRIGUEZ, GERARDO
23069	GORDON, JUSTIN T
23074	INTERCEPT CONSUMER SERVICES INC
	SANTILLAN, MARIA E
23080	TERRELL, STACEY
23100	PORTILLO, ILEANA I
23130	COLE, V
23150	OCCUPANT UNKNOWN,
23162	MILLNER, LEE A
23164	OCHOA, ARNULFO L
23165	LAZARENO, ROBERT

MOUNTAIN AVE 2005 (Cont'd)

23179	ALVAREZ, BIANCA E
23201	SANBRIA, ROSALIO
23236	HERNANDEZ, A SIMPLY WE CARE CO
23242	MOLINA, JESUS
23243	OCCUPANT UNKNOWN,
23273	MCCARTER, ADELL
23301	ANDRADE, AGUSTIN G
23327	WILLIAMS, JOHN
23336	PEREZ, JOSEFINA
23370	MORA, MANUEL M
23375	OCCUPANT UNKNOWN,
23390	RAYA, RONALD O
23407	OCCUPANT UNKNOWN,
23431	REYNOSO, VIRGINIA E
23436	ESPARZA, ROBERTO M
23465	SALAZAR, MARIA
23480	RAMOS, ISABEL G
23491	BOURGEOIS, LIONEL G
23816	LAZARENO, GABRIEL H



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MCPHERSON RD 2000

22010 SKINNER, BARBARA A
22011 JOHNSON, BILL
22150 IVERSON, DONALD L
22151 OCCUPANT UNKNOWN,
22180 OCCUPANT UNKNOWN,
22210 LONG, DAVID
22389 BRUCE, ODEN R
24755 AGUILAR, H
RODRIGUEZ, JUAN

MOUNTAIN AVE 2000

105 YONKLES, JOHN A
 120 EGGLETON WATER TRUCK RENTER
 WHITE HOUSE SANITATION
 2222 SOK, C
 20220 CAROTHERS, JAMES A
 20221 OCCUPANT UNKNOWN,
 20245 ANDERSON, LARRY
 20247 OCCUPANT UNKNOWN,
 20280 HILLIG, MARTIN
 20291 FEENEY, DONALD
 20293 BRANT, WANDA L
 20325 OCCUPANT UNKNOWN,
 20368 URIARTE, F J
 20402 PRZEBIEDA, KAREN M
 20404 OCCUPANT UNKNOWN,
 20520 OCCUPANT UNKNOWN,
 20525 OCCUPANT UNKNOWN,
 20552 OCCUPANT UNKNOWN,
 20601 VOILES, FREDDIE L
 20621 DIETZMAN, ARNO
 20740 THOMPSON, DOUGLAS
 21037 CLARKS APPLIANCE
 COOK, RONNIE L
 21200 LEMKE, CHARLES
 21285 LEDESMA, MARTIN
 21313 OCCUPANT UNKNOWN,
 21327 WRIGHT, E A
 21331 COMER, LONNIE
 21357 BENNETT, TERRY L
 21535 WEATHERLY, JAY B
 21638 SHAFFER, HERB
 21641 OCCUPANT UNKNOWN,
 21660 RODDY, CAROLYN
 21661 OCCUPANT UNKNOWN,
 21691 PADILLA, F L
 21701 RAMIREZ, MANUEL R
 21725 RAMIREZ, TRINIDA
 21732 BLACKBURN, RILEY
 21970 BELLO, ALBERT
 22020 MENDOZA, YOLANDA
 22090 ARGUELLO, DULAR
 22100 BOLDIZAR, GREGORY
 22120 OCCUPANT UNKNOWN,
 22151 BRHEL, MARTIN C
 22222 CHHOEUN, SAPHAY
 22247 SILVA, CIRILO C
 22270 OCCUPANT UNKNOWN,
 22285 D & M AUTO WRECKING
 MANNEY, JAMES
 22290 OCCUPANT UNKNOWN,

MOUNTAIN AVE 2000 (Cont'd)

22295 GONZALEZ, RAMON P
22299 OCCUPANT UNKNOWN,
22337 MCMILLAN, BARBARA
22338 OCCUPANT UNKNOWN,
22347 YOUNG, TRACY
22380 HARRIS, KARL
22381 OCCUPANT UNKNOWN,
22386 ELWOOD, THERON
22449 OCCUPANT UNKNOWN,
22475 OCCUPANT UNKNOWN,
22560 GRIMES, ALTON
22567 OCCUPANT UNKNOWN,
22580 RODRIGUEZ, P
22588 OCCUPANT UNKNOWN,
22667 SIERRAS, MIKE
22876 GOOD HOPE MISSIONARY BAPTIST CHURCH
22881 WELCH, BOBBIE
22913 OCCUPANT UNKNOWN,
23011 OCCUPANT UNKNOWN,
23044 MONROE, JEFFREY R
23069 OCCUPANT UNKNOWN,
23074 CAMPBELL, DARREN
23080 OCCUPANT UNKNOWN,
23100 OCCUPANT UNKNOWN,
23130 OCCUPANT UNKNOWN,
23162 MILLNER, LEE
23164 OCHOA, ARNULFO
23165 PORTER, ELVA
23243 FRANKLIN, MARTHA
23274 OCCUPANT UNKNOWN,
23301 ANDRADE, AGUSTIN
23327 WILLIAMS, JOHN
23336 PEREZ, J
23390 RAYA, RONALD
23407 OCCUPANT UNKNOWN,
23421 THOMAS, RONALD
23431 OCCUPANT UNKNOWN,
23436 OCCUPANT UNKNOWN,
23450 GOMEZ, SISTO
23491 BOURGEOIS, LIONEL



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MCPHERSON RD 1995

22010 SKINNER, F
22011 JOHNSON, BILL
22150 IVERSON, DONALD L
22151 SANCHEZ, JOSIE
22180 CLAYTON, JENNIE L
22210 LONG, DAVID
22389 BRUCE, ODEN R
22500 GONZALEZDIAZ, E
22654 STEFFER, LINDA
22751 SARDEGNA, MICHAEL A
24025 JACKSON, JOHNNIE M
26445 PAYNE, ALVIN R



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MOUNTAIN AVE 1995

90 PERRIS TRUCK & AUTO DISMANTLER
 VERNIS TOWING
 105 YONKLES, JOHN A
 120 OCCUPANT UNKNOWNN
 20343 TMC PLUMBING
 21037 CLARK, CHARLIE
 CLARKS APPLIANCE
 21050 ELWOOD, SHERRY
 21200 LEMKE, CHARLES
 21285 ALVAREZ, AIDEE
 21331 COMER, LONNIE
 21641 RODRIGUEZ, FRANK
 21661 OCCUPANT UNKNOWNN
 21701 LUMAS, ANN
 21732 OCCUPANT UNKNOWNN
 21761 JOHNSON, DALE E
 21970 LUMAS, NORMAN C
 22020 NICKENS, EUGENE
 22050 OCCUPANT UNKNOWNN
 22090 ARGUELLO, DULAR
 22222 GONZALEZ, L
 22247 OCCUPANT UNKNOWNN
 22270 JACOBS, YOLANDA
 22285 J & M AUTO WRECKING
 MANNEY, JAMES
 22337 CALAWAY, BEN D
 22338 STEWART, ROBERT JR
 22347 YOUNG, TRACY
 22380 OCCUPANT UNKNOWNN
 22381 SHAFER, OPHA
 22386 ELWOOD, THERON
 22420 OCCUPANT UNKNOWNN
 22449 REED, JIM
 22560 OCCUPANT UNKNOWNN
 22590 BERMUDEZ, LISA
 22667 SIERRAS, MIKE
 22876 GOOD HOPE MISSIONARY BAPTIST
 22910 CHAPMAN, JUDITH A
 22913 ZELL, ALLIE
 22921 WILDS, THOMAS
 23074 GUEVARRA, JUDY
 23165 NAJAR, MANUEL Z
 23179 LEON, DINA
 23201 SANABRIA, ROSALIO
 23327 OCCUPANT UNKNOWNN
 23431 CURIEL, VICTOR
 23436 OCCUPANT UNKNOWNN
 23465 OCCUPANT UNKNOWNN



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MCPHERSON RD 1992

22010 SKINNER, F
22011 JOHNSON, BILL
22151 ESTRADA, DANNY
22210 LONG, DAVID
22389 BRUCE, ODEN R
22654 STEFFER, LINDA
26445 PAYNE, ALVIN R

MOUNTAIN AVE 1992

90	PERRIS TRUCK&AUTO
105	YONKLES, JOHN A
120	A 1 PERRIS VLY TWNG SIERRA VISTA RNTLS
20220	BARTH, SHIRLEY
20221	SALAZAR, TONY
20246	YOUNG, CHRIS
20280	HILLIG, MARTIN
20368	GARCIA, RAUL
20440	WALZ, CAROL L
20525	HARPER, JACK
20552	ESCOBAR, STEVEN
20621	DIETZMAN, ARNO
20740	J M S ENTERPRISES THOMPSON, DOUGLAS
21037	CLARKS APPLIANCE
21200	LEMKE, CHARLES
21331	COMER, LONNIE
21641	RODRIGUEZ, FRANK
21761	JOHNSON, DALE E
21970	LUMAS, NORMAN C
22020	NICKENS, EUGENE
22090	ARGUELLO, DULAR
22285	MANNEY, JAMES
22337	CALAWAY, BEN D
22338	STEWART, ROBERT JR
22347	YOUNG, TRACY
22381	SHAFER, OPHA
22667	SIERRAS, MIKE
22876	GOOD HOPE MSSNY BPT
22921	WILDS, THOMAS
23421	THOMAS, RONALD

MCPHERSON RD 1985

MC PHERSON 92370 PERRIS

22010	SPINNER FREDERICK	657-7149	0
22151	ESTRADA DANNY	657-1547	2
22389	BRUCE ODEN R	657-6777	+5
22500	LIPTRAPP THOMAS	657-2677	1
22654	STEFFER GERALD D	657-6309	2
*	0 BUS	5 RES	1 NEW

MOUNTAIN AVE 1985

MOUNTAIN AV 92370 PERRIS		
90	PERRIS TRK DSMNTRLS	657-9935 4
105	J&J AUTO WRECKING	657-8759 2
	YONKLES JOHN A	657-3294
110	XXXX	00
120	EAGLE AUTOMOTIVE	657-9005 +5
	VALLEY TOW SERVICE	657-1577 +5
20118	XXXX	00
20162	XXXX	00
20190	YOUNG LAVERN	943-1867 +5
20220	TODD ARTHUR	657-6347 8
20221	SALAZAR TONY	657-7952 9
20245	DURON EDDIE V	657-3918 6
20246	XXXX	00
20247	XXXX	00
20280	XXXX	00
20291	RODRIGUEZ FELIX	657-3916
20343	CALHOUN J C	657-9956 4
20368	XXXX	00
20369	XXXX	00
20402	MULLEN N	943-2726 +5
20404	XXXX	00
20440	WALZ CAROL L	657-4158
20520	XXXX	00
20525	HARPER JACK	657-6814 8
20552	XXXX	00
20601	KELLY SHIRLEY	943-3722 +5
20610	THOMSON W I	657-6106 1
20671	ALLISON MERLE A	657-3323
20740	STAYLOR MICHAEL	943-1893 +5
21050	XXXX	00
21100	XXXX	00
21200	LEMKE CHAS	657-3030 2
21641	RODRIGUEZ FRANK	657-5643 9
21661	LEE LENARD	943-3593 +5
21701	OLIVAREZ GUADALUPE	657-2429 +5
21732	BLACKBURN MARY	657-3426 8
21752	AGUILAR CARMEN	943-4162 +5
21761	JOHNSON DALE E	657-6534 8
21905	ARIAS PAULINE	657-2203 4
21970	LUMAS NORMAN C	657-7954 0
22020	NICKENS EUGENE	657-4650
22023	XXXX	00
22090	ARGUELLO DULAR	943-1807 4
22151	BRHEL MARTIN	657-8257 +5
22222	PICKENS RAY	943-1043 4
22247	XXXX	00
22270	CALLIER S REV	943-3550 +5
22285	XXXX	00
22290	TOWNSEND WM BERN	657-6893
22295	XXXX	00
22337	CALAWAY B D	657-3457 0
22338	XXXX	00
22380	STEWART ROBT	657-6552 8
	WILLIAMS STEPHEN	657-0590 +5
22386	ELWOOD VIOLA MRS	657-3566
22420	XXXX	00
22449	XXXX	00
22560	RITCHIE HAZEL	657-9065 +5
22567	XXXX	00
22580	CASTILLO TRINIDAD	657-4381 9
22590	XXXX	00
22667	SIERRAS MIKE	657-6685 6
22734	XXXX	00
22876	GOOD HOPE MSSNY BPT	657-5465
22881	WELCH B J	657-8530 9
22913	WILDS THOS	943-2415 +5
22921	LOSBY JAS	943-3538 +5
22950	CANTRELL DAVID	657-9755 0
23069	CHAVARRIA LUCIANO	657-2762
23130	XXXX	00
23162	MILLNER LEE	657-2510
23301	MARTZ JOHN F	657-8141 +5
23327	HARRIS CORDELIA	657-5381 7
23373	XXXX	00
23420	XXXX	00
23421	THOMAS JOANN	657-4973
23423	XXXX	00
23431	XXXX	00
23436	ROSS GEO C	943-2157 4
23450	CABRAL L G CAPT	657-4904 8
	* 5 BUS 75 RES 16 NEW	

MCPHERSON RD 1980

MC PHERSON RD 92370
PERRIS

22010	SKINNER FREDERICK	657-7149 +0
22151	ESTRACA DANNY	657-1547 +0
22751	BENTLEY JOHN	657-2407 8
22801	XXXX	00
★	0 BUS	4 RES
		2 NEW

MOUNTAIN AVE 1980

MOUNTAIN AV 92370

PERRIS

105	YONKLES JOHN A	657-3294	
110	GUTHRIE JOHN E	657-2910	
120★	JACOBS W R ENTPRS	657-9839+0	
★	JACOBS W R ENTRPRS	657-9839+0	
20118	YAGER DONALD H	657-6675	7
	YAGER EUPHEMIA	657-6675	8
20162	OSTROWSKI JOHN	657-4083	9
20182	SPAGNOLO FRANK JR	657-5214	6
20190	XXXX	00	
20220	TODD ARTHUR	657-6347	8
20221	SALAZAR TONY	657-7952	9
20245	DURON EDDIE V	657-3918	6
20246	XXXX	00	
20247	WOLFE S GORDON	657-6636	8
20280	XXXX	00	
20291	RODRIGUEZ FELIX	657-3916	5
20343	XXXX	00	
20368	XXXX	00	
20369	XXXX	00	
20402	XXXX	00	
20404	MURPHY GERALD M	657-6346	5
20440	WALZ CAROL L	657-4158	
20450	KIRKWOOD VIRGINIA	657-4022	7
20520	XXXX	00	
20525	HARPER JACK	657-6814	8
20552	GUNN MICHAEL	657-3673	9
20601	CONQUEST PAUL R	674-1064	+0
20671	ALLISON MILDRED	657-3323	5
20740	HENRY DOROTHY MRS	657-4794	6
21050	GONZALEZ ESTEVAN	657-2391	4

MOUNTAIN AVE 1980

MOUNTAIN AV		92370 CONT
21100	MANOR SAM	657-4785 9
21200★	LEMKE C TILE CO	657-6350 9
21641	RODRIGUEZ FRANK	657-5643 9
21732	BLACKBURN MARY	657-3426 8
21761	JOHNSON DALE E	657-6534 8
21970	LUMAS NORMAN C	657-7954 +0
22020	NICKENS EUGENE	657-4650
22023	TORRES JOSE	657-1018 +0
22090	XXXX	00
22151	BRHEL MARTIN	657-8793 8
22222	SMITH CHAS O	657-3612 8
22247	XXXX	00
22270	XXXX	00
22285	SMITH STAN	657-1010 +0
22290	TOWNSEND WM BERN	657-6693 4
22295	XXXX	00
22337	CALAWAY B D	657-3457 +0
22338	XXXX	00
22380	STEWART ELLA	657-6552 8
22386	ELWOOD VIOLA MRS	657-3566 4
22420	XXXX	00
22449	FOUTZ HUBERT A	657-4587 8
	FOUTZ MARTHA	781-8547 +0
22560	WASHINGTON ANNIE	657-5904 9
22567	SHAMBLEY GEO	657-2959 4
22580	CASTILLO TRINIDAD	657-4381 9
22590	NEELY FRED	657-8615 +0
22667	SIERRAS MIKE	657-6685 6
22734	XXXX	00
22876★	GOOD HOPE BPTST CH	657-5465
22881	WELCH B J	657-8530 9
22950	CANTRELL DAVID	657-9755 +0
23069	CHAVARRIA LUCIANO	657-2762
23130	XXXX	00
23162	MILLNER LEE	657-2510
23166	XXXX	00
23179	CALLOWAY EDMOND	657-3363 8
23201	XXXX	00
23273	MCCARTER ADELL REV	657-8564 +0
23301	MALONE JONSEY	657-2616 +0
23327	HARRIS CORDELIA	657-5381 7
23373	MARTINEZ ZORAIDA	657-6933 9
23420	XXXX	00
23421	RAMIREZ LUPE O	657-6055 6
	THOMAS JULIUS J	657-4973 4
23423	XXXX	00
23431	REYNOSO MAX	657-6286 6
23450	CABRAL L G CAPT	657-4904 8
24567	XXXX	00
24585	ARIAS PAULINE	657-2203 5
24600	MEADOR JIM E	657-6888 +0
★	4 BUS 77 RES	13 NEW

MOUNTAIN AVE 1973

MOUNTAIN AV 92370 PERRIS

105	YONKLES JOHN A	657-3294
110	GUTHRIE JOHN E	657-2910
20246	PARKS ROLLA B	657-4628
20291	RODRIGUEZ FELIX	657-5655
20343	CARTER JOHN S	657-4198
20368	PEKRUL MARION BELL	657-5242
20369	CARTER LOIS	657-5815
20402	MORRIS EVELYN F	657-4487
20440	WALZ CAROL L	657-4158
20520	NELSON RAY MRS	657-4694
20621	SARMIENTO E	657-5387
20740	HENRY DOROTHY MRS	657-4794
21100	ROQUEMORE BENNIE J	657-2546
21761	DODSON VIVIAN	657-2495
22020	NICKENS EUGENE	657-4650
22090	NICKENS ALMA E	657-5669
22247	WILSON ROBT	657-5357
22270	CALLIER S REV	657-6694
22295	MOORE MARION	657-6751
	*PINES PRRS TREE FRM	657-6519

MOUNTAIN AVE 1973

Target Street	Cross Street	Source
..MOUNTAIN AV		92370 CONT..
22338 FREDERICKS HENRY		657-4936
22380 MOORE PERRY		657-2648
22876*GOOD HOPE BPTST CH		657-5465
23069 CHAVARRIA LUCIANO		657-2762
23130 JACKSON HAMPTON O		657-3305
23162 MILLNER LEE		657-2510
23179 CALLOWAY EDMOND		657-3365
23301 MALONE BEN F		657-3938
23420 CABRAL LOUIS G CAPT		657-4904
23421 WILLIAMS DELORES		657-2024
24567 SHAMBLEY GEO		657-2959
NO # BLACKBURN MARY		657-3426
NO # ELWOOD VIOLA MRS		657-3566
* 2 BUS		31 RES

National Flood Hazard Layer FIRMMette



117°15'9"W 33°46'11"N



USGS The National Map: Orthoimagery. Data refreshed October, 2020.

0 250 500 1,000 1,500 2,000 Feet 1:6,000

117°14'32"W 33°45'41"N

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS		Without Base Flood Elevation (BFE) <i>Zone A, V, A99</i>
		With BFE or Depth <i>Zone AE, AO, AH, VE, AR</i>
		Regulatory Floodway
OTHER AREAS OF FLOOD HAZARD		0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile <i>Zone X</i>
		Future Conditions 1% Annual Chance Flood Hazard <i>Zone X</i>
		Area with Reduced Flood Risk due to Levee. See Notes. <i>Zone X</i>
		Area with Flood Risk due to Levee <i>Zone D</i>
OTHER AREAS		NO SCREEN Area of Minimal Flood Hazard <i>Zone X</i>
		Effective LOMRs
GENERAL STRUCTURES		Area of Undetermined Flood Hazard <i>Zone D</i>
		Channel, Culvert, or Storm Sewer
		Levee, Dike, or Floodwall
OTHER FEATURES		20.2 Cross Sections with 1% Annual Chance
		17.5 Water Surface Elevation
		Coastal Transect
		Base Flood Elevation Line (BFE)
		Limit of Study
MAP PANELS		Jurisdiction Boundary
		Coastal Transect Baseline
		Profile Baseline
		Hydrographic Feature
		Digital Data Available
		No Digital Data Available
		Unmapped
		The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.



This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on **12/7/2020 at 6:39 PM** and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

United States Drug Enforcement Administration- Clandestine Laboratory Register Data

state	county	city	address1	address2	date
California	Alameda	San Lorenzo	17283 Via Annette Dr		2/6/2004
California	Alameda	San Lorenzo	17283 Via Annette Dr		2/6/2004
California	Alameda	San Leandro	1735 138th Ave		2/18/2004
California	Alameda	San Leandro	1735 138th Ave		2/18/2004
California	Alameda	Newark	37120 Spruce St G		2/29/2004
California	Alameda	Hayward	333 Jackson St 219		3/12/2004
California	Alameda	Hayward	333 Jackson St 219		3/12/2004
California	Alameda	Hayward	1032 Central Blvd		6/9/2004
California	Alameda	Hayward	1032 Central Blvd		6/9/2004
California	Alameda	Hayward	231 Culp Ave		8/29/2004
California	Alameda	Hayward	231 Culp Ave		8/29/2004
California	Alameda	Union City	32673 Brenda Way 3		9/28/2004
California	Alameda	Union City	32673 Brenda Way 3		9/28/2004
California	Alameda	Pleasanton	6443 Alisal St		1/19/2005
California	Alameda	San Leandro	872 Donovan Dr		5/4/2005
California	Alameda	San Leandro	14446 Elm St		5/31/2005
California	Alameda	Hayward	27948 Pueblo Serena Way		1/9/2006
California	Alameda	Union City	2351 Hartford Drive		4/7/2006
California	Alameda	Union City	2351 Hartford Drive		4/7/2006
California	Alameda	Fremont	35856 Toledo Court		7/28/2006
California	Alameda	San Lorenzo	1302 Via San Juan Street		10/25/2007
California	Alameda	San Leandro	1553 Santa Maria Road		11/28/2007
California	Alameda	San Leandro	1553 Santa Maria Road		11/28/2007
California	Alameda	Hayward	698 Overhill Drive		5/16/2008
California	Alameda	Hayward	698 Overhill Drive		5/16/2008
California	Alameda	Berkeley	2240 9th Street		7/19/2008
California	Alameda	Oakland	923 39th Street		11/25/2008
California	Alameda	San Lorenzo	16150 Arriba Viaduct		4/8/2009
California	Alameda	Pleasanton	818 Angela Street		3/10/2010
California	Alameda	Pleasanton	818 Angela Street		3/10/2010
California	Alameda	Castro Valley	19127 Santa Maria Avenue		3/24/2010
California	Alameda	Castro Valley	19127 Santa Maria Avenue		3/24/2010
California	Alameda	Oakland	1950 86th Avenue		12/7/2015
California	Alameda	Oakland	1950 86th Avenue		12/7/2015
California	Butte	Oroville	1940 Helman St		2/4/2004
California	Butte	Oroville	1940 Helman St		2/4/2004
California	Butte	Oroville	110 Greenback Dr		2/5/2004
California	Butte	Oroville	110 Greenback Dr		2/5/2004
California	Butte	Oroville	2437 Oro Quincy Hwy		3/17/2004
California	Butte	Oroville	2437 Oro Quincy Hwy		3/17/2004
California	Butte	Paradise	6441 Moss Ln		3/31/2004
California	Butte	Paradise	6441 Moss Ln		3/31/2004
California	Butte	Magalia	3 Jordan Hill Rd		3/31/2004
California	Butte	Biggs	2164 Larkin		4/9/2004
California	Butte	Biggs	2164 Larkin		4/9/2004
California	Butte	Chico	939 W East Ave 4		4/19/2004
California	Butte	Chico	939 W East Ave 4		4/19/2004
California	Butte	Oroville	126 Canyon Highlands Dr		5/5/2004

California	Butte	Oroville	126 Canyon Highlands Dr	5/5/2004
California	Butte	Oroville	208 Misty View Ln	5/10/2004
California	Butte	Oroville	208 Misty View Ln	5/10/2004
California	Butte	Chico	853 E 7th St	7/14/2004
California	Butte	Oroville	2750 De Bangar Hwy	7/21/2004
California	Butte	Paradise	538 Castle	7/23/2004
California	Butte	Paradise	538 Castle	7/23/2004
California	Butte	Oroville	2720 Oro Dam Blvd 6a	8/3/2004
California	Butte	Oroville	2720 Oro Dam Blvd 6a	8/3/2004
California	Butte	Chico	453 Posada Way 12	8/4/2004
California	Butte	Chico	453 Posada Way 12	8/4/2004
California	Butte	Magalia	14723 Gold Cone Dr	9/21/2004
California	Butte	Biggs	488 G St	10/26/2004
California	Butte	Biggs	488 G St	10/26/2004
California	Butte	Oroville	1130 Tehama St	1/12/2005
California	Butte	Oroville	1130 Tehama St	1/12/2005
California	Butte	Chico	1056 E 8th St	3/18/2005
California	Butte	Chico	1056 E 8th St	3/18/2005
California	Butte	Oroville	1915 Plumas St	6/9/2005
California	Butte	Durham	9606 Fimple Rd	7/15/2005
California	Butte	Chico	696 7th E St	10/19/2005
California	Butte	Chico	1402 Pomona Ln	11/17/2005
California	Butte	Oroville	2794 Oak Knoll Way	11/30/2005
California	Butte	Chico	997 E 16th St	12/15/2005
California	Butte	Chico	997 E 16th St	12/15/2005
California	Butte	Gridley	233 Kentucky Street	2/21/2006
California	Butte	Gridley	233 Kentucky Street	2/21/2006
California	Butte	Gridley	275 Kentucky St	2/21/2006
California	Butte	Gridley	275 Kentucky St	2/21/2006
California	Butte	Paradise	5955 Hazel Way	5/25/2006
California	Butte	Oroville	91 Toyon Hills Drive	2/23/2007
California	Butte	Chico	1735 Magnolia Avenue	2/26/2007
California	Butte	Chico	1735 Magnolia Avenue	2/26/2007
California	Butte	Oroville	165 Hurles Circle	3/18/2007
California	Butte	Oroville	165 Hurles Circle	3/18/2007
California	Butte	Oroville	4210 Oro Bangor Highway	6/1/2007
California	Butte	Oroville	4210 Oro Bangor Highway	6/1/2007
California	Butte	Palermo	2398 Louis Avenue	8/27/2007
California	Butte	Palermo	2398 Louis Avenue	8/27/2007
California	Butte	Oroville	2349 Via Madero	9/11/2007
California	Butte	Oroville	1616 Oro Dam Boulevard	10/29/2007
California	Butte	Oroville	1616 Oro Dam Boulevard	10/29/2007
California	Butte	Oroville	1660 20th Street	1/31/2008
California	Butte	Oroville	1660 20th Street	1/31/2008
California	Butte	Oroville	3 Alverda Drive	5/13/2008
California	Butte	Oroville	3 Alverda Drive	5/13/2008
California	Butte	Chico	1024 Neal Dow Avenue	6/7/2008
California	Butte	Honcut	16 Truxton Court	9/2/2008
California	Butte	Honcut	16 Truxton Court	9/2/2008

California	Butte	Oroville	1840 7th Street	9/17/2008
California	Butte	Oroville	1840 7th Street	9/17/2008
California	Butte	Chico	729 Nord Avenue	9/30/2008
California	Butte	Chico	729 Nord Avenue	9/30/2008
California	Butte	Oroville	1960 Rose Street	4/7/2009
California	Butte	Oroville	1960 Rose Street	4/7/2009
California	Butte	Oroville	5075 Lower Wyandotte Avenue	4/7/2009
California	Butte	Oroville	5075 Lower Wyandotte Avenue	4/7/2009
California	Butte	Gridley	124 East Gridley Road	5/14/2010
California	Butte	Gridley	124 East Gridley Road	5/14/2010
California	Butte	Durham	8200 Durnel Drive	5/22/2010
California	Butte	Durham	8200 Durnel Drive	5/22/2010
California	Calaveras	Mountain Ranch	5645 Doster Rd	12/20/2004
California	Calaveras	Mountain Ranch	5645 Doster Rd	12/20/2004
California	Contra Costa	Rodeo	1120 4th St	7/8/2004
California	Contra Costa	Rodeo	1120 4th St	7/8/2004
California	Contra Costa	Antioch	1927 Birch Ave	12/12/2004
California	Contra Costa	Martinez	625 Marina Vista St	3/22/2005
California	Contra Costa	Martinez	625 Marina Vista St	3/22/2005
California	Contra Costa	Richmond	2420 Esmond Avenue	12/5/2006
California	Contra Costa	El Sobrante	2211 Rancho Road	9/20/2007
California	Contra Costa	El Sobrante	2211 Rancho Road	9/20/2007
California	Contra Costa	Richmond	712 Bradford Drive	7/29/2008
California	Contra Costa	Richmond	712 Bradford Drive	7/29/2008
California	Contra Costa	Brentwood	638 Summerwood Drive	2/11/2010
California	Contra Costa	Brentwood	638 Summerwood Drive	2/11/2010
California	Contra Costa	Crockett	815 1st Avenue	12/9/2010
California	Contra Costa	Crockett	815 1st Avenue	12/9/2010
California	Contra Costa	Bay Point	71 Mountain View Avenue	3/22/2011
California	Contra Costa	Bay Point	71 Mountain View Avenue	3/22/2011
California	Contra Costa	Brentwood	1880 East Eden Plains Street	10/2/2014
California	Contra Costa	Brentwood	1880 East Eden Plains Street	10/2/2014
California	Del Norte	Crescent City	1733 Wildwood Ln	4/14/2004
California	Del Norte	Crescent City	1733 Wildwood Ln	4/14/2004
California	El Dorado	El Dorado	6841 Union Mine Rd	4/29/2004
California	El Dorado	El Dorado	6841 Union Mine Rd	4/29/2004
California	Fresno	Reedley	22134 E Hogan Ave	1/15/2004
California	Fresno	Reedley	22134 E Hogan Ave	1/15/2004
California	Fresno	Fresno	12884 S Elm Ave	7/15/2004
California	Fresno	Fresno	12884 S Elm Ave	7/15/2004
California	Fresno	Fresno	1315 E Cornell	7/15/2004
California	Fresno	Fresno	1315 E Cornell	7/15/2004
California	Fresno	Fresno	7090 N Fruit Ave 140	7/29/2004
California	Fresno	Coalinga	47932 Lost Hills Rd	8/30/2004
California	Fresno	Fresno	4822 E Mono St	6/9/2005
California	Fresno	Fresno	4822 E Mono St	6/9/2005
California	Fresno	San Joaquin	2243 Eldorado S B	3/10/2006
California	Fresno	Fresno	2540 North Floyd Avenue	11/24/2006
California	Fresno	Fresno	2540 North Floyd Avenue	11/24/2006

California	Fresno	Caruthers	14594 South Elm Avenue	11/28/2006
California	Fresno	Caruthers	14594 South Elm Avenue	11/28/2006
California	Fresno	Fresno	8971 Mountain View	12/13/2006
California	Fresno	Fresno	8971 Mountain View	12/13/2006
California	Fresno	Fowler	6424 South Fowler Avenue	8/21/2007
California	Fresno	Reedley	20069 Clayton Avenue	12/8/2007
California	Fresno	Reedley	20069 Clayton Avenue	12/8/2007
California	Fresno	Fresno	4409 East Hedges Avenue A	12/16/2008
California	Fresno	Dos Palos	43186 Merrill Avenue	4/15/2010
California	Fresno	Dos Palos	43186 Merrill Avenue	4/15/2010
California	Fresno	Clovis	287 West Barstow Avenue 125b	10/26/2012
California	Fresno	Fresno	3001 West Swift Ave Avenue 104	8/6/2013
California	Fresno	Fresno	3001 West Swift Ave Avenue 104	8/6/2013
California	Fresno	Squaw Valley	46992 Creekside Road	11/18/2013
California	Fresno	Fresno	4851 North N Cedar Ave Avenue 117	1/6/2014
California	Fresno	Fresno	3852 East E Olive Ave Avenue 201	1/14/2014
California	Fresno	Fresno	3852 East E Olive Ave Avenue 201	1/14/2014
California	Fresno	Fresno	3025 East E Gettysburg Ave Avenue 102	1/21/2014
California	Fresno	Fresno	3025 East E Gettysburg Ave Avenue 102	1/21/2014
California	Fresno	Fresno	7675 N First Street Box 203	9/6/2015
California	Fresno	Fresno	4102 E North Avenue	12/24/2015
California	Fresno	Fresno	2715 N Millbrook Avenue	2/3/2016
California	Fresno	Fresno	2715 N Millbrook Avenue	2/3/2016
California	Glenn	Willows	5627 County Road 69	5/12/2004
California	Glenn	Willows	5627 County Road 69	5/12/2004
California	Humboldt	Fortuna	1788 Penn Ave	3/2/2004
California	Humboldt	Fortuna	1788 Penn Ave	3/2/2004
California	Humboldt	Mckinleyville	2331 Central Ave 4	3/25/2004
California	Humboldt	Eureka	1984 Gage Ln	4/27/2004
California	Humboldt	Blue Lake	113 Raymar Ave	5/9/2005
California	Humboldt	Eureka	1034 14th St	6/6/2005
California	Humboldt	Eureka	1034 14th St	6/6/2005
California	Humboldt	Eureka	1323 Summer Street	6/15/2006
California	Humboldt	Arcata	258 Lupin Avenue	8/30/2006
California	Humboldt	Arcata	258 Lupin Avenue	8/30/2006
California	Imperial	Holtville	819 1/2 Fern St	1/28/2004
California	Imperial	Holtville	819 1/2 Fern St	1/28/2004
California	Imperial	Holtville	2300 Slayton Rd	2/5/2004
California	Imperial	Seeley	2205 Haskell Rd	7/20/2004
California	Imperial	Holtville	819 1/2 Fern Ave	3/20/2006
California	Imperial	Holtville	819 1/2 Fern Ave	3/20/2006
California	Kern	Shafter	18478 S Shafter Ave	1/23/2004
California	Kern	Shafter	18478 S Shafter Ave	1/23/2004
California	Kern	Delano	1305 20th Ave	2/4/2004
California	Kern	Delano	1305 20th Ave	2/4/2004
California	Kern	Bakersfield	8614 Fuller	2/22/2004
California	Kern	Bakersfield	2600 Norman Ave	5/26/2004
California	Kern	Bakersfield	2600 Norman Ave	5/26/2004
California	Kern	Shafter	31396 Burbank Ave	6/12/2004

California	Kern	Taft	412 Kern St	8/26/2004
California	Kern	Lake Isabella	3105 Wenyor	9/21/2004
California	Kern	Lake Isabella	3105 Wenyor	9/21/2004
California	Kern	Ridgecrest	709 W Atkins Ave	12/9/2004
California	Kern	Bakersfield	321 Oakdale Dr	3/15/2005
California	Kern	Bakersfield	2714 Allen Rd	3/22/2005
California	Kern	Bakersfield	2714 Allen Rd	3/22/2005
California	Kern	Taft	217 Lierly St	6/20/2005
California	Kern	Bakersfield	2314 Center St	10/19/2005
California	Kern	Bakersfield	200 Miraflores	2/28/2006
California	Kern	Bakersfield	200 Miraflores	2/28/2006
California	Kern	Bakersfield	101 Agarnsey Ln	3/20/2006
California	Kern	Bakersfield	101 Agarnsey Ln	3/20/2006
California	Kern	Bakersfield	109 Clyde Street	4/26/2006
California	Kern	Bakersfield	109 Clyde Street	4/26/2006
California	Kern	Bakersfield	200 Miraflores Avenue	3/18/2007
California	Kern	Bakersfield	200 Miraflores Avenue	3/18/2007
California	Kern	Ridgecrest	345 West Moyer Avenue	6/4/2007
California	Kern	Ridgecrest	345 West Moyer Avenue	6/4/2007
California	Kern	Lamont	10224 San Emidio Street	7/11/2007
California	Kern	Lamont	10224 San Emidio Street	7/11/2007
California	Kern	Lamont	8008 Middleton Lane	5/19/2008
California	Kern	Lamont	8008 Middleton Lane	5/19/2008
California	Kern	Johannesburg	405 Broadway Avenue	10/9/2008
California	Kern	Johannesburg	405 Broadway Avenue	10/9/2008
California	Kern	Bakersfield	8th Street	6/22/2009
California	Kern	Bakersfield	3801 Newcombe Court	3/3/2011
California	Kern	Bakersfield	3804 La Tonia Court	3/3/2011
California	Kern	Bakersfield	3804 La Tonia Court	3/3/2011
California	Kern	Bakersfield	3801 Newcombe Court	3/3/2011
California	Kern	Bakersfield	218 El Tejon Avenue	7/8/2011
California	Kern	Bakersfield	218 El Tejon Avenue	7/8/2011
California	Kern	Bakersfield	7601 Redbank	12/13/2011
California	Kern	Bakersfield	7601 Redbank	12/13/2011
California	Kings	Unincorporated City	6260 Barstow Ave	5/21/2004
California	Kings	Unincorporated City	6260 Barstow Ave	5/21/2004
California	Kings	Hanford	11111 9 3/4 Avenue	4/16/2007
California	Kings	Hanford	11111 9 3/4 Avenue	4/16/2007
California	Lake	Lakeport	525 Esplanade St	1/27/2004
California	Lake	Clearlake	13660 East Lake Dr	4/19/2004
California	Lake	Clearlake	13660 East Lake Dr	4/19/2004
California	Lake	Clearlake	15888 19th St	4/28/2004
California	Lake	Clearlake	15888 19th St	4/28/2004
California	Lake	Finley	3424 Stone Dr	9/15/2004
California	Lake	Finley	3424 Stone Dr	9/15/2004
California	Lake	Lower Lake	10243 Siegler Canyon Rd	11/17/2004
California	Lake	Lower Lake	10243 Siegler Canyon Rd	11/17/2004
California	Lake	Clearlake	16537 35th Ave	6/18/2005
California	Lake	Nice	6643 Collier	2/15/2006

California	Lake	Clearlake	13820 Manakee Drive	1/20/2010
California	Lake	Clearlake	13820 Manakee Drive	1/20/2010
California	Los Angeles	Redondo Beach	208 B Ave	1/4/2004
California	Los Angeles	Los Angeles	2742 Lanfranco St 7	1/7/2004
California	Los Angeles	Covina	444 Citrus N Ave	1/13/2004
California	Los Angeles	Santa Fe Springs	11462 Telegraph Rd	1/14/2004
California	Los Angeles	Littlerock	8632 Avenue U E	1/21/2004
California	Los Angeles	Long Beach	2520 Pacific Coast E Hwy 221	1/27/2004
California	Los Angeles	Lancaster	3995 Avenue H W	3/3/2004
California	Los Angeles	East Los Angeles	4135 Floral Ave	3/5/2004
California	Los Angeles	Compton	1016 Poinsettia S Ave	3/10/2004
California	Los Angeles	Llano	25757 V E Ave	3/24/2004
California	Los Angeles	Palmdale	38233 Hendon Dr	4/3/2004
California	Los Angeles	Torrance	4111 Pacific Coast Highway 308	4/11/2004
California	Los Angeles	Norwalk	11026 Imperial E Hwy 10	4/21/2004
California	Los Angeles	Los Angeles	560 Keenan Ave	5/12/2004
California	Los Angeles	La Canada Flintridge	5016 Angeles Crest Hwy	5/25/2004
California	Los Angeles	Los Angeles	5320 1/2 Ithaca Ave	6/22/2004
California	Los Angeles	Whittier	8171 Washington Ave	6/24/2004
California	Los Angeles	Long Beach	1401 11 E St	7/1/2004
California	Los Angeles	Signal Hill	2210 Gaviota N Ave C	7/6/2004
California	Los Angeles	Glendora	19104 Manua Loa	7/21/2004
California	Los Angeles	Los Angeles	21150 Hobart	8/18/2004
California	Los Angeles	La Puente	410 Evanwood Ave	9/22/2004
California	Los Angeles	Baldwin Park	3109 Robinette Ave	9/28/2004
California	Los Angeles	San Dimas	1717 Monte Vista Dr	10/7/2004
California	Los Angeles	Pomona	320 Jefferson W Ave	10/19/2004
California	Los Angeles	Lynwood	10868 Drury Ln	10/29/2004
California	Los Angeles	El Monte	11828 Emery St	11/18/2004
California	Los Angeles	El Monte	4350 Ranger Ave	11/29/2004
California	Los Angeles	La Puente	18631 Altario St	1/13/2005
California	Los Angeles	Lancaster	42705 6th E St	2/3/2005
California	Los Angeles	Downey	9322 Stamps Ave	2/18/2005
California	Los Angeles	City Of Commerce	5820 Ramon Ct	4/14/2005
California	Los Angeles	San Pedro	975 5th W St	8/3/2005
California	Los Angeles	Winnetka	8474 Quartz Ave	9/28/2005
California	Los Angeles	Van Nuys	15149 Domino St	11/8/2005
California	Los Angeles	Whittier	6133 Mcnees Ave	1/14/2006
California	Los Angeles	Panorama City	8154 Allott	1/19/2006
California	Los Angeles	Wilmington	1724 Fries Ave	2/17/2006
California	Los Angeles	Gardena	14903 Chadron Ave 1	3/1/2006
California	Los Angeles	Los Angeles	1406 Gordon Street	3/26/2006
California	Los Angeles	Long Beach	2124 Mc Kenzie Avenue	4/25/2006
California	Los Angeles	Lancaster	44634 Date Avenue	6/2/2006
California	Los Angeles	Shadow Hills	10339 Johanna Avenue	6/22/2006
California	Los Angeles	Los Angeles	123 S Lake Street	7/14/2006
California	Los Angeles	Sylmar	12600 Bradley Street	7/19/2006
California	Los Angeles	Diamond Bar	2620 Castlerock Road	8/1/2006
California	Los Angeles	Covina	19850 Arrow Highway	8/6/2006

California	Los Angeles	Los Angeles	3015 Sunnynook Drive	8/11/2006
California	Los Angeles	Palmdale	38566 East 35th Street	10/3/2006
California	Los Angeles	Los Angeles	244 West 47th Place	10/12/2006
California	Los Angeles	Los Angeles	244 47th Place	10/12/2006
California	Los Angeles	Pomona	1347 Cambrin Road	12/7/2006
California	Los Angeles	Los Angeles	11630 West 207th Street	12/7/2006
California	Los Angeles	Cerritos	12513 Sandy Creek Lane	3/9/2007
California	Los Angeles	Long Beach	1624 Junipero Avenue	4/4/2007
California	Los Angeles	Whittier	10816 Townley Drive	5/11/2007
California	Los Angeles	Huntington Park	2505 Olive Street	5/15/2007
California	Los Angeles	South Gate	2634 Palm Place	5/29/2007
California	Los Angeles	Pomona	260 La Verne Avenue	7/12/2007
California	Los Angeles	Lancaster	45448 Elm	7/14/2007
California	Los Angeles	Wilmington	1630 Sandison Street	7/20/2007
California	Los Angeles	Los Angeles	321 Westminster Avenue	8/9/2007
California	Los Angeles	Los Angeles	1216 Hanover Avenue	8/12/2007
California	Los Angeles	Huntington Park	6418 Seville	9/18/2007
California	Los Angeles	Los Angeles	359 71st Street	10/10/2007
California	Los Angeles	Diamond Bar	749 Featherwood Drive	11/1/2007
California	Los Angeles	Long Beach	3613 La Jara Street	11/14/2007
California	Los Angeles	Los Angeles	3744 59th Street	12/20/2007
California	Los Angeles	Van Nuys	7400 Sepulveda Boulevard	2/12/2008
California	Los Angeles	Los Angeles	218 1/2 54th Street	3/14/2008
California	Los Angeles	Los Angeles	4154 Compton Avenue	4/17/2008
California	Los Angeles	Downey	10350 Haledon Avenue	5/21/2008
California	Los Angeles	Baldwin Park	4442 Edra Avenue	6/16/2008
California	Los Angeles	Encino	17448 Ventura Boulevard	8/11/2008
California	Los Angeles	Bellflower	17122 Downey Avenue	11/2/2008
California	Los Angeles	Huntington Park	2409 Olive Street	11/18/2008
California	Los Angeles	Long Beach	1875 Lime Avenue	12/22/2008
California	Los Angeles	Los Angeles	6118 Hooper Street	4/24/2009
California	Los Angeles	Bell	3717 Bell Avenue	6/6/2009
California	Los Angeles	Los Angeles	5170 South Normandie Avenue	1/3/2010
California	Los Angeles	Los Angeles	2109 Estrella Avenue	2/2/2010
California	Los Angeles	Long Beach	2345 East Harding Street	2/4/2010
California	Los Angeles	Long Beach	2454 Easy Avenue	2/10/2010
California	Los Angeles	Santa Fe Springs	13310 Telegraph Road	4/14/2010
California	Los Angeles	Bell Gardens	7534 Purdy Street	5/1/2010
California	Los Angeles	Inglewood	8815 South Van Ness Avenue	5/4/2010
California	Los Angeles	Los Angeles	6516 South Main Street	6/2/2010
California	Los Angeles	Norwalk	12618 Studebaker Road	6/14/2010
California	Los Angeles	Hawthorne	12600 Prairie Avenue	7/19/2010
California	Los Angeles	Hawthorne	2851 West 120th Street	7/22/2010
California	Los Angeles	Los Angeles	213 1/2 West 66 Street	9/21/2010
California	Los Angeles	Hawthorne	13611 Doty Avenue	2/3/2011
California	Los Angeles	Los Angeles	1564 East 117th Street	4/4/2013
California	Los Angeles	Artesia	11635 Artesia Boulevard	5/1/2013
California	Los Angeles	Beverly Hills	712 North Rexford Drive	6/1/2013
California	Los Angeles	Covina	771 Rancho Simi Drive	6/1/2016

California	Los Angeles	Compton	14502 S Keene Ave	8/14/2016
California	Los Angeles	Gardena	1218 W 134th St	9/25/2016
California	Los Angeles	Lancaster	42835 San Francisco Av	12/10/2017
California	Los Angeles	North Hollywood	7829 Nagle Av	12/10/2017
California	Madera	Chowchilla	18899 Road 16	4/28/2004
California	Madera	Chowchilla	1304 Colusa Ave A	1/25/2005
California	Madera	Madera	21442 Avenue 19 Ave	2/10/2005
California	Madera	Madera	815 East Clinton Avenue	8/29/2006
California	Madera	Madera	18697 Avenue Pass	8/21/2007
California	Madera	Madera	512 Fein Street	8/25/2007
California	Madera	Madera	35626 14 1/2 Avenue	2/1/2008
California	Madera	Madera	13577 20th Avenue	9/4/2008
California	Madera	Madera	19184 Ave 18	5/15/2014
California	Madera	Madera	25816 Avenue 18 1/2	6/14/2016
California	Madera	Madera	11265 Iowa Av	12/27/2017
California	Mendocino	Fort Bragg	16900 Franklin Road	5/9/2006
California	Mendocino	Willits	65000 Sherwood Ridge Road	2/20/2008
California	Mendocino	Redwood Valley	9800 West Road	4/9/2009
California	Mendocino	Philo	3500 Little Mill Creek Road	5/6/2010
California	Mendocino	Fort Bragg	621 West St	9/16/2016
California	Mendocino	Hopland	14410 Mountain House Rd	9/21/2016
California	Merced	Merced	2536 Lobo	2/4/2004
California	Merced	Stevinson	18910 W 6th St	2/10/2004
California	Merced	Merced	3613 N Garner Rd	2/27/2004
California	Merced	Livingston	5679 Arena Way	4/6/2004
California	Merced	Hilmar	20295 August Rd	4/15/2004
California	Merced	Cressey	9835 Cressey	6/3/2004
California	Merced	Delhi	16235 Redbud Ct	6/29/2004
California	Merced	South Dos Palos	8827 W K St	7/23/2004
California	Merced	Winton	6280 Central Ave	8/8/2004
California	Merced	Winton	9605 Eucalyptus Ave	8/8/2004
California	Merced	Hilmar	19511 Williams Ave	10/13/2004
California	Merced	Merced	321 S 59 S Hwy	1/3/2005
California	Merced	Gustine	8450 Highway 33 S Hwy	3/2/2005
California	Merced	Atwater	9000 Moran Ave	5/11/2005
California	Merced	Atwater	1236 Hull Rd	9/23/2005
California	Merced	Stevinson	23875 Second Avenue	3/27/2006
California	Merced	Los Banos	313 J Street	8/11/2006
California	Merced	Atwater	1001 Sandpiper Way	11/15/2006
California	Merced	Delhi	8620 Hinton	11/15/2006
California	Merced	Merced	824 S Freya	1/25/2007
California	Merced	Winton	7409 Amanda Drive	3/13/2007
California	Merced	Merced	2499 East Gerard Avenue	3/21/2007
California	Merced	Merced	14717 East 272nd	9/6/2007
California	Merced	Hilmar	250 N Union	10/12/2007
California	Merced	Merced	5 West 25th Street 2	1/16/2008
California	Merced	Stevinson	2917 Cemetery Road	2/20/2008
California	Merced	Stevinson	2991 Cemetery	2/20/2008
California	Merced	Winton	6814 Arlene Way	3/12/2008

California	Merced	Atwater	4146 South Elliott Road	8/11/2008
California	Merced	Delhi	15575 August Avenue	9/8/2008
California	Merced	Ballico	11368 North Santa Fe Avenue	1/10/2010
California	Merced	Hilmar	19542 East First Street	4/1/2010
California	Merced	Winton	7125 North Vine Avenue	4/21/2010
California	Merced	Stevinson	2228 Nelander Avenue	4/27/2010
California	Merced	Livingston	15290 Sunset Drive	5/22/2010
California	Merced	Delhi	9640 Sands Road	6/6/2010
California	Merced	Winton	7040 Myrtle Avenue	2/8/2016
California	Merced	Atwater	2521 Boulder Dr	9/21/2016
California	Monterey	Salinas	1769 Yosemite Cir	5/21/2004
California	Monterey	Pacific Grove	316 Prescott Ln	7/16/2004
California	Monterey	Salinas	18840 Northeast Eisenhowere Drive	6/20/2007
California	Monterey	Salinas	1233 East Polk Street	6/20/2007
California	Monterey	Greenfield	424 7th Avenue	9/19/2010
California	Nevada	Grass Valley	439 Neal St 1	7/30/2004
California	Orange	Laguna Beach	985 Pacific Coast N Hwy	2/1/2004
California	Orange	Buena Park	7555 Beach Blvd 128	2/10/2004
California	Orange	Irvine	173 Topeka	2/11/2004
California	Orange	Tustin	13624 Estero Cir	4/24/2004
California	Orange	Santa Ana	1137 Mcfadden W	7/7/2004
California	Orange	Westminster	7681 Baylor Dr	7/15/2004
California	Orange	La Habra	2320 Story Ave	7/16/2004
California	Orange	Garden Grove	8062 Garden Grove Blvd 241	9/21/2004
California	Orange	Orange	2135 Almond W St	10/15/2004
California	Orange	Santa Ana	1233 Genoa S Dr	11/30/2004
California	Orange	Cypress	4812 Grace Avenue	4/10/2006
California	Orange	Westminster	9851 Bolsa Avenue	5/5/2006
California	Orange	Westminster	5051 Princeton Avenue	5/17/2006
California	Orange	La Palma	4761 Sharon Drive A	7/17/2006
California	Orange	Stanton	10698 Court Street	9/15/2006
California	Orange	Stanton	7701 Westbrook Way	4/19/2007
California	Orange	Yorba Linda	5471 Jefferson Street	11/13/2007
California	Orange	Fullerton	641 Commonwealth Avenue	12/7/2007
California	Orange	Anaheim	131 Magnolia Avenue	3/21/2008
California	Orange	Anaheim	3554 West Cornelia Circle	3/24/2008
California	Orange	Anaheim	1819 Cris	3/27/2008
California	Orange	Anaheim	1261 Placentia Street	3/29/2008
California	Orange	Anaheim	2500 East Terrace Street	4/8/2008
California	Orange	Santa Ana	1314 Harbor Boulevard	4/9/2008
California	Orange	Garden Grove	9755 Bixby Avenue	4/11/2008
California	Orange	Costa Mesa	929 Joann Street	5/13/2008
California	Orange	Santa Ana	3012 Halladay	5/19/2008
California	Orange	Santa Ana	412 Baker Street	5/21/2008
California	Orange	Orange	207 Esplande Street	5/30/2008
California	Orange	Santa Ana	702 Santa Ana Boulevard	7/14/2008
California	Orange	Anaheim	622 Velare Avenue	9/16/2008
California	Orange	Westminster	13100 Goldenwest Street	4/28/2009
California	Orange	Santa Ana	1450 Auto Drive	5/11/2009

California	Orange	Garden Grove	10042 Lampson Avenue	5/13/2009
California	Orange	Westminster	6942 Garden Grove Boulevard	5/21/2009
California	Orange	Buena Park	7111 Beach Boulevard	2/10/2010
California	Orange	Garden Grove	13691 Barnett Way	2/13/2010
California	Orange	Anaheim	1303 West Marlboro Avenue	2/22/2010
California	Orange	Placentia	745 Dunn	3/16/2010
California	Orange	Irvine	87 Pinestone	3/23/2010
California	Orange	Orange	2300 North Tustin Avenue	3/29/2010
California	Orange	Huntington Beach	8230 Talbert	4/7/2010
California	Orange	Santa Ana	4417 Morningside	4/28/2010
California	Orange	Brea	2595 Imperial Highway	5/20/2010
California	Orange	Santa Ana	800 South Sullivan Street D3	12/23/2011
California	Orange	Anaheim	10141 Gravier St	12/8/2017
California	Plumas	Portola	5630 Casey Jones Road	4/14/2006
California	Plumas	Chester	460 Melissa Avenue	10/11/2007
California	Plumas	Quincy Junction	1426 Butterfly Valley Road	2/17/2010
California	Plumas	Portola	324 Bella Vista	3/9/2010
California	Riverside	Desert Hot Springs	66366 6th St	1/20/2004
California	Riverside	Riverside	344 N State 148	1/28/2004
California	Riverside	Hemet	531 Cedar Ln 2	2/7/2004
California	Riverside	Perris	332 W 11th St	2/8/2004
California	Riverside	Hemet	1675 Cobble Ln	2/11/2004
California	Riverside	Cathedral City	68557 C Street	2/16/2004
California	Riverside	Hemet	1097 N State St 2	2/18/2004
California	Riverside	Glen Avon Heights	4080 Conning	2/29/2004
California	Riverside	Corona	734 Viewtop Ln	3/12/2004
California	Riverside	El Cerrito	19078 Rising Sun Rd	3/12/2004
California	Riverside	Norco	2574 Ridgecrest	3/16/2004
California	Riverside	Hemet	772 N State	3/24/2004
California	Riverside	Hemet	225 S Elk St 36	3/30/2004
California	Riverside	Riverside	5861 Mitchell	3/31/2004
California	Riverside	Corona	995 Pomona Rd 17	4/2/2004
California	Riverside	Beaumont	34250 San Timiteo Canyon Rd	4/15/2004
California	Riverside	Beaumont	1016 Palm Ave	4/19/2004
California	Riverside	Lake Elsinore	17911 Thoreson	4/29/2004
California	Riverside	Hemet	43939 Florida Ave	5/4/2004
California	Riverside	Hemet	585 S Santa Fe	5/15/2004
California	Riverside	Winchester	33091 Willard	5/20/2004
California	Riverside	Hemet	2688 E Florida Ave 18	6/4/2004
California	Riverside	Indio	46540 Padua Cir	6/9/2004
California	Riverside	Anza	57310 Valley Vista	6/11/2004
California	Riverside	Perris	143 Perou St	6/27/2004
California	Riverside	Victorville	20197 Nandina Ave	7/9/2004
California	Riverside	Corona	1330 W 8th St 18	7/21/2004
California	Riverside	Perris	618 Bond Dr	7/29/2004
California	Riverside	San Jacinto	437 Mead	8/2/2004
California	Riverside	Moreno Valley	25204 Bridle Trail	8/29/2004
California	Riverside	Indio	47800 Madison St 169	9/21/2004
California	Riverside	Lake Matthews	17224 Cajon Dr	9/28/2004

California	Riverside	Banning	1007 Linda Vista Rd	10/26/2004
California	Riverside	Victorville	22875 Rios	11/16/2004
California	Riverside	Menifee	26814 Madera Ct	12/6/2004
California	Riverside	Hemet	4400 Florida W Ave 117	12/8/2004
California	Riverside	Hemet	41251 Rope Rd	1/29/2005
California	Riverside	Perris	4715 Wade Ave	3/3/2005
California	Riverside	San Jacinto	344 N State St Sp 196	6/15/2005
California	Riverside	Perris	19881 Gustin Rd	12/12/2005
California	Riverside	Hemet	525 Gilbert N 49	1/20/2006
California	Riverside	Lake Elsinore	34323 Sunrise Drive	1/27/2006
California	Riverside	Corona	446 Francis E St	2/2/2006
California	Riverside	San Jacinto	610 Washington E Ave	2/22/2006
California	Riverside	Hemet	25873 Riverview Lane	3/15/2006
California	Riverside	Desert Hot Springs	13255 Mexquite Avenue	3/23/2006
California	Riverside	San Jacinto	182 De Anza	4/20/2006
California	Riverside	Nuevo	22788 Via Santana	4/21/2006
California	Riverside	Calimesa	9453 Sharondale Road	6/8/2006
California	Riverside	Riverside	11235 Cypress	6/27/2006
California	Riverside	Mountain Center	63137 Jeraboa Road	4/12/2007
California	Riverside	Corona	379 East Rancho Road	1/2/2008
California	Riverside	Norco	3117 Shadow Canyon Circle	1/31/2008
California	Riverside	Hemet	32809 Red Mountain Road	2/18/2008
California	Riverside	Palm Springs	383 Vereda Norte	6/20/2008
California	Riverside	Perris	21747 Webster Avenue	8/7/2008
California	Riverside	Perris	21881 Oleander Avenue	8/29/2008
California	Riverside	Mira Loma	10351 Oak Bark Lane	11/12/2008
California	Riverside	Desert Hot Springs	12155 Ocotillo Road	4/29/2009
California	Riverside	Hemet	871 San Mateo Circle	5/21/2009
California	Riverside	Temecula	29774 Calle Pantano	2/2/2010
California	Riverside	Riverside	4080 Pedley Road	2/5/2010
California	Riverside	Banning	514 East Victory Avenue	3/21/2010
California	Riverside	Riverside	12172 Severn Way	4/2/2010
California	Riverside	Riverside	11744 Hazeldell Drive	4/2/2010
California	Riverside	Perris	644 Primrose Place	4/8/2011
California	Riverside	Perris	2520 Spectacular Bid Street	7/29/2014
California	Riverside	Moreno Valley	16329 Saddleback Lane	2/3/2015
California	Riverside	Moreno Valley	25399 Todd Drive	8/15/2015
California	Riverside	Moreno Valley	16329 Saddlebrook Lane	2/9/2016
California	Riverside	Hemet	1610 Bluejay Way	3/2/2016
California	Riverside	Indio	43430 Monroe St	9/3/2016
California	Riverside	Coachella	731 Orchard St	10/4/2016
California	Riverside	Mira Loma	12332 Kern River Dr	12/6/2017
California	Riverside	Temecula	30984 Lolita Rd	12/7/2017
California	Sacramento	Sacramento	4405 23rd St	2/4/2004
California	Sacramento	Sacramento	4719 Hayford Way	2/24/2004
California	Sacramento	Sacramento	7624 Birdie Ct	3/23/2004
California	Sacramento	Sacramento	1536 Strader Ave	3/26/2004
California	Sacramento	Sacramento	5867 Auburn Blvd 30	3/30/2004
California	Sacramento	Sacramento	2530 Street S 8	4/1/2004

California	Sacramento	Rancho Cordova	10892 Walnutwood Way	4/4/2004
California	Sacramento	Elverta	2495 Rhine Way	8/5/2004
California	Sacramento	Sacramento	3534 Summer Park Dr 354	10/8/2004
California	Sacramento	Elk Grove	5354 Jade Creek	2/23/2005
California	Sacramento	Elverta	2110 Quail Ranch Court	2/28/2006
California	Sacramento	Sacramento	4144 Cabinet Circle	3/6/2006
California	Sacramento		5140 W Sherman Island Road	5/13/2006
California	Sacramento	Sacramento	7662 Country Park Drive	6/6/2006
California	Sacramento	Sacramento	5230 Palm	1/30/2007
California	Sacramento	Sacramento	2681 Fairfield Street	2/13/2007
California	Sacramento	Citrus Heights	7401 Lovato	6/23/2007
California	Sacramento	Sacramento	6316 Welty Way	12/3/2008
California	Sacramento	Galt	132 4th	4/20/2010
California	San Bernardino	Fontana	14430 Santa Ana	1/15/2004
California	San Bernardino	Ontario	844 Wysteria E Ct	1/21/2004
California	San Bernardino	Redlands	1034 Alta St	1/28/2004
California	San Bernardino	Victorville	16717 C St	1/30/2004
California	San Bernardino	Chino	11838 Central Ave 93	2/11/2004
California	San Bernardino	Rialto	349 N Lilac	2/17/2004
California	San Bernardino	Apple Valley	21845 Arapahoe St 1	2/17/2004
California	San Bernardino	Victorville	16868 Stoddard Wells Rd	2/19/2004
California	San Bernardino	Twentynine Palms	4828 Lear Ave	2/22/2004
California	San Bernardino	Hesperia	14926 Fir St	2/25/2004
California	San Bernardino	San Bernardino	1443 Cedar 23	3/9/2004
California	San Bernardino	Victorville	15330 Condor Rd	3/9/2004
California	San Bernardino	Newberry Springs	52875 Bedford Rd	3/25/2004
California	San Bernardino	Fontana	13519 Arrow Rt	3/30/2004
California	San Bernardino	Twentynine Palms	7580 Mac Rd	3/31/2004
California	San Bernardino	San Bernardino	1443 Cedar St 1	4/9/2004
California	San Bernardino	Twentynine Palms	5665 Aeronia	4/15/2004
California	San Bernardino	Baker	71759 Baker Blvd	4/16/2004
California	San Bernardino	Highland	7409 Los Feliz Dr	4/23/2004
California	San Bernardino	San Bernardino	3160 N State St	4/23/2004
California	San Bernardino	Phelan	8135 Joshua St	4/27/2004
California	San Bernardino	Chino	12018 Central Ave	5/13/2004
California	San Bernardino	Highland	25715 Lime St	5/18/2004
California	San Bernardino	Apple Valley	10620 Matilija	5/21/2004
California	San Bernardino	San Bernardino	2176 Amanda St	5/21/2004
California	San Bernardino	Highland	28457 Merrion Ave	5/21/2004
California	San Bernardino	Joshua Tree	62475 Cove Ln	5/27/2004
California	San Bernardino	Apple Valley	10808 Mills Rd	6/2/2004
California	San Bernardino	Barstow	24966 Camino Del Sol St	6/7/2004
California	San Bernardino	Hesperia	15356 Pendleton	6/16/2004
California	San Bernardino	Twentynine Palms	68077 Indian Trail	6/16/2004
California	San Bernardino	Muscoy	2544 3rd St	6/23/2004
California	San Bernardino	Newberry Springs	47962 Horner Rd	6/24/2004
California	San Bernardino	Hesperia	11976 Mariposa Rd	7/3/2004
California	San Bernardino	Ontario	1506 E Highland Ct	7/26/2004
California	San Bernardino	Fontana	7642 Kempster Ave	9/7/2004

California	San Bernardino	Phelan	6721 Nielson Rd	9/17/2004
California	San Bernardino	Barstow	2577 Community Blvd	9/18/2004
California	San Bernardino	Joshua Tree	3255 Sunset Rd	9/26/2004
California	San Bernardino	Hesperia	7892 Alston	10/1/2004
California	San Bernardino	Rancho Cucamonga	7651 Effen	10/1/2004
California	San Bernardino	Newberry Springs	35377 Newberry Rd	10/11/2004
California	San Bernardino	Phelan	11480 Macron	10/19/2004
California	San Bernardino	Victorville	17053 B St	10/19/2004
California	San Bernardino	Victorville	16688 Hughes	10/21/2004
California	San Bernardino	Redlands	28565 San Timoteo Canyon	10/25/2004
California	San Bernardino	San Bernardino	1162 E 2nd	11/16/2004
California	San Bernardino	Bloomington	16742 14th St	11/17/2004
California	San Bernardino	Barstow	29779 N 1st	11/18/2004
California	San Bernardino	Chino Hills	15553 Esther St	12/13/2004
California	San Bernardino	San Bernardino	2547 3rd Ave	12/28/2004
California	San Bernardino	Trona	13860 Fremont St 2	12/30/2004
California	San Bernardino	Barstow	434 S Second St 1	1/1/2005
California	San Bernardino	Upland	359 Seventh St	1/5/2005
California	San Bernardino	San Bernardino	123 E 11th St	1/19/2005
California	San Bernardino	San Bernardino	1318 E Gould St	1/22/2005
California	San Bernardino	Redlands	2155 Citrus Ave 112	2/14/2005
California	San Bernardino	Yucaipa	12470 15th St	5/25/2005
California	San Bernardino	Hesperia	10721 Maple St	7/29/2005
California	San Bernardino	Victorville	16262 Yucca Ave	8/1/2005
California	San Bernardino	San Bernardino	11571 5th St	8/29/2005
California	San Bernardino	Victorville	11550 White Rd	10/17/2005
California	San Bernardino	Hesperia	9553 Los Banos Ave	1/12/2006
California	San Bernardino	Victorville	13126 Mesa	2/7/2006
California	San Bernardino	Ontario	956 Princeton W St	2/10/2006
California	San Bernardino	Victorville	16755 Union St B	2/24/2006
California	San Bernardino	Victorville	15618 Topango Road	3/2/2006
California	San Bernardino	San Bernardino	2131 Genevieve Street	3/10/2006
California	San Bernardino	Victorville	13602 Nassau Drive	3/15/2006
California	San Bernardino	San Bernardino	756 W 19 St	3/16/2006
California	San Bernardino	Fontana	17265 Lurelane Street	3/20/2006
California	San Bernardino	Redlands	828 6th Street	3/23/2006
California	San Bernardino	Hesperia	11516 Hawthorne	3/25/2006
California	San Bernardino	Newberry Springs	42378 Silver Valley Road	4/21/2006
California	San Bernardino	Hesperia	9393 Hickory	6/8/2006
California	San Bernardino	Hesperia	10983 4th Avenue	6/9/2006
California	San Bernardino	Oro Grande	21451 National Trails Highway	6/13/2006
California	San Bernardino	Fontana	13449 Ivy	6/15/2006
California	San Bernardino	Loma Linda	26232 Newport Avenue	8/1/2006
California	San Bernardino	Yermo	37933 Grandview Avenue	8/10/2006
California	San Bernardino	Yucca Valley	58620 San Marino Drive	9/6/2006
California	San Bernardino	San Bernardino	19829 Kendall Drive	9/12/2006
California	San Bernardino	San Bernardino	2292 Portola Street	10/13/2006
California	San Bernardino	Apple Valley	12618 Pocono Road	10/15/2006
California	San Bernardino	Fontana	14349 Figwood Drive	12/13/2006

California	San Bernardino	Victorville	14349 Hesperia Road	12/21/2006
California	San Bernardino	Apple Valley	20024 Happy Trails Highway	1/4/2007
California	San Bernardino	Hesperia	13010 Prairie Trail	2/22/2007
California	San Bernardino	Pinon Hills	11475 Prado Road	3/27/2007
California	San Bernardino	Victorville	13852 Burning Tree Lane	5/3/2007
California	San Bernardino	Redlands	511 Redlands Boulevard	5/16/2007
California	San Bernardino	Colton	1822 Admiralty Street	6/15/2007
California	San Bernardino	San Bernardino	243 Meridian Avenue	7/18/2007
California	San Bernardino	Victorville	16753 Zenda Street	8/6/2007
California	San Bernardino	Ontario	740 Camelot	9/10/2007
California	San Bernardino	San Bernardino	223 49th	11/7/2007
California	San Bernardino	San Bernardino	1431 7th Street	11/26/2007
California	San Bernardino	Adelanto	17526 Keats Road	11/29/2007
California	San Bernardino	Rialto	624 Etiwanda Avenue	12/22/2007
California	San Bernardino	Joshua Tree	8997 Tortuga Road	1/14/2008
California	San Bernardino	San Bernardino	6317 Bonnie Street	4/3/2008
California	San Bernardino	Fontana	16411 Athol Street	4/17/2008
California	San Bernardino	San Bernardino	7234 Dwight Way	7/1/2008
California	San Bernardino	Landers	57646 Linn Road	10/14/2008
California	San Bernardino	Hesperia	9519 Maple Avenue	10/18/2008
California	San Bernardino	Hinkley	23572 State Highway 58	4/5/2009
California	San Bernardino	Apple Valley	9611 Navajo Road	5/5/2009
California	San Bernardino	Victorville	13143 Sleepy Ridge Lane	3/5/2010
California	San Bernardino	San Bernardino	205 West Benedict Road	4/2/2010
California	San Diego	Boulevard	2605 Paseo Alta Ct	1/7/2004
California	San Diego	San Ysidro	905 Hwy Caliente Rd	1/16/2004
California	San Diego	Santee	8593 Magnolia Ave	1/30/2004
California	San Diego	San Diego	875 Hotel S Cir	1/30/2004
California	San Diego	Escondido	1306 Ronda Ave	3/23/2004
California	San Diego	Fallbrook	422 Catalpa Ln	5/19/2004
California	San Diego	San Diego	6173 Fauna Drive	5/21/2004
California	San Diego	Lakeside	11441 El Nopal	8/12/2004
California	San Diego	Escondido	431 4th E Ave 1b	8/31/2004
California	San Diego	San Diego	4242 34th St D	9/16/2004
California	San Diego	Vista	1280 Hacienda Dr G6	11/24/2004
California	San Diego	Escondido	16975 Guejito Rd	3/3/2005
California	San Diego	Escondido	1825 East Valley Way	6/6/2006
California	San Diego	Vista	1710 Avocado Drive	9/14/2006
California	San Diego	Oceanside	3965 Brown Street	9/20/2006
California	San Diego	Vista	663 Eucalyptus	4/3/2007
California	San Diego	La Puente	1254 Bannon	5/10/2007
California	San Diego	San Diego	3835 Midway #203 Drive	6/20/2007
California	San Diego	Vista	526 Mar Vista Drive	11/29/2007
California	San Diego	Vista	1610 N Santa Fe	4/9/2008
California	San Diego	Valley Center	30118 Miller Road	11/7/2008
California	San Diego	San Diego	9777 De La Amistad Viaduct	6/12/2009
California	San Diego	Escondido Junction	1531 Montiel	1/20/2010
California	San Diego	Carlsbad	847 Laguna	8/8/2010
California	San Diego	Carlsbad	382 Acacia	8/8/2010

California	San Diego	Alpine	404 Summerhill Terrace	12/2/2013
California	San Francisco	San Francisco	35 Belvedere St 5	3/29/2006
California	San Joaquin	Stockton	7790 N Ashley Ln	1/20/2004
California	San Joaquin	Stockton	9800 E Eight Mile Rd	4/16/2004
California	San Joaquin	Stockton	5708 N Highway 99	4/18/2004
California	San Joaquin	Stockton	1560 Silver Creek	4/22/2004
California	San Joaquin	Stockton	10285 Hildreth Ln	6/30/2004
California	San Joaquin	Stockton	2717 W March Ln	7/31/2004
California	San Joaquin	Stockton	2654 W March Ln 304	8/4/2004
California	San Joaquin	Stockton	3416 Farmington E Rd 2	8/26/2004
California	San Joaquin	Stockton	2274 E Fremont	9/25/2004
California	San Joaquin	Stockton	2071 La Jolla Dr	4/25/2005
California	San Joaquin	Stockton	2553 Michaelangelo Drive	6/1/2006
California	San Joaquin	Tracy	14703 Finck Road	8/3/2006
California	San Joaquin	Stockton	301 Morada	4/19/2007
California	San Joaquin	Manteca	481 South Union Road	4/20/2007
California	San Joaquin	Lathrop	15523 Sixth Street	10/11/2007
California	San Joaquin	Tracy	11422 West Larch Road	3/14/2008
California	San Luis Obispo	Atascadero	1400 San Ramon	1/5/2004
California	San Luis Obispo	Atascadero	4080 Dolores Avenue	3/14/2006
California	San Luis Obispo	Grover Beach	448 North 9th Street	3/30/2006
California	San Luis Obispo	Morro Bay	525 Atascadero Road	7/12/2006
California	San Luis Obispo	San Luis Obispo	3500 Bullock	8/29/2006
California	San Luis Obispo	Paso Robles	749 Orchard	9/5/2006
California	San Luis Obispo	Templeton	30 Danelion Road	1/15/2007
California	San Luis Obispo	Nipomo	155 East Price Street	4/29/2008
California	San Luis Obispo	San Luis Obispo	1771 Cordova	12/7/2011
California	San Mateo	East Palo Alto	1894 Bay Road	6/4/2006
California	San Mateo	Belmont	926 South Road	6/21/2006
California	San Mateo	Daly City	439 Bonnie Street	1/14/2010
California	Santa Clara	San Jose	3570 Columbine Dr	1/15/2004
California	Santa Clara	San Jose	110 Roundtable Dr 1	2/8/2004
California	Santa Clara	Gilroy	7860 Driftwood Ter A	4/3/2004
California	Santa Clara	San Jose	1374 Randol Ave	5/5/2004
California	Santa Clara	Santa Clara	1232 Warburton Ave	6/8/2004
California	Santa Clara	San Jose	90 Saddlebrook Dr	6/22/2004
California	Santa Clara	San Jose	935 Foxchase Dr 413	9/21/2004
California	Santa Clara	Morgan Hill	6760 Croy Rd	9/29/2004
California	Santa Clara	Los Altos	25562 Fernhill Dr	10/26/2004
California	Santa Clara	San Jose	2251 Lansford Ave	11/15/2004
California	Santa Clara	San Jose	1425 Stahl St	10/16/2005
California	Santa Clara	San Jose	1560 Darlene Ave	1/24/2006
California	Santa Clara	San Jose	1919 Fruitdale Avenue	5/11/2006
California	Santa Clara	San Jose	4075 Hobart Avenue	4/27/2007
California	Santa Clara	Campbell	768 Nevins Street	7/11/2007
California	Santa Clara	San Jose	2475 Glen Angus Way	2/21/2008
California	Santa Clara	Santa Clara	2597 Borax Drive	2/22/2008
California	Santa Clara	San Jose	843 Spindrift Way	3/18/2008
California	Santa Clara	San Jose	1480 Douglas Street	3/20/2008

California	Santa Clara	San Jose	71 Avenida Espana	5/29/2008
California	Santa Clara	San Jose	973 Idlewood Drive	8/31/2008
California	Santa Clara	San Jose	800 Saratoga Avenue A308	6/10/2010
California	Santa Clara	Gilroy	2250 Roop Rd Road	8/19/2010
California	Santa Clara	San Jose	5674 San Felipe Road	8/26/2010
California	Santa Clara	Santa Clara	2147 Newhall Street	3/9/2011
California	Santa Clara	San Jose	315 N 21st Street	9/18/2015
California	Santa Clara	Santa Clara	930 El Camino Real	5/19/2016
California	Santa Cruz	Soquel	2600 41st St	8/12/2004
California	Santa Cruz	Santa Cruz	911 Soquel Ave	3/18/2005
California	Santa Cruz	Santa Cruz	231 Felix Street	5/2/2006
California	Santa Cruz	Santa Cruz	870 17th Avenue	9/29/2006
California	Santa Cruz	Watsonville	216 Silverleaf Drive	10/17/2007
California	Santa Cruz	Santa Cruz	15769 Comstock Mill Road	3/13/2008
California	Santa Cruz	Capitola	1066 41st Avenue	9/12/2010
California	Shasta	Redding	1420 Arizona Street	2/2/2004
California	Shasta	Redding	781 S Street	3/21/2004
California	Shasta	Redding	12691 Williamson Rd	3/30/2004
California	Shasta	Anderson	6465 Saddle Trail Rd	7/29/2004
California	Shasta	Redding	80 Churn Creek Rd	7/18/2005
California	Shasta	Igo	14463 Windwalker Ln	3/27/2006
California	Shasta	Shingletown	7498 Hilda Rd	4/13/2006
California	Shasta	Redding	3115 Stratford Avenue	9/19/2006
California	Shasta	Redding	1571 College View Drive	8/29/2007
California	Shasta	Redding	13922a Sundust Road	3/11/2010
California	Siskiyou	Weed	208 Jackson St	2/21/2004
California	Siskiyou	Dorris	2100 Sheepy Island Rd 437	3/3/2004
California	Solano	Vallejo	1130 Monterey St	2/12/2004
California	Solano	Dixon	805 N Adams St 110	3/23/2004
California	Solano	Vallejo	1163 Lewis Ave	3/30/2004
California	Solano	Vallejo	618 Main St	4/20/2004
California	Solano	Vallejo	136 Hogan St	5/14/2004
California	Solano	Suisun City	515 Crested Dr	3/9/2005
California	Solano	Vacaville	7234 Shelton Ln	9/29/2005
California	Solano	Dixon	9155 Olmo Rd	3/3/2006
California	Solano	Vallejo	318 Taper Avenue	1/31/2008
California	Solano	Vacaville	148 Lomita Avenue	3/5/2008
California	Solano	Vallejo	264 Flyingcloud Court	4/30/2010
California	Stanislaus	Ceres	4837 Faith Home Rd 119	1/1/2004
California	Stanislaus	Oakdale	143 N 6th St	1/5/2004
California	Stanislaus	Modesto	3356 Maze W Blvd	1/17/2004
California	Stanislaus	Hickman	948 Hickman Rd	1/20/2004
California	Stanislaus	Modesto	1520 Prospect Ln	1/24/2004
California	Stanislaus	Stanislaus	13660 Carpenter Rd	2/7/2004
California	Stanislaus	Waterford	575 E St	3/5/2004
California	Stanislaus	Turlock	6407 Mitchell Rd	4/12/2004
California	Stanislaus	Turlock	1625 Larkspur St	6/29/2004
California	Stanislaus	Ceres	4022 Esmail Keyes	7/2/2004
California	Stanislaus	Modesto	2009 Monticello Ave	7/13/2004

California	Stanislaus	Modesto	1312 Mchenry 111	7/13/2004
California	Stanislaus	Modesto	1516 Bollinger Ct	9/1/2004
California	Stanislaus	Modesto	1240 N 9th St 10	9/5/2004
California	Stanislaus	Denair	5319 Berkeley Ave	9/19/2004
California	Stanislaus	Modesto	8100 Yosemite Blvd	10/3/2004
California	Stanislaus	Oakdale	13537 Orange Blossom Rd	10/22/2004
California	Stanislaus	Oakdale	410 Arboles Way	10/26/2004
California	Stanislaus	Turlock	265 Ironwood	10/30/2004
California	Stanislaus	Turlock	357 E Olive Ave	11/4/2004
California	Stanislaus	Oakdale	755 River Ave	11/29/2004
California	Stanislaus	Oakdale	445 N Fifth	12/6/2004
California	Stanislaus	Modesto	3708 Almeria Dr	12/11/2004
California	Stanislaus	Ceres	2033 Hackett Rd	1/18/2005
California	Stanislaus	Modesto	400 Algen Ave	2/2/2005
California	Stanislaus	Denair	4540 Arnold Rd	2/2/2005
California	Stanislaus	Modesto	1022 Calder Ct	3/26/2005
California	Stanislaus	Grayson	1705 Hito Dr	4/7/2005
California	Stanislaus	Modesto	205 Glacier Ave	1/18/2006
California	Stanislaus	Riverbank	3939 Minniear Ave	1/31/2006
California	Stanislaus	Modesto	3500 Plain View Road	3/7/2006
California	Stanislaus	Ceres	527 Mitchell Rd	3/22/2006
California	Stanislaus	Ceres	3707 Monte Vista E Ave	3/24/2006
California	Stanislaus	Modesto	1411 Scenic Drive	4/24/2006
California	Stanislaus	Modesto	110 Wisenor	5/18/2006
California	Stanislaus	Modesto	2008 Stracker Way	6/8/2006
California	Stanislaus	Modesto	620 Paradise Road	9/13/2006
California	Stanislaus	Modesto	306 Locust Street	9/14/2006
California	Stanislaus	Ceres	1743 Central	10/20/2006
California	Stanislaus	Modesto	665 7th Street	12/4/2006
California	Stanislaus	Modesto	1331 Paradise Road	6/3/2007
California	Stanislaus	Turlock	201 G Street	6/26/2007
California	Stanislaus	Turlock	1105 Berea	9/15/2007
California	Stanislaus	Turlock	1090 Denair Avenue	1/6/2008
California	Stanislaus	Newman	531 Lady Slipper	1/15/2008
California	Stanislaus	Turlock	1125 South Tegner Road A	2/16/2008
California	Stanislaus	Turlock	3800 Crowell Road	4/18/2008
California	Stanislaus	Modesto	1016 East Marlow	6/19/2008
California	Stanislaus	Hickman	861 Meier Road	6/19/2008
California	Stanislaus	Modesto	1016 Marlow	6/19/2008
California	Stanislaus	Turlock	590 Minaret Avenue	8/5/2008
California	Stanislaus	Ceres	112 Taylor Road	8/25/2008
California	Stanislaus	Ceres	1948 Evans Road	11/16/2008
California	Stanislaus	Ceres	1528 Evans Road	11/18/2008
California	Stanislaus	Turlock	677 North Soderquist Road	12/15/2008
California	Stanislaus	Denair	18000 Keyes Road	4/14/2009
California	Stanislaus	Turlock	4519 Moffett Road	4/22/2009
California	Stanislaus	Patterson	1830 Orange Avenue	5/3/2009
California	Stanislaus	Ceres	3107 Taylor Road	5/19/2009
California	Stanislaus	Ceres	3107 East Taylor Road	5/19/2009

California	Stanislaus	Turlock	6107 Mountain View Road	5/19/2009
California	Stanislaus	Modesto	1898 Skylane Way	5/21/2009
California	Stanislaus	Oakdale	20601 Warnerville Road	5/28/2009
California	Stanislaus	Turlock	460 Moffet Road	5/29/2009
California	Stanislaus	Riverbank	2924 Stanislaus Street	6/18/2009
California	Stanislaus	Oakdale	10742 Pioneer Avenue	6/30/2009
California	Stanislaus	Ceres	2329 6th Street	2/5/2010
California	Stanislaus	Turlock	1180 West Linwood Avenue	2/9/2010
California	Stanislaus	Riverbank	3238 Pocket Avenue	5/22/2010
California	Stanislaus	Newman	1200 Main Street	7/26/2010
California	Stanislaus	Modesto	1600 French	8/11/2011
California	Stanislaus	Hughson	1828 White Birtch Drive	8/28/2011
California	Stanislaus	Modesto	1749 Poland	2/9/2012
California	Sutter	Yuba City	2898 Mckenly Rd	1/11/2004
California	Sutter	Yuba City	1400 Lytle Rd	2/17/2004
California	Sutter	Yuba City	1718 Elmer Rd	3/10/2004
California	Sutter	Yuba City	1292 Harter Rd	5/11/2004
California	Sutter	Sutter	2235 Madrone St	5/17/2004
California	Sutter	Yuba City	1619 Franklin Rd K	6/7/2004
California	Sutter	Yuba City	1081 Northridge Dr	9/1/2004
California	Sutter	Yuba City	400 Walton N Ave 3	9/2/2004
California	Sutter	Yuba City	761 Chestnut St	10/18/2004
California	Sutter	Yuba City	413 Pine St	10/30/2004
California	Sutter	Yuba City	1368 Hutchinson A	11/5/2004
California	Sutter	Live Oak	2691 Stafford Dr	11/10/2004
California	Sutter	Yuba City	24 Central Ave	12/11/2004
California	Sutter	Yuba City	132 S Walton Ave A	12/22/2004
California	Sutter	Yuba City	1587 Gray Ave	2/15/2005
California	Sutter	Live Oak	9755 O St	4/7/2005
California	Sutter	Yuba City	1341 Dustin Dr 39	9/1/2005
California	Sutter	Yuba City	4098 Marlette Rd	1/23/2006
California	Sutter	Yuba City	1115 Marcia Avenue	2/18/2006
California	Sutter	Yuba City	1250 Kenny Drive	5/19/2006
California	Sutter	Yuba City	617 Forbes Avenue	1/2/2007
California	Tehama	Corning	6330 Piedmont Rd	9/27/2004
California	Tehama	Corning	323 Rio Del Rey Court	7/31/2006
California	Tehama	Red Bluff	19932 Sawtooth Drive	8/1/2006
California	Tehama	Los Molinos	24881 68th	4/28/2010
California	Trinity	Trinity Center	360 Maude Avenue	3/11/2007
California	Tulare	Woodville	16477 Hudson Ave	1/29/2004
California	Tulare	Porterville	27003 Avenue 120	2/7/2004
California	Tulare	Lindsay	1445 E Honolulu	3/24/2004
California	Tulare	Dinuba	39780 Road 56	3/31/2004
California	Tulare	Tulare	26442 99 Hwy 210	5/26/2004
California	Tulare	Porterville	1611 E Success Drive	1/7/2006
California	Tulare	Porterville	670 E Poplar	1/7/2006
California	Tulare	Cutler	39500 Road 136	4/28/2006
California	Tulare	Tipton	14144 Road 152	8/9/2006
California	Tulare	Dinuba	38929 Road 84	8/17/2006

California	Ventura	N/a	5892 Santa Clara Rd	2/22/2006
California	Ventura	Ventura	1300 Saratoga Street	5/4/2006
California	Ventura	Fillmore	2989 West W Telegraph Road Highway	6/14/2006
California	Ventura	Oxnard	765 Kohala Street	11/9/2006
California	Ventura	Thousand Oaks	982 East Janas Road	3/20/2007
California	Yolo	West Sacramento	1155 Linden Rd	1/13/2004
California	Yolo	Woodland	1730 Donner Way	3/10/2004
California	Yolo	West Sacramento	1900 Evergreen Avenue	3/30/2007
California	Yuba	Marysville	1118 I St	4/6/2004
California	Yuba	Marysville	1205 E 22nd St	4/12/2004
California	Yuba	Marysville	222 H St	4/14/2004
California	Yuba	Marysville	1804 Hile Ave C	5/12/2004
California	Yuba	Marysville	1505 Ramirez Rd	5/20/2004
California	Yuba	Arboga	13814 Charlies Ln	5/27/2004
California	Yuba	Marysville	5956 Park Ave O	7/18/2004
California	Yuba	Marysville	5818 Park Ave	8/3/2004
California	Yuba	Marysville	5931 Redburn Ave	8/8/2004
California	Yuba	Marysville	1735 N Beale Rd	9/10/2004
California	Yuba	Olivehurst	3735 Arboga Rd	9/27/2004
California	Yuba	Olivehurst	4456 College	9/28/2004
California	Yuba	Marysville	2209 Boulton Way	10/18/2004
California	Yuba	Marysville	976 Kay St	10/25/2004
California	Yuba	Olivehurst	1941 14th St	11/3/2004
California	Yuba	Olivehurst	4461 College Way	11/17/2004
California	Yuba	Marysville	5395 Feather River Blvd	12/21/2004
California	Yuba	Olivehurst	1696 10th Ave	1/27/2005
California	Yuba	Marysville	5528 Alicia Ave	2/22/2005
California	Yuba	Marysville	5696 Arboga Rd	3/9/2005
California	Yuba	Marysville	1100 E 17th St 36	5/18/2005
California	Yuba	Marysville	885 Grand Ave	5/24/2005
California	Yuba	Marysville	209 E St	12/13/2005
California	Yuba	Marysville	1097 Vine Ave	1/12/2006
California	Yuba	Olivehurst	1440 Broadway Rd	1/17/2006
California	Yuba	Loma Rica	5124 Wolf Trail	1/25/2006
California	Yuba	Olivehurst	3948 Shimer Rd	1/31/2006
California	Yuba	Olivehurst	4605 Summers Ln	1/31/2006
California	Yuba	Marysville	647 Ramirez Rd B	2/16/2006
California	Yuba	Marysville	714 Boyer Road	3/30/2006
California	Yuba	Marysville	5514 Feather River Boulevard	7/13/2006
California	Yuba	Marysville	8369 Hwy 70	10/3/2006
California	Yuba	Marysville	7340 Doc Adams Road	10/9/2006
California	Yuba	Marysville	1164 Redwood Avenue	6/11/2007
California	Yuba	Marysville	4499 East Erle Road	7/7/2007

CASE SUMMARY

REPORT DATE HAZARDOUS MATERIAL INCIDENT REPORT FILED WITH OES?

I. REPORTED BY -

UNKNOWN

CREATED BY

UNKNOWN

III. SITE LOCATION

FACILITY NAME

TECHALLOY BRINE FAC

FACILITY ID

FACILITY ADDRESS

2500 A STREET

PERRIS, CA 92570

RIVERSIDE COUNTY

ORIENTATION OF SITE TO STREET

CROSS STREET

V. SUBSTANCES RELEASED / CONTAMINANT(S) OF CONCERN

VI. DISCOVERY/ABATEMENT

DATE DISCHARGE BEGAN

DATE DISCOVERED

HOW DISCOVERED

DESCRIPTION

DATE STOPPED

STOP METHOD

DESCRIPTION

VII. SOURCE/CAUSE

SOURCE OF DISCHARGE

CAUSE OF DISCHARGE

DISCHARGE DESCRIPTION

VIII. CASE TYPE

CASE TYPE

IX. REMEDIAL ACTION

NO REMEDIAL ACTIONS ENTERED

X. GENERAL COMMENTS

Techalloy Company, Inc. operates a steel wire manufacturing facility in Perris, CA. From 1966 to 1979, Techalloy discharged acidic hazardous wastes (containing high levels of chromium, nickel, fluoride, copper, and nitrate) to three lined surface impoundments at the site under Board Order No. 88-66 and Resolution No. 66-38. In Oct. 1984, during removal of residual solid wastes from the impoundments, the liner puncture was discovered. Subsurface investigations (13 soil boreholes and 23 monitoring wells) performed in 1985 and 1986. These investigations concluded that groundwater contamination by total dissolved solids and heavy metals. Additional groundwater monitoring wells installed in June 1990 to investigate the extent of contaminant plumes. The site closure plan was approved by the Regional Board, State Dept. of Toxic Substances Control (DTSC), and the USEPA. The installation of a low permeability closure cap over the three surface impoundments completed in July 1989. The Regional Board issued Order No. 90-145 for post-closure groundwater monitoring at the site on October 9, 1990. Since this is a hazardous waste facility, DTSC is the lead agency for site closure and groundwater monitoring program for the site. The Regional Board issued Order No. 90-145 for post-closure groundwater monitoring at the site on October 9, 1990. Since this is a hazardous waste facility, DTSC is the lead agency for site closure and groundwater monitoring program for the site. In May 1996, DTSC issued a hazardous waste post-closure facility permit for this facility. The Regional Board is a responsible agency (but a lead agency in enforcing the requirements in Order No. 90-145) and requests that a copy of the groundwater monitoring report be submitted as well. Techalloy is conducting post-closure groundwater monitoring and cap inspection and maintenance as directed by DTSC under a Post-closure Facility Permit (EnviroStor ID 80001433). The Regional Board rescinded Order No. 90-145 on December 6, 2013.

Go to Techalloy (Global ID# SLT8R1924097) in Geotracker to view groundwater monitoring reports. Also, go to DTSC's EnviroStor database to access all technical reports (post-closure facility permit, land use covenant, monitoring reports, etc.) for Techalloy (EnviroStar ID # 80001433, Facility EPA ID# CAD059277137).

XI. CERTIFICATION

I HEREBY CERTIFY THAT THE INFORMATION REPORTED HEREIN
IS TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE.

XII. REGULATORY USE ONLY

LOCAL AGENCY CASE NUMBER

80001433

REGIONAL BOARD CASE NUMBER

8 332024001

LOCAL AGENCY

UNKNOWN

REGIONAL BOARD

CONTACT NAME

JOANNE LEE

INITIALS

JPL

ORGANIZATION NAME

SANTA ANA RWQCB (REGION 8)

EMAIL ADDRESS

joanne.lee@waterboards.ca.gov

ADDRESS

3737 MAIN STREET, SUITE 500
RIVERSIDE, CA 92501-3339

CONTACT DESCRIPTION

THE CONTACT ADDRESS IS THE BUSINESS ADDRESS

PHONE TYPE

VOICE

PHONE NUMBER

(951)-782-3291

EXTENSION

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Riverside County Parcel Report

APN(s):342080042,342080039,342080040,342080041

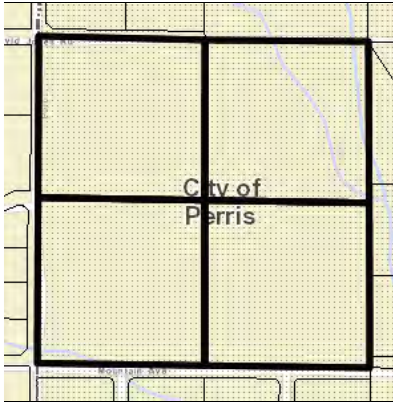
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MAPS/IMAGES



PARCEL

APN 342-080-039-3, 342-080-040-3, 342-080-041-4, 342-080-042-5 Supervisorial District JEFF HEWITT, DISTRICT 5

Previous APN 342080039
342080007
342080040
342080007
342080041
342080007
342080042
342080007
Township/Range T5SR4W SEC 1 NE

Owner Name NOT AVAILABLE ONLINE Elevation 1538 ft

Address Thomas Bros. PAGE: 807, GRID: E5
Map Page/Grid PAGE: 807, GRID: E6

Mailing Address 342080039
3857 BIRCH ST STE 501
NEWPORT BEACH CA 92660 Indian Tribal Land NOT IN A TRIBAL LAND

342080040
3857 BIRCH ST STE 501
NEWPORT BEACH CA 92660

342080041
3857 BIRCH ST STE 501
NEWPORT BEACH CA 92660

342080042
3857 BIRCH ST STE 501
NEWPORT BEACH CA 92660

Legal Description	<p>342080039 Recorded Book/Page: PM 86/30 (http://weblink.rctima.org/WebLink/Search.aspx?dbid=0&searchcommand=%7b%5bTransportation+Survey%5d%3a%5bSurvey+Document+Type%5d%3d%22PM+-+Parcel+Map%22%7d%26%7b%5bTransportation+Survey%5d%3a%5bBook%5d%3d%2286%22%7d%26%7b%5bTransportation+Survey%5d%3a%5bPage%5d%3d%2230%22%7d) Subdivision Name: PM 16059 Lot/Parcel: 1 Block: Tract Number:</p> <p>342080040 Recorded Book/Page: PM 86/30 (http://weblink.rctima.org/WebLink/Search.aspx?dbid=0&searchcommand=%7b%5bTransportation+Survey%5d%3a%5bSurvey+Document+Type%5d%3d%22PM+-+Parcel+Map%22%7d%26%7b%5bTransportation+Survey%5d%3a%5bBook%5d%3d%2286%22%7d%26%7b%5bTransportation+Survey%5d%3a%5bPage%5d%3d%2230%22%7d) Subdivision Name: PM 16059 Lot/Parcel: 2 Block: Tract Number:</p> <p>342080041 Recorded Book/Page: PM 86/30 (http://weblink.rctima.org/WebLink/Search.aspx?dbid=0&searchcommand=%7b%5bTransportation+Survey%5d%3a%5bSurvey+Document+Type%5d%3d%22PM+-+Parcel+Map%22%7d%26%7b%5bTransportation+Survey%5d%3a%5bBook%5d%3d%2286%22%7d%26%7b%5bTransportation+Survey%5d%3a%5bPage%5d%3d%2230%22%7d) Subdivision Name: PM 16059 Lot/Parcel: 3 Block: Tract Number:</p> <p>342080042 Recorded Book/Page: PM 86/30 (http://weblink.rctima.org/WebLink/Search.aspx?dbid=0&searchcommand=%7b%5bTransportation+Survey%5d%3a%5bSurvey+Document+Type%5d%3d%22PM+-+Parcel+Map%22%7d%26%7b%5bTransportation+Survey%5d%3a%5bBook%5d%3d%2286%22%7d%26%7b%5bTransportation+Survey%5d%3a%5bPage%5d%3d%2230%22%7d) Subdivision Name: PM 16059 Lot/Parcel: 4 Block: Tract Number:</p>
-------------------	---

		City Spheres of influence	NOT IN A CITY SPHERE
Lot Size	<p>342080039 Recorded lot size is 10.07 acres</p> <p>342080040 Recorded lot size is 10.08 acres</p> <p>342080041 Recorded lot size is 10.24 acres</p> <p>342080042 Recorded lot size is 10.01 acres</p>	March Joint Powers Authority	NOT IN THE JURISDICTION OF THE MARCH JOINT POWERS AUTHORITY

Property Characteristics	<p>342080039 Year Constructed: Baths: Bedrooms: Construction Type: Garage Type: Property Area (sq ft): Roof Type: Stories: Pool: NO Central Cool: NO Central Heat: NO</p> <p>342080040 Year Constructed: Baths: Bedrooms: Construction Type: Garage Type: Property Area (sq ft): Roof Type: Stories: Pool: NO Central Cool: NO Central Heat: NO</p> <p>342080041 Year Constructed: Baths: Bedrooms: Construction Type: Garage Type: Property Area (sq ft): Roof Type: Stories: Pool: NO Central Cool: NO Central Heat: NO</p> <p>342080042 Year Constructed: Baths: Bedrooms: Construction Type: Garage Type: Property Area (sq ft): Roof Type: Stories: Pool: NO Central Cool: NO Central Heat: NO</p>	County Service Area	NOT IN A COUNTY SERVICE AREA
--------------------------	---	---------------------	------------------------------

Annexation Date	N/A	LAFCO Case	N/A
Proposals	N/A		

Specific Plans	NOT IN A SPECIFIC PLAN	Historic Preservation Districts	NOT IN A HISTORIC PRESERVATION DISTRICT
Land Use Designations	CITY	Agricultural Preserve	NOT IN AN AGRICULTURAL PRESERVE
General Plan Policy Overlays	N/A		
Area Plan (RCIP)	Mead Valley	Airport Influence Areas	MARCH AIR RESERVE BASE
General Plan Policy Areas	NOT IN A GENERAL PLAN POLICY AREA	Airport Compatibility Zones	MARCH AIR RESERVE BASE, ZONE E
Zoning Classifications (ORD. 348) (https://planning.rctlma.org/General-Plan-Zoning/Zone-Descriptions-Requirements)	CHECK WITH THE CITY FOR MORE INFORMATION	Zoning Districts and Zoning Areas	NOT IN A ZONING DISTRICT/AREA
Zoning Overlays	NOT IN A ZONING OVERLAY	Community Advisory Councils	NOT IN A COMMUNITY ADVISORY COUNCIL
Residential Permit Stats			
N/A			
ENVIRONMENTAL more... (http://www.rctlma.org/epd/default.aspx)			
CVMSHCP (Coachella Valley Multi-Species Habitat Conservation Plan) Plan Area (http://www.cvmshcp.org/)	NOT IN A COACHELLA VALLEY MSHCP FEE AREA	WRMSHCP (Western Riverside County Multi-Species Habitat Conservation Plan) Cell Group	NOT IN A CELL GROUP
CVMSHCP (Coachella Valley Multi-Species Habitat Conservation Plan) Conservation Area	NOT COACHELLA VALLEY CONSERVATION AREA	WRMSHCP Cell Number	NOT IN A CELL NUMBER
CVMSHCP Fluvial Sand Transport Special Provision Areas	NOT IN A FLUVIAL SAND TRANSPORT SPECIAL PROVISION AREA	HANS/ERP (Habitat Acquisition and Negotiation Strategy/Expedited Review Process)	NOT IN A HANS/ERP PROJECT
WRMSHCP (Western Riverside County Multi-Species Habitat Conservation Plan) Plan Area (http://rctlma.org/epd/WR-MSHCP)	WESTERN RIVERSIDE COUNTY	Vegetation (2005)	CALIFORNIA BUCKWHEAT ALLIANCE CALIFORNIA SYCAMORE ALLIANCE URBAN INTERFACE MAPPING UNIT URBAN OR DEVELOPMENT MAPPING UNIT
Fire			
Fire Hazard Classification (Ord. 787 (http://www.rivcocob.org/ords/700/787.pdf))	NOT IN A FIRE HAZARD ZONE	Fire Responsibility Area	NOT IN A FIRE RESPONSIBILITY AREA
DEVELOPMENT FEES			
CVMSHCP (Coachella Valley Multi-Species Habitat Conservation Plan) (http://www.cvmshcp.org/) Fee Area (Ord 875 (http://www.rivcocob.org/ords/800/875.pdf))	NOT IN A COACHELLA VALLEY MSHCP FEE AREA	RBB (Road & Bridge Benefit District)	NOT IN A ROAD BRIDGE BENEFIT DISTRICT
WRMSHCP (Western Riverside County Multi-Species Habitat Conservation Plan) Fee Area (Ord. 810 (http://www.rivcocob.org/ords/800/810.htm))	WESTERN RIVERSIDE COUNTY	DIF (Development Impact Fee Area Ord. 659) (http://www.rivcocob.org/ords/600/659.12.pdf)	MEAD VALLEY, AREA 13
Western TUMF (Transportation Uniform Mitigation Fee Ord. 824 (http://www.rivcocob.org/ords/800/824.pdf))	IN OR PARTIALLY WITHIN A TUMF FEE AREA	SKR Fee Area (Stephen's Kagaroo Rat Ord. 663.10 (http://www.rivcocob.org/ords/600/663.10.pdf))	IN OR PARTIALLY WITHIN THE SKR FEE AREA
Eastern TUMF (Transportation Uniform Mitigation Fee Ord. 673 (http://www.rivcocob.org/ords/600/673.pdf))	NOT IN THE EASTERN TUMF FEE AREA	DA (Development Agreements)	NOT IN A DEVELOPMENT AGREEMENT
TRANSPORTATION more... (http://rctlma.org/trans)			
Circulation Element Ultimate Right-of-Way	IN OR PARTIALLY WITHIN A CIRCULATION ELEMENT RIGHT-OF-WAY	Road Book Page	63
		Transportation Agreements	NOT IN A TRANS AGREEMENT
		CETAP (Community and Environmental Transportation Acceptability Process) Corridors	NOT IN A CETAP CORRIDOR
HYDROLOGY			
Flood Plan Review	OUTSIDE FLOODPLAIN, REVIEW NOT REQUIRED	Watershed	SAN JACINTO VALLEY
Water District	EASTERN MUNICIPAL WATER DISTRICT		
Flood Control District	RIVERSIDE COUNTY FLOOD CONTROL DISTRICT		
GEOLOGIC			
Fault Zone	NOT IN A FAULT ZONE	Paleontological Sensitivity	LOW POTENTIAL (L): FOLLOWING A LITERATURE SEARCH, RECORDS CHECK AND A FIELD SURVEY, AREAS MAY BE DETERMINED BY A QUALIFIED VERTEBRATE PALEONTOLOGIST AS HAVING LOW POTENTIAL FOR CONTAINING SIGNIFICANT PALEONTOLOGICAL RESOURCES SUBJECT TO ADVERSE IMPACTS.
Faults	NOT IN A FAULT LINE		
Liquefaction Potential	NOT IN A LIQUEFACTION AREA		
Subsidence	NOT IN A SUBSIDENCE AREA		
MISCELLANEOUS			
School District		PERRIS & PERRIS UNION HIGH	
Communities		PERRIS	
Lighting (Ord. 655 (http://www.rivcocob.org/ords/600/655.htm))		ZONE: B	
2010 Census Tract		429.01	
Farmland		LOCAL IMPORTANCE OTHER LANDS	
Special Notes		NO SPECIAL NOTES	
Tax Rate Areas		008016 - CITY OF PERRIS 008016 - CITY OF PERRIS LIGHTING 008016 - CO FREE LIBRARY 008016 - EMWD 008016 - EMWD IMP DIST 8 008016 - FLOOD CONTROL ADMIN 008016 - FLOOD CONTROL ZN 4 008016 - GENERAL 008016 - GENERAL PURPOSE	

008016 - MT SAN JACINTO JR COLLEGE
 008016 - MWD EAST 1301999
 008016 - PERRIS AREA ELEM SCHOOL FUND
 008016 - PERRIS JR HIGH AREA FUND
 008016 - PERRIS SCHOOL
 008016 - PERRIS UNION HS
 008016 - PERRIS VALLEY CEMETERY
 008016 - RIVERSIDE CO OFC OF EDUCATION
 008016 - SAN JACINTO BASIN RESOURCE CONS
 008016 - SO. CALIF.JT(19,30,33,36,37,56)

Department of Environmental Health Permits

Septic Permits

Record Id	Application Date	Plan Check Approved Date	Final Inspection Date	Approved Date
N/A	N/A	N/A	N/A	N/A

Well Water Permits

Record Id	PE	Permit Paid Date	Permit Approved Date	Well Finaled Date
N/A	N/A	N/A	N/A	N/A

PLUS PERMITS & CASES

Administrative Cases

Case	Case Description	Status
N/A	N/A	N/A

Building and Safety Cases

Case	Case Description	Status
N/A	N/A	N/A

Code Cases

Case	Case Description	Status
N/A	N/A	N/A

Fire Cases

Case	Case Description	Status
N/A	N/A	N/A

Planning Cases

Case	Case Description	Status
N/A	N/A	N/A

Survey Cases

Case	Case Description	Status
MAP31304		ISSUED
MAP31305		ISSUED
MAP37904	REQUESTING A NEW TRACT MAP NUMBER FOR A DEVELOPMENT IN PERIS.	APPLIED

Transportation Cases

Case	Case Description	Status
N/A	N/A	N/A

USER QUESTIONNAIRE – PACIFIC EMERALD PROJECT INTRODUCTION

In order to qualify for one of the *Landowner Liability Protections* offered by the Small Business Liability Relief and Brownfields Revitalization Act of 2002, the *user* must provide the following information (if available) to the *environmental professional*. Failure to provide this information could result in a determination that “*all appropriate inquiry*” is not complete.

(1) Are you aware of any environmental cleanup liens against the property that are filed or recorded under federal, tribal, state or local law?
CIRCLE YES or **NO**

If yes, please explain in detail.

(2) Are you aware of any Act Use Limitations (AUL), such as *engineering controls*, land use restrictions or *institutional controls* that are in place at the site and/or have been filed or recorded in a registry under federal, tribal, state or local law?
YES or **NO**

If yes, please explain.

(3) As the *user* of this Environmental Site Assessment (ESA) do you have any specialized knowledge or familiarity related to the *property* or nearby properties? For example, are you involved in the same line of business as the current or former *occupants* of the *property* or its neighboring *property*, so that you may have specific knowledge of the chemicals and processes used by this type of business?
YES or **NO**

If yes, please explain.

(4) Does the purchase price being paid for this *property* reasonably reflect the fair market value of the *property*?
YES or **NO NELSON HAS OWNED THIS PROPERTY FOR MANY YEARS.**

If you believe that there is a difference, have you considered whether the lower purchase price is because contamination is known or believed to be present at the property?
YES or **NO**

If yes, please explain.

(5) Are you aware of commonly known or *reasonably* ascertainable information that would help the *environment professional* to identify conditions pinpointing releases or threaten releases of hazardous materials and/ or chemicals? For example, as user,

(a.) Do you know of any past uses of the *property*? YES or **NO**

(b.) Do you know of specific chemicals that are present or once were present at the *property*? YES or **NO**

(c.) Do you know of any chemical spills or any other chemical releases that have taken place at the *property*? YES or **NO**

(d.) Do you know of any environmental cleanups that have taken place at the *property*? YES or **NO**

If any yes, please explain.

(6) As the user of this Environmental Site Assessment (ESA), based on your knowledge and experience related to the *property* are there any *obvious* indicators that point to the presence or likely presence of a contamination at the *property*?

YES or **NO**

If yes, please explain.

Completed By TONY ARNEST

Print Name

TONY ARNEST, SR. PROJECT MANAGER

Tract 31304

Mountain Avenue/Mcpherson Road

Perris, CA 92570

Inquiry Number: 6286613.3

December 02, 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

12/02/20

Site Name:

Tract 31304
Mountain Avenue/Mcpherson F
Perris, CA 92570
EDR Inquiry # 6286613.3

Client Name:

Geotek
1548 North Maple Street
Corona, CA 92880
Contact: Kyle Mchargue



The Sanborn Library has been searched by EDR and maps covering the target property location as provided by Geotek 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 # A404-49C2-BD1D

PO # 2359-CR

Project Tract 31304

UNMAPPED PROPERTY

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Sanborn® Library search results

Certification #: A404-49C2-BD1D

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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**PACIFIC COMMUNITIES BUILDER, INC.
TRACT No. 31304
PERRIS, RIVERSIDE COUNTY, CALIFORNIA**

**PROJECT No. 2359-CR
DECEMBER 10, 2020**

APPENDIX C

PHOTOGRAPHS



PHOTOGRAPHS
Tract 31304
Perris, Riverside County, California



1. View north from south portion of property.

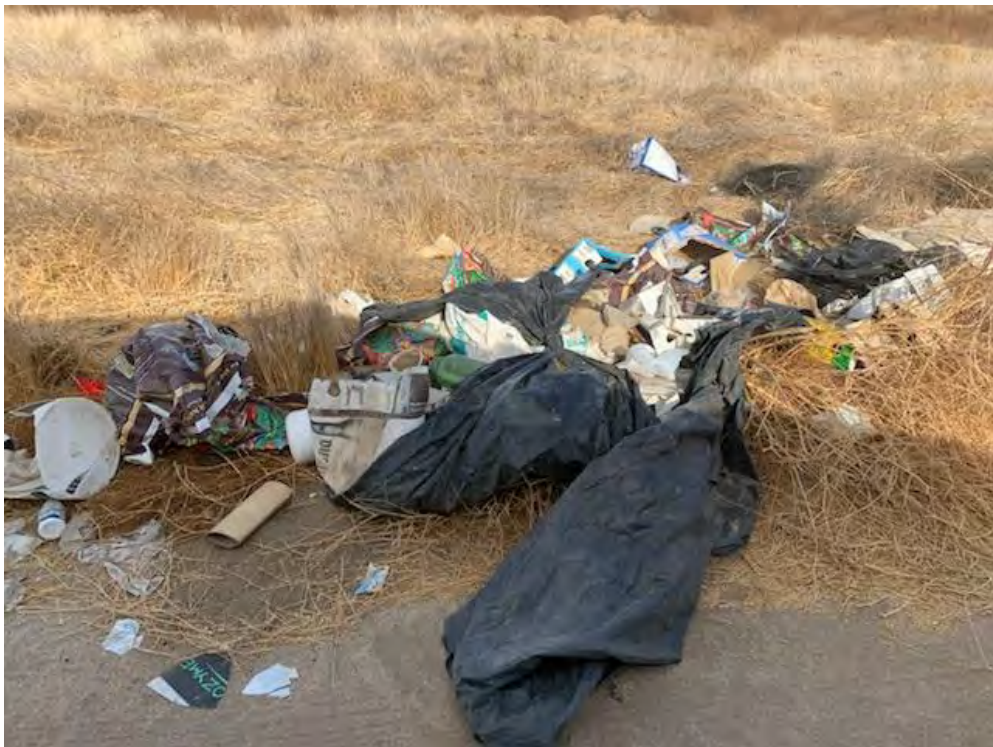


2. View northeast from south portion of property. Showing discarded automobile tires.

PHOTOGRAPHS
Tract 31304
Perris, Riverside County, California



3. View northwest on the southeast portion of the property.



4. Showing discarded household trash on the southeast portion of the property.

PHOTOGRAPHS
Tract 31304
Perris, Riverside County, California



5. View west from the east portion of property.



6. View north from the east portion of property.

PHOTOGRAPHS
Tract 31304
Perris, Riverside County, California



7. View west from the northeast portion of the property.



8. View northwest from the northeast portion of the property. Showing debris and automobile tires.

PHOTOGRAPHS
Tract 31304
Perris, Riverside County, California



9. View south from north portion of the property.



10. View northwest of the adjacent residence on the north portion of the property.

PHOTOGRAPHS
Tract 31304
Perris, Riverside County, California



11. View southeast from the northwest portion of property.



12. View east from the west portion of property.

PHOTOGRAPHS
Tract 31304
Perris, Riverside County, California



13. View of an adjacent residence on the west portion of property.



14. View east from the southwest portion of the property. Showing Mountain Avenue.

PHOTOGRAPHS
Tract 31304
Perris, Riverside County, California



15. View north from southwest portion of property. Showing discarded household items.



16. View north from southwest portion of property.

**PACIFIC COMMUNITIES BUILDER, INC.
TRACT No. 31304
PERRIS, RIVERSIDE COUNTY, CALIFORNIA**

**PROJECT No. 2359-CR
DECEMBER 10, 2020**

APPENDIX D

VAPOR ENCROACHMENT SCREEN



Tract 31304

Mountain Avenue/Mcpherson Road
Perris, CA 92570

Inquiry Number: 6286613.2s

December 7, 2020

EDR Vapor Encroachment Screen

Prepared using EDR's Vapor Encroachment Worksheet

TABLE OF CONTENTS

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Executive Summary	ES1
Primary Map	2
Secondary Map	3
Map Findings	4
Record Sources and Currency	GR-1

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 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	0	0
Local Lists of Registered Storage Tanks	0.25	0	0	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	0	0

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

TRACT 31304
MOUNTAIN AVENUE/MCPHERSON ROAD
PERRIS, CA 92570

COORDINATES

Latitude (North):	33.767495 - 33° 46' 2.979126"
Longitude (West):	117.248531 - 117° 14' 54.699097"
Elevation:	1547 ft. above sea level

EXECUTIVE SUMMARY

SEARCH RESULTS

Unmappable (orphan) sites are not considered in the foregoing analysis.

STANDARD ENVIRONMENTAL RECORDS

<u>Name</u>	<u>Address</u>	<u>Dist/Dir</u>	<u>Map ID</u>	<u>Page</u>
Not Reported				

ADDITIONAL ENVIRONMENTAL RECORDS

<u>Name</u>	<u>Address</u>	<u>Dist/Dir</u>	<u>Map ID</u>	<u>Page</u>
Not Reported				

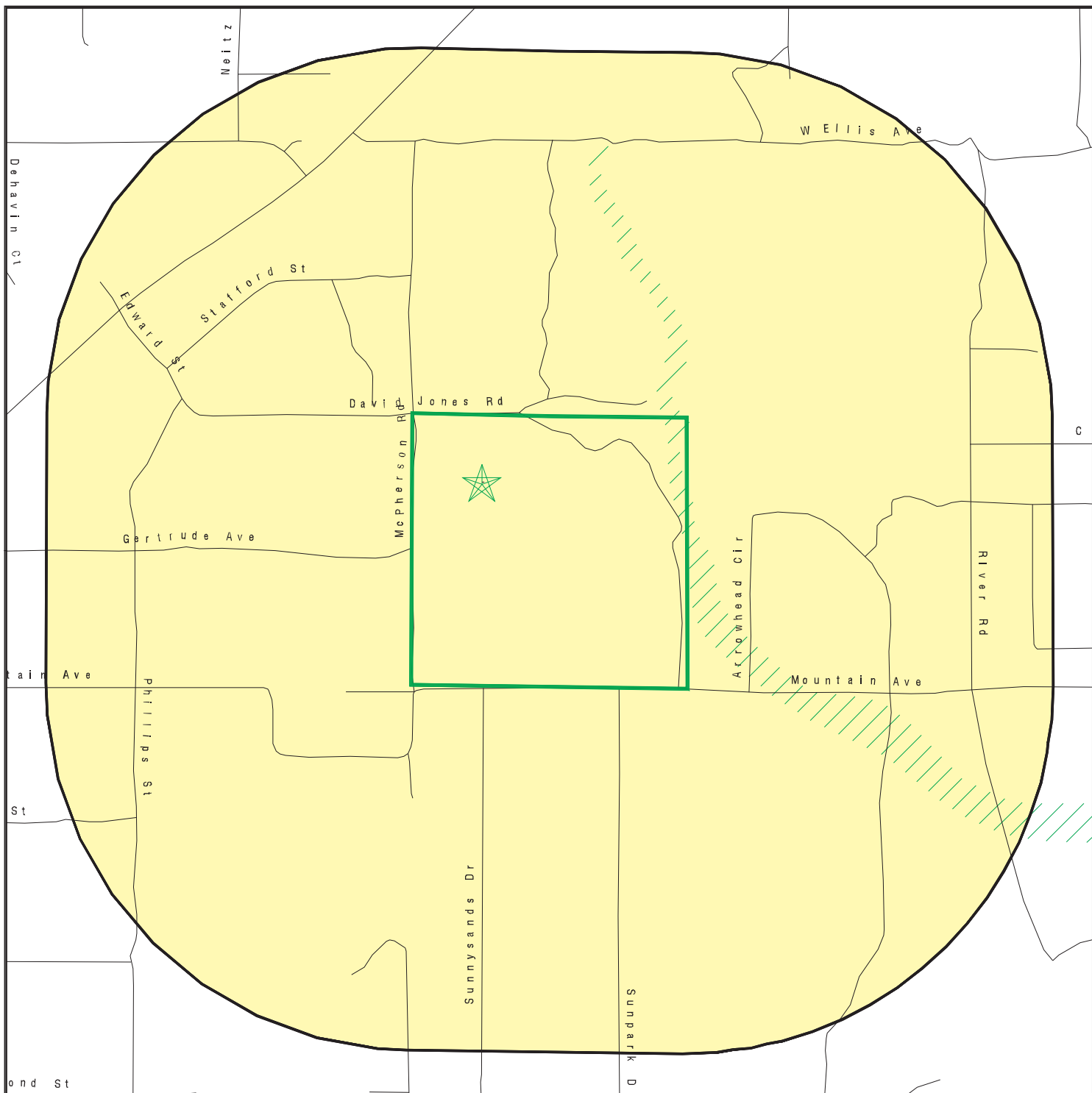
EDR HIGH RISK HISTORICAL RECORDS











<u>Name</u>	<u>Address</u>	<u>Dist/Dir</u>	<u>Map ID</u>	<u>Page</u>
Not Reported				

EDR RECOVERED GOVERNMENT ARCHIVES

<u>Name</u>	<u>Address</u>	<u>Dist/Dir</u>	<u>Map ID</u>	<u>Page</u>
Not Reported				

PRIMARY MAP - 6286613.2S



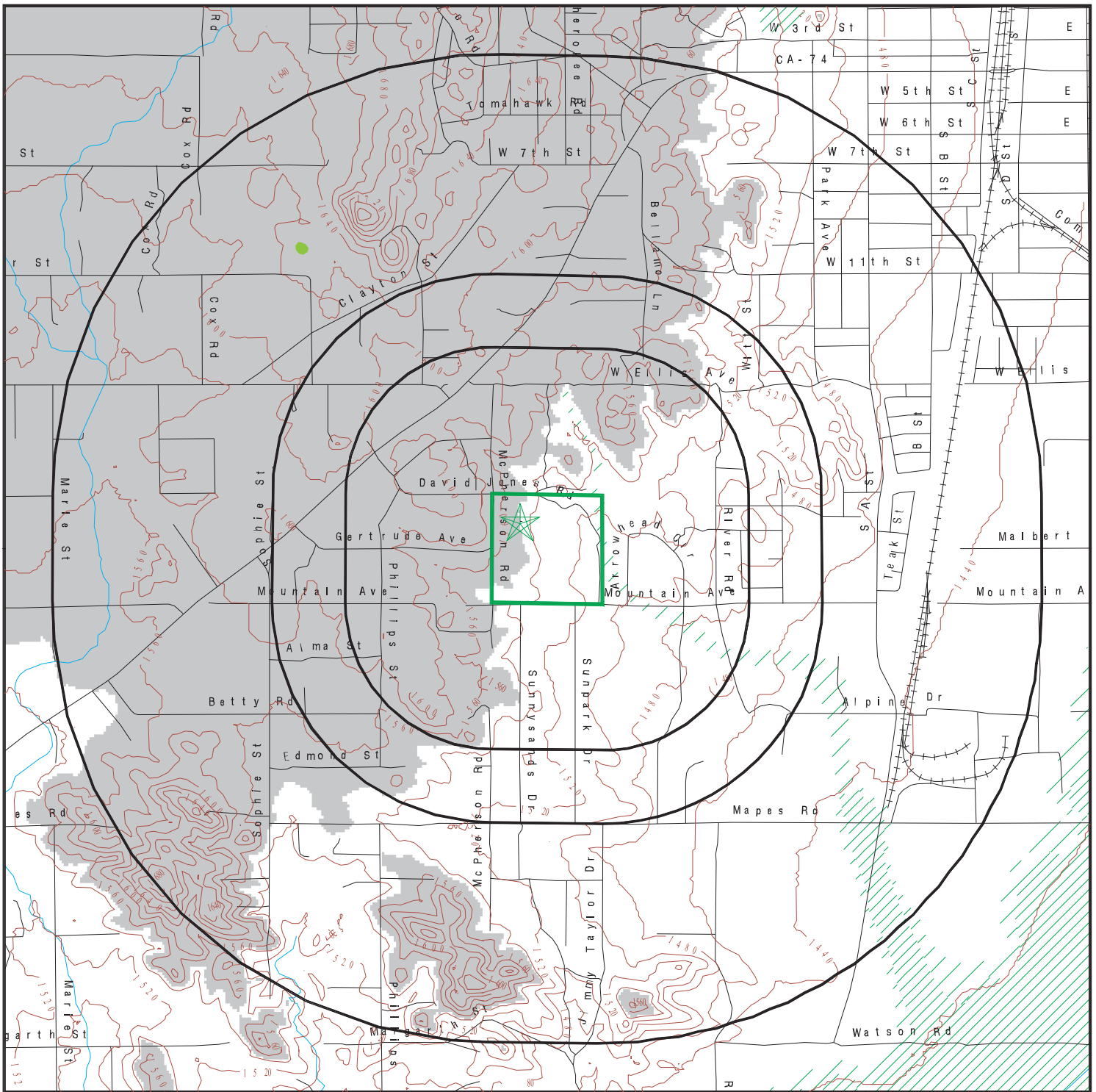
-  Target Property
-  Sites at elevations higher than or equal to the target property
-  Sites at elevations lower than the target property
-  Manufactured Gas Plants
-  National Priority List Sites
-  Dept. Defense Sites
-  Indian Reservations BIA
-  Special Flood Hazard Area (1%)
-  0.2% Annual Chance Flood Hazard
-  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: Tract 31304
 ADDRESS: Mountain Avenue/Mcpherson Road
 Perris CA 92570
 LAT/LONG: 33.767495 / 117.248531

CLIENT: Geotek
 CONTACT: Kyle Mchargue
 INQUIRY #: 6286613.2s
 DATE: December 02, 2020 5:45 pm

SECONDARY MAP - 6286613.2S



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

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: Tract 31304
 ADDRESS: Mountain Avenue/Mcpherson Road
 Perris CA 92570
 LAT/LONG: 33.767495 / 117.248531

CLIENT: Geotek
 CONTACT: Kyle Mchargue
 INQUIRY #: 6286613.2s
 DATE: December 02, 2020 5:42 pm

MAP FINDINGS

LEGEND

FACILITY NAME		FACILITY ADDRESS, CITY, ST, ZIP		EDR SITE ID NUMBER
◆ MAP ID#	Direction	Distance Range	(Distance feet / miles)	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.
	Relative Elevation	Feet Above Sea Level		
Worksheet:				
Comments:				
Comments may be added on the online Vapor Encroachment Worksheet.				

DATABASE ACRONYM: Applicable categories (A hoverbox with database description).

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

St	Acronym	Full Name	Government Agency	Gov Date	Arvl Date	Active Date
ENVIRONMENTAL RECORDS						
<i>Federal NPL site list</i>						
US	NPL	National Priority List	EPA	10/28/2020	11/05/2020	11/25/2020
US	Proposed NPL	Proposed National Priority List Sites	EPA	10/28/2020	11/05/2020	11/25/2020
US	NPL LIENS	Federal Superfund Liens	EPA	10/15/1991	02/02/1994	03/30/1994
<i>Federal CERCLIS list</i>						
US	SEMS	Superfund Enterprise Management System	EPA	10/28/2020	11/05/2020	11/25/2020
<i>Federal RCRA CORRACTS facilities list</i>						
US	CORRACTS	Corrective Action Report	EPA	06/15/2020	06/22/2020	09/17/2020
<i>Federal RCRA TSD facilities list</i>						
US	RCRA-TSDF	RCRA - Treatment, Storage and Disposal	Environmental Protection Agency	06/15/2020	06/22/2020	09/18/2020
<i>Federal RCRA generators list</i>						
US	RCRA-LOG	RCRA - Large Quantity Generators	Environmental Protection Agency	06/15/2020	06/22/2020	09/18/2020
US	RCRA-SQG	RCRA - Small Quantity Generators	Environmental Protection Agency	06/15/2020	06/22/2020	09/18/2020
US	RCRA-VSOG	RCRA - Very Small Quantity Generators (Formerly Conditional	Environmental Protection Agency	06/15/2020	06/22/2020	09/18/2020
<i>Federal institutional controls / engineering controls registries</i>						
US	LUCIS	Land Use Control Information System	Department of the Navy	08/06/2020	08/21/2020	11/11/2020
US	US ENG CONTROLS	Engineering Controls Sites List	Environmental Protection Agency	10/28/2020	11/05/2020	11/18/2020
US	US INST CONTROLS	Institutional Controls Sites List	Environmental Protection Agency	10/28/2020	11/05/2020	11/18/2020
<i>Federal ERNS list</i>						
US	ERNS	Emergency Response Notification System	National Response Center, United States Coast	06/15/2020	06/22/2020	09/17/2020
<i>State and tribal - equivalent NPL</i>						
CA	RESPONSE	State Response Sites	Department of Toxic Substances Control	07/27/2020	07/27/2020	10/08/2020
<i>State and tribal - equivalent CERCLIS</i>						
CA	ENVIROSTOR	EnviroStor Database	Department of Toxic Substances Control	07/27/2020	07/27/2020	10/08/2020
<i>State and tribal landfill / solid waste disposal</i>						
CA	SWF/IF (SWIS)	Solid Waste Information System	Department of Resources Recycling and Recover	05/11/2020	05/12/2020	07/27/2020
<i>State and tribal leaking storage tank lists</i>						
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 5	Leaking Underground Storage Tank Database	California Regional Water Quality Control Boa	07/01/2008	07/22/2008	07/31/2008
CA	LUST REG 4	Underground Storage Tank Leak List	California Regional Water Quality Control Boa	09/07/2004	09/07/2004	10/12/2004
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 2	Fuel Leak List	California Regional Water Quality Control Boa	09/30/2004	10/20/2004	11/19/2004
CA	LUST	Leaking Underground Fuel Tank Report (GEOTRACKER)	State Water Resources Control Board	09/08/2020	09/08/2020	11/30/2020
CA	LUST REG 1	Active Toxic Site Investigation	California Regional Water Quality Control Boa	02/01/2001	02/28/2001	03/29/2001

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

St	Acronym	Full Name	Government Agency	Gov. Date	Arvl. Date	Active Date
CA	LUST REG 8	Leaking Underground Storage Tanks	California Regional Water Quality Control Board	02/14/2005	02/15/2005	03/28/2005
CA	LUST REG 9	Leaking Underground Storage Tank Report	California Regional Water Quality Control Board	03/01/2001	04/23/2001	05/21/2001
CA	LUST REG 6L	Leaking Underground Storage Tank Case Listing	California Regional Water Quality Control Board	09/09/2003	09/10/2003	10/07/2003
CA	LUST REG 7	Leaking Underground Storage Tank Case Listing	California Regional Water Quality Control Board	02/26/2004	02/26/2004	03/24/2004
US	INDIAN LUST R10	Leaking Underground Storage Tanks on Indian Land	EPA Region 10	04/14/2020	05/20/2020	08/12/2020
US	INDIAN LUST R1	Leaking Underground Storage Tanks on Indian Land	EPA Region 1	04/29/2020	05/20/2020	08/12/2020
US	INDIAN LUST R4	Leaking Underground Storage Tanks on Indian Land	EPA Region 4	04/14/2020	05/26/2020	08/12/2020
US	INDIAN LUST R5	Leaking Underground Storage Tanks on Indian Land	EPA, Region 5	04/14/2020	05/20/2020	08/12/2020
US	INDIAN LUST R9	Leaking Underground Storage Tanks on Indian Land	Environmental Protection Agency	04/08/2020	05/20/2020	08/12/2020
US	INDIAN LUST R8	Leaking Underground Storage Tanks on Indian Land	EPA Region 8	04/14/2020	05/20/2020	08/12/2020
US	INDIAN LUST R7	Leaking Underground Storage Tanks on Indian Land	EPA Region 7	04/15/2020	05/20/2020	08/12/2020
US	INDIAN LUST R6	Leaking Underground Storage Tanks on Indian Land	EPA Region 6	04/08/2020	05/20/2020	08/12/2020
CA	CPS-SLIC	Statewide SLIC Cases (GEOTRACKER)	State Water Resources Control Board	09/08/2020	09/08/2020	11/30/2020
CA	SLIC REG 1	Active Toxic Site Investigations	California Regional Water Quality Control Board	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 Board	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 Board	09/07/2004	09/07/2004	10/12/2004
CA	SLIC REG 7	SLIC List	California Regional Water 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 Board	09/10/2007	09/11/2007	09/28/2007
State and tribal registered storage tank lists						
CA	UST	Active UST Facilities	SWRCB	09/08/2020	09/08/2020	11/30/2020
CA	MILITARY UST SITES	Military UST Sites (GEOTRACKER)	State Water Resources Control Board	09/08/2020	09/08/2020	11/30/2020
CA	UST CLOSURE	Proposed Closure of Underground Storage Tank (UST) Cases	State Water Resources Control Board	05/26/2020	06/09/2020	08/20/2020
CA	UST MENDOCINO	Mendocino County UST Database	Department of Public Health	05/20/2020	05/20/2020	08/06/2020
CA	AST	Aboveground Petroleum Storage Tank Facilities	California Environmental Protection Agency	07/06/2016	07/12/2016	09/19/2016
US	INDIAN UST R9	Underground Storage Tanks on Indian Land	EPA Region 9	04/08/2020	05/20/2020	08/12/2020
US	INDIAN UST R4	Underground Storage Tanks on Indian Land	EPA Region 4	04/14/2020	05/26/2020	08/12/2020
US	INDIAN UST R5	Underground Storage Tanks on Indian Land	EPA Region 5	04/14/2020	05/20/2020	08/12/2020
US	INDIAN UST R10	Underground Storage Tanks on Indian Land	EPA Region 10	04/14/2020	05/20/2020	08/12/2020
US	INDIAN UST R8	Underground Storage Tanks on Indian Land	EPA Region 8	04/14/2020	05/20/2020	08/12/2020
US	INDIAN UST R7	Underground Storage Tanks on Indian Land	EPA Region 7	04/03/2020	05/20/2020	08/13/2020
US	INDIAN UST R6	Underground Storage Tanks on Indian Land	EPA Region 6	04/08/2020	05/20/2020	08/12/2020
US	INDIAN UST R1	Underground Storage Tanks on Indian Land	EPA, Region 1	04/29/2020	05/20/2020	08/12/2020
US	FEMA UST	Underground Storage Tank Listing	FEMA	07/21/2020	09/03/2020	11/25/2020

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 Listing	EPA, Region 7	03/20/2008	04/22/2008	05/19/2008
CA	VCP	Voluntary Cleanup Program Properties	Department of Toxic Substances Control	07/27/2020	07/27/2020	10/08/2020
		State and tribal Brownfields sites				
CA	BROWNFIELDS	Considered Brownfields Sites Listing	State Water Resources Control Board	06/22/2020	06/22/2020	09/04/2020
		Other Records				
US	CONSENT	Superfund (CERCLA) Consent Decrees	Department of Justice, Consent Decree Library	06/30/2020	07/15/2020	07/21/2020
US	ROD	Records Of Decision	EPA	10/28/2020	11/05/2020	11/25/2020
US	LIENS 2	CERCLA Lien Information	Environmental Protection Agency	10/28/2020	11/05/2020	11/25/2020
CA	HIST CAL-SITES	Calisites 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	09/08/2020	09/08/2020	11/30/2020
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 Health	08/03/2020	08/05/2020	10/22/2020
CA	SWEEPS UST	SWEEPS UST Listing	State Water Resources Control Board	06/01/1994	07/07/2005	08/11/2005
US	COAL ASH DOE	Steam-Electric Plant Operation Data	Department of Energy	12/31/2018	12/04/2019	01/15/2020
US	2020 COR ACTION	2020 Corrective Action Program List	Environmental Protection Agency	09/30/2017	05/08/2018	07/20/2018
US	LEAD SMELTER 2	Lead Smelter Sites	American Journal of Public Health	04/05/2001	10/27/2010	12/02/2010
US	LEAD SMELTER 1	Lead Smelter Sites	Environmental Protection Agency	10/28/2020	11/05/2020	11/25/2020
US	PCB TRANSFORMER	PCB Transformer Registration Database	Environmental Protection Agency	09/13/2019	11/06/2019	02/10/2020
US	COAL ASH EPA	Coal Combustion Residues Surface Impoundments List	Environmental Protection Agency	01/12/2017	03/05/2019	11/11/2019
US	SCRD DRYCLEANERS	State Coalition for Remediation of Drycleaners Listing	Environmental Protection Agency	01/01/2017	02/03/2017	04/07/2017
US	US AIRS (AFS)	Aerometric Information Retrieval System Facility Subsystem (EPA	10/12/2016	10/26/2016	02/03/2017
US	US AIRS MINOR	Air Facility System Data	EPA	10/12/2016	10/26/2016	02/03/2017
US	US FIN ASSUR	Financial Assurance Information	Environmental Protection Agency	06/15/2020	06/22/2020	09/10/2020
US	EPA WATCH LIST	EPA WATCH LIST	Environmental Protection Agency	06/15/2020	06/22/2020	09/10/2020
US	FUSRAP	Formerly Utilized Sites Remedial Action Program	Department of Energy	08/30/2013	03/21/2014	06/17/2014
US	US HIST CDL	National Clandestine Laboratory Register	Drug Enforcement Administration	08/08/2017	09/11/2018	09/14/2018
US	Delisted NPL	National Priority List Deletions	EPA	03/18/2020	03/19/2020	06/09/2020
US	SEMS-ARCHIVE	Superfund Enterprise Management System Archive	EPA	10/28/2020	11/05/2020	11/25/2020
US	RCRA NonGen / NLR	RCRA - Non Generators / No Longer Regulated	Environmental Protection Agency	06/15/2020	06/22/2020	09/18/2020
US	HMIRS	Hazardous Materials Information Reporting System	U.S. Department of Transportation	06/22/2020	06/23/2020	09/17/2020
US	DOT OPS	Incident and Accident Data	Department of Transportation, Office of Pipeline	01/02/2020	01/28/2020	04/17/2020
US	US CDL	Clandestine Drug Labs	Drug Enforcement Administration	03/18/2020	03/19/2020	06/09/2020
US	US BROWNFIELDS	A Listing of Brownfields Sites	Environmental Protection Agency	06/01/2020	06/02/2020	06/09/2020
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	08/05/2020	08/13/2020	10/21/2020
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	MINES VIOLATIONS	MSHA Violation Assessment Data	DOL, Mine Safety & Health Admi	09/10/2020	09/15/2020	11/20/2020
US	US MINES	Mines Master Index File	Department of Labor, Mine Safety and Health A	08/04/2020	08/25/2020	11/18/2020

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	05/06/2020	05/27/2020	08/13/2020
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	04/27/2020	05/06/2020	06/09/2020
US	TRIS	Toxic Chemical Release Inventory System	EPA	12/31/2018	08/14/2020	11/04/2020
US	TSCA	Toxic Substances Control Act	EPA	12/31/2016	06/17/2020	09/10/2020
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	07/20/2020	07/21/2020	10/08/2020
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	08/05/2020	08/10/2020	10/08/2020
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	09/04/2020	09/15/2020	11/20/2020
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	07/24/2020	08/03/2020	10/21/2020
US	BRS	Biennial Reporting System	EPA/NTIS	12/31/2017	06/22/2020	11/20/2020
US	PWS	Public Water System Data	EPA	12/17/2013	01/09/2014	11/15/2014
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	Environmental Protection Agency	04/01/2014	08/06/2014	01/29/2015
US	ABANDONED MINES	Abandoned Mines	Department of Health & Human Services, Indian	06/22/2020	06/22/2020	09/10/2020
CA	CA BOND EXP. PLAN	Bond Expenditure Plan	Department of Interior	01/01/1989	07/27/1994	08/02/1994
CA	CDL	Clandestine Drug Labs	Department of Health Services	06/30/2019	05/28/2020	08/12/2020
CA	CHMIRS	California Hazardous Material Incident Report System	Office of Emergency Services	06/30/2020	07/21/2020	10/07/2020
CA	CORTESE	"Cortese" Hazardous Waste & Substances Sites List	CAL EPA/Office of Emergency Information	06/22/2020	06/22/2020	09/04/2020
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	08/31/2020	08/31/2020	11/20/2020
CA	DRYCLEAN SOUTH COAST	South Coast Air Quality Management District Drycleaner Listi	South Coast Air Quality Management District	08/19/2020	08/21/2020	09/04/2020
CA	DRYCLEANERS	Cleaner Facilities	Department of Toxic Substance Control	08/06/2020	08/28/2020	11/17/2020
CA	DRYCLEAN AVAQMD	Antelope Valley Air Quality Management District Drycleaner L	Antelope Valley Air Quality Management Distri	08/25/2020	08/26/2020	11/13/2020
CA	EMI	Emissions Inventory Data	California Air Resources Board	12/31/2018	06/16/2020	08/28/2020
CA	ENF	Enforcement Action Listing	State Water Resources Control Board	07/20/2020	07/21/2020	10/07/2020
CA	Financial Assurance 1	Financial Assurance Information Listing	Department of Toxic Substances Control	07/13/2020	07/16/2020	09/29/2020
CA	Financial Assurance 2	Financial Assurance Information Listing	California Integrated Waste Management Board	08/05/2020	08/05/2020	10/23/2020
CA	HAULERS	Registered Waste Tire Haulers Listing	Integrated Waste Management Board	05/28/2020	05/29/2020	08/12/2020
CA	HAZNET	Facility and Manifest Data	California Environmental Protection Agency	12/31/2019	04/15/2020	07/02/2020
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	08/17/2020	08/17/2020	11/05/2020
CA	HWT	Registered Hazardous Waste Transporter Database	Department of Toxic Substances Control	07/06/2020	07/07/2020	09/17/2020
CA	ICE	ICE	Department of Toxic Substances Control	08/17/2020	08/17/2020	11/05/2020
CA	LDS	Land Disposal Sites Listing (GEOTRACKER)	State Water Quality Control Board	09/08/2020	09/08/2020	11/30/2020
CA	LIENS	Environmental Liens Listing	Department of Toxic Substances Control	08/26/2020	08/28/2020	11/17/2020
CA	MCS	Military Cleanup Sites Listing (GEOTRACKER)	State Water Resources Control Board	09/08/2020	09/08/2020	11/30/2020
CA	MINES	Mines Site Location Listing	Department of Conservation	09/08/2020	09/08/2020	11/30/2020
CA	MWMP	Medical Waste Management Program Listing	Department of Public Health	08/31/2020	08/31/2020	11/20/2020

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

St	Acronym	Full Name	Government Agency	Gov. Date	Arvl. Date	Active Date
CA	NPDES	NPDES Permits Listing	State Water Resources Control Board	08/10/2020	08/10/2020	10/29/2020
CA	PEST LIC	Pesticide Regulation Licenses Listing	Department of Pesticide Regulation	08/31/2020	08/31/2020	11/20/2020
CA	PROC	Certified Processors Database	Department of Conservation	09/08/2020	09/08/2020	12/01/2020
CA	NOTIFY 65	Proposition 65 Records	State Water Resources Control Board	08/21/2020	08/21/2020	08/27/2020
CA	SCH	School Property Evaluation Program	Department of Toxic Substances Control	07/27/2020	07/27/2020	10/08/2020
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	Department of Conservation	09/08/2020	09/08/2020	12/01/2020
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	State Water Resources Control Board	07/03/2009	07/21/2009	08/03/2009
CA	WMUDS/SWAT	Waste Management Unit Database	Los Angeles Water Quality Control Board	04/01/2000	04/10/2000	05/10/2000
CA	CERS	CalEPA Regulated Site Portal Data	State Water Resources Control Board	07/20/2020	07/21/2020	10/07/2020
US	DOCKET HWC	Hazardous Waste Compliance Docket Listing	California Environmental Protection Agency	05/31/2018	07/26/2018	10/05/2018
CA	HWTS	Hazardous Waste Tracking System	Environmental Protection Agency	10/13/2020	10/14/2020	11/03/2020
CA	PROJECT	Project Sites (GEOTRACKER)	Department of Toxic Substances Control	09/08/2020	09/08/2020	11/30/2020
CA	SAMPLING POINT	Sampling Point ? Public Sites (GEOTRACKER)	State Water Resources Control Board	09/08/2020	09/08/2020	11/30/2020
CA	MILITARY PRIV SITES	Military Privatized Sites (GEOTRACKER)	State Water Resources Control Board	09/08/2020	09/08/2020	11/30/2020
CA	NON-CASE INFO	Non-Case Information Sites (GEOTRACKER)	State Water Resources Control Board	09/08/2020	09/08/2020	11/30/2020
CA	OTHER OIL GAS	Other Oil & Gas Projects Sites (GEOTRACKER)	State Water Resources Control Board	09/08/2020	09/08/2020	11/30/2020
CA	PROD WATER PONDS	Produced Water Ponds Sites (GEOTRACKER)	State Water Resources Control Board	09/08/2020	09/08/2020	11/30/2020
CA	UIC GEO	Underground Injection Control Sites (GEOTRACKER)	State Water Resource Control Board	09/08/2020	09/08/2020	11/30/2020
US	ECHO	Well Stimulation Project (GEOTRACKER)	State Water Resource Control Board	09/08/2020	09/08/2020	11/30/2020
US	PFAS	Enforcement & Compliance History Information	Environmental Protection Agency	06/27/2020	07/02/2020	09/28/2020
US	FUELS PROGRAM	PFAS Contamination Site Location Listing	State Water Resources Control Board	09/08/2020	09/08/2020	12/01/2020
CA	CERS HAZ WASTE	EPA Fuels Program Registered Listing	EPA	08/17/2020	08/17/2020	10/21/2020
CA	CIWQS	CERS HAZ WASTE	CalEPA	07/20/2020	07/21/2020	10/07/2020
CA	CERS TANKS	California Integrated Water Quality System	State Water Resources Control Board	08/31/2020	08/31/2020	11/20/2020
CA	WDR	California Environmental Reporting System (CERS) Tanks	California Environmental Protection Agency	07/20/2020	07/21/2020	10/07/2020
US	UXO	Waste Discharge Requirements Listing	State Water Resources Control Board	09/08/2020	09/08/2020	12/01/2020
US	MINES MRDS	Unexploded Ordnance Sites	Department of Defense	12/31/2018	07/02/2020	09/17/2020
		Mineral Resources Data System	USGS	04/06/2018	10/21/2019	10/24/2019
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	07/01/2013	01/13/2014
CA	RGA LUST	Recovered Government Archive Leaking Underground Storage Tan	State Water Resources Control Board	07/01/2013	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	06/30/2020	07/01/2020	06/17/2020
CA	CUPA AMADOR	CUPA Facility List	Amador County Environmental Health	05/18/2020	05/19/2020	06/01/2020
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	06/17/2020	06/18/2020	09/02/2020
CA	CUPA COLUSA	CUPA Facility List	Health & Human Services	04/06/2020	04/23/2020	07/10/2020
CA	SL CONTRA COSTA	Site List	Contra Costa Health Services Department	07/16/2020	07/22/2020	10/08/2020
CA	CUPA DEL NORTE	CUPA Facility List	Del Norte County Environmental Health Divisio	06/08/2020	08/13/2020	10/22/2020
CA	CUPA EL DORADO	CUPA Facility List	El Dorado County Environmental Management Dep	08/13/2020	08/13/2020	10/22/2020
CA	CUPA FRESNO	CUPA Resources List	Dept. of Community Health	06/30/2020	07/01/2020	09/17/2020
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	08/13/2020	08/17/2020	11/05/2020
CA	CUPA IMPERIAL	CUPA Facility List	San Diego Border Field Office	07/14/2020	07/16/2020	09/29/2020
CA	CUPA INYO	CUPA Facility List	Inyo County Environmental Health Services	04/02/2018	04/03/2018	06/14/2018
CA	CUPA KERN	CUPA Facility List	Kern County Public Health	07/28/2020	07/30/2020	10/13/2020
CA	UST KERN	Underground Storage Tank Sites & Tank Listing	Kern County Environment Health Services Depar	07/28/2020	07/30/2020	10/14/2020
CA	CUPA KINGS	CUPA Facility List	Kings County Department of Public Health	05/11/2020	05/12/2020	07/27/2020
CA	CUPA LAKE	CUPA Facility List	Lake County Environmental Health	08/13/2020	08/13/2020	10/23/2020
CA	CUPA LASSEN	CUPA Facility List	Lassen County Environmental Health	07/31/2020	08/21/2020	11/09/2020
CA	AOCONCERN	Key Areas of Concerns in Los Angeles County	Department of Public Works	03/30/2009	03/31/2009	03/23/2009
CA	HMS LOS ANGELES	HMS: Street Number List	La County Department of Public Works	07/06/2020	07/10/2020	09/28/2020
CA	LF LOS ANGELES	List of Solid Waste Facilities	Engineering & Construction Division	07/13/2020	07/13/2020	09/29/2020
CA	LF LOS ANGELES CITY	City of Los Angeles Landfills	Los Angeles Fire Department	12/31/2019	08/17/2020	11/05/2020
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	03/25/2020	04/14/2020	07/01/2020
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	08/10/2020	08/12/2020	10/23/2020
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	07/28/2020	07/30/2020	07/13/2020
CA	CUPA MONO	CUPA Facility List	Mono County Health Department	08/20/2020	08/24/2020	11/09/2020
CA	CUPA MONTEREY	CUPA Facility Listing	Monterey County Health Department	07/13/2020	07/15/2020	07/31/2020
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	07/29/2020	07/30/2020	10/13/2020
CA	IND_SITE ORANGE	List of Industrial Site Cleanups	Health Care Agency	06/10/2020	08/03/2020	10/19/2020
CA	LUST ORANGE	List of Underground Storage Tank Cleanups	Health Care Agency	07/02/2020	08/05/2020	10/23/2020
CA	UST ORANGE	List of Underground Storage Tank Facilities	Health Care Agency	07/01/2020	08/03/2020	10/19/2020
CA	MS PLACER	Master List of Facilities	Placer County Health and Human Services	11/24/2020	11/24/2020	11/25/2020
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	10/06/2020	10/07/2020	11/03/2020

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

St	Acronym	Full Name	Government Agency	Gov. Date	Arvl. Date	Active Date
CA	UST RIVERSIDE	Underground Storage Tank List	Department of Environmental Health	10/06/2020	10/07/2020	11/03/2020
CA	CS SACRAMENTO	Toxic Site Clean-Up List	Sacramento County Environmental Management	02/18/2020	03/31/2020	06/15/2020
CA	ML SACRAMENTO	Master Hazardous Materials Facility List	Sacramento County Environmental Management	02/24/2020	03/31/2020	06/17/2020
CA	CUPA SAN BENITO	CUPA Facility List	San Benito County Environmental Health	08/04/2020	08/05/2020	10/22/2020
CA	PERMITS SAN BERNARDINO	Hazardous Materials Permits	San Bernardino County Fire Department Hazard	08/04/2020	08/05/2020	10/26/2020
CA	HIMD SAN DIEGO	Hazardous Materials Management Division Database	Hazardous Materials Management Division	08/31/2020	08/31/2020	11/23/2020
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	07/14/2020	07/16/2020	09/29/2020
CA	SAN DIEGO CO SAM	Environmental Case Listing	Department of Environmental Health	03/23/2010	06/15/2010	07/09/2010
CA	CUPA SAN FRANCISCO CO	CUPA Facility Listing	San Diego County Department of Environmental	08/03/2020	08/05/2020	10/22/2020
CA	LUST SAN FRANCISCO	Local Oversight Facilities	San Francisco County Department of Environmen	09/19/2008	09/19/2008	09/29/2008
CA	UST SAN FRANCISCO	Underground Storage Tank Information	Department Of Public Health San Francisco Cou	08/03/2020	08/05/2020	10/26/2020
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	07/27/2020	08/12/2020	10/26/2020
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 Environmental Health Service	09/08/2020	09/09/2011	10/07/2011
CA	CUPA SANTA CLARA	Cupa Facility List	Department of Environmental Health	08/20/2020	08/20/2020	11/09/2020
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	Department of Environmental Health	07/30/2020	07/31/2020	10/16/2020
CA	CUPA SANTA CRUZ	CUPA Facility List	City of San Jose Fire Department	01/21/2017	02/22/2017	05/23/2017
CA	CUPA SHASTA	CUPA Facility List	Santa Cruz County Environmental Health	06/15/2017	06/19/2017	08/09/2017
CA	LUST SOLANO	Leaking Underground Storage Tanks	Shasta County Department of Resource Manageme	06/04/2019	06/06/2019	08/13/2019
CA	UST SOLANO	Underground Storage Tanks	Solano County Department of Environmental Man	08/25/2020	08/26/2020	09/16/2020
CA	CUPA SONOMA	Cupa Facility List	Solano County Department of Environmental Man	07/07/2020	07/08/2020	09/25/2020
CA	LUST SONOMA	Leaking Underground Storage Tank Sites	County of Sonoma Fire & Emergency Services De	07/01/2020	07/02/2020	09/17/2020
CA	CUPA STANISLAUS	CUPA Facility List	Department of Health Services	02/04/2020	02/05/2020	04/15/2020
CA	UST SUTTER	Underground Storage Tanks	Stanislaus County Department of Ennvironmenta	08/25/2020	08/26/2020	11/17/2020
CA	CUPA TEHAMA	CUPA Facility List	Sutter County Environmental Health Services	08/11/2020	08/12/2020	10/26/2020
CA	CUPA TRINITY	CUPA Facility List	Tehama County Department of Environmental Hea	07/14/2020	07/16/2020	09/29/2020
CA	CUPA TULARE	CUPA Facility List	Department of Toxic Substances Control	08/06/2020	08/06/2020	10/26/2020
CA	CUPA TUOLUMNE	CUPA Facility List	Tulare County Environmental Health Services D	04/23/2018	04/25/2018	06/25/2018
CA	BWT VENTURA	Business Plan, Hazardous Waste Producers, and Operating Unde	Division of Environmental Health	07/10/2020	07/22/2020	10/08/2020
CA	LF VENTURA	Inventory of Illegal Abandoned and Inactive Sites	Ventura County 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	07/13/2008
CA	MED WASTE VENTURA	Medical Waste Program List	Ventura County Resource Management Agency	07/10/2020	07/22/2020	10/07/2020
CA	UST VENTURA	Underground Tank Closed Sites List	Environmental Health Division	08/26/2020	09/08/2020	12/01/2020
CA	UST YOLO	Underground Storage Tank Comprehensive Facility Report	Yolo County Department of Health	06/23/2020	06/29/2020	09/15/2020
CA	CUPA YUBA	CUPA Facility List	Yuba County Environmental Health Department	08/06/2020	08/07/2020	10/26/2020

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

St_Acronym Full Name Government Agency Gov Date Arvl Date Active Date

STREET AND ADDRESS INFORMATION

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**PACIFIC COMMUNITIES BUILDER, INC.
TRACT No. 31304
PERRIS, RIVERSIDE COUNTY, CALIFORNIA**

**PROJECT No. 2359-CR
DECEMBER 10, 2020**

APPENDIX E

ENVIRONMENTAL DATABASE REPORT



Tract 31304

Mountain Avenue/Mcpherson Road
Perris, CA 92570

Inquiry Number: 6286613.2s
December 02, 2020

The EDR Radius Map™ Report with GeoCheck®



6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

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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

MOUNTAIN AVENUE/MCPHERSON ROAD
PERRIS, CA 92570

COORDINATES

Latitude (North): 33.7674950 - 33° 46' 2.98"
Longitude (West): 117.2485310 - 117° 14' 54.71"
Universal Transverse Mercator: Zone 11
UTM X (Meters): 476985.8
UTM Y (Meters): 3736210.8
Elevation: 1547 ft. above sea level

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property Map:	5641330 PERRIS, CA
Version Date:	2012
Southeast Map:	5641314 ROMOLAND, CA
Version Date:	2012
Southwest Map:	5636473 LAKE ELSINORE, CA
Version Date:	2012
Northwest Map:	5641324 STEELE PEAK, CA
Version Date:	2012

AERIAL PHOTOGRAPHY IN THIS REPORT

Portions of Photo from: 20140603
Source: USDA

MAPPED SITES SUMMARY

Target Property Address:
MOUNTAIN AVENUE/MCPHERSON ROAD
PERRIS, CA 92570

Click on Map ID to see full detail.

MAP ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	RELATIVE ELEVATION	DIST (ft. & mi.) DIRECTION
1	PINACTE MIDDLE SCHOO	1990 SOUTH A STREET	ENVIROSTOR, SCH, CHMIRS, NPDES, CIWQS	Lower	3372, 0.639, ESE
A2	CENTRAL WIRE INC	2500 SOUTH A ST	RESPONSE, ENVIROSTOR, CPS-SLIC, DEED, ENF, ICE,...	Lower	5203, 0.985, SE
A3	TECHALLOY COMPANY, I	2500 A STREET	Toxic Pits, DEED	Lower	5203, 0.985, SE
A4	TECHALLOY WESTERN IN	2500 S 'A' ST	SEMS-ARCHIVE, CORRACTS, RCRA-TSDF, RCRA-LQG, US...	Lower	5203, 0.985, SE

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 non-CORRACTS TSD facilities list

RCRA-TSDF..... RCRA - Treatment, Storage and Disposal

Federal RCRA generators list

RCRA-LQG..... RCRA - Large Quantity Generators
RCRA-SQG..... RCRA - Small Quantity Generators
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

Federal ERNS list

ERNS..... Emergency Response Notification System

EXECUTIVE SUMMARY

State and tribal landfill and/or solid waste disposal site lists

SWF/LF..... Solid Waste Information System

State and tribal leaking storage tank lists

LUST..... Geotracker's Leaking Underground Fuel Tank Report
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
UST..... Active UST Facilities
AST..... Aboveground Petroleum Storage Tank Facilities
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 Brownfields 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
DEBRIS REGION 9..... Torres Martinez Reservation Illegal Dump Site Locations
ODI..... Open Dump Inventory
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
CERS HAZ WASTE..... CERS HAZ WASTE
US CDL..... National Clandestine Laboratory Register
PFAS..... PFAS Contamination Site Location Listing

Local Lists of Registered Storage Tanks

SWEEPS UST..... SWEEPS UST Listing

EXECUTIVE SUMMARY

HIST UST..... Hazardous Substance Storage Container Database
CA FID UST..... Facility Inventory Database
CERS TANKS..... California Environmental Reporting System (CERS) Tanks

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

RCRA NonGen / NLR..... RCRA - Non Generators / No Longer Regulated
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
ABANDONED MINES..... Abandoned Mines
FINDS..... Facility Index System/Facility Registry System
DOCKET HWC..... Hazardous Waste Compliance Docket Listing

EXECUTIVE SUMMARY

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
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 Auto.....	EDR Exclusive Historical Auto Stations
EDR Hist Cleaner.....	EDR Exclusive Historical Cleaners

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA LF.....	Recovered Government Archive Solid Waste Facilities List
RGA LUST.....	Recovered Government Archive Leaking Underground Storage Tank

SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified in the following databases.

EXECUTIVE SUMMARY

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 CORRACTS facilities list

CORRACTS: CORRACTS is a list of handlers with RCRA Corrective Action Activity. This report shows which nationally-defined corrective action core events have occurred for every handler that has had corrective action activity.

A review of the CORRACTS list, as provided by EDR, and dated 06/15/2020 has revealed that there is 1 CORRACTS site within approximately 1 mile of the target property.

<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
<i>TECHALLOY WESTERN IN</i> EPA ID:: CAD059277137	<i>2500 S 'A' ST</i>	<i>SE 1/2 - 1 (0.985 mi.)</i>	<i>A4</i>	<i>43</i>

State- and tribal - equivalent NPL

RESPONSE: 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.

A review of the RESPONSE list, as provided by EDR, has revealed that there is 1 RESPONSE site within approximately 1 mile of the target property.

<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
<i>CENTRAL WIRE INC</i> Database: RESPONSE, Date of Government Version: 07/27/2020 Status: Refer: RCRA Facility Id: 33340012	<i>2500 SOUTH A ST</i>	<i>SE 1/2 - 1 (0.985 mi.)</i>	<i>A2</i>	<i>16</i>

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 identifies 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,

EXECUTIVE SUMMARY

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 07/27/2020 has revealed that there are 2 ENVIROSTOR sites within approximately 1 mile of the target property.

<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
PINACTE MIDDLE SCHOO Facility Id: 60001342 Status: No Further Action	1990 SOUTH A STREET	ESE 1/2 - 1 (0.639 mi.)	1	9
CENTRAL WIRE INC Facility Id: 80001433 Facility Id: 33340012 Status: Active Status: Refer: RCRA	2500 SOUTH A ST	SE 1/2 - 1 (0.985 mi.)	A2	16

ADDITIONAL ENVIRONMENTAL RECORDS

Local Lists of Hazardous waste / Contaminated Sites

Toxic Pits: The Toxic Pits Cleanup Act Sites database identifies sites suspected of containing hazardous substances where cleanup has not yet been completed. The data come from the State Water Resources Control Board.

A review of the Toxic Pits list, as provided by EDR, and dated 07/01/1995 has revealed that there is 1 Toxic Pits site within approximately 1 mile of the target property.

<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
TECHALLOY COMPANY, I Closure Date: 01/08/90 Task #: 88007 Status: CLOSED	2500 A STREET	SE 1/2 - 1 (0.985 mi.)	A3	42

Other Ascertainable Records

HWP: Detailed information on permitted hazardous waste facilities and corrective action ("cleanups") tracked in EnviroStor.

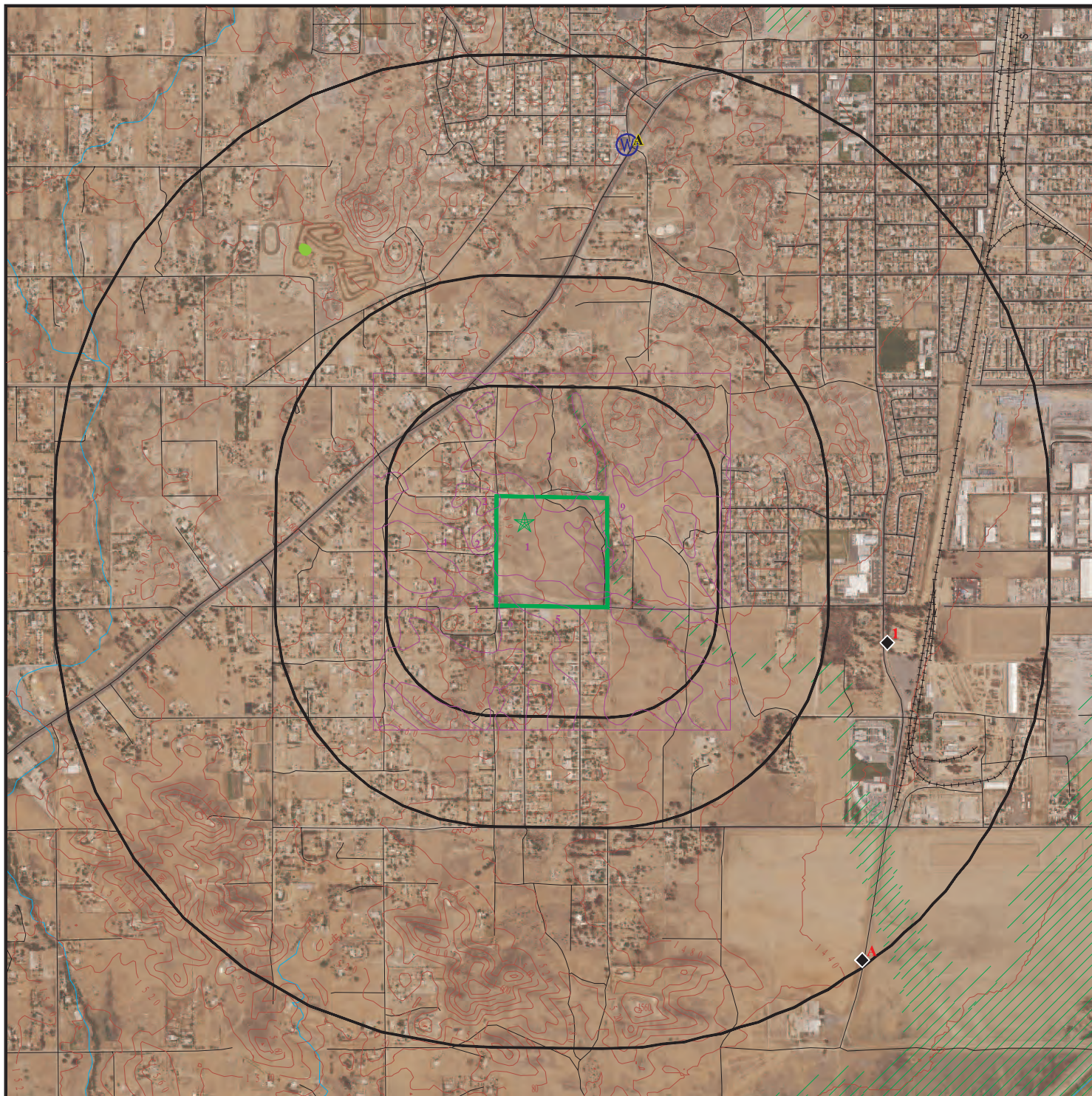
A review of the HWP list, as provided by EDR, and dated 08/17/2020 has revealed that there is 1 HWP site within approximately 1 mile of the target property.

<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
CENTRAL WIRE INC EPA Id: CAD059277137 Cleanup Status: POST CLOSURE PERMIT	2500 SOUTH A ST	SE 1/2 - 1 (0.985 mi.)	A2	16


EXECUTIVE SUMMARY


There were no unmapped sites in this report.

OVERVIEW MAP - 6286613.2S



 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

 Special Flood Hazard Area (1%)

 0.2% Annual Chance Flood Hazard

 National Wetland Inventory

 State Wetlands

 Areas of Concern

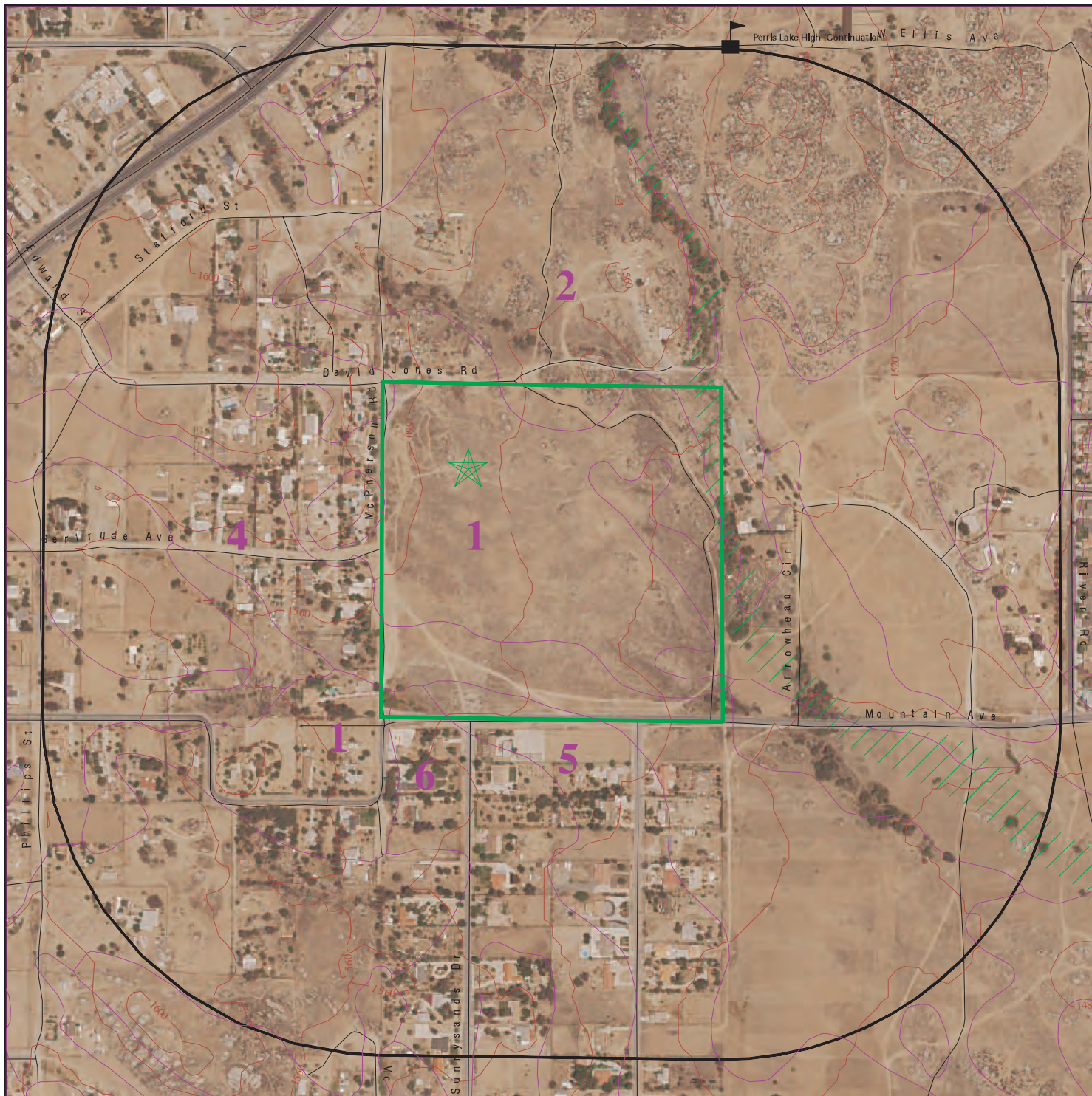


This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.


SITE NAME: Tract 31304
 ADDRESS: Mountain Avenue/Mcpherson Road
 Perris CA 92570
 LAT/LONG: 33.767495 / 117.248531


CLIENT: Geotek
 CONTACT: Kyle Mchargue
 INQUIRY #: 6286613.2s
 DATE: December 02, 2020 5:43 pm

DETAIL MAP - 6286613.2S



 Target Property

 Sites at elevations higher than or equal to the target property

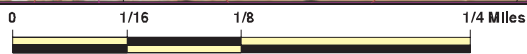
 Sites at elevations lower than the target property

 Manufactured Gas Plants


 Sensitive Receptors

 National Priority List Sites

 Dept. Defense Sites



 Indian Reservations BIA

 Areas of Concern

 Special Flood Hazard Area (1%)

 0.2% Annual Chance Flood Hazard



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: Tract 31304
 ADDRESS: Mountain Avenue/Mcpherson Road
 Perris CA 92570
 LAT/LONG: 33.767495 / 117.248531

CLIENT: Geotek
 CONTACT: Kyle Mchargue
 INQUIRY #: 6286613.2s
 DATE: December 02, 2020 5:47 pm

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								
<i>Federal NPL site list</i>								
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
<i>Federal Delisted NPL site list</i>								
Delisted NPL	1.000		0	0	0	0	NR	0
<i>Federal CERCLIS list</i>								
FEDERAL FACILITY	0.500		0	0	0	NR	NR	0
SEMS	0.500		0	0	0	NR	NR	0
<i>Federal CERCLIS NFRAP site list</i>								
SEMS-ARCHIVE	0.500		0	0	0	NR	NR	0
<i>Federal RCRA CORRACTS facilities list</i>								
CORRACTS	1.000		0	0	0	1	NR	1
<i>Federal RCRA non-CORRACTS TSD facilities list</i>								
RCRA-TSDF	0.500		0	0	0	NR	NR	0
<i>Federal RCRA generators list</i>								
RCRA-LQG	0.250		0	0	NR	NR	NR	0
RCRA-SQG	0.250		0	0	NR	NR	NR	0
RCRA-VSQG	0.250		0	0	NR	NR	NR	0
<i>Federal institutional controls / engineering controls registries</i>								
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
<i>Federal ERNS list</i>								
ERNS	0.001		0	NR	NR	NR	NR	0
<i>State- and tribal - equivalent NPL RESPONSE</i>								
RESPONSE	1.000		0	0	0	1	NR	1
<i>State- and tribal - equivalent CERCLIS ENVIROSTOR</i>								
ENVIROSTOR	1.000		0	0	0	2	NR	2
<i>State and tribal landfill and/or solid waste disposal site lists</i>								
SWF/LF	0.500		0	0	0	NR	NR	0
<i>State and tribal leaking storage tank lists</i>								
LUST	0.500		0	0	0	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
INDIAN LUST	0.500		0	0	0	NR	NR	0
CPS-SLIC	0.500		0	0	0	NR	NR	0
<i>State and tribal registered storage tank lists</i>								
FEMA UST	0.250		0	0	NR	NR	NR	0
UST	0.250		0	0	NR	NR	NR	0
AST	0.250		0	0	NR	NR	NR	0
INDIAN UST	0.250		0	0	NR	NR	NR	0
<i>State and tribal voluntary cleanup sites</i>								
INDIAN VCP	0.500		0	0	0	NR	NR	0
VCP	0.500		0	0	0	NR	NR	0
<i>State and tribal Brownfields sites</i>								
BROWNFIELDS	0.500		0	0	0	NR	NR	0
<u>ADDITIONAL ENVIRONMENTAL RECORDS</u>								
<i>Local Brownfield lists</i>								
US BROWNFIELDS	0.500		0	0	0	NR	NR	0
<i>Local Lists of Landfill / Solid Waste Disposal Sites</i>								
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
DEBRIS REGION 9	0.500		0	0	0	NR	NR	0
ODI	0.500		0	0	0	NR	NR	0
IHS OPEN DUMPS	0.500		0	0	0	NR	NR	0
<i>Local Lists of Hazardous waste / Contaminated Sites</i>								
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
Toxic Pits	1.000		0	0	0	1	NR	1
CERS HAZ WASTE	0.250		0	0	NR	NR	NR	0
US CDL	0.001		0	NR	NR	NR	NR	0
PFAS	0.500		0	0	0	NR	NR	0
<i>Local Lists of Registered Storage Tanks</i>								
SWEEPS UST	0.250		0	0	NR	NR	NR	0
HIST UST	0.250		0	0	NR	NR	NR	0
CA FID UST	0.250		0	0	NR	NR	NR	0
CERS TANKS	0.250		0	0	NR	NR	NR	0
<i>Local Land Records</i>								
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		0	0	NR	NR	NR	0
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	1	NR	1
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		0	NR	NR	NR	NR	0
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	0	0	0	6	0	6
-------------	--	---	---	---	---	---	---	---

MAP FINDINGS SUMMARY

<u>Database</u>	<u>Search Distance (Miles)</u>	<u>Target Property</u>	<u>< 1/8</u>	<u>1/8 - 1/4</u>	<u>1/4 - 1/2</u>	<u>1/2 - 1</u>	<u>> 1</u>	<u>Total Plotted</u>
-----------------	--	----------------------------	-----------------	------------------	------------------	----------------	---------------	--------------------------

NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

Map ID
 Direction
 Distance
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
 EPA ID Number

1
ESE
1/2-1
0.639 mi.
3372 ft.

PINACTE MIDDLE SCHOOL
1990 SOUTH A STREET
PERRIS, CA 92570

ENVIROSTOR **S108404076**
SCH **N/A**
CHMIRS
NPDES
CIWQS

Relative:
Lower
Actual:
1445 ft.

ENVIROSTOR:
 Name: PINACATE MIDDLE SCHOOL EXPANSION
 Address: 1990 SOUTH A STREET
 City,State,Zip: PERRIS, CA 92570
 Facility ID: 60001342
 Status: No Further Action
 Status Date: 11/30/2010
 Site Code: 404851
 Site Type: School Investigation
 Site Type Detailed: School
 Acres: 2
 NPL: NO
 Regulatory Agencies: SMBRP
 Lead Agency: SMBRP
 Program Manager: Triss Chesney
 Supervisor: Shahir Haddad
 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: 33.76605
 Longitude: -117.2361
 APN: NONE SPECIFIED
 Past Use: AGRICULTURAL - ROW CROPS
 Potential COC: Arsenic Chlordane DDD DDE DDT Endrin Toxaphene
 Confirmed COC: 30001-NO 30004-NO 30006-NO 30007-NO 30008-NO 30010-NO 30023-NO
 Potential Description: NMA
 Alias Name: 404851
 Alias Type: Project Code (Site Code)
 Alias Name: 60001342
 Alias Type: Envirostor ID Number

Completed Info:
 Completed Area Name: PROJECT WIDE
 Completed Sub Area Name: Not reported
 Completed Document Type: Preliminary Endangerment Assessment Report
 Completed Date: 11/30/2010
 Comments: DTSC approved the PEA with a No Further Action determination.

Completed Area Name: PROJECT WIDE
 Completed Sub Area Name: Not reported
 Completed Document Type: Cost Recovery Closeout Memo
 Completed Date: 01/25/2011
 Comments: DTSC prepared the memorandum to close out the project.

Completed Area Name: PROJECT WIDE
 Completed Sub Area Name: Not reported
 Completed Document Type: Environmental Oversight Agreement
 Completed Date: 09/28/2010
 Comments: Fully executed EOA sent (FedEx) to District.

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

PINACTE MIDDLE SCHOOL (Continued)

S108404076

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: PINACATE MIDDLE SCHOOL EXPANSION
Address: 1990 SOUTH A STREET
City,State,Zip: PERRIS, CA 92570
Facility ID: 60001342
Site Type: School Investigation
Site Type Detail: School
Site Mgmt. Req.: NONE SPECIFIED
Acres: 2
National Priorities List: NO
Cleanup Oversight Agencies: SMBRP
Lead Agency: SMBRP
Lead Agency Description: DTSC - Site Cleanup Program
Project Manager: Triss Chesney
Supervisor: Shahir Haddad
Division Branch: Southern California Schools & Brownfields Outreach
Site Code: 404851
Assembly: 61
Senate: 31
Special Program Status: Not reported
Status: No Further Action
Status Date: 11/30/2010
Restricted Use: NO
Funding: School District
Latitude: 33.76605
Longitude: -117.2361
APN: NONE SPECIFIED
Past Use: AGRICULTURAL - ROW CROPS
Potential COC: Arsenic, Chlordane, DDD, DDE, DDT, Endrin, Toxaphene
Confirmed COC: 30001-NO, 30004-NO, 30006-NO, 30007-NO, 30008-NO, 30010-NO, 30023-NO
Potential Description: NMA
Alias Name: 404851
Alias Type: Project Code (Site Code)
Alias Name: 60001342
Alias Type: Envirostor ID Number

Completed Info:

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Preliminary Endangerment Assessment Report
Completed Date: 11/30/2010
Comments: DTSC approved the PEA with a No Further Action determination.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Cost Recovery Closeout Memo

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

PINACTE MIDDLE SCHOOL (Continued)

S108404076

Completed Date: 01/25/2011
Comments: DTSC prepared the memorandum to close out the project.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Environmental Oversight Agreement
Completed Date: 09/28/2010
Comments: Fully executed EOA sent (FedEx) to District.

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

CHMIRS:

Name: Not reported
Address: 1990 A STREET
City,State,Zip: PERRIS, CA 91770
OES Incident Number: 5-4062
OES notification: 07/10/2005
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: Reporting Party
Containment: Not reported

Map ID
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MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

PINACTE MIDDLE SCHOOL (Continued)

S108404076

What Happened:	Not reported
Type:	Not reported
Measure:	Not reported
Other:	Not reported
Date/Time:	Not reported
Year:	2005
Agency:	So Cal Edison
Incident Date:	7/10/2005 12:00:00 AM
Admin Agency:	Riverside County Environmental Health
Amount:	Not reported
Contained:	Yes
Site Type:	Residence
E Date:	Not reported
Substance:	Mineral Oil
Gallons:	90
Unknown:	0
Substance #2:	Not reported
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:	Failure of the overhead transformers causing spill.

NPDES:

Name:	PINACTE MIDDLE SCHOOL
Address:	1990 SOUTH A STREET
City,State,Zip:	PERRIS, CA 92570
Facility Status:	Not reported
NPDES Number:	Not reported
Region:	Not reported
Agency Number:	Not reported
Regulatory Measure ID:	Not reported
Place ID:	Not reported
Order Number:	Not reported
WDID:	8 33C361887
Regulatory Measure Type:	Construction
Program Type:	Not reported
Adoption Date Of Regulatory Measure:	Not reported
Effective Date Of Regulatory Measure:	Not reported
Termination Date Of Regulatory Measure:	Not reported
Expiration Date Of Regulatory Measure:	Not reported
Discharge Address:	Not reported
Discharge Name:	Not reported
Discharge City:	Not reported
Discharge State:	Not reported
Discharge Zip:	Not reported

Map ID
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MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

PINACTE MIDDLE SCHOOL (Continued)

S108404076

Status: Terminated
Status Date: 10/15/2015
Operator Name: Perris Union High School District
Operator Address: 155 East Fourth Street
Operator City: Perris
Operator State: California
Operator Zip: 92570

NPDES as of 03/2018:

NPDES Number: Not reported
Status: Not reported
Agency Number: Not reported
Region: 8
Regulatory Measure ID: 419214
Order Number: Not reported
Regulatory Measure Type: Construction
Place ID: Not reported
WDID: 8 33C361887
Program Type: Not reported
Adoption Date Of Regulatory Measure: Not reported
Effective Date Of Regulatory Measure: Not reported
Expiration Date Of Regulatory Measure: Not reported
Termination Date Of Regulatory Measure: 10/02/2015
Discharge Name: Not reported
Discharge Address: Not reported
Discharge City: Not reported
Discharge State: Not reported
Discharge Zip: Not reported
Received Date: 08/23/2011
Processed Date: 09/07/2011
Status: Terminated
Status Date: 10/15/2015
Place Size: 22
Place Size Unit: Acres
Contact: Mike Squires
Contact Title: Not reported
Contact Phone: 909-921-7412
Contact Phone Ext: Not reported
Contact Email: mike@pcm-construction.com
Operator Name: Perris Union High School District
Operator Address: 155 East Fourth Street
Operator City: Perris
Operator State: California
Operator Zip: 92570
Operator Contact: Candace Reines
Operator Contact Title: Not reported
Operator Contact Phone: 951-943-6369
Operator Contact Phone Ext: Not reported
Operator Contact Email: creines@puhsd.org
Operator Type: Other
Developer: PCM Construction
Developer Address: 8447 Maple Place
Developer City: Rancho Cucamonga
Developer State: California
Developer Zip: 91730
Developer Contact: Mike Squires
Developer Contact Title: Not reported
Constype Linear Utility Ind: N

Map ID
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MAP FINDINGS

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Database(s)

EDR ID Number
EPA ID Number

PINACTE MIDDLE SCHOOL (Continued)

S108404076

Emergency Phone:	Not reported
Emergency Phone Ext:	Not reported
Constype Above Ground Ind:	Not reported
Constype Below Ground Ind:	Not reported
Constype Cable Line Ind:	Not reported
Constype Comm Line Ind:	Not reported
Constype Commercial Ind:	Not reported
Constype Electrical Line Ind:	Not reported
Constype Gas Line Ind:	Not reported
Constype Industrial Ind:	Not reported
Constype Other Description:	Public School
Constype Other Ind:	Y
Constype Recons Ind:	Not reported
Constype Residential Ind:	Not reported
Constype Transport Ind:	Not reported
Constype Utility Description:	Not reported
Constype Utility Ind:	Not reported
Constype Water Sewer Ind:	Not reported
Dir Discharge Uswater Ind:	N
Receiving Water Name:	Lake Elsinore
Certifier:	Candace Reines
Certifier Title:	Not reported
Certification Date:	23-AUG-11
Primary Sic:	Not reported
Secondary Sic:	Not reported
Tertiary Sic:	Not reported
NPDES Number:	CAS000002
Status:	Terminated
Agency Number:	0
Region:	8
Regulatory Measure ID:	419214
Order Number:	2009-0009-DWQ
Regulatory Measure Type:	Enrollee
Place ID:	Not reported
WDID:	8 33C361887
Program Type:	Construction
Adoption Date Of Regulatory Measure:	Not reported
Effective Date Of Regulatory Measure:	09/07/2011
Expiration Date Of Regulatory Measure:	Not reported
Termination Date Of Regulatory Measure:	10/02/2015
Discharge Name:	Perris Union High School District
Discharge Address:	155 East Fourth Street
Discharge City:	Perris
Discharge State:	California
Discharge Zip:	92570
Received Date:	Not reported
Processed Date:	Not reported
Status:	Not reported
Status Date:	Not reported
Place Size:	Not reported
Place Size Unit:	Not reported
Contact:	Not reported
Contact Title:	Not reported
Contact Phone:	Not reported
Contact Phone Ext:	Not reported
Contact Email:	Not reported

Map ID
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MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

PINACTE MIDDLE SCHOOL (Continued)

S108404076

Operator Name:	Not reported
Operator Address:	Not reported
Operator City:	Not reported
Operator State:	Not reported
Operator Zip:	Not reported
Operator Contact:	Not reported
Operator Contact Title:	Not reported
Operator Contact Phone:	Not reported
Operator Contact Phone Ext:	Not reported
Operator Contact Email:	Not reported
Operator Type:	Not reported
Developer:	Not reported
Developer Address:	Not reported
Developer City:	Not reported
Developer State:	Not reported
Developer Zip:	Not reported
Developer Contact:	Not reported
Developer Contact Title:	Not reported
Constype Linear Utility Ind:	Not reported
Emergency Phone:	Not reported
Emergency Phone Ext:	Not reported
Constype Above Ground Ind:	Not reported
Constype Below Ground Ind:	Not reported
Constype Cable Line Ind:	Not reported
Constype Comm Line Ind:	Not reported
Constype Commercial Ind:	Not reported
Constype Electrical Line Ind:	Not reported
Constype Gas Line Ind:	Not reported
Constype Industrial Ind:	Not reported
Constype Other Description:	Not reported
Constype Other Ind:	Not reported
Constype Recons Ind:	Not reported
Constype Residential Ind:	Not reported
Constype Transport Ind:	Not reported
Constype Utility Description:	Not reported
Constype Utility Ind:	Not reported
Constype Water Sewer Ind:	Not reported
Dir Discharge Uswater Ind:	Not reported
Receiving Water Name:	Not reported
Certifier:	Not reported
Certifier Title:	Not reported
Certification Date:	Not reported
Primary Sic:	Not reported
Secondary Sic:	Not reported
Tertiary Sic:	Not reported

CIWQS:

Name:	PINACTE MIDDLE SCHOOL
Address:	1990 SOUTH A STREET
City,State,Zip:	PERRIS, CA 92570
Agency:	Perris Union High School District
Agency Address:	155 East Fourth Street, Perris, CA 92570
Place/Project Type:	Construction - Other: Public School
SIC/NAICS:	Not reported
Region:	8
Program:	CONSTW

Map ID
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MAP FINDINGS

Site

Database(s)

EDR ID Number
 EPA ID Number

PINACTE MIDDLE SCHOOL (Continued)

S108404076

Regulatory Measure Status: Terminated
 Regulatory Measure Type: Storm water construction
 Order Number: 2009-0009-DWQ
 WDID: 8 33C361887
 NPDES Number: CAS000002
 Adoption Date: Not reported
 Effective Date: 09/07/2011
 Termination Date: 10/02/2015
 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: 33.76573
 Longitude: -117.23725

A2
SE
1/2-1
0.985 mi.
5203 ft.

Relative:
Lower

Actual:
1432 ft.

CENTRAL WIRE INC
2500 SOUTH A ST
PERRIS, CA 92570

Site 1 of 3 in cluster A

RESPONSE **S109287100**
ENVIROSTOR **N/A**
CPS-SLIC
DEED
ENF
ICE
HWP
CIWQS
CERS

RESPONSE:

Name: TECHALLOY
 Address: 2500 A STREET
 City,State,Zip: PERRIS, CA 92370
 Facility ID: 33340012
 Site Type: State Response
 Site Type Detail: State Response or NPL
 Acres: Not reported
 National Priorities List: NO
 Cleanup Oversight Agencies: NONE SPECIFIED
 Lead Agency Description: Not reported
 Project Manager: Not reported
 Supervisor: Referred - Not Assigned
 Division Branch: Cleanup Cypress
 Site Code: 400254
 Site Mgmt. Req.: NONE SPECIFIED
 Assembly: Not reported
 Senate: Not reported
 Special Program Status: Not reported
 Status: Refer: RCRA
 Status Date: 01/01/1982
 Restricted Use: NO
 Funding: Responsible Party
 Latitude: 33.75146
 Longitude: -117.2377
 APN: NONE SPECIFIED
 Past Use: NONE SPECIFIED
 Potential COC : * UNSPECIFIED SLUDGE WASTE * OTHER PESTICIDE CONTAINERS, 30 GALLONS
 OR MORE
 Confirmed COC: NONE SPECIFIED

Map ID
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MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

CENTRAL WIRE INC (Continued)

S109287100

Potential Description: NONE SPECIFIED
Alias Name: TECHALLOY WESTERN INC.
Alias Type: Alternate Name
Alias Name: CAD059277137
Alias Type: EPA Identification Number
Alias Name: 110000479688
Alias Type: EPA (FRS #)
Alias Name: 400254
Alias Type: Project Code (Site Code)
Alias Name: 33340012
Alias Type: Envirostor ID Number

Completed Info:

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Site Screening
Completed Date: 03/11/1987
Comments: Site Screening Done.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: * Discovery
Completed Date: 04/25/1983
Comments: Facility identified from DMI file listing.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Certification
Completed Date: 01/01/1982
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

ENVIROSTOR:

Name: CENTRAL WIRE INCORPORATED
Address: 2500 SOUTH A ST
City,State,Zip: PERRIS, CA 925709317
Facility ID: 80001433
Status: Active
Status Date: 01/01/2008
Site Code: 400254
Site Type: Corrective Action
Site Type Detailed: Corrective Action
Acres: 0
NPL: NO
Regulatory Agencies: SMBRP
Lead Agency: WM
Program Manager: Peter Bailey
Supervisor: Richard Hume

Map ID
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MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

CENTRAL WIRE INC (Continued)

S109287100

Division Branch: Office of Permitting
Assembly: 61
Senate: 31
Special Program: Not reported
Restricted Use: YES
Site Mgmt Req: NONE SPECIFIED
Funding: Not reported
Latitude: 33.75146
Longitude: -117.2377
APN: NONE SPECIFIED
Past Use: NONE SPECIFIED
Potential COC: NONE SPECIFIED
Confirmed COC: NONE SPECIFIED
Potential Description: NONE SPECIFIED
Alias Name: Techalloy Co Inc
Alias Type: Alternate Name
Alias Name: CAD059277137
Alias Type: EPA Identification Number
Alias Name: 400254
Alias Type: Project Code (Site Code)
Alias Name: 33340012
Alias Type: Envirostor ID Number
Alias Name: 80001433
Alias Type: Envirostor ID Number

Completed Info:

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Groundwater Migration Controlled
Completed Date: 06/07/2000
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Human Exposure Controlled
Completed Date: 05/25/2000
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: * Remedy Selected
Completed Date: 05/10/1995
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Remedy Construction Complete
Completed Date: 02/29/2008
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: RFI Report
Completed Date: 10/12/1991
Comments: Verified by file chronology.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported

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MAP FINDINGS

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Database(s)

EDR ID Number
EPA ID Number

CENTRAL WIRE INC (Continued)

S109287100

Completed Document Type: Corrective Measure Implementation Workplan
Completed Date: 09/25/1996
Comments: Verified by file chronology.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Corrective Measures Study Workplan
Completed Date: 03/19/1992
Comments: Verified by file chronology.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: RFI Workplan
Completed Date: 04/12/1990
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Preliminary Assessment Report
Completed Date: 05/01/1985
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Preliminary Assessment Report
Completed Date: 05/01/1981
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Other Report
Completed Date: 02/04/2010
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Interim Measures Questionnaire
Completed Date: 11/26/1991
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: RCRA Facility Assessment Report
Completed Date: 09/10/1986
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Land Use Restriction
Completed Date: 01/09/1990
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Consent Decree
Completed Date: 12/27/1988
Comments: Not reported

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MAP FINDINGS

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EDR ID Number
EPA ID Number

CENTRAL WIRE INC (Continued)

S109287100

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Remedy Selection and Statement of Basis
Completed Date: 05/10/1995
Comments: Confirmed by Final Statement of Basis.

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

Name: TECHALLOY
Address: 2500 A STREET
City,State,Zip: PERRIS, CA 92370
Facility ID: 33340012
Status: Refer: RCRA
Status Date: 01/01/1982
Site Code: 400254
Site Type: State Response
Site Type Detailed: State Response or NPL
Acres: Not reported
NPL: NO
Regulatory Agencies: NONE SPECIFIED
Lead Agency: NONE SPECIFIED
Program Manager: Not reported
Supervisor: Referred - Not Assigned
Division Branch: Cleanup Cypress
Assembly: Not reported
Senate: Not reported
Special Program: Not reported
Restricted Use: NO
Site Mgmt Req: NONE SPECIFIED
Funding: Responsible Party
Latitude: 33.75146
Longitude: -117.2377
APN: NONE SPECIFIED
Past Use: NONE SPECIFIED
Potential COC: * UNSPECIFIED SLUDGE WASTE * OTHER PESTICIDE CONTAINERS, 30 GALLONS
OR MORE
Confirmed COC: NONE SPECIFIED
Potential Description: NONE SPECIFIED
Alias Name: TECHALLOY WESTERN INC.
Alias Type: Alternate Name
Alias Name: CAD059277137
Alias Type: EPA Identification Number
Alias Name: 110000479688
Alias Type: EPA (FRS #)
Alias Name: 400254
Alias Type: Project Code (Site Code)
Alias Name: 33340012
Alias Type: Envirostor ID Number

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MAP FINDINGS

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EPA ID Number

CENTRAL WIRE INC (Continued)

S109287100

Completed Info:

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Site Screening
Completed Date: 03/11/1987
Comments: Site Screening Done.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: * Discovery
Completed Date: 04/25/1983
Comments: Facility identified from DMI file listing.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Certification
Completed Date: 01/01/1982
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

CPS-SLIC:

Name: TECHALLOY
Address: 2500 A STREET
City,State,Zip: PERRIS, CA
Region: STATE
Facility Status: Completed - Case Closed
Status Date: 12/06/2013
Global Id: SLT8R1924097
Lead Agency: DEPARTMENT OF TOXIC SUBSTANCES CONTROL
Lead Agency Case Number: 80001433
Latitude: 33.7511940698763
Longitude: -117.237501198273
Case Type: Cleanup Program Site
Case Worker: Not reported
Local Agency: Not reported
RB Case Number: Not reported
File Location: DTSC
Potential Media Affected: Not reported
Potential Contaminants of Concern: Not reported
Site History: Techalloy Company, Inc. operates a steel wire manufacturing facility in Perris, CA. From 1966 to 1979, Techalloy discharged acidic hazardous wastes (containing high levels of chromium, nickel, fluoride, copper, and nitrate) to three lined surface impoundments at the site under Board Order No. 88-66 and Resolution No. 66-38. In Oct. 1984, during removal of residual solid wastes from the impoundments, the liner puncture was discovered. Subsurface investigations (13 soil borings and 23 monitoring wells) performed in

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CENTRAL WIRE INC (Continued)

S109287100

1985 and 1986. These investigations concluded that groundwater contamination by total dissolved solids and heavy metals. Additional groundwater monitoring wells installed in June 1990 to investigate the extent of contaminant plumes. The site closure plan was approved by the Regional Board, DTSC, and the USEPA. The installation of a low permeability closure cap over the three impoundments completed in July 1989. The Regional Board issued Order No. 90-145 for post-closure groundwater monitoring at the site on October 9, 1990. Since this is a hazardous waste facility, DTSC is the lead agency for site closure and groundwater monitoring program for the site. Techalloy is conducting post-closure groundwater monitoring and cap inspection and maintenance as directed by DTSC under a Post-closure Facility Permit (EnviroStor ID 80001433). The Regional Board rescinded Order No. 90-145 in December 2013.

[Click here to access the California GeoTracker records for this facility:](#)

DEED:

Name: CENTRAL WIRE INC
Address: 2500 SOUTH A ST
City,State,Zip: PERRIS, CA 925709317
Envirostor ID: CAD059277137
Area: Not reported
Sub Area: Not reported
Site Type: POST CLOSURE PERMIT
Status: POST CLOSURE PERMIT
Agency: Not reported
Covenant Uploaded: Not reported
Deed Date(s): Not reported
File Name: Envirostor Land Use Restrictions

Name: CENTRAL WIRE INC
Address: 2500 SOUTH A ST
City,State,Zip: PERRIS, CA 925709317
Envirostor ID: CAD059277137
Area: Not reported
Sub Area: Not reported
Site Type: POST CLOSURE PERMIT
Status: POST CLOSURE PERMIT
Agency: Not reported
Covenant Uploaded: Not reported
Deed Date(s): Not reported
File Name: Envirostor Land Use Restrictions

Name: CENTRAL WIRE INCORPORATED
Address: 2500 SOUTH A ST
City,State,Zip: PERRIS, CA 925709317
Envirostor ID: 80001433
Area: PROJECT WIDE
Sub Area: Not reported
Site Type: CORRECTIVE ACTION
Status: ACTIVE
Agency: Not reported
Covenant Uploaded: Not reported
Deed Date(s): Not reported
File Name: Envirostor Land Use Restrictions

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Database(s)

EDR ID Number
EPA ID Number

CENTRAL WIRE INC (Continued)

S109287100

ENF:

Name: BRINE PONDS
Address: 2500 A
City,State,Zip: PERRIS, CA 92570
Region: 8
Facility Id: 210428
Agency Name: Techalloy Company Inc
Place Type: Waste Management Unit
Place Subtype: Surface Impoundment
Facility Type: Industrial
Agency Type: Privately-Owned Business
Of Agencies: 1
Place Latitude: 33.752688
Place Longitude: -117.23528
SIC Code 1: 3351
SIC Desc 1: Rolling, Drawing, and Extruding of Copper
SIC Code 2: Not reported
SIC Desc 2: Not reported
SIC Code 3: Not reported
SIC Desc 3: Not reported
NAICS Code 1: Not reported
NAICS Desc 1: Not reported
NAICS Code 2: Not reported
NAICS Desc 2: Not reported
NAICS Code 3: Not reported
NAICS Desc 3: Not reported
Of Places: 1
Source Of Facility: Reg Meas
Design Flow: 0.0001
Threat To Water Quality: 3
Complexity: B
Pretreatment: X - Facility is not a POTW
Facility Waste Type: Process waste, NEC
Facility Waste Type 2: Not reported
Facility Waste Type 3: Not reported
Facility Waste Type 4: Not reported
Program: LFNONOPER
Program Category1: LNDISP
Program Category2: LNDISP
Of Programs: 1
WDID: 8 332024001
Reg Measure Id: 139815
Reg Measure Type: WDR
Region: 8
Order #: 90-145
Npdes# CA#: Not reported
Major-Minor: Not reported
Npdes Type: Not reported
Reclamation: N - No
Dredge Fill Fee: Not reported
301H: Not reported
Application Fee Amt Received: Not reported
Status: Historical
Status Date: 01/23/2014
Effective Date: 10/19/1990
Expiration/Review Date: 10/01/2005
Termination Date: 12/06/2013

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EPA ID Number

CENTRAL WIRE INC (Continued)

S109287100

WDR Review - Amend:	Not reported
WDR Review - Revise/Renew:	Not reported
WDR Review - Rescind:	Not reported
WDR Review - No Action Required:	Not reported
WDR Review - Pending:	Not reported
WDR Review - Planned:	Not reported
Status Enrollee:	N
Individual/General:	I
Fee Code:	15 - WDRs pending rescission
Direction/Voice:	Passive
Enforcement Id(EID):	224909
Region:	8
Order / Resolution Number:	84-130
Enforcement Action Type:	Clean-up and Abatement Order
Effective Date:	10/29/1984
Adoption/Issuance Date:	Not reported
Achieve Date:	Not reported
Termination Date:	Not reported
ACL Issuance Date:	Not reported
EPL Issuance Date:	Not reported
Status:	Historical
Title:	Enforcement - 8 332024001
Description:	DETERMINE EXTENT OF DISCHARGE AND CLEANUP.
Program:	LFNONOPER
Latest Milestone Completion Date:	Not reported
# Of Programs1:	1
Total Assessment Amount:	0
Initial Assessed Amount:	0
Liability \$ Amount:	0
Project \$ Amount:	0
Liability \$ Paid:	0
Project \$ Completed:	0
Total \$ Paid/Completed Amount:	0
Name:	BRINE PONDS
Address:	2500 A
City,State,Zip:	PERRIS, CA 92570
Region:	8
Facility Id:	210428
Agency Name:	Techalloy Company Inc
Place Type:	Waste Management Unit
Place Subtype:	Surface Impoundment
Facility Type:	Industrial
Agency Type:	Privately-Owned Business
# Of Agencies:	1
Place Latitude:	33.752688
Place Longitude:	-117.23528
SIC Code 1:	3351
SIC Desc 1:	Rolling, Drawing, and Extruding of Copper
SIC Code 2:	Not reported
SIC Desc 2:	Not reported
SIC Code 3:	Not reported
SIC Desc 3:	Not reported
NAICS Code 1:	Not reported
NAICS Desc 1:	Not reported
NAICS Code 2:	Not reported
NAICS Desc 2:	Not reported

Map ID
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MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

CENTRAL WIRE INC (Continued)

S109287100

NAICS Code 3:	Not reported
NAICS Desc 3:	Not reported
# Of Places:	1
Source Of Facility:	Reg Meas
Design Flow:	0.0001
Threat To Water Quality:	3
Complexity:	B
Pretreatment:	X - Facility is not a POTW
Facility Waste Type:	Process waste, NEC
Facility Waste Type 2:	Not reported
Facility Waste Type 3:	Not reported
Facility Waste Type 4:	Not reported
Program:	LFNONOPER
Program Category1:	LNDISP
Program Category2:	LNDISP
# Of Programs:	1
WDID:	8 332024001
Reg Measure Id:	139815
Reg Measure Type:	WDR
Region:	8
Order #:	90-145
Npdes# CA#:	Not reported
Major-Minor:	Not reported
Npdes Type:	Not reported
Reclamation:	N - No
Dredge Fill Fee:	Not reported
301H:	Not reported
Application Fee Amt Received:	Not reported
Status:	Historical
Status Date:	01/23/2014
Effective Date:	10/19/1990
Expiration/Review Date:	10/01/2005
Termination Date:	12/06/2013
WDR Review - Amend:	Not reported
WDR Review - Revise/Renew:	Not reported
WDR Review - Rescind:	Not reported
WDR Review - No Action Required:	Not reported
WDR Review - Pending:	Not reported
WDR Review - Planned:	Not reported
Status Enrollee:	N
Individual/General:	I
Fee Code:	15 - WDRs pending rescission
Direction/Voice:	Passive
Enforcement Id(EID):	223723
Region:	8
Order / Resolution Number:	99-08405
Enforcement Action Type:	Clean-up and Abatement Order
Effective Date:	11/19/1999
Adoption/Issuance Date:	Not reported
Achieve Date:	Not reported
Termination Date:	Not reported
ACL Issuance Date:	Not reported
EPL Issuance Date:	Not reported
Status:	Historical
Title:	Enforcement - 8 332024001
Description:	RESCINDS CAO 84-130
Program:	LFNONOPER

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MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

CENTRAL WIRE INC (Continued)

S109287100

Latest Milestone Completion Date: Not reported
Of Programs1: 1
Total Assessment Amount: 0
Initial Assessed Amount: 0
Liability \$ Amount: 0
Project \$ Amount: 0
Liability \$ Paid: 0
Project \$ Completed: 0
Total \$ Paid/Completed Amount: 0

ICE:

Envirostor ID: 3000991
Name: CENTRAL WIRE INC
Address: 2500 SOUTH A ST
City,State,Zip: PERRIS, CA 92570
EPA ID: CAD059277137
Site Type: INSPECTION
Facility Status: No Action

Inspection:

Action Type: Financial Records Review - Post-Closure
Action Date: 04/22/2008
Violation Class: No Violations
RTC Date: Not reported

Action Type: Financial Records Review - Treatment, Storage and Disposal
Action Date: 01/10/2001
Violation Class: No Violations
RTC Date: Not reported

Action Type: Financial Records Review - Treatment, Storage and Disposal
Action Date: 11/19/2002
Violation Class: No Violations
RTC Date: Not reported

Action Type: Financial Records Review - Treatment, Storage and Disposal
Action Date: 02/17/2004
Violation Class: No Violations
RTC Date: Not reported

Action Type: Compliance Evaluation Inspection - Treatment, Storage and Disposal
Action Date: 01/10/2001
Violation Class: Class 2, Minor
RTC Date: 05/11/2001

Action Type: Financial Records Review - Treatment, Storage and Disposal
Action Date: 11/16/2001
Violation Class: No Violations
RTC Date: Not reported

Action Type: Compliance Evaluation Inspection - Treatment, Storage and Disposal
Action Date: 02/24/1999
Violation Class: No Violations
RTC Date: Not reported

Action Type: Compliance Evaluation Inspection - Treatment, Storage and Disposal
Action Date: 02/19/2004

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MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

CENTRAL WIRE INC (Continued)

S109287100

Violation Class:	No Violations
RTC Date:	Not reported
Action Type:	Compliance Evaluation Inspection - Post-Closure
Action Date:	11/16/2005
Violation Class:	Class 2
RTC Date:	12/16/2005
Action Type:	Compliance Evaluation Inspection - Post-Closure
Action Date:	04/27/2004
Violation Class:	Class 2
RTC Date:	05/27/2004
Action Type:	Financial Records Review - Treatment, Storage and Disposal
Action Date:	05/16/2005
Violation Class:	No Violations
RTC Date:	Not reported
Action Type:	Financial Records Review - Post-Closure
Action Date:	10/24/2006
Violation Class:	No Violations
RTC Date:	Not reported
Action Type:	Financial Records Review - Treatment, Storage and Disposal
Action Date:	12/08/2005
Violation Class:	No Violations
RTC Date:	Not reported
Action Type:	Compliance Evaluation Inspection - Treatment, Storage and Disposal
Action Date:	10/29/2002
Violation Class:	No Violations
RTC Date:	Not reported
Action Type:	Compliance Evaluation Inspection - Post-Closure
Action Date:	11/30/2010
Violation Class:	Minor
RTC Date:	11/30/2010
Action Type:	Compliance Evaluation Inspection - Post-Closure
Action Date:	02/29/2008
Violation Class:	No Violations
RTC Date:	Not reported
Action Type:	Financial Records Review - Post-Closure
Action Date:	01/20/2011
Violation Class:	No Violations
RTC Date:	Not reported
Action Type:	Compliance Evaluation Inspection - Post-Closure
Action Date:	10/26/2006
Violation Class:	No Violations
RTC Date:	Not reported
Action Type:	Compliance Evaluation Inspection - Treatment, Storage and Disposal
Action Date:	12/13/2001
Violation Class:	No Violations
RTC Date:	Not reported

Map ID
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MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

CENTRAL WIRE INC (Continued)

S109287100

Action Type: Compliance Evaluation Inspection - Post-Closure
Action Date: 10/29/2012
Violation Class: No Violations
RTC Date: Not reported

Action Type: Financial Records Review - Post-Closure
Action Date: 01/17/2013
Violation Class: No Violations
RTC Date: Not reported

Action Type: Financial Records Review - Post-Closure
Action Date: 07/07/2015
Violation Class: No Violations
RTC Date: Not reported

Action Type: Focused Compliance Inspection - Treatment, Storage and Disposal
Action Date: 03/07/2017
Violation Class: Class 2
RTC Date: 03/14/2017

Action Type: Compliance Evaluation Inspection - Post-Closure
Action Date: 10/16/2014
Violation Class: No Violations
RTC Date: Not reported

Action Type: Compliance Evaluation Inspection - Post-Closure
Action Date: 10/19/2017
Violation Class: No Violations
RTC Date: Not reported

Action Type: Financial Records Review - Post-Closure
Action Date: 11/06/2017
Violation Class: No Violations
RTC Date: Not reported

HWP:

Name: CENTRAL WIRE INC
Address: 2500 SOUTH A ST
City,State,Zip: PERRIS, CA 925709317
EPA Id: CAD059277137
Cleanup Status: POST CLOSURE PERMIT
Latitude: 33.75146
Longitude: -117.2377
Facility Type: Post-Closure Permitted
Facility Size: Medium Postclosure
Team: MUZHDA FEROUZ
Supervisor: RAMINDER BOLA
Site Code: 400254
Assembly District: 61
Senate District: 31
Public Information Officer: RUSS EDMONDSON
Public Information Officer: TAMMY PICKENS

Activities:

EPA Id: CAD059277137
Facility Type: Post-Closure Permitted

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MAP FINDINGS

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Database(s)

EDR ID Number
EPA ID Number

CENTRAL WIRE INC (Continued)

S109287100

Unit Names:	CONTAIN1 (GPRA Unit), TANKTRT1 (GPRA Unit)
Event Description:	Renewal - No Changes - FINAL PERMIT RENEWAL - WITHDRAWAL REQUEST RECEIVED
Actual Date:	10/31/2001
EPA Id:	CAD059277137
Facility Type:	Post-Closure Permitted
Unit Names:	SURFIMP1 (GPRA Unit), SURFIMP2 (GPRA Unit), SURFIMP3 (GPRA Unit)
Event Description:	PC Renewal PC - No Changes - RESPONSE TO 2ND NOD RECEIVED
Actual Date:	10/02/2018
EPA Id:	CAD059277137
Facility Type:	Post-Closure Permitted
Unit Names:	SURFIMP1 (GPRA Unit), SURFIMP2 (GPRA Unit), SURFIMP3 (GPRA Unit)
Event Description:	*PC Mod Class 2 - 2 or More Units - FINAL POST-CLOSURE PERMIT MODIFICATION
Actual Date:	12/02/2005
EPA Id:	CAD059277137
Facility Type:	Post-Closure Permitted
Unit Names:	CONTAIN1 (GPRA Unit), TANKTRT1 (GPRA Unit)
Event Description:	Renewal - No Changes - FINAL PERMIT RENEWAL - WITHDRAWAL REQUEST ACKNOWLEDGED
Actual Date:	10/31/2001
EPA Id:	CAD059277137
Facility Type:	Post-Closure Permitted
Unit Names:	CONTAIN1 (GPRA Unit), TANKTRT1 (GPRA Unit)
Event Description:	New Operating Permit - RESPONSE TO 1ST NOD RECEIVED
Actual Date:	06/21/1991
EPA Id:	CAD059277137
Facility Type:	Post-Closure Permitted
Unit Names:	SURFIMP1 (GPRA Unit), SURFIMP2 (GPRA Unit), SURFIMP3 (GPRA Unit)
Event Description:	PC Renewal PC - With Changes - FINAL PART A & PART B RECEIVED
Actual Date:	01/09/2008
EPA Id:	CAD059277137
Facility Type:	Post-Closure Permitted
Unit Names:	Not reported
Event Description:	*PC Mod Class 1 - No Prior Approval Required - FINAL POST-CLOSURE PERMIT MODIFICATION (EFFE
Actual Date:	03/16/2015
EPA Id:	CAD059277137
Facility Type:	Post-Closure Permitted
Unit Names:	Not reported
Event Description:	*PC Mod Class 1 - No Prior Approval Required - FINAL POST-CLOSURE PERMIT MODIFICATION (EXPI
Actual Date:	03/18/2018
EPA Id:	CAD059277137
Facility Type:	Post-Closure Permitted
Unit Names:	Not reported
Event Description:	*Mod Class 1* - Prior Approval Required - PUBLIC NOTICE BY PERMITTEE
Actual Date:	09/30/2014
EPA Id:	CAD059277137
Facility Type:	Post-Closure Permitted
Unit Names:	Not reported
Event Description:	*Mod Class 1* - Prior Approval Required - CEQA DETERMINATION
Actual Date:	10/16/2014

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Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

CENTRAL WIRE INC (Continued)

S109287100

EPA Id: CAD059277137
Facility Type: Post-Closure Permitted
Unit Names: SURFIMP1 (GPRA Unit), SURFIMP2 (GPRA Unit), SURFIMP3 (GPRA Unit)
Event Description: PC Renewal PC - With Changes - 2ND NOTICE OF DEFICIENCY ISSUED
Actual Date: 08/07/2007

EPA Id: CAD059277137
Facility Type: Post-Closure Permitted
Unit Names: SURFIMP1 (GPRA Unit), SURFIMP2 (GPRA Unit), SURFIMP3 (GPRA Unit)
Event Description: PC Renewal PC - No Changes - 1ST NOTICE OF DEFICIENCY ISSUED
Actual Date: 12/18/2017

EPA Id: CAD059277137
Facility Type: Post-Closure Permitted
Unit Names: SURFIMP1 (GPRA Unit), SURFIMP2 (GPRA Unit), SURFIMP3 (GPRA Unit)
Event Description: PC Renewal PC - No Changes - RESPONSE TO 1ST NOD RECEIVED
Actual Date: 04/27/2018

EPA Id: CAD059277137
Facility Type: Post-Closure Permitted
Unit Names: SURFIMP1 (GPRA Unit), SURFIMP2 (GPRA Unit), SURFIMP3 (GPRA Unit)
Event Description: PC Renewal PC - No Changes - PRE-APPLICATION MEETING
Actual Date: 12/22/2016

EPA Id: CAD059277137
Facility Type: Post-Closure Permitted
Unit Names: SURFIMP1 (GPRA Unit), SURFIMP2 (GPRA Unit), SURFIMP3 (GPRA Unit)
Event Description: PC Renewal PC - No Changes - TECHNICAL COMPLETE LETTER
Actual Date: 04/19/2019

EPA Id: CAD059277137
Facility Type: Post-Closure Permitted
Unit Names: SURFIMP1 (GPRA Unit), SURFIMP2 (GPRA Unit), SURFIMP3 (GPRA Unit)
Event Description: New Operating Permit - INITIAL ADMINISTRATIVE REVIEW COMPLETED
Actual Date: 09/05/1983

EPA Id: CAD059277137
Facility Type: Post-Closure Permitted
Unit Names: SURFIMP1 (GPRA Unit), SURFIMP2 (GPRA Unit), SURFIMP3 (GPRA Unit)
Event Description: PC Renewal PC - No Changes - TECHNICAL REVIEW COMPLETED
Actual Date: 04/12/2019

EPA Id: CAD059277137
Facility Type: Post-Closure Permitted
Unit Names: CONTAIN1 (GPRA Unit), TANKTRT1 (GPRA Unit)
Event Description: New Operating Permit - FINAL PERMIT (EFFECTIVE)
Actual Date: 08/13/1992

EPA Id: CAD059277137
Facility Type: Post-Closure Permitted
Unit Names: CONTAIN1 (GPRA Unit), TANKTRT1 (GPRA Unit)
Event Description: New Operating Permit - FINAL PERMIT
Actual Date: 08/13/1992

EPA Id: CAD059277137
Facility Type: Post-Closure Permitted
Unit Names: SURFIMP1 (GPRA Unit), SURFIMP2 (GPRA Unit), SURFIMP3 (GPRA Unit)

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MAP FINDINGS

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Database(s)

EDR ID Number
EPA ID Number

CENTRAL WIRE INC (Continued)

S109287100

Event Description:	New Operating Permit - FINAL PERMIT - WITHDRAWAL REQUEST ACKNOWLEDGED
Actual Date:	10/04/1983
EPA Id:	CAD059277137
Facility Type:	Post-Closure Permitted
Unit Names:	SURFIMP1 (GPRA Unit), SURFIMP2 (GPRA Unit), SURFIMP3 (GPRA Unit)
Event Description:	PC Renewal PC - No Changes - FINAL POST-CLOSURE PERMIT (EFFECTIVE)
Actual Date:	06/24/2019
EPA Id:	CAD059277137
Facility Type:	Post-Closure Permitted
Unit Names:	SURFIMP1 (GPRA Unit), SURFIMP2 (GPRA Unit), SURFIMP3 (GPRA Unit)
Event Description:	PC Renewal PC - No Changes - FINAL PART A & PART B RECEIVED
Actual Date:	04/15/2019
EPA Id:	CAD059277137
Facility Type:	Post-Closure Permitted
Unit Names:	SURFIMP1 (GPRA Unit), SURFIMP2 (GPRA Unit), SURFIMP3 (GPRA Unit)
Event Description:	*PC Mod Class 3 - 2 or More Units - FINAL POST-CLOSURE PERMIT MODIFICATION
Actual Date:	04/25/2006
EPA Id:	CAD059277137
Facility Type:	Post-Closure Permitted
Unit Names:	CONTAIN1 (GPRA Unit), TANKTRT1 (GPRA Unit)
Event Description:	Renewal - No Changes - APPLICATION PART B RECEIVED
Actual Date:	10/31/2001
EPA Id:	CAD059277137
Facility Type:	Post-Closure Permitted
Unit Names:	CONTAIN1 (GPRA Unit), TANKTRT1 (GPRA Unit)
Event Description:	New Operating Permit - 1ST NOTICE OF DEFICIENCY ISSUED
Actual Date:	01/03/1991
EPA Id:	CAD059277137
Facility Type:	Post-Closure Permitted
Unit Names:	SURFIMP1 (GPRA Unit), SURFIMP2 (GPRA Unit), SURFIMP3 (GPRA Unit)
Event Description:	PC Renewal PC - With Changes - INITIAL ADMINISTRATIVE REVIEW COMPLETED
Actual Date:	05/08/2006
EPA Id:	CAD059277137
Facility Type:	Post-Closure Permitted
Unit Names:	SURFIMP1 (GPRA Unit), SURFIMP2 (GPRA Unit), SURFIMP3 (GPRA Unit)
Event Description:	New Operating Permit - CALL-IN LETTER ISSUED
Actual Date:	01/28/1983
EPA Id:	CAD059277137
Facility Type:	Post-Closure Permitted
Unit Names:	SURFIMP1 (GPRA Unit), SURFIMP2 (GPRA Unit), SURFIMP3 (GPRA Unit)
Event Description:	PC Renewal PC - No Changes - PUBLIC COMMENT (END)
Actual Date:	06/21/2019
EPA Id:	CAD059277137
Facility Type:	Post-Closure Permitted
Unit Names:	SURFIMP1 (GPRA Unit), SURFIMP2 (GPRA Unit), SURFIMP3 (GPRA Unit)
Event Description:	New Operating Permit - FINAL PERMIT - WITHDRAWAL REQUEST RECEIVED
Actual Date:	10/04/1983

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MAP FINDINGS

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Database(s)

EDR ID Number
EPA ID Number

CENTRAL WIRE INC (Continued)

S109287100

EPA Id:	CAD059277137
Facility Type:	Post-Closure Permitted
Unit Names:	SURFIMP1 (GPRA Unit), SURFIMP2 (GPRA Unit), SURFIMP3 (GPRA Unit)
Event Description:	PC Renewal PC - No Changes - 2ND NOTICE OF DEFICIENCY ISSUED
Actual Date:	06/20/2018
EPA Id:	CAD059277137
Facility Type:	Post-Closure Permitted
Unit Names:	SURFIMP1 (GPRA Unit), SURFIMP2 (GPRA Unit), SURFIMP3 (GPRA Unit)
Event Description:	PC Renewal PC - No Changes - ADMINISTRATIVE REVIEW APPROVED
Actual Date:	07/20/2017
EPA Id:	CAD059277137
Facility Type:	Post-Closure Permitted
Unit Names:	SURFIMP1 (GPRA Unit), SURFIMP2 (GPRA Unit), SURFIMP3 (GPRA Unit)
Event Description:	PC Renewal PC - No Changes - FINAL CEQA
Actual Date:	06/24/2019
EPA Id:	CAD059277137
Facility Type:	Post-Closure Permitted
Unit Names:	SURFIMP1 (GPRA Unit), SURFIMP2 (GPRA Unit), SURFIMP3 (GPRA Unit)
Event Description:	New Operating Permit - APPLICATION PART A RECEIVED
Actual Date:	11/19/1980
EPA Id:	CAD059277137
Facility Type:	Post-Closure Permitted
Unit Names:	Not reported
Event Description:	*Mod Class 1* - Prior Approval Required - MAILING LIST
Actual Date:	09/10/2014
EPA Id:	CAD059277137
Facility Type:	Post-Closure Permitted
Unit Names:	SURFIMP1 (GPRA Unit), SURFIMP2 (GPRA Unit), SURFIMP3 (GPRA Unit)
Event Description:	PC Renewal PC - No Changes - PUBLIC NOTICE - POST-CLOSURE PERMIT RECEIVED
Actual Date:	07/14/2017
EPA Id:	CAD059277137
Facility Type:	Post-Closure Permitted
Unit Names:	SURFIMP1 (GPRA Unit), SURFIMP2 (GPRA Unit), SURFIMP3 (GPRA Unit)
Event Description:	PC Renewal PC - No Changes - APPLICATION PART B RECEIVED
Actual Date:	06/27/2017
EPA Id:	CAD059277137
Facility Type:	Post-Closure Permitted
Unit Names:	SURFIMP1 (GPRA Unit), SURFIMP2 (GPRA Unit), SURFIMP3 (GPRA Unit)
Event Description:	PC Renewal PC - No Changes - CALL-IN LETTER ISSUED
Actual Date:	09/30/2016
EPA Id:	CAD059277137
Facility Type:	Post-Closure Permitted
Unit Names:	SURFIMP1 (GPRA Unit), SURFIMP2 (GPRA Unit), SURFIMP3 (GPRA Unit)
Event Description:	PC Renewal PC - With Changes - APPLICATION PART B RECEIVED
Actual Date:	11/16/2005
EPA Id:	CAD059277137
Facility Type:	Post-Closure Permitted
Unit Names:	CONTAIN1 (GPRA Unit), TANKTRT1 (GPRA Unit)

Map ID
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MAP FINDINGS

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Database(s)

EDR ID Number
EPA ID Number

CENTRAL WIRE INC (Continued)

S109287100

Event Description:	New Operating Permit - APPLICATION PART A RECEIVED
Actual Date:	01/30/1990
EPA Id:	CAD059277137
Facility Type:	Post-Closure Permitted
Unit Names:	SURFIMP1 (GPRA Unit), SURFIMP2 (GPRA Unit), SURFIMP3 (GPRA Unit)
Event Description:	PC Renewal PC - With Changes - CALL-IN LETTER ISSUED
Actual Date:	06/17/2004
EPA Id:	CAD059277137
Facility Type:	Post-Closure Permitted
Unit Names:	CONTAIN1 (GPRA Unit), TANKTRT1 (GPRA Unit)
Event Description:	Renewal - No Changes - CALL-IN LETTER ISSUED
Actual Date:	10/31/2001
EPA Id:	CAD059277137
Facility Type:	Post-Closure Permitted
Unit Names:	SURFIMP1 (GPRA Unit), SURFIMP2 (GPRA Unit), SURFIMP3 (GPRA Unit)
Event Description:	PC Renewal PC - With Changes - FINAL POST-CLOSURE PERMIT
Actual Date:	02/29/2008
EPA Id:	CAD059277137
Facility Type:	Post-Closure Permitted
Unit Names:	SURFIMP1 (GPRA Unit), SURFIMP2 (GPRA Unit), SURFIMP3 (GPRA Unit)
Event Description:	PC Renewal PC - With Changes - FINAL POST-CLOSURE PERMIT (EXPIRES)
Actual Date:	03/01/2018
EPA Id:	CAD059277137
Facility Type:	Post-Closure Permitted
Unit Names:	SURFIMP1 (GPRA Unit), SURFIMP2 (GPRA Unit), SURFIMP3 (GPRA Unit)
Event Description:	PC Renewal PC - With Changes - PUBLIC COMMENT (BEGIN)
Actual Date:	01/10/2008
EPA Id:	CAD059277137
Facility Type:	Post-Closure Permitted
Unit Names:	Not reported
Event Description:	*Mod Class 1* - Prior Approval Required - FINAL PERMIT MODIFICATION (EXPIRES)
Actual Date:	03/01/2018
EPA Id:	CAD059277137
Facility Type:	Post-Closure Permitted
Unit Names:	SURFIMP1 (GPRA Unit), SURFIMP2 (GPRA Unit), SURFIMP3 (GPRA Unit)
Event Description:	PC Renewal PC - No Changes - INITIAL ADMINISTRATIVE REVIEW COMPLETED
Actual Date:	07/20/2017
EPA Id:	CAD059277137
Facility Type:	Post-Closure Permitted
Unit Names:	SURFIMP1 (GPRA Unit), SURFIMP2 (GPRA Unit), SURFIMP3 (GPRA Unit)
Event Description:	PC Renewal PC - No Changes - FINAL POST-CLOSURE PERMIT (EXPIRES)
Actual Date:	06/23/2029
EPA Id:	CAD059277137
Facility Type:	Post-Closure Permitted
Unit Names:	SURFIMP1 (GPRA Unit), SURFIMP2 (GPRA Unit), SURFIMP3 (GPRA Unit)
Event Description:	PC Renewal PC - No Changes - APPLICATION PART A RECEIVED
Actual Date:	06/27/2017

Map ID
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MAP FINDINGS

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Database(s)

EDR ID Number
EPA ID Number

CENTRAL WIRE INC (Continued)

S109287100

EPA Id:	CAD059277137
Facility Type:	Post-Closure Permitted
Unit Names:	CONTAIN1 (GPRA Unit), TANKTRT1 (GPRA Unit)
Event Description:	New Operating Permit - DRAFT PERMIT
Actual Date:	10/27/1991
EPA Id:	CAD059277137
Facility Type:	Post-Closure Permitted
Unit Names:	SURFIMP1 (GPRA Unit), SURFIMP2 (GPRA Unit), SURFIMP3 (GPRA Unit)
Event Description:	PC Renewal PC - With Changes - DISCLOSURE (CLEARED)
Actual Date:	02/28/2008
EPA Id:	CAD059277137
Facility Type:	Post-Closure Permitted
Unit Names:	CONTAIN1 (GPRA Unit), TANKTRT1 (GPRA Unit)
Event Description:	New Operating Permit - FINAL PERMIT (EXPIRES)
Actual Date:	08/13/2000
EPA Id:	CAD059277137
Facility Type:	Post-Closure Permitted
Unit Names:	CONTAIN1 (GPRA Unit), TANKTRT1 (GPRA Unit)
Event Description:	New Operating Permit - APPLICATION PART B RECEIVED
Actual Date:	03/06/1987
EPA Id:	CAD059277137
Facility Type:	Post-Closure Permitted
Unit Names:	SURFIMP1 (GPRA Unit), SURFIMP2 (GPRA Unit), SURFIMP3 (GPRA Unit)
Event Description:	PC Renewal PC - No Changes - DTSC MEETING WITH APPLICANT
Actual Date:	12/22/2016
EPA Id:	CAD059277137
Facility Type:	Post-Closure Permitted
Unit Names:	SURFIMP1 (GPRA Unit), SURFIMP2 (GPRA Unit), SURFIMP3 (GPRA Unit)
Event Description:	PC Renewal PC - With Changes - DRAFT POST-CLOSURE PERMIT
Actual Date:	01/10/2008
EPA Id:	CAD059277137
Facility Type:	Post-Closure Permitted
Unit Names:	Not reported
Event Description:	*PC Mod Class 1 - No Prior Approval Required - FINAL POST-CLOSURE PERMIT MODIFICATION
Actual Date:	03/16/2015
EPA Id:	CAD059277137
Facility Type:	Post-Closure Permitted
Unit Names:	SURFIMP1 (GPRA Unit), SURFIMP2 (GPRA Unit), SURFIMP3 (GPRA Unit)
Event Description:	PC Renewal PC - No Changes - TECHNICAL REVIEW BEGIN
Actual Date:	07/31/2017
EPA Id:	CAD059277137
Facility Type:	Post-Closure Permitted
Unit Names:	SURFIMP1 (GPRA Unit), SURFIMP2 (GPRA Unit), SURFIMP3 (GPRA Unit)
Event Description:	PC Renewal PC - No Changes - DRAFT POST-CLOSURE PERMIT
Actual Date:	04/17/2019
EPA Id:	CAD059277137
Facility Type:	Post-Closure Permitted
Unit Names:	CONTAIN1 (GPRA Unit), TANKTRT1 (GPRA Unit)

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

CENTRAL WIRE INC (Continued)

S109287100

Event Description:	New Operating Permit - PUBLIC COMMENT (BEGIN)
Actual Date:	10/27/1991
EPA Id:	CAD059277137
Facility Type:	Post-Closure Permitted
Unit Names:	Not reported
Event Description:	*PC Mod Class 1 - No Prior Approval Required - MAILING LIST
Actual Date:	03/12/2015
EPA Id:	CAD059277137
Facility Type:	Post-Closure Permitted
Unit Names:	SURFIMP1 (GPRA Unit), SURFIMP2 (GPRA Unit), SURFIMP3 (GPRA Unit)
Event Description:	PC Renewal PC - No Changes - PUBLIC COMMENT (BEGIN)
Actual Date:	05/08/2019
EPA Id:	CAD059277137
Facility Type:	Post-Closure Permitted
Unit Names:	SURFIMP1 (GPRA Unit), SURFIMP2 (GPRA Unit), SURFIMP3 (GPRA Unit)
Event Description:	New Operating Permit - APPLICATION PART B RECEIVED
Actual Date:	08/02/1983
EPA Id:	CAD059277137
Facility Type:	Post-Closure Permitted
Unit Names:	SURFIMP1 (GPRA Unit), SURFIMP2 (GPRA Unit), SURFIMP3 (GPRA Unit)
Event Description:	PC Renewal PC - With Changes - FINAL POST-CLOSURE PERMIT (EFFECTIVE)
Actual Date:	02/29/2008
EPA Id:	CAD059277137
Facility Type:	Post-Closure Permitted
Unit Names:	SURFIMP1 (GPRA Unit), SURFIMP2 (GPRA Unit), SURFIMP3 (GPRA Unit)
Event Description:	PC Renewal PC - With Changes - PUBLIC COMMENT (END)
Actual Date:	02/24/2008
EPA Id:	CAD059277137
Facility Type:	Post-Closure Permitted
Unit Names:	Not reported
Event Description:	*Mod Class 1* - Prior Approval Required - FINAL PERMIT MODIFICATION
Actual Date:	10/16/2014
EPA Id:	CAD059277137
Facility Type:	Post-Closure Permitted
Unit Names:	Not reported
Event Description:	*Mod Class 1* - Prior Approval Required - FINAL PERMIT MODIFICATION (EFFECTIVE)
Actual Date:	11/01/2014
EPA Id:	CAD059277137
Facility Type:	Post-Closure Permitted
Unit Names:	SURFIMP1 (GPRA Unit), SURFIMP2 (GPRA Unit), SURFIMP3 (GPRA Unit)
Event Description:	PC Renewal PC - No Changes - FINAL POST-CLOSURE PERMIT
Actual Date:	06/24/2019
EPA Id:	CAD059277137
Facility Type:	Post-Closure Permitted
Unit Names:	SURFIMP1 (GPRA Unit), SURFIMP2 (GPRA Unit), SURFIMP3 (GPRA Unit)
Event Description:	PC Renewal PC - No Changes - CEQA DETERMINATION
Actual Date:	06/24/2019

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

CENTRAL WIRE INC (Continued)

S109287100

EPA Id: CAD059277137
Facility Type: Post-Closure Permitted
Unit Names: SURFIMP1 (GPRA Unit), SURFIMP2 (GPRA Unit), SURFIMP3 (GPRA Unit)
Event Description: PC Renewal PC - No Changes - DRAFT CEQA
Actual Date: 04/09/2019

EPA Id: CAD059277137
Facility Type: Post-Closure Permitted
Unit Names: SURFIMP1 (GPRA Unit), SURFIMP2 (GPRA Unit), SURFIMP3 (GPRA Unit)
Event Description: PC Renewal PC - With Changes - 1ST NOTICE OF DEFICIENCY ISSUED
Actual Date: 09/13/2006

EPA Id: CAD059277137
Facility Type: Post-Closure Permitted
Unit Names: Not reported
Event Description: *PC Mod Class 1 - No Prior Approval Required - PUBLIC NOTICE BY PERMITTEE
Actual Date: 03/30/2015

EPA Id: CAD059277137
Facility Type: Post-Closure Permitted
Unit Names: SURFIMP1 (GPRA Unit), SURFIMP2 (GPRA Unit), SURFIMP3 (GPRA Unit)
Event Description: New Operating Permit - 1ST NOTICE OF DEFICIENCY ISSUED
Actual Date: 10/04/1983

Closure:
EPA Id: CAD059277137
Facility Type: Post-Closure Permitted
Unit Names: SURFIMP1 (GPRA Unit), SURFIMP2 (GPRA Unit), SURFIMP3 (GPRA Unit)
Event Description: Closure - RECEIVE CLOSURE CERTIFICATION
Actual Date: 08/28/1989

EPA Id: CAD059277137
Facility Type: Post-Closure Permitted
Unit Names: SURFIMP1 (GPRA Unit), SURFIMP2 (GPRA Unit), SURFIMP3 (GPRA Unit)
Event Description: New Post-Closure Permit - DRAFT POST-CLOSURE PERMIT
Actual Date: 01/10/1996

EPA Id: CAD059277137
Facility Type: Post-Closure Permitted
Unit Names: SURFIMP1 (GPRA Unit), SURFIMP2 (GPRA Unit), SURFIMP3 (GPRA Unit)
Event Description: Closure - ISSUE CLOSURE VERIFICATION
Actual Date: 11/01/1989

EPA Id: CAD059277137
Facility Type: Post-Closure Permitted
Unit Names: SURFIMP1 (GPRA Unit), SURFIMP2 (GPRA Unit), SURFIMP3 (GPRA Unit)
Event Description: New Post-Closure Permit - FINAL PART A & PART B RECEIVED
Actual Date: 03/28/1995

EPA Id: CAD059277137
Facility Type: Post-Closure Permitted
Unit Names: CONTAIN1 (GPRA Unit), TANKTRT1 (GPRA Unit)
Event Description: Closure Administrative - ISSUE CLOSURE VERIFICATION
Actual Date: 08/13/2002

EPA Id: CAD059277137
Facility Type: Post-Closure Permitted

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

CENTRAL WIRE INC (Continued)

S109287100

Unit Names: SURFIMP1 (GPRA Unit), SURFIMP2 (GPRA Unit), SURFIMP3 (GPRA Unit)
Event Description: New Post-Closure Permit - RESPONSE TO 1ST NOD RECEIVED
Actual Date: 03/10/1995

EPA Id: CAD059277137
Facility Type: Post-Closure Permitted
Unit Names: SURFIMP1 (GPRA Unit), SURFIMP2 (GPRA Unit), SURFIMP3 (GPRA Unit)
Event Description: Closure - PUBLIC COMMENT (END)
Actual Date: 07/31/1987

EPA Id: CAD059277137
Facility Type: Post-Closure Permitted
Unit Names: SURFIMP1 (GPRA Unit), SURFIMP2 (GPRA Unit), SURFIMP3 (GPRA Unit)
Event Description: Closure - CLOSURE PLAN APPROVED
Actual Date: 09/29/1987

EPA Id: CAD059277137
Facility Type: Post-Closure Permitted
Unit Names: SURFIMP1 (GPRA Unit), SURFIMP2 (GPRA Unit), SURFIMP3 (GPRA Unit)
Event Description: New Post-Closure Permit - PUBLIC COMMENT (PUBLIC HEARING)
Actual Date: 02/07/1996

EPA Id: CAD059277137
Facility Type: Post-Closure Permitted
Unit Names: SURFIMP1 (GPRA Unit), SURFIMP2 (GPRA Unit), SURFIMP3 (GPRA Unit)
Event Description: New Post-Closure Permit - APPLICATION PART B RECEIVED
Actual Date: 12/08/1993

EPA Id: CAD059277137
Facility Type: Post-Closure Permitted
Unit Names: SURFIMP1 (GPRA Unit), SURFIMP2 (GPRA Unit), SURFIMP3 (GPRA Unit)
Event Description: New Post-Closure Permit - FINAL POST-CLOSURE PERMIT (EFFECTIVE)
Actual Date: 05/08/1996

EPA Id: CAD059277137
Facility Type: Post-Closure Permitted
Unit Names: SURFIMP1 (GPRA Unit), SURFIMP2 (GPRA Unit), SURFIMP3 (GPRA Unit)
Event Description: New Post-Closure Permit - 1ST NOTICE OF DEFICIENCY ISSUED
Actual Date: 01/27/1995

EPA Id: CAD059277137
Facility Type: Post-Closure Permitted
Unit Names: SURFIMP1 (GPRA Unit), SURFIMP2 (GPRA Unit), SURFIMP3 (GPRA Unit)
Event Description: New Post-Closure Permit - FINAL POST-CLOSURE PERMIT (EXPIRES)
Actual Date: 05/08/2006

EPA Id: CAD059277137
Facility Type: Post-Closure Permitted
Unit Names: SURFIMP1 (GPRA Unit), SURFIMP2 (GPRA Unit), SURFIMP3 (GPRA Unit)
Event Description: New Post-Closure Permit - PUBLIC COMMENT (BEGIN)
Actual Date: 01/10/1996

EPA Id: CAD059277137
Facility Type: Post-Closure Permitted
Unit Names: SURFIMP1 (GPRA Unit), SURFIMP2 (GPRA Unit), SURFIMP3 (GPRA Unit)
Event Description: New Post-Closure Permit - FINAL POST-CLOSURE PERMIT
Actual Date: 05/08/1996

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

CENTRAL WIRE INC (Continued)

S109287100

EPA Id: CAD059277137
Facility Type: Post-Closure Permitted
Unit Names: SURFIMP1 (GPRA Unit), SURFIMP2 (GPRA Unit), SURFIMP3 (GPRA Unit)
Event Description: Closure - CLOSURE PLAN RECEIVED
Actual Date: 07/29/1983

EPA Id: CAD059277137
Facility Type: Post-Closure Permitted
Unit Names: SURFIMP1 (GPRA Unit), SURFIMP2 (GPRA Unit), SURFIMP3 (GPRA Unit)
Event Description: Closure - PUBLIC COMMENT (BEGIN)
Actual Date: 07/31/1987

EPA Id: CAD059277137
Facility Type: Post-Closure Permitted
Unit Names: SURFIMP1 (GPRA Unit), SURFIMP2 (GPRA Unit), SURFIMP3 (GPRA Unit)
Event Description: New Post-Closure Permit - CALL-IN LETTER ISSUED
Actual Date: 09/30/1993

Alias:
EPA Id: CAD059277137
Facility Type: Post-Closure Permitted
Alias Type: APN
Alias: 330120014-6

EPA Id: CAD059277137
Facility Type: Post-Closure Permitted
Alias Type: Envirostor ID Number
Alias: 33340012

EPA Id: CAD059277137
Facility Type: Post-Closure Permitted
Alias Type: Project Code (Site Code)
Alias: 400254

EPA Id: CAD059277137
Facility Type: Post-Closure Permitted
Alias Type: Alternate Name
Alias: Techalloy Co Inc

Maintenance:
EPA Id: CAD059277137
Title: 2013 Annual GW Momitoring Report
Document Type: Monitoring Report - Groundwater
Received Date: 07/03/2014

EPA Id: CAD059277137
Title: 2014 First Semiannual Monitoring Report (3 Year Sampling Interval Included)
Document Type: Monitoring Report - Groundwater
Received Date: 08/08/2014

EPA Id: CAD059277137
Title: 2014 Annual Monitoring Report
Document Type: Monitoring Report - Groundwater
Received Date: 01/22/2015

EPA Id: CAD059277137

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

CENTRAL WIRE INC (Continued)

S109287100

Title: Reassignment of DTSC Project Manager
Document Type: Correspondence
Received Date: 12/07/2015

EPA Id: CAD059277137
Title: 2018 First Semiannual Monitoring Report
Document Type: Monitoring Report - Groundwater
Received Date: 01/23/2020

EPA Id: CAD059277137
Title: 2017 Annual Groundwater Monitoring Report
Document Type: Monitoring Report - Groundwater
Received Date: 12/26/2017

EPA Id: CAD059277137
Title: Review 2014 Engineered Cap Survey
Document Type: Permit Condition Implementation
Received Date: 10/06/2017

EPA Id: CAD059277137
Title: 2016 Annual Groundwater Monitoring Report
Document Type: Monitoring Report - Groundwater
Received Date: 12/26/2017

EPA Id: CAD059277137
Title: Review 2016 Semiannual Groundwater Monitoring Report
Document Type: Monitoring Workplan - Groundwater
Received Date: 12/26/2017

EPA Id: CAD059277137
Title: Central Wire 2015 Annual Groundwater Monitoring Report
Document Type: Monitoring Workplan - Groundwater
Received Date: 12/26/2017

EPA Id: CAD059277137
Title: First Semiannual Groundwater Monitoring Report for 2017
Document Type: Monitoring Report - Groundwater
Received Date: 12/26/2017

EPA Id: CAD059277137
Title: 2018 Annual Monitoring Report
Document Type: Monitoring Report - Groundwater
Received Date: 01/23/2020

EPA Id: CAD059277137
Title: 1st Semiannual Groundwater Monitoring Report for 2019
Document Type: Monitoring Report - Groundwater
Received Date: 09/18/2019

EPA Id: CAD059277137
Title: Waste Minimization Certification
Document Type: Certification Documents from Facility
Received Date: 02/17/2011

EPA Id: CAD059277137
Title: Deed restriction for the Techalloy Company, Inc. dated 1/9/1990.
Document Type: Deed Restriction / LUC Issued

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

CENTRAL WIRE INC (Continued)

S109287100

Received Date: 01/09/1990

EPA Id: CAD059277137
Title: Ammended Deed restriction for the Techalloy Company, Inc. dated 4/11/2006.
Document Type: Deed Restriction / LUC Issued
Received Date: 04/11/2006

EPA Id: CAD059277137
Title: Waste Minimization Certification
Document Type: Certification Documents from Facility
Received Date: 02/21/2013

EPA Id: CAD059277137
Title: Reassignment of DTSC Project Manager
Document Type: Meeting with Facility
Received Date: 06/29/2015

EPA Id: CAD059277137
Title: Explanation for Semiannual Water Level Measurements in 2014
Document Type: Letter from Facility
Received Date: 01/14/2015

EPA Id: CAD059277137
Title: Waste Minimization Certification
Document Type: Certification Documents from Facility
Received Date: 02/21/2017

EPA Id: CAD059277137
Title: Annual Waste Reduction and Minimization Certification
Document Type: Certification Documents from Facility
Received Date: 02/28/2018

EPA Id: CAD059277137
Title: No Active Treatment or Storage, for more than 90 days, of RCRA Hazardous Waster
Document Type: Certification Documents from Facility
Received Date: 02/21/2017

EPA Id: CAD059277137
Title: 2013 Waste Minimization Cert & Generator of HazWaste less than 90 Days
Document Type: Certification Documents from Facility
Received Date: 03/06/2014

EPA Id: CAD059277137
Title: Rescission of Waste Discharge Requirements, Order No. R8-2013-0053
Document Type: Letter from Facility
Received Date: 12/06/2013

EPA Id: CAD059277137
Title: 2014 Waste Minimization Cert & Generator of HazWaste less than 90 Days
Document Type: Certification Documents from Facility
Received Date: 02/20/0215

EPA Id: CAD059277137
Title: 2020 Waste Minimization Certificatation
Document Type: Certification Documents from Facility
Received Date: 02/12/2020

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

CENTRAL WIRE INC (Continued)

S109287100

EPA Id: CAD059277137
Title: 2019 Annual Monitoring Report (GWM, cap inspect, survey, LUC Cert)
Document Type: Inspection Report
Received Date: 04/09/2020

EPA Id: CAD059277137
Title: First Semiannual GW Monitoring Report 2011 (Weston Solutions)
Document Type: Monitoring Report - Groundwater
Received Date: 10/24/2011

EPA Id: CAD059277137
Title: 2011-11-28 Annual Groundwater Monitoring Report (Weston Solutions Inc)
Document Type: Monitoring Report - Groundwater
Received Date: 03/05/2012

EPA Id: CAD059277137
Title: First Semiannual Groundwater Monitoring Report for 2013
Document Type: Monitoring Report - Groundwater
Received Date: 11/18/2013

EPA Id: CAD059277137
Title: 2012 Annual Monitoring Report Techalloy Facility
Document Type: Monitoring Report - Groundwater
Received Date: 11/18/2013

CIWQS:

Name: BRINE PONDS
Address: 2500 A
City,State,Zip: PERRIS, CA 92570
Agency: Techalloy Company Inc
Agency Address: 2500 South A Street, Perris, CA 92570
Place/Project Type: Surface Impoundments
SIC/NAICS: 3351
Region: 8
Program: LFNONOPER, LNDISP
Regulatory Measure Status: Historical
Regulatory Measure Type: WDR
Order Number: 90-145
WDID: 8 332024001
NPDES Number: Not reported
Adoption Date: 10/19/1990
Effective Date: 10/19/1990
Termination Date: 12/06/2013
Expiration/Review Date: 10/01/2005
Design Flow: 0.0001
Major/Minor: Not reported
Complexity: B
TTWQ: 3
Enforcement Actions within 5 years: 0
Violations within 5 years: 0
Latitude: 33.752688
Longitude: -117.23528

CERS:

Name: BRINE PONDS

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

CENTRAL WIRE INC (Continued)

S109287100

Address: 2500 A
City,State,Zip: PERRIS, CA 92570
Site ID: 309561
CERS ID: 210428
CERS Description: Land Disposal

Enforcement Action:

Site ID: 309561
Site Name: Brine Ponds
Site Address: 2500 A
Site City: PERRIS
Site Zip: 92570
Enf Action Date: 10-29-1984
Enf Action Type: Clean-up and Abatement Order
Enf Action Description: Clean-up and Abatement Order
Enf Action Notes: Not reported
Enf Action Division: Water Boards
Enf Action Program: UNSPEC
Enf Action Source: CIWQS

Site ID: 309561
Site Name: Brine Ponds
Site Address: 2500 A
Site City: PERRIS
Site Zip: 92570
Enf Action Date: 11-19-1999
Enf Action Type: Clean-up and Abatement Order
Enf Action Description: Clean-up and Abatement Order
Enf Action Notes: Not reported
Enf Action Division: Water Boards
Enf Action Program: UNSPEC
Enf Action Source: CIWQS

A3 **TECHALLOY COMPANY, INC.**
SE **2500 A STREET**
1/2-1 **PERRIS, CA 92370**

Toxic Pits **S100676402**
DEED **N/A**

0.985 mi.
5203 ft.

Site 2 of 3 in cluster A

Relative:
Lower
Actual:
1432 ft.

TOXIC PITS:
Region: 08
Task #: 88007
Owner: TECHALLOY COMPANY, INC.
1/2 Mi Limit: Not reported
Num. of Pits: 1
Cease Discharge Due: 06/30/88
Cease Discharge Complete: 04/10/89
Closure Due: 06/30/89
Closure Completed: 01/08/90
Status: CLOSED
Hydro Geological Assessment Report Due: / /
Final Hydro Geological Assessment Review Completed: 04/22/88

DEED:

Name: TECHALLOY COMPANY, INC.
Address: 2500 A STREET
City,State,Zip: PERRIS, CA 92370

Map ID
 Direction
 Distance
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
 EPA ID Number

TECHALLOY COMPANY, INC. (Continued)

S100676402

Envirostor ID: Not reported
 Area: Not reported
 Sub Area: Not reported
 Site Type: HWMP Land Use Restrictions by Facility Name
 Status: Not reported
 Agency: Not reported
 Covenant Uploaded: Not reported
 Deed Date(s): Not reported
 File Name: HWMP Restrictions

A4 **TECHALLOY WESTERN INC**
SE **2500 S 'A' ST**
1/2-1 **PERRIS, CA 92370**
0.985 mi.
5203 ft. **Site 3 of 3 in cluster A**

Relative:
Lower

Actual:
1432 ft.

SEMS-ARCHIVE 1000239144
CORRACTS CAD059277137
RCRA-TSDF
RCRA-LQG
US INST CONTROLS
CPS-SLIC
HIST UST
DEED
LDS
US FIN ASSUR
2020 COR ACTION
NPDES
WDS
CIWQS
CERS

SEMS Archive:
 Site ID: 0901470
 EPA ID: CAD059277137
 Name: TECHALLOY WESTERN INC
 Address: 2500 S 'A' ST
 Address 2: Not reported
 City,State,Zip: PERRIS, CA 92370
 Cong District: 36
 FIPS Code: 06065
 FF: N
 NPL: Not on the NPL
 Non NPL Status: NFRAP-Site does not qualify for the NPL based on existing information

SEMS Archive Detail:
 Region: 09
 Site ID: 0901470
 EPA ID: CAD059277137
 Site Name: TECHALLOY WESTERN INC
 NPL: N
 FF: N
 OU: 00
 Action Code: VS
 Action Name: ARCH SITE
 SEQ: 1
 Start Date: Not reported
 Finish Date: 1985-05-01 05:00:00
 Qual: Not reported
 Current Action Lead: EPA Perf In-Hse

 Region: 09
 Site ID: 0901470
 EPA ID: CAD059277137

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

Site Name: TECHALLOY WESTERN INC
NPL: N
FF: N
OU: 01
Action Code: SC
Action Name: RCRA DD
SEQ: 1
Start Date: Not reported
Finish Date: 1995-05-10 04:00:00
Qual: Not reported
Current Action Lead: EPA Perf

Region: 09
Site ID: 0901470
EPA ID: CAD059277137
Site Name: TECHALLOY WESTERN INC
NPL: N
FF: N
OU: 00
Action Code: SI
Action Name: SI
SEQ: 1
Start Date: Not reported
Finish Date: 1985-05-01 05:00:00
Qual: N
Current Action Lead: EPA Perf

Region: 09
Site ID: 0901470
EPA ID: CAD059277137
Site Name: TECHALLOY WESTERN INC
NPL: N
FF: N
OU: 00
Action Code: PA
Action Name: PA
SEQ: 1
Start Date: Not reported
Finish Date: 1981-05-01 04:00:00
Qual: L
Current Action Lead: EPA Perf

Region: 09
Site ID: 0901470
EPA ID: CAD059277137
Site Name: TECHALLOY WESTERN INC
NPL: N
FF: N
OU: 00
Action Code: DS
Action Name: DISCVRY
SEQ: 1
Start Date: 1980-08-01 04:00:00
Finish Date: 1980-08-01 04:00:00
Qual: Not reported
Current Action Lead: EPA Perf

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

CORRACTS:

Name: CENTRAL WIRE INC
Address: 2500 SOUTH A STREET
Address 2: Not reported
Area Name: ENTIRE FACILITY
Corrective Action: CA500
Actual Date: 1996-09-25 00:00:00.0
Air Release Indicator: Not reported
Groundwater Release Indicator: Not reported
Soil Release Indicator: Not reported
Surface Water Release Indicator: Not reported

Name: CENTRAL WIRE INC
Address: 2500 SOUTH A STREET
Address 2: Not reported
Area Name: ENTIRE FACILITY
Corrective Action: CA772ID
Actual Date: 1990-01-09 00:00:00.0
Air Release Indicator: Not reported
Groundwater Release Indicator: Not reported
Soil Release Indicator: Not reported
Surface Water Release Indicator: Not reported

Name: CENTRAL WIRE INC
Address: 2500 SOUTH A STREET
Address 2: Not reported
Area Name: ENTIRE FACILITY
Corrective Action: CA150
Actual Date: 1990-04-12 00:00:00.0
Air Release Indicator: Not reported
Groundwater Release Indicator: Not reported
Soil Release Indicator: Not reported
Surface Water Release Indicator: Not reported

Name: CENTRAL WIRE INC
Address: 2500 SOUTH A STREET
Address 2: Not reported
Area Name: ENTIRE FACILITY
Corrective Action: CA200
Actual Date: 1991-10-12 00:00:00.0
Air Release Indicator: Not reported
Groundwater Release Indicator: Not reported
Soil Release Indicator: Not reported
Surface Water Release Indicator: Not reported

Name: CENTRAL WIRE INC
Address: 2500 SOUTH A STREET
Address 2: Not reported
Area Name: ENTIRE FACILITY
Corrective Action: CA300
Actual Date: 1992-03-19 00:00:00.0
Air Release Indicator: Not reported
Groundwater Release Indicator: Not reported
Soil Release Indicator: Not reported
Surface Water Release Indicator: Not reported

Name: CENTRAL WIRE INC

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

Address: 2500 SOUTH A STREET
Address 2: Not reported
Area Name: ENTIRE FACILITY
Corrective Action: CA550RC
Actual Date: 2008-02-29 00:00:00.0
Air Release Indicator: Not reported
Groundwater Release Indicator: Not reported
Soil Release Indicator: Not reported
Surface Water Release Indicator: Not reported

Name: CENTRAL WIRE INC
Address: 2500 SOUTH A STREET
Address 2: Not reported
Area Name: ENTIRE FACILITY
Corrective Action: CA725YE
Actual Date: 2000-05-25 00:00:00.0
Air Release Indicator: Not reported
Groundwater Release Indicator: Not reported
Soil Release Indicator: Not reported
Surface Water Release Indicator: Not reported

Name: CENTRAL WIRE INC
Address: 2500 SOUTH A STREET
Address 2: Not reported
Area Name: ENTIRE FACILITY
Corrective Action: CA750YE
Actual Date: 2000-06-07 00:00:00.0
Air Release Indicator: Not reported
Groundwater Release Indicator: Not reported
Soil Release Indicator: Not reported
Surface Water Release Indicator: Not reported

Name: CENTRAL WIRE INC
Address: 2500 SOUTH A STREET
Address 2: Not reported
Area Name: ENTIRE FACILITY
Corrective Action: CA400
Actual Date: 1995-05-10 00:00:00.0
Air Release Indicator: Not reported
Groundwater Release Indicator: Not reported
Soil Release Indicator: Not reported
Surface Water Release Indicator: Not reported

RCRA-LQG:

Date Form Received by Agency: 2018-02-15 00:00:00.0
Handler Name: CENTRAL WIRE INC
Handler Address: 2500 SOUTH A STREET
Handler City,State,Zip: PERRIS, CA 92570-9317
EPA ID: CAD059277137
Contact Name: STEFANO PELLEGRINI
Contact Address: SOUTH A STREET
Contact City,State,Zip: PERRIS, CA 92570-9317
Contact Telephone: 951-657-2105
Contact Fax: 951-943-6061
Contact Email: STEFANO.PELLEGRINI@CENTRALWIRE.COM
Contact Title: PLANT MANAGER
EPA Region: 09

Map ID
 Direction
 Distance
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
 EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

Land Type:	Private
Federal Waste Generator Description:	Large Quantity Generator
Non-Notifier:	Not reported
Biennial Report Cycle:	2017
Accessibility:	Not reported
Active Site Indicator:	Handler Activities, Permitting Activities, Corrective Action Activities
State District Owner:	Not reported
State District:	Not reported
Mailing Address:	SOUTH A STREET
Mailing City,State,Zip:	PERRIS, CA 92570-9317
Owner Name:	CENTRAL WIRE
Owner Type:	Private
Operator Name:	CENTRAL WIRE
Operator Type:	Private
Short-Term Generator Activity:	No
Importer Activity:	No
Mixed Waste Generator:	No
Transporter Activity:	No
Transfer Facility Activity:	No
Recycler Activity with Storage:	No
Small Quantity On-Site Burner Exemption:	No
Smelting Melting and Refining Furnace Exemption:	No
Underground Injection Control:	No
Off-Site Waste Receipt:	No
Universal Waste Indicator:	No
Universal Waste Destination Facility:	No
Federal Universal Waste:	No
Active Site Fed-Reg Treatment Storage and Disposal Facility:	Land Disposal
Active Site Converter Treatment storage and Disposal Facility:	Not reported
Active Site State-Reg Treatment Storage and Disposal Facility:	Not reported
Active Site State-Reg Handler:	---
Federal Facility Indicator:	Not reported
Hazardous Secondary Material Indicator:	NN
Sub-Part K Indicator:	Not reported
Commercial TSD Indicator:	No
Treatment Storage and Disposal Type:	Land Disposal, Storage, Treatment
2018 GPRC Permit Baseline:	Not on the Baseline
2018 GPRC Renewals Baseline:	Accomplished
Permit Renewals Workload Universe:	Not reported
Permit Workload Universe:	Not reported
Permit Progress Universe:	Land Disposal, Storage, Treatment
Post-Closure Workload Universe:	Land Disposal
Closure Workload Universe:	Not reported
202 GPRC Corrective Action Baseline:	Yes
Corrective Action Workload Universe:	Yes
Subject to Corrective Action Universe:	Yes
Non-TSDs Where RCRA CA has Been Imposed Universe:	No
TSDs Potentially Subject to CA Under 3004 (u)/(v) Universe:	Yes
TSDs Only Subject to CA under Discretionary Auth Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	Yes
Human Exposure Controls Indicator:	Yes
Groundwater Controls Indicator:	Yes
Operating TSD Universe:	Not reported
Full Enforcement Universe:	Land Disposal

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TECHALLOY WESTERN INC (Continued)

1000239144

Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Corrective Action, Post-Closure Care
Handler Date of Last Change:	2018-11-26 18:57:03.0
Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Recycler Activity Without Storage:	No
Manifest Broker:	No
Sub-Part P Indicator:	Not reported

Biennial: List of Years

Year: 2017

Click Here for Biennial Reporting System Data:
Year: 2015

Click Here for Biennial Reporting System Data:
Year: 2009

Click Here for Biennial Reporting System Data:
Year: 2007

Click Here for Biennial Reporting System Data:
Year: 2005

Click Here for Biennial Reporting System Data:
Year: 2003

Click Here for Biennial Reporting System Data:
Year: 2001

Click Here for Biennial Reporting System Data:

Hazardous Waste Summary:

Waste Code: D001
Waste Description: IGNITABLE WASTE

Waste Code: D002
Waste Description: CORROSIVE WASTE

Waste Code: D003
Waste Description: REACTIVE WASTE

Waste Code: D007
Waste Description: CHROMIUM

Waste Code: F006
Waste Description: WASTEWATER TREATMENT SLUDGES FROM ELECTROPLATING OPERATIONS, EXCEPT FROM THE FOLLOWING PROCESSES: (1) SULFURIC ACID ANODIZING OF ALUMINUM; (2) TIN PLATING ON CARBON STEEL; (3) ZINC PLATING (SEGREGATED BASIS) ON CARBON STEEL; (4) ALUMINUM OR ZINC-ALUMINUM PLATING ON CARBON STEEL; (5) CLEANING/STRIPPING ASSOCIATED WITH TIN, ZINC, AND ALUMINUM

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TECHALLOY WESTERN INC (Continued)

1000239144

PLATING ON CARBON STEEL; AND (6) CHEMICAL ETCHING AND MILLING OF ALUMINUM.

Waste Code: F007
Waste Description: SPENT CYANIDE PLATING BATH SOLUTIONS FROM ELECTROPLATING OPERATIONS.

Waste Code: F008
Waste Description: PLATING BATH RESIDUES FROM THE BOTTOM OF PLATING BATHS FROM ELECTROPLATING OPERATIONS IN WHICH CYANIDES ARE USED IN THE PROCESS.

Handler - Owner Operator:

Owner/Operator Indicator: Operator
Owner/Operator Name: TECHALLOY CO. INC
Legal Status: Private
Date Became Current: 1966-01-01 00:00:00.
Date Ended Current: Not reported
Owner/Operator Address: Not reported
Owner/Operator City,State,Zip: Not reported
Owner/Operator Telephone: Not reported
Owner/Operator Telephone Ext: Not reported
Owner/Operator Fax: Not reported
Owner/Operator Email: Not reported

Owner/Operator Indicator: Owner
Owner/Operator Name: CENTRAL WIRE
Legal Status: Private
Date Became Current: 1966-01-01 00:00:00.
Date Ended Current: Not reported
Owner/Operator Address: 6509 OLSON ROAD
Owner/Operator City,State,Zip: UNION, IL 60180
Owner/Operator Telephone: 815-923-2131
Owner/Operator Telephone Ext: Not reported
Owner/Operator Fax: Not reported
Owner/Operator Email: Not reported

Owner/Operator Indicator: Owner
Owner/Operator Name: TECHALLOY CO. INC.
Legal Status: Private
Date Became Current: 1966-01-01 00:00:00.
Date Ended Current: Not reported
Owner/Operator Address: 370 FRANKLIN TURNPIKE
Owner/Operator City,State,Zip: MAHWAH, NJ 07430
Owner/Operator Telephone: Not reported
Owner/Operator Telephone Ext: Not reported
Owner/Operator Fax: Not reported
Owner/Operator Email: Not reported

Owner/Operator Indicator: Owner
Owner/Operator Name: TECHALLOY CO INC
Legal Status: Private
Date Became Current: 1990-01-01 00:00:00.
Date Ended Current: Not reported
Owner/Operator Address: 370 FRANKLIN TURNPIKE
Owner/Operator City,State,Zip: MAHWAH, NJ 07430
Owner/Operator Telephone: Not reported
Owner/Operator Telephone Ext: Not reported
Owner/Operator Fax: Not reported

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TECHALLOY WESTERN INC (Continued)

1000239144

Owner/Operator Email:	Not reported
Owner/Operator Indicator:	Operator
Owner/Operator Name:	TECHALLOY CO. INC.
Legal Status:	Private
Date Became Current:	1966-01-01 00:00:00.
Date Ended Current:	Not reported
Owner/Operator Address:	Not reported
Owner/Operator City,State,Zip:	Not reported
Owner/Operator Telephone:	Not reported
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported
Owner/Operator Indicator:	Operator
Owner/Operator Name:	TECHALLOY CO. INC
Legal Status:	Private
Date Became Current:	1966-01-01 00:00:00.
Date Ended Current:	Not reported
Owner/Operator Address:	Not reported
Owner/Operator City,State,Zip:	Not reported
Owner/Operator Telephone:	Not reported
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported
Owner/Operator Indicator:	Owner
Owner/Operator Name:	CENTRAL WIRE
Legal Status:	Private
Date Became Current:	1966-01-01 00:00:00.
Date Ended Current:	Not reported
Owner/Operator Address:	6509 OLSON ROAD
Owner/Operator City,State,Zip:	UNION, IL 60180
Owner/Operator Telephone:	951-657-2105
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported
Owner/Operator Indicator:	Operator
Owner/Operator Name:	CENTRAL WIRE
Legal Status:	Private
Date Became Current:	1966-01-01 00:00:00.
Date Ended Current:	Not reported
Owner/Operator Address:	2500 SOUTH A STREET
Owner/Operator City,State,Zip:	PERRIS, CA 92570-9317
Owner/Operator Telephone:	951-657-2105
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	STEFANO.PELLEGRINI@CENTRALWIRE.COM
Owner/Operator Indicator:	Operator
Owner/Operator Name:	KEN GOLD
Legal Status:	Private
Date Became Current:	1990-01-01 00:00:00.
Date Ended Current:	Not reported
Owner/Operator Address:	Not reported
Owner/Operator City,State,Zip:	Not reported

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TECHALLOY WESTERN INC (Continued)

1000239144

Owner/Operator Telephone: Not reported
Owner/Operator Telephone Ext: Not reported
Owner/Operator Fax: Not reported
Owner/Operator Email: Not reported

Owner/Operator Indicator: Owner
Owner/Operator Name: TECHALLOY CO. INC
Legal Status: Private
Date Became Current: 1966-01-01 00:00:00.
Date Ended Current: Not reported
Owner/Operator Address: 6509 OLSON ROAD
Owner/Operator City,State,Zip: UNION, IL 60180
Owner/Operator Telephone: 815-923-2131
Owner/Operator Telephone Ext: Not reported
Owner/Operator Fax: Not reported
Owner/Operator Email: Not reported

Owner/Operator Indicator: Owner
Owner/Operator Name: TECHALLOY CO INC
Legal Status: Private
Date Became Current: Not reported
Date Ended Current: Not reported
Owner/Operator Address: 84 BUSINESS PARK RD
Owner/Operator City,State,Zip: ARMONK, NY 10504
Owner/Operator Telephone: 914-273-4500
Owner/Operator Telephone Ext: Not reported
Owner/Operator Fax: Not reported
Owner/Operator Email: Not reported

Owner/Operator Indicator: Operator
Owner/Operator Name: CENTRAL WIRE
Legal Status: Private
Date Became Current: 1966-01-01 00:00:00.
Date Ended Current: Not reported
Owner/Operator Address: Not reported
Owner/Operator City,State,Zip: Not reported
Owner/Operator Telephone: Not reported
Owner/Operator Telephone Ext: Not reported
Owner/Operator Fax: Not reported
Owner/Operator Email: Not reported

Owner/Operator Indicator: Operator
Owner/Operator Name: TECHALLOY WESTERN INC
Legal Status: Private
Date Became Current: Not reported
Date Ended Current: Not reported
Owner/Operator Address: 2500 S A STREET
Owner/Operator City,State,Zip: CITY NOT REPORTED, CA 99999
Owner/Operator Telephone: 714-657-2105
Owner/Operator Telephone Ext: Not reported
Owner/Operator Fax: Not reported
Owner/Operator Email: Not reported

Owner/Operator Indicator: Owner
Owner/Operator Name: TECHALLOY CO. INC
Legal Status: Private
Date Became Current: 1966-01-01 00:00:00.

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TECHALLOY WESTERN INC (Continued)

1000239144

Date Ended Current: Not reported
Owner/Operator Address: P.O. BOX 423
Owner/Operator City,State,Zip: UNION, IL 60180
Owner/Operator Telephone: Not reported
Owner/Operator Telephone Ext: Not reported
Owner/Operator Fax: Not reported
Owner/Operator Email: Not reported

Historic Generators:

Receive Date: 2010-02-23 00:00:00.0
Handler Name: TECHALLOY CO. INC
Federal Waste Generator Description: Large Quantity Generator
State District Owner: Not reported
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: No
Non Storage Recycler Activity: Not reported
Electronic Manifest Broker: Not reported

Receive Date: 2016-02-18 00:00:00.0
Handler Name: CENTRAL WIRE
Federal Waste Generator Description: Large Quantity Generator
State District Owner: Not reported
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: No
Non Storage Recycler Activity: Not reported
Electronic Manifest Broker: Not reported

Receive Date: 2018-02-15 00:00:00.0
Handler Name: CENTRAL WIRE INC
Federal Waste Generator Description: Large Quantity Generator
State District Owner: Not reported
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: Yes
Non Storage Recycler Activity: No
Electronic Manifest Broker: No

Receive Date: 1996-09-01 00:00:00.0
Handler Name: TECHALLOY WESTERN INC
Federal Waste Generator Description: Large Quantity Generator
State District Owner: Not reported
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No

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TECHALLOY WESTERN INC (Continued)

1000239144

Current Record:	No
Non Storage Recycler Activity:	Not reported
Electronic Manifest Broker:	Not reported
Receive Date:	1980-08-18 00:00:00.0
Handler Name:	TECHALLOY WESTERN INC
Federal Waste Generator Description:	Large Quantity Generator
State District Owner:	Not reported
Large Quantity Handler of Universal Waste:	No
Recognized Trader Importer:	No
Recognized Trader Exporter:	No
Spent Lead Acid Battery Importer:	No
Spent Lead Acid Battery Exporter:	No
Current Record:	No
Non Storage Recycler Activity:	Not reported
Electronic Manifest Broker:	Not reported
Receive Date:	1980-08-18 00:00:00.0
Handler Name:	TECHALLOY WESTERN INC
Federal Waste Generator Description:	Large Quantity Generator
State District Owner:	Not reported
Large Quantity Handler of Universal Waste:	No
Recognized Trader Importer:	No
Recognized Trader Exporter:	No
Spent Lead Acid Battery Importer:	No
Spent Lead Acid Battery Exporter:	No
Current Record:	No
Non Storage Recycler Activity:	Not reported
Electronic Manifest Broker:	Not reported
Receive Date:	1998-02-05 00:00:00.0
Handler Name:	TECHALLOY WESTERN INC
Federal Waste Generator Description:	Large Quantity Generator
State District Owner:	Not reported
Large Quantity Handler of Universal Waste:	No
Recognized Trader Importer:	No
Recognized Trader Exporter:	No
Spent Lead Acid Battery Importer:	No
Spent Lead Acid Battery Exporter:	No
Current Record:	No
Non Storage Recycler Activity:	Not reported
Electronic Manifest Broker:	Not reported
Receive Date:	1990-04-16 00:00:00.0
Handler Name:	TECHALLOY CO INC
Federal Waste Generator Description:	Large Quantity Generator
State District Owner:	Not reported
Large Quantity Handler of Universal Waste:	No
Recognized Trader Importer:	No
Recognized Trader Exporter:	No
Spent Lead Acid Battery Importer:	No
Spent Lead Acid Battery Exporter:	No
Current Record:	No
Non Storage Recycler Activity:	Not reported
Electronic Manifest Broker:	Not reported
Receive Date:	1992-02-28 00:00:00.0

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TECHALLOY WESTERN INC (Continued)

1000239144

Handler Name: TECHALLOY CO., INC.
Federal Waste Generator Description: Large Quantity Generator
State District Owner: Not reported
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: No
Non Storage Recycler Activity: Not reported
Electronic Manifest Broker: Not reported

Receive Date: 1994-04-11 00:00:00.0
Handler Name: TECHALLOY CO. INC.
Federal Waste Generator Description: Large Quantity Generator
State District Owner: Not reported
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: No
Non Storage Recycler Activity: Not reported
Electronic Manifest Broker: Not reported

Receive Date: 1996-02-29 00:00:00.0
Handler Name: TECHALLOY CO INC
Federal Waste Generator Description: Large Quantity Generator
State District Owner: Not reported
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: No
Non Storage Recycler Activity: Not reported
Electronic Manifest Broker: Not reported

Receive Date: 1999-03-04 00:00:00.0
Handler Name: TECHALLAY CO
Federal Waste Generator Description: Large Quantity Generator
State District Owner: Not reported
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: No
Non Storage Recycler Activity: Not reported
Electronic Manifest Broker: Not reported

Receive Date: 2000-10-12 00:00:00.0
Handler Name: TECHALLOY CO., INC.
Federal Waste Generator Description: Large Quantity Generator
State District Owner: Not reported
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No

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TECHALLOY WESTERN INC (Continued)

1000239144

Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: No
Non Storage Recycler Activity: Not reported
Electronic Manifest Broker: Not reported

Receive Date: 2002-02-27 00:00:00.0
Handler Name: TECHALLOY CO INC
Federal Waste Generator Description: Large Quantity Generator
State District Owner: Not reported
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: No
Non Storage Recycler Activity: Not reported
Electronic Manifest Broker: Not reported

Receive Date: 2004-03-01 00:00:00.0
Handler Name: TECHALLOY CO INC
Federal Waste Generator Description: Small Quantity Generator
State District Owner: Not reported
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: No
Non Storage Recycler Activity: Not reported
Electronic Manifest Broker: Not reported

Receive Date: 2006-02-17 00:00:00.0
Handler Name: TECHALLOY CO. INC.
Federal Waste Generator Description: Small Quantity Generator
State District Owner: Not reported
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: No
Non Storage Recycler Activity: Not reported
Electronic Manifest Broker: Not reported

Receive Date: 2008-02-13 00:00:00.0
Handler Name: TECHALLOY CO. INC
Federal Waste Generator Description: Small Quantity Generator
State District Owner: Not reported
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: No
Non Storage Recycler Activity: Not reported

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TECHALLOY WESTERN INC (Continued)

1000239144

Electronic Manifest Broker: Not reported

List of NAICS Codes and Descriptions:

NAICS Code: 331222
 NAICS Description: STEEL WIRE DRAWING

NAICS Code: 332112
 NAICS Description: NONFERROUS FORGING

Facility Has Received Notices of Violation:

Found Violation: Yes
 Agency Which Determined Violation: State
 Violation Short Description: Generators - Pre-transport
 Date Violation was Determined: 2017-09-20 00:00:00.0
 Actual Return to Compliance Date: Not reported
 Return to Compliance Qualifier: Not reported
 Violation Responsible Agency: State
 Scheduled Compliance Date: Not reported
 Enforcement Identifier: Not reported
 Date of Enforcement Action: Not reported
 Enforcement Responsible Agency: Not reported
 Enforcement Docket Number: Not reported
 Enforcement Attorney: Not reported
 Corrective Action Component: Not reported
 Appeal Initiated Date: Not reported
 Appeal Resolution Date: Not reported
 Disposition Status Date: Not reported
 Disposition Status: Not reported
 Disposition Status Description: Not reported
 Consent/Final Order Sequence Number: Not reported
 Consent/Final Order Respondent Name: Not reported
 Consent/Final Order Lead Agency: Not reported
 Enforcement Type: Not reported
 Enforcement Responsible Person: Not reported
 Enforcement Responsible Sub-Organization: Not reported
 SEP Sequence Number: Not reported
 SEP Expenditure Amount: Not reported
 SEP Scheduled Completion Date: Not reported
 SEP Actual Date: Not reported
 SEP Defaulted Date: Not reported
 SEP Type: Not reported
 SEP Type Description: Not reported
 Proposed Amount: Not reported
 Final Monetary Amount: Not reported
 Paid Amount: Not reported
 Final Count: Not reported
 Final Amount: Not reported

Found Violation: Yes
 Agency Which Determined Violation: State
 Violation Short Description: Generators - General
 Date Violation was Determined: 1993-07-01 00:00:00.0
 Actual Return to Compliance Date: 1994-05-13 00:00:00.0
 Return to Compliance Qualifier: Observed
 Violation Responsible Agency: State
 Scheduled Compliance Date: Not reported

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TECHALLOY WESTERN INC (Continued)

1000239144

Enforcement Identifier: 013
Date of Enforcement Action: 1994-03-09 00:00:00.0
Enforcement Responsible Agency: State
Enforcement Docket Number: Not reported
Enforcement Attorney: Not reported
Corrective Action Component: No
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: INITIAL 3008(A) COMPLIANCE
Enforcement Responsible Person: R9STA
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: 1550
Final Monetary Amount: 750
Paid Amount: Not reported
Final Count: 1
Final Amount: 750

Found Violation: No
Agency Which Determined Violation: Not reported
Violation Short Description: Not reported
Date Violation was Determined: Not reported
Actual Return to Compliance Date: Not reported
Return to Compliance Qualifier: Not reported
Violation Responsible Agency: Not reported
Scheduled Compliance Date: Not reported
Enforcement Identifier: Not reported
Date of Enforcement Action: Not reported
Enforcement Responsible Agency: Not reported
Enforcement Docket Number: Not reported
Enforcement Attorney: Not reported
Corrective Action Component: Not reported
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: Not reported
Enforcement Responsible Person: Not reported
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported

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TECHALLOY WESTERN INC (Continued)

1000239144

SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported
Final Amount: Not reported

Found Violation: No
Agency Which Determined Violation: Not reported
Violation Short Description: Not reported
Date Violation was Determined: Not reported
Actual Return to Compliance Date: Not reported
Return to Compliance Qualifier: Not reported
Violation Responsible Agency: Not reported
Scheduled Compliance Date: Not reported
Enforcement Identifier: Not reported
Date of Enforcement Action: Not reported
Enforcement Responsible Agency: Not reported
Enforcement Docket Number: Not reported
Enforcement Attorney: Not reported
Corrective Action Component: Not reported
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: Not reported
Enforcement Responsible Person: Not reported
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported
Final Amount: Not reported

Found Violation: Yes
Agency Which Determined Violation: State
Violation Short Description: TSD - General
Date Violation was Determined: 1989-01-28 00:00:00.0
Actual Return to Compliance Date: 1989-03-22 00:00:00.0
Return to Compliance Qualifier: Observed
Violation Responsible Agency: State
Scheduled Compliance Date: 1989-02-28 00:00:00.0

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TECHALLOY WESTERN INC (Continued)

1000239144

Enforcement Identifier: 006
Date of Enforcement Action: 1989-02-09 00:00:00.0
Enforcement Responsible Agency: State
Enforcement Docket Number: Not reported
Enforcement Attorney: Not reported
Corrective Action Component: No
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: WRITTEN INFORMAL
Enforcement Responsible Person: R9STA
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported
Final Amount: Not reported

Found Violation: Yes
Agency Which Determined Violation: State
Violation Short Description: TSD - General Facility Standards
Date Violation was Determined: 2001-01-10 00:00:00.0
Actual Return to Compliance Date: 2001-05-11 00:00:00.0
Return to Compliance Qualifier: Documented
Violation Responsible Agency: State
Scheduled Compliance Date: Not reported
Enforcement Identifier: 200
Date of Enforcement Action: 2001-01-10 00:00:00.0
Enforcement Responsible Agency: State
Enforcement Docket Number: Not reported
Enforcement Attorney: Not reported
Corrective Action Component: No
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: Not reported
Enforcement Responsible Person: Not reported
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported

Map ID
 Direction
 Distance
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
 EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

SEP Scheduled Completion Date: Not reported
 SEP Actual Date: Not reported
 SEP Defaulted Date: Not reported
 SEP Type: Not reported
 SEP Type Description: Not reported
 Proposed Amount: Not reported
 Final Monetary Amount: Not reported
 Paid Amount: Not reported
 Final Count: Not reported
 Final Amount: Not reported

Found Violation: No
 Agency Which Determined Violation: Not reported
 Violation Short Description: Not reported
 Date Violation was Determined: Not reported
 Actual Return to Compliance Date: Not reported
 Return to Compliance Qualifier: Not reported
 Violation Responsible Agency: Not reported
 Scheduled Compliance Date: Not reported
 Enforcement Identifier: Not reported
 Date of Enforcement Action: Not reported
 Enforcement Responsible Agency: Not reported
 Enforcement Docket Number: Not reported
 Enforcement Attorney: Not reported
 Corrective Action Component: Not reported
 Appeal Initiated Date: Not reported
 Appeal Resolution Date: Not reported
 Disposition Status Date: Not reported
 Disposition Status: Not reported
 Disposition Status Description: Not reported
 Consent/Final Order Sequence Number: Not reported
 Consent/Final Order Respondent Name: Not reported
 Consent/Final Order Lead Agency: Not reported
 Enforcement Type: Not reported
 Enforcement Responsible Person: Not reported
 Enforcement Responsible Sub-Organization: Not reported
 SEP Sequence Number: Not reported
 SEP Expenditure Amount: Not reported
 SEP Scheduled Completion Date: Not reported
 SEP Actual Date: Not reported
 SEP Defaulted Date: Not reported
 SEP Type: Not reported
 SEP Type Description: Not reported
 Proposed Amount: Not reported
 Final Monetary Amount: Not reported
 Paid Amount: Not reported
 Final Count: Not reported
 Final Amount: Not reported

Found Violation: Yes
 Agency Which Determined Violation: State
 Violation Short Description: Generators - Pre-transport
 Date Violation was Determined: 2017-09-20 00:00:00.0
 Actual Return to Compliance Date: Not reported
 Return to Compliance Qualifier: Not reported
 Violation Responsible Agency: State
 Scheduled Compliance Date: 2017-10-20 00:00:00.0

Map ID
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Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

Enforcement Identifier: 601
Date of Enforcement Action: 2017-09-20 00:00:00.0
Enforcement Responsible Agency: State
Enforcement Docket Number: Not reported
Enforcement Attorney: Not reported
Corrective Action Component: No
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: FINAL 3008(A) COMPLIANCE ORDER
Enforcement Responsible Person: Not reported
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported
Final Amount: Not reported

Found Violation: No
Agency Which Determined Violation: Not reported
Violation Short Description: Not reported
Date Violation was Determined: Not reported
Actual Return to Compliance Date: Not reported
Return to Compliance Qualifier: Not reported
Violation Responsible Agency: Not reported
Scheduled Compliance Date: Not reported
Enforcement Identifier: Not reported
Date of Enforcement Action: Not reported
Enforcement Responsible Agency: Not reported
Enforcement Docket Number: Not reported
Enforcement Attorney: Not reported
Corrective Action Component: Not reported
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: Not reported
Enforcement Responsible Person: Not reported
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported

Map ID
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MAP FINDINGS

Site

Database(s)

EDR ID Number
 EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

SEP Scheduled Completion Date: Not reported
 SEP Actual Date: Not reported
 SEP Defaulted Date: Not reported
 SEP Type: Not reported
 SEP Type Description: Not reported
 Proposed Amount: Not reported
 Final Monetary Amount: Not reported
 Paid Amount: Not reported
 Final Count: Not reported
 Final Amount: Not reported

Found Violation: Yes
 Agency Which Determined Violation: State
 Violation Short Description: TSD - General
 Date Violation was Determined: 1997-02-21 00:00:00.0
 Actual Return to Compliance Date: 1997-03-07 00:00:00.0
 Return to Compliance Qualifier: Observed
 Violation Responsible Agency: State
 Scheduled Compliance Date: Not reported
 Enforcement Identifier: Not reported
 Date of Enforcement Action: Not reported
 Enforcement Responsible Agency: Not reported
 Enforcement Docket Number: Not reported
 Enforcement Attorney: Not reported
 Corrective Action Component: Not reported
 Appeal Initiated Date: Not reported
 Appeal Resolution Date: Not reported
 Disposition Status Date: Not reported
 Disposition Status: Not reported
 Disposition Status Description: Not reported
 Consent/Final Order Sequence Number: Not reported
 Consent/Final Order Respondent Name: Not reported
 Consent/Final Order Lead Agency: Not reported
 Enforcement Type: Not reported
 Enforcement Responsible Person: Not reported
 Enforcement Responsible Sub-Organization: Not reported
 SEP Sequence Number: Not reported
 SEP Expenditure Amount: Not reported
 SEP Scheduled Completion Date: Not reported
 SEP Actual Date: Not reported
 SEP Defaulted Date: Not reported
 SEP Type: Not reported
 SEP Type Description: Not reported
 Proposed Amount: Not reported
 Final Monetary Amount: Not reported
 Paid Amount: Not reported
 Final Count: Not reported
 Final Amount: Not reported

Found Violation: Yes
 Agency Which Determined Violation: State
 Violation Short Description: Generators - Pre-transport
 Date Violation was Determined: 2017-09-20 00:00:00.0
 Actual Return to Compliance Date: Not reported
 Return to Compliance Qualifier: Not reported
 Violation Responsible Agency: State
 Scheduled Compliance Date: Not reported

Map ID
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MAP FINDINGS

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Database(s)

EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

Enforcement Identifier:	Not reported
Date of Enforcement Action:	Not reported
Enforcement Responsible Agency:	Not reported
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	Not reported
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	Not reported
Enforcement Responsible Person:	Not reported
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported
Found Violation:	No
Agency Which Determined Violation:	Not reported
Violation Short Description:	Not reported
Date Violation was Determined:	Not reported
Actual Return to Compliance Date:	Not reported
Return to Compliance Qualifier:	Not reported
Violation Responsible Agency:	Not reported
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	Not reported
Date of Enforcement Action:	Not reported
Enforcement Responsible Agency:	Not reported
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	Not reported
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	Not reported
Enforcement Responsible Person:	Not reported
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported

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Database(s)

EDR ID Number
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TECHALLOY WESTERN INC (Continued)

1000239144

SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported
Found Violation:	Yes
Agency Which Determined Violation:	State
Violation Short Description:	TSD - General
Date Violation was Determined:	1994-06-27 00:00:00.0
Actual Return to Compliance Date:	1994-08-29 00:00:00.0
Return to Compliance Qualifier:	Observed
Violation Responsible Agency:	State
Scheduled Compliance Date:	1994-07-16 00:00:00.0
Enforcement Identifier:	014
Date of Enforcement Action:	1994-06-27 00:00:00.0
Enforcement Responsible Agency:	State
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	No
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	WRITTEN INFORMAL
Enforcement Responsible Person:	R9STA
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported
Found Violation:	Yes
Agency Which Determined Violation:	State
Violation Short Description:	TSD - General
Date Violation was Determined:	1989-10-26 00:00:00.0
Actual Return to Compliance Date:	1990-01-03 00:00:00.0
Return to Compliance Qualifier:	Observed
Violation Responsible Agency:	State
Scheduled Compliance Date:	Not reported

Map ID
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MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

Enforcement Identifier: 007
Date of Enforcement Action: 1989-12-08 00:00:00.0
Enforcement Responsible Agency: State
Enforcement Docket Number: Not reported
Enforcement Attorney: Not reported
Corrective Action Component: No
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: WRITTEN INFORMAL
Enforcement Responsible Person: R9STA
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported
Final Amount: Not reported

Found Violation: Yes
Agency Which Determined Violation: State
Violation Short Description: LDR - General
Date Violation was Determined: 1997-02-21 00:00:00.0
Actual Return to Compliance Date: 1997-03-07 00:00:00.0
Return to Compliance Qualifier: Observed
Violation Responsible Agency: State
Scheduled Compliance Date: Not reported
Enforcement Identifier: Not reported
Date of Enforcement Action: Not reported
Enforcement Responsible Agency: Not reported
Enforcement Docket Number: Not reported
Enforcement Attorney: Not reported
Corrective Action Component: Not reported
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: Not reported
Enforcement Responsible Person: Not reported
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported

Map ID
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MAP FINDINGS

Site

Database(s)

EDR ID Number
 EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported
Found Violation:	No
Agency Which Determined Violation:	Not reported
Violation Short Description:	Not reported
Date Violation was Determined:	Not reported
Actual Return to Compliance Date:	Not reported
Return to Compliance Qualifier:	Not reported
Violation Responsible Agency:	Not reported
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	Not reported
Date of Enforcement Action:	Not reported
Enforcement Responsible Agency:	Not reported
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	Not reported
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	Not reported
Enforcement Responsible Person:	Not reported
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported
Found Violation:	Yes
Agency Which Determined Violation:	State
Violation Short Description:	TSD IS-Ground-Water Monitoring
Date Violation was Determined:	1992-01-23 00:00:00.0
Actual Return to Compliance Date:	1993-09-13 00:00:00.0
Return to Compliance Qualifier:	Observed
Violation Responsible Agency:	State
Scheduled Compliance Date:	Not reported

Map ID
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MAP FINDINGS

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Database(s)

EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

Enforcement Identifier: 011
Date of Enforcement Action: 1992-05-20 00:00:00.0
Enforcement Responsible Agency: State
Enforcement Docket Number: Not reported
Enforcement Attorney: Not reported
Corrective Action Component: No
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: INITIAL 3008(A) COMPLIANCE
Enforcement Responsible Person: R9STA
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: 71250
Final Monetary Amount: 71250
Paid Amount: 71250
Final Count: 1
Final Amount: 71250

Found Violation: No
Agency Which Determined Violation: Not reported
Violation Short Description: Not reported
Date Violation was Determined: Not reported
Actual Return to Compliance Date: Not reported
Return to Compliance Qualifier: Not reported
Violation Responsible Agency: Not reported
Scheduled Compliance Date: Not reported
Enforcement Identifier: Not reported
Date of Enforcement Action: Not reported
Enforcement Responsible Agency: Not reported
Enforcement Docket Number: Not reported
Enforcement Attorney: Not reported
Corrective Action Component: Not reported
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: Not reported
Enforcement Responsible Person: Not reported
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported

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EDR ID Number
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TECHALLOY WESTERN INC (Continued)

1000239144

SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported
Found Violation:	Yes
Agency Which Determined Violation:	State
Violation Short Description:	TSD - General
Date Violation was Determined:	1987-02-23 00:00:00.0
Actual Return to Compliance Date:	1990-01-03 00:00:00.0
Return to Compliance Qualifier:	Observed
Violation Responsible Agency:	State
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	Not reported
Date of Enforcement Action:	Not reported
Enforcement Responsible Agency:	Not reported
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	Not reported
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	Not reported
Enforcement Responsible Person:	Not reported
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported
Found Violation:	Yes
Agency Which Determined Violation:	State
Violation Short Description:	TSD - General
Date Violation was Determined:	1994-06-27 00:00:00.0
Actual Return to Compliance Date:	1994-08-29 00:00:00.0
Return to Compliance Qualifier:	Observed
Violation Responsible Agency:	State
Scheduled Compliance Date:	1994-07-16 00:00:00.0

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EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

Enforcement Identifier: 014
Date of Enforcement Action: 1994-06-27 00:00:00.0
Enforcement Responsible Agency: State
Enforcement Docket Number: Not reported
Enforcement Attorney: Not reported
Corrective Action Component: No
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: WRITTEN INFORMAL
Enforcement Responsible Person: R9STA
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported
Final Amount: Not reported

Found Violation: Yes
Agency Which Determined Violation: State
Violation Short Description: TSD - General
Date Violation was Determined: 1993-07-01 00:00:00.0
Actual Return to Compliance Date: 1994-05-13 00:00:00.0
Return to Compliance Qualifier: Observed
Violation Responsible Agency: State
Scheduled Compliance Date: Not reported
Enforcement Identifier: 012
Date of Enforcement Action: 1993-07-01 00:00:00.0
Enforcement Responsible Agency: State
Enforcement Docket Number: Not reported
Enforcement Attorney: Not reported
Corrective Action Component: No
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: WRITTEN INFORMAL
Enforcement Responsible Person: R9STA
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported

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EDR ID Number
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TECHALLOY WESTERN INC (Continued)

1000239144

SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported
Found Violation:	Yes
Agency Which Determined Violation:	EPA
Violation Short Description:	TSD - Financial Requirements
Date Violation was Determined:	1991-10-21 00:00:00.0
Actual Return to Compliance Date:	1991-10-21 00:00:00.0
Return to Compliance Qualifier:	Observed
Violation Responsible Agency:	EPA
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	Not reported
Date of Enforcement Action:	Not reported
Enforcement Responsible Agency:	Not reported
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	Not reported
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	Not reported
Enforcement Responsible Person:	Not reported
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported
Found Violation:	No
Agency Which Determined Violation:	Not reported
Violation Short Description:	Not reported
Date Violation was Determined:	Not reported
Actual Return to Compliance Date:	Not reported
Return to Compliance Qualifier:	Not reported
Violation Responsible Agency:	Not reported
Scheduled Compliance Date:	Not reported

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TECHALLOY WESTERN INC (Continued)

1000239144

Enforcement Identifier:	Not reported
Date of Enforcement Action:	Not reported
Enforcement Responsible Agency:	Not reported
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	Not reported
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	Not reported
Enforcement Responsible Person:	Not reported
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported
Found Violation:	Yes
Agency Which Determined Violation:	State
Violation Short Description:	TSD - General
Date Violation was Determined:	1991-03-04 00:00:00.0
Actual Return to Compliance Date:	1991-09-18 00:00:00.0
Return to Compliance Qualifier:	Observed
Violation Responsible Agency:	State
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	009
Date of Enforcement Action:	1991-04-17 00:00:00.0
Enforcement Responsible Agency:	State
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	No
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	WRITTEN INFORMAL
Enforcement Responsible Person:	R9STA
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported

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MAP FINDINGS

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Database(s)

EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported
Found Violation:	Yes
Agency Which Determined Violation:	State
Violation Short Description:	TSD - General
Date Violation was Determined:	1991-03-04 00:00:00.0
Actual Return to Compliance Date:	1991-09-18 00:00:00.0
Return to Compliance Qualifier:	Observed
Violation Responsible Agency:	State
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	009
Date of Enforcement Action:	1991-04-17 00:00:00.0
Enforcement Responsible Agency:	State
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	No
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	WRITTEN INFORMAL
Enforcement Responsible Person:	R9STA
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported
Found Violation:	Yes
Agency Which Determined Violation:	State
Violation Short Description:	TSD - Financial Requirements
Date Violation was Determined:	1989-11-06 00:00:00.0
Actual Return to Compliance Date:	1990-05-21 00:00:00.0
Return to Compliance Qualifier:	Observed
Violation Responsible Agency:	State
Scheduled Compliance Date:	Not reported

Map ID
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Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

Enforcement Identifier: 010
Date of Enforcement Action: 1992-05-20 00:00:00.0
Enforcement Responsible Agency: State
Enforcement Docket Number: Not reported
Enforcement Attorney: Not reported
Corrective Action Component: No
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: FINAL 3008(A) COMPLIANCE ORDER
Enforcement Responsible Person: R9STA
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: 68000
Paid Amount: 20000
Final Count: 1
Final Amount: 68000

Found Violation: Yes
Agency Which Determined Violation: State
Violation Short Description: TSD - Financial Requirements
Date Violation was Determined: 1987-12-28 00:00:00.0
Actual Return to Compliance Date: 1993-09-13 00:00:00.0
Return to Compliance Qualifier: Observed
Violation Responsible Agency: State
Scheduled Compliance Date: Not reported
Enforcement Identifier: 003
Date of Enforcement Action: 1988-02-05 00:00:00.0
Enforcement Responsible Agency: State
Enforcement Docket Number: Not reported
Enforcement Attorney: Not reported
Corrective Action Component: No
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: WRITTEN INFORMAL
Enforcement Responsible Person: R9STA
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported

Map ID
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MAP FINDINGS

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Database(s)

EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported
Found Violation:	Yes
Agency Which Determined Violation:	State
Violation Short Description:	TSD - Preparedness and Prevention
Date Violation was Determined:	2001-01-10 00:00:00.0
Actual Return to Compliance Date:	2001-05-11 00:00:00.0
Return to Compliance Qualifier:	Documented
Violation Responsible Agency:	State
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	200
Date of Enforcement Action:	2001-01-10 00:00:00.0
Enforcement Responsible Agency:	State
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	No
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	Not reported
Enforcement Responsible Person:	Not reported
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported
Found Violation:	Yes
Agency Which Determined Violation:	State
Violation Short Description:	Generators - Pre-transport
Date Violation was Determined:	2017-09-20 00:00:00.0
Actual Return to Compliance Date:	Not reported
Return to Compliance Qualifier:	Not reported
Violation Responsible Agency:	State
Scheduled Compliance Date:	2017-10-20 00:00:00.0

Map ID
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MAP FINDINGS

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Database(s)

EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

Enforcement Identifier: 601
Date of Enforcement Action: 2017-09-20 00:00:00.0
Enforcement Responsible Agency: State
Enforcement Docket Number: Not reported
Enforcement Attorney: Not reported
Corrective Action Component: No
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: FINAL 3008(A) COMPLIANCE ORDER
Enforcement Responsible Person: Not reported
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported
Final Amount: Not reported

Found Violation: Yes
Agency Which Determined Violation: State
Violation Short Description: TSD IS-Ground-Water Monitoring
Date Violation was Determined: 1992-01-23 00:00:00.0
Actual Return to Compliance Date: 1993-09-13 00:00:00.0
Return to Compliance Qualifier: Observed
Violation Responsible Agency: State
Scheduled Compliance Date: Not reported
Enforcement Identifier: 002
Date of Enforcement Action: 1988-12-30 00:00:00.0
Enforcement Responsible Agency: EPA
Enforcement Docket Number: Not reported
Enforcement Attorney: Not reported
Corrective Action Component: No
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: FINAL CIVIL JUDICIAL ACTION FOR IMMINENT AND SUBSTANTIAL ENDANGERMENT
Enforcement Responsible Person: R9EPA
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported

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MAP FINDINGS

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Database(s)

EDR ID Number
 EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported
Found Violation:	Yes
Agency Which Determined Violation:	State
Violation Short Description:	Generators - Pre-transport
Date Violation was Determined:	2017-09-20 00:00:00.0
Actual Return to Compliance Date:	Not reported
Return to Compliance Qualifier:	Not reported
Violation Responsible Agency:	State
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	Not reported
Date of Enforcement Action:	Not reported
Enforcement Responsible Agency:	Not reported
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	Not reported
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	Not reported
Enforcement Responsible Person:	Not reported
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported
Found Violation:	Yes
Agency Which Determined Violation:	State
Violation Short Description:	TSD - General
Date Violation was Determined:	1993-07-01 00:00:00.0
Actual Return to Compliance Date:	1994-05-13 00:00:00.0
Return to Compliance Qualifier:	Observed
Violation Responsible Agency:	State
Scheduled Compliance Date:	Not reported

Map ID
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MAP FINDINGS

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Database(s)

EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

Enforcement Identifier:	012
Date of Enforcement Action:	1993-07-01 00:00:00.0
Enforcement Responsible Agency:	State
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	No
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	WRITTEN INFORMAL
Enforcement Responsible Person:	R9STA
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported
Found Violation:	No
Agency Which Determined Violation:	Not reported
Violation Short Description:	Not reported
Date Violation was Determined:	Not reported
Actual Return to Compliance Date:	Not reported
Return to Compliance Qualifier:	Not reported
Violation Responsible Agency:	Not reported
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	Not reported
Date of Enforcement Action:	Not reported
Enforcement Responsible Agency:	Not reported
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	Not reported
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	Not reported
Enforcement Responsible Person:	Not reported
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported

Map ID
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 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
 EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

SEP Scheduled Completion Date: Not reported
 SEP Actual Date: Not reported
 SEP Defaulted Date: Not reported
 SEP Type: Not reported
 SEP Type Description: Not reported
 Proposed Amount: Not reported
 Final Monetary Amount: Not reported
 Paid Amount: Not reported
 Final Count: Not reported
 Final Amount: Not reported

Found Violation: No
 Agency Which Determined Violation: Not reported
 Violation Short Description: Not reported
 Date Violation was Determined: Not reported
 Actual Return to Compliance Date: Not reported
 Return to Compliance Qualifier: Not reported
 Violation Responsible Agency: Not reported
 Scheduled Compliance Date: Not reported
 Enforcement Identifier: Not reported
 Date of Enforcement Action: Not reported
 Enforcement Responsible Agency: Not reported
 Enforcement Docket Number: Not reported
 Enforcement Attorney: Not reported
 Corrective Action Component: Not reported
 Appeal Initiated Date: Not reported
 Appeal Resolution Date: Not reported
 Disposition Status Date: Not reported
 Disposition Status: Not reported
 Disposition Status Description: Not reported
 Consent/Final Order Sequence Number: Not reported
 Consent/Final Order Respondent Name: Not reported
 Consent/Final Order Lead Agency: Not reported
 Enforcement Type: Not reported
 Enforcement Responsible Person: Not reported
 Enforcement Responsible Sub-Organization: Not reported
 SEP Sequence Number: Not reported
 SEP Expenditure Amount: Not reported
 SEP Scheduled Completion Date: Not reported
 SEP Actual Date: Not reported
 SEP Defaulted Date: Not reported
 SEP Type: Not reported
 SEP Type Description: Not reported
 Proposed Amount: Not reported
 Final Monetary Amount: Not reported
 Paid Amount: Not reported
 Final Count: Not reported
 Final Amount: Not reported

Found Violation: Yes
 Agency Which Determined Violation: State
 Violation Short Description: TSD - General
 Date Violation was Determined: 1989-10-26 00:00:00.0
 Actual Return to Compliance Date: 1990-01-03 00:00:00.0
 Return to Compliance Qualifier: Observed
 Violation Responsible Agency: State
 Scheduled Compliance Date: Not reported

Map ID
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MAP FINDINGS

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Database(s)

EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

Enforcement Identifier: 008
Date of Enforcement Action: 1990-03-05 00:00:00.0
Enforcement Responsible Agency: State
Enforcement Docket Number: Not reported
Enforcement Attorney: Not reported
Corrective Action Component: No
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: INITIAL 3008(A) COMPLIANCE
Enforcement Responsible Person: R9STA
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported
Final Amount: Not reported

Found Violation: Yes
Agency Which Determined Violation: State
Violation Short Description: TSD - General
Date Violation was Determined: 1996-02-09 00:00:00.0
Actual Return to Compliance Date: 1996-04-17 00:00:00.0
Return to Compliance Qualifier: Observed
Violation Responsible Agency: State
Scheduled Compliance Date: Not reported
Enforcement Identifier: 015
Date of Enforcement Action: 1996-02-09 00:00:00.0
Enforcement Responsible Agency: State
Enforcement Docket Number: Not reported
Enforcement Attorney: Not reported
Corrective Action Component: No
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: WRITTEN INFORMAL
Enforcement Responsible Person: R9STA
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported

Map ID
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Database(s)

EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported
Found Violation:	No
Agency Which Determined Violation:	Not reported
Violation Short Description:	Not reported
Date Violation was Determined:	Not reported
Actual Return to Compliance Date:	Not reported
Return to Compliance Qualifier:	Not reported
Violation Responsible Agency:	Not reported
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	Not reported
Date of Enforcement Action:	Not reported
Enforcement Responsible Agency:	Not reported
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	Not reported
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	Not reported
Enforcement Responsible Person:	Not reported
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported
Found Violation:	Yes
Agency Which Determined Violation:	State
Violation Short Description:	TSD - Financial Requirements
Date Violation was Determined:	1987-02-24 00:00:00.0
Actual Return to Compliance Date:	1993-09-13 00:00:00.0
Return to Compliance Qualifier:	Observed
Violation Responsible Agency:	State
Scheduled Compliance Date:	Not reported

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MAP FINDINGS

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Database(s)

EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

Enforcement Identifier: 002
Date of Enforcement Action: 1988-12-30 00:00:00.0
Enforcement Responsible Agency: EPA
Enforcement Docket Number: Not reported
Enforcement Attorney: Not reported
Corrective Action Component: No
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: FINAL CIVIL JUDICIAL ACTION FOR IMMINENT AND SUBSTANTIAL ENDANGERMENT
Enforcement Responsible Person: R9EPA
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported
Final Amount: Not reported

Found Violation: Yes
Agency Which Determined Violation: State
Violation Short Description: TSD - General
Date Violation was Determined: 1988-12-28 00:00:00.0
Actual Return to Compliance Date: 1989-03-02 00:00:00.0
Return to Compliance Qualifier: Observed
Violation Responsible Agency: State
Scheduled Compliance Date: 1989-02-28 00:00:00.0
Enforcement Identifier: 005
Date of Enforcement Action: 1989-01-09 00:00:00.0
Enforcement Responsible Agency: State
Enforcement Docket Number: Not reported
Enforcement Attorney: Not reported
Corrective Action Component: No
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: WRITTEN INFORMAL
Enforcement Responsible Person: R9STA
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported

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EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported
Found Violation:	Yes
Agency Which Determined Violation:	State
Violation Short Description:	TSD - Tank System Standards
Date Violation was Determined:	2001-01-10 00:00:00.0
Actual Return to Compliance Date:	2001-05-11 00:00:00.0
Return to Compliance Qualifier:	Documented
Violation Responsible Agency:	State
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	200
Date of Enforcement Action:	2001-01-10 00:00:00.0
Enforcement Responsible Agency:	State
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	No
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	Not reported
Enforcement Responsible Person:	Not reported
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported
Found Violation:	No
Agency Which Determined Violation:	Not reported
Violation Short Description:	Not reported
Date Violation was Determined:	Not reported
Actual Return to Compliance Date:	Not reported
Return to Compliance Qualifier:	Not reported
Violation Responsible Agency:	Not reported
Scheduled Compliance Date:	Not reported

Map ID
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MAP FINDINGS

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Database(s)

EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

Enforcement Identifier:	Not reported
Date of Enforcement Action:	Not reported
Enforcement Responsible Agency:	Not reported
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	Not reported
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	Not reported
Enforcement Responsible Person:	Not reported
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported
Found Violation:	No
Agency Which Determined Violation:	Not reported
Violation Short Description:	Not reported
Date Violation was Determined:	Not reported
Actual Return to Compliance Date:	Not reported
Return to Compliance Qualifier:	Not reported
Violation Responsible Agency:	Not reported
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	Not reported
Date of Enforcement Action:	Not reported
Enforcement Responsible Agency:	Not reported
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	Not reported
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	Not reported
Enforcement Responsible Person:	Not reported
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported

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MAP FINDINGS

Site

Database(s)

EDR ID Number
 EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported
Found Violation:	Yes
Agency Which Determined Violation:	State
Violation Short Description:	Generators - General
Date Violation was Determined:	1994-06-27 00:00:00.0
Actual Return to Compliance Date:	1994-08-29 00:00:00.0
Return to Compliance Qualifier:	Observed
Violation Responsible Agency:	State
Scheduled Compliance Date:	1994-07-16 00:00:00.0
Enforcement Identifier:	010
Date of Enforcement Action:	1992-05-20 00:00:00.0
Enforcement Responsible Agency:	State
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	No
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	FINAL 3008(A) COMPLIANCE ORDER
Enforcement Responsible Person:	R9STA
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	68000
Paid Amount:	20000
Final Count:	1
Final Amount:	68000
Found Violation:	Yes
Agency Which Determined Violation:	State
Violation Short Description:	Generators - General
Date Violation was Determined:	2007-06-18 00:00:00.0
Actual Return to Compliance Date:	2007-07-18 00:00:00.0
Return to Compliance Qualifier:	Observed
Violation Responsible Agency:	State
Scheduled Compliance Date:	Not reported

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

Enforcement Identifier: 601
Date of Enforcement Action: 2007-06-18 00:00:00.0
Enforcement Responsible Agency: State
Enforcement Docket Number: Not reported
Enforcement Attorney: Not reported
Corrective Action Component: No
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: WRITTEN INFORMAL
Enforcement Responsible Person: Not reported
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported
Final Amount: Not reported

Found Violation: Yes
Agency Which Determined Violation: State
Violation Short Description: TSD - General
Date Violation was Determined: 1997-02-21 00:00:00.0
Actual Return to Compliance Date: 1997-03-07 00:00:00.0
Return to Compliance Qualifier: Observed
Violation Responsible Agency: State
Scheduled Compliance Date: Not reported
Enforcement Identifier: Not reported
Date of Enforcement Action: Not reported
Enforcement Responsible Agency: Not reported
Enforcement Docket Number: Not reported
Enforcement Attorney: Not reported
Corrective Action Component: Not reported
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: Not reported
Enforcement Responsible Person: Not reported
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported

Map ID
 Direction
 Distance
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
 EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported
Found Violation:	Yes
Agency Which Determined Violation:	State
Violation Short Description:	TSD - Container Use and Management
Date Violation was Determined:	2010-11-30 00:00:00.0
Actual Return to Compliance Date:	2010-11-30 00:00:00.0
Return to Compliance Qualifier:	Documented
Violation Responsible Agency:	State
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	301
Date of Enforcement Action:	2010-11-30 00:00:00.0
Enforcement Responsible Agency:	State
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	No
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	Not reported
Enforcement Responsible Person:	Not reported
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported
Found Violation:	Yes
Agency Which Determined Violation:	State
Violation Short Description:	TSD - Financial Requirements
Date Violation was Determined:	1987-12-28 00:00:00.0
Actual Return to Compliance Date:	1993-09-13 00:00:00.0
Return to Compliance Qualifier:	Observed
Violation Responsible Agency:	State
Scheduled Compliance Date:	Not reported

Map ID
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Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

Enforcement Identifier: 001
Date of Enforcement Action: 1988-09-30 00:00:00.0
Enforcement Responsible Agency: EPA
Enforcement Docket Number: Not reported
Enforcement Attorney: Not reported
Corrective Action Component: No
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: INITIAL CIVIL JUDICIAL ACTION FOR COMPLIANCE AND/OR MONETARY PENALTY
Enforcement Responsible Person: R9EPA
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported
Final Amount: Not reported

Found Violation: Yes
Agency Which Determined Violation: State
Violation Short Description: TSD - Closure/Post-Closure
Date Violation was Determined: 2004-04-27 00:00:00.0
Actual Return to Compliance Date: 2004-05-27 00:00:00.0
Return to Compliance Qualifier: Documented
Violation Responsible Agency: State
Scheduled Compliance Date: Not reported
Enforcement Identifier: 200
Date of Enforcement Action: 2004-04-27 00:00:00.0
Enforcement Responsible Agency: State
Enforcement Docket Number: Not reported
Enforcement Attorney: Not reported
Corrective Action Component: No
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: Not reported
Enforcement Responsible Person: Not reported
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported

Map ID
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Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported
Found Violation:	Yes
Agency Which Determined Violation:	State
Violation Short Description:	TSD - General
Date Violation was Determined:	1994-06-27 00:00:00.0
Actual Return to Compliance Date:	1994-08-29 00:00:00.0
Return to Compliance Qualifier:	Observed
Violation Responsible Agency:	State
Scheduled Compliance Date:	1994-07-16 00:00:00.0
Enforcement Identifier:	010
Date of Enforcement Action:	1992-05-20 00:00:00.0
Enforcement Responsible Agency:	State
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	No
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	FINAL 3008(A) COMPLIANCE ORDER
Enforcement Responsible Person:	R9STA
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	68000
Paid Amount:	20000
Final Count:	1
Final Amount:	68000
Found Violation:	Yes
Agency Which Determined Violation:	State
Violation Short Description:	Generators - Pre-transport
Date Violation was Determined:	2017-09-20 00:00:00.0
Actual Return to Compliance Date:	Not reported
Return to Compliance Qualifier:	Not reported
Violation Responsible Agency:	State
Scheduled Compliance Date:	Not reported

Map ID
Direction
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Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

Enforcement Identifier:	Not reported
Date of Enforcement Action:	Not reported
Enforcement Responsible Agency:	Not reported
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	Not reported
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	Not reported
Enforcement Responsible Person:	Not reported
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported
Found Violation:	Yes
Agency Which Determined Violation:	State
Violation Short Description:	TSD - General
Date Violation was Determined:	1991-03-04 00:00:00.0
Actual Return to Compliance Date:	1991-09-18 00:00:00.0
Return to Compliance Qualifier:	Observed
Violation Responsible Agency:	State
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	010
Date of Enforcement Action:	1992-05-20 00:00:00.0
Enforcement Responsible Agency:	State
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	No
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	FINAL 3008(A) COMPLIANCE ORDER
Enforcement Responsible Person:	R9STA
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported

Map ID
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Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: 68000
Paid Amount: 20000
Final Count: 1
Final Amount: 68000

Found Violation: No
Agency Which Determined Violation: Not reported
Violation Short Description: Not reported
Date Violation was Determined: Not reported
Actual Return to Compliance Date: Not reported
Return to Compliance Qualifier: Not reported
Violation Responsible Agency: Not reported
Scheduled Compliance Date: Not reported
Enforcement Identifier: Not reported
Date of Enforcement Action: Not reported
Enforcement Responsible Agency: Not reported
Enforcement Docket Number: Not reported
Enforcement Attorney: Not reported
Corrective Action Component: Not reported
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: Not reported
Enforcement Responsible Person: Not reported
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported
Final Amount: Not reported

Found Violation: No
Agency Which Determined Violation: Not reported
Violation Short Description: Not reported
Date Violation was Determined: Not reported
Actual Return to Compliance Date: Not reported
Return to Compliance Qualifier: Not reported
Violation Responsible Agency: Not reported
Scheduled Compliance Date: Not reported

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

Enforcement Identifier:	Not reported
Date of Enforcement Action:	Not reported
Enforcement Responsible Agency:	Not reported
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	Not reported
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	Not reported
Enforcement Responsible Person:	Not reported
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported
Found Violation:	Yes
Agency Which Determined Violation:	State
Violation Short Description:	Generators - General
Date Violation was Determined:	1993-07-01 00:00:00.0
Actual Return to Compliance Date:	1994-05-13 00:00:00.0
Return to Compliance Qualifier:	Observed
Violation Responsible Agency:	State
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	010
Date of Enforcement Action:	1992-05-20 00:00:00.0
Enforcement Responsible Agency:	State
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	No
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	FINAL 3008(A) COMPLIANCE ORDER
Enforcement Responsible Person:	R9STA
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported

Map ID
 Direction
 Distance
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
 EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	68000
Paid Amount:	20000
Final Count:	1
Final Amount:	68000
Found Violation:	Yes
Agency Which Determined Violation:	State
Violation Short Description:	TSD - Financial Requirements
Date Violation was Determined:	1988-12-01 00:00:00.0
Actual Return to Compliance Date:	1990-05-21 00:00:00.0
Return to Compliance Qualifier:	Observed
Violation Responsible Agency:	State
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	004
Date of Enforcement Action:	1988-07-14 00:00:00.0
Enforcement Responsible Agency:	State
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	No
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	FINAL 3008(A) COMPLIANCE ORDER
Enforcement Responsible Person:	R9STA
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported
Found Violation:	Yes
Agency Which Determined Violation:	State
Violation Short Description:	Generators - General
Date Violation was Determined:	1994-06-27 00:00:00.0
Actual Return to Compliance Date:	1994-08-29 00:00:00.0
Return to Compliance Qualifier:	Observed
Violation Responsible Agency:	State
Scheduled Compliance Date:	1994-07-16 00:00:00.0

Map ID
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MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

Enforcement Identifier: 014
Date of Enforcement Action: 1994-06-27 00:00:00.0
Enforcement Responsible Agency: State
Enforcement Docket Number: Not reported
Enforcement Attorney: Not reported
Corrective Action Component: No
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: WRITTEN INFORMAL
Enforcement Responsible Person: R9STA
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported
Final Amount: Not reported

Found Violation: No
Agency Which Determined Violation: Not reported
Violation Short Description: Not reported
Date Violation was Determined: Not reported
Actual Return to Compliance Date: Not reported
Return to Compliance Qualifier: Not reported
Violation Responsible Agency: Not reported
Scheduled Compliance Date: Not reported
Enforcement Identifier: Not reported
Date of Enforcement Action: Not reported
Enforcement Responsible Agency: Not reported
Enforcement Docket Number: Not reported
Enforcement Attorney: Not reported
Corrective Action Component: Not reported
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: Not reported
Enforcement Responsible Person: Not reported
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported

Map ID
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MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported
Found Violation:	Yes
Agency Which Determined Violation:	State
Violation Short Description:	TSD - Financial Requirements
Date Violation was Determined:	1988-12-01 00:00:00.0
Actual Return to Compliance Date:	1990-05-21 00:00:00.0
Return to Compliance Qualifier:	Observed
Violation Responsible Agency:	State
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	010
Date of Enforcement Action:	1992-05-20 00:00:00.0
Enforcement Responsible Agency:	State
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	No
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	FINAL 3008(A) COMPLIANCE ORDER
Enforcement Responsible Person:	R9STA
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	68000
Paid Amount:	20000
Final Count:	1
Final Amount:	68000
Found Violation:	Yes
Agency Which Determined Violation:	State
Violation Short Description:	Generators - Pre-transport
Date Violation was Determined:	2014-09-16 00:00:00.0
Actual Return to Compliance Date:	2014-10-16 00:00:00.0
Return to Compliance Qualifier:	Documented
Violation Responsible Agency:	State
Scheduled Compliance Date:	2014-10-16 00:00:00.0

Map ID
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MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

Enforcement Identifier:	603
Date of Enforcement Action:	2014-09-16 00:00:00.0
Enforcement Responsible Agency:	State
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	No
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	WRITTEN INFORMAL
Enforcement Responsible Person:	Not reported
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported
Found Violation:	No
Agency Which Determined Violation:	Not reported
Violation Short Description:	Not reported
Date Violation was Determined:	Not reported
Actual Return to Compliance Date:	Not reported
Return to Compliance Qualifier:	Not reported
Violation Responsible Agency:	Not reported
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	Not reported
Date of Enforcement Action:	Not reported
Enforcement Responsible Agency:	Not reported
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	Not reported
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	Not reported
Enforcement Responsible Person:	Not reported
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported

Map ID
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MAP FINDINGS

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Database(s)

EDR ID Number
 EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

SEP Scheduled Completion Date: Not reported
 SEP Actual Date: Not reported
 SEP Defaulted Date: Not reported
 SEP Type: Not reported
 SEP Type Description: Not reported
 Proposed Amount: Not reported
 Final Monetary Amount: Not reported
 Paid Amount: Not reported
 Final Count: Not reported
 Final Amount: Not reported

Found Violation: No
 Agency Which Determined Violation: Not reported
 Violation Short Description: Not reported
 Date Violation was Determined: Not reported
 Actual Return to Compliance Date: Not reported
 Return to Compliance Qualifier: Not reported
 Violation Responsible Agency: Not reported
 Scheduled Compliance Date: Not reported
 Enforcement Identifier: Not reported
 Date of Enforcement Action: Not reported
 Enforcement Responsible Agency: Not reported
 Enforcement Docket Number: Not reported
 Enforcement Attorney: Not reported
 Corrective Action Component: Not reported
 Appeal Initiated Date: Not reported
 Appeal Resolution Date: Not reported
 Disposition Status Date: Not reported
 Disposition Status: Not reported
 Disposition Status Description: Not reported
 Consent/Final Order Sequence Number: Not reported
 Consent/Final Order Respondent Name: Not reported
 Consent/Final Order Lead Agency: Not reported
 Enforcement Type: Not reported
 Enforcement Responsible Person: Not reported
 Enforcement Responsible Sub-Organization: Not reported
 SEP Sequence Number: Not reported
 SEP Expenditure Amount: Not reported
 SEP Scheduled Completion Date: Not reported
 SEP Actual Date: Not reported
 SEP Defaulted Date: Not reported
 SEP Type: Not reported
 SEP Type Description: Not reported
 Proposed Amount: Not reported
 Final Monetary Amount: Not reported
 Paid Amount: Not reported
 Final Count: Not reported
 Final Amount: Not reported

Found Violation: Yes
 Agency Which Determined Violation: State
 Violation Short Description: TSD - General
 Date Violation was Determined: 1993-07-01 00:00:00.0
 Actual Return to Compliance Date: 1994-05-13 00:00:00.0
 Return to Compliance Qualifier: Observed
 Violation Responsible Agency: State
 Scheduled Compliance Date: Not reported

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

Enforcement Identifier: 010
Date of Enforcement Action: 1992-05-20 00:00:00.0
Enforcement Responsible Agency: State
Enforcement Docket Number: Not reported
Enforcement Attorney: Not reported
Corrective Action Component: No
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: FINAL 3008(A) COMPLIANCE ORDER
Enforcement Responsible Person: R9STA
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: 68000
Paid Amount: 20000
Final Count: 1
Final Amount: 68000

Found Violation: Yes
Agency Which Determined Violation: State
Violation Short Description: State Statute or Regulation
Date Violation was Determined: 2017-03-07 00:00:00.0
Actual Return to Compliance Date: 2017-03-14 00:00:00.0
Return to Compliance Qualifier: Observed
Violation Responsible Agency: State
Scheduled Compliance Date: Not reported
Enforcement Identifier: 306
Date of Enforcement Action: 2017-03-07 00:00:00.0
Enforcement Responsible Agency: State
Enforcement Docket Number: Not reported
Enforcement Attorney: Not reported
Corrective Action Component: No
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: Not reported
Enforcement Responsible Person: Not reported
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported

Map ID
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Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported
Final Amount: Not reported

Found Violation: No
Agency Which Determined Violation: Not reported
Violation Short Description: Not reported
Date Violation was Determined: Not reported
Actual Return to Compliance Date: Not reported
Return to Compliance Qualifier: Not reported
Violation Responsible Agency: Not reported
Scheduled Compliance Date: Not reported
Enforcement Identifier: Not reported
Date of Enforcement Action: Not reported
Enforcement Responsible Agency: Not reported
Enforcement Docket Number: Not reported
Enforcement Attorney: Not reported
Corrective Action Component: Not reported
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: Not reported
Enforcement Responsible Person: Not reported
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported
Final Amount: Not reported

Found Violation: No
Agency Which Determined Violation: Not reported
Violation Short Description: Not reported
Date Violation was Determined: Not reported
Actual Return to Compliance Date: Not reported
Return to Compliance Qualifier: Not reported
Violation Responsible Agency: Not reported
Scheduled Compliance Date: Not reported

Map ID
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Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

Enforcement Identifier:	Not reported
Date of Enforcement Action:	Not reported
Enforcement Responsible Agency:	Not reported
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	Not reported
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	Not reported
Enforcement Responsible Person:	Not reported
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported
Found Violation:	Yes
Agency Which Determined Violation:	State
Violation Short Description:	Generators - General
Date Violation was Determined:	2004-06-28 00:00:00.0
Actual Return to Compliance Date:	2004-07-19 00:00:00.0
Return to Compliance Qualifier:	Observed
Violation Responsible Agency:	State
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	501
Date of Enforcement Action:	2004-06-28 00:00:00.0
Enforcement Responsible Agency:	State
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	No
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	WRITTEN INFORMAL
Enforcement Responsible Person:	Not reported
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported

Map ID
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MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported
Final Amount: Not reported

Found Violation: Unknown
Agency Which Determined Violation: Not reported
Violation Short Description: Not reported
Date Violation was Determined: Not reported
Actual Return to Compliance Date: Not reported
Return to Compliance Qualifier: Not reported
Violation Responsible Agency: Not reported
Scheduled Compliance Date: Not reported
Enforcement Identifier: Not reported
Date of Enforcement Action: Not reported
Enforcement Responsible Agency: Not reported
Enforcement Docket Number: Not reported
Enforcement Attorney: Not reported
Corrective Action Component: Not reported
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: Not reported
Enforcement Responsible Person: Not reported
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported
Final Amount: Not reported

Found Violation: Yes
Agency Which Determined Violation: State
Violation Short Description: Generators - Pre-transport
Date Violation was Determined: 2014-09-16 00:00:00.0
Actual Return to Compliance Date: 2014-10-16 00:00:00.0
Return to Compliance Qualifier: Documented
Violation Responsible Agency: State
Scheduled Compliance Date: 2014-10-16 00:00:00.0

Map ID
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MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

Enforcement Identifier: 603
Date of Enforcement Action: 2014-09-16 00:00:00.0
Enforcement Responsible Agency: State
Enforcement Docket Number: Not reported
Enforcement Attorney: Not reported
Corrective Action Component: No
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: WRITTEN INFORMAL
Enforcement Responsible Person: Not reported
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported
Final Amount: Not reported

Found Violation: Yes
Agency Which Determined Violation: State
Violation Short Description: TSD - General
Date Violation was Determined: 1993-07-01 00:00:00.0
Actual Return to Compliance Date: 1994-05-13 00:00:00.0
Return to Compliance Qualifier: Observed
Violation Responsible Agency: State
Scheduled Compliance Date: Not reported
Enforcement Identifier: 010
Date of Enforcement Action: 1992-05-20 00:00:00.0
Enforcement Responsible Agency: State
Enforcement Docket Number: Not reported
Enforcement Attorney: Not reported
Corrective Action Component: No
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: FINAL 3008(A) COMPLIANCE ORDER
Enforcement Responsible Person: R9STA
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported

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MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	68000
Paid Amount:	20000
Final Count:	1
Final Amount:	68000
Found Violation:	Yes
Agency Which Determined Violation:	State
Violation Short Description:	TSD - General
Date Violation was Determined:	1996-02-09 00:00:00.0
Actual Return to Compliance Date:	1996-03-07 00:00:00.0
Return to Compliance Qualifier:	Observed
Violation Responsible Agency:	State
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	015
Date of Enforcement Action:	1996-02-09 00:00:00.0
Enforcement Responsible Agency:	State
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	No
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	WRITTEN INFORMAL
Enforcement Responsible Person:	R9STA
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported
Found Violation:	Yes
Agency Which Determined Violation:	State
Violation Short Description:	TSD - General
Date Violation was Determined:	1993-07-01 00:00:00.0
Actual Return to Compliance Date:	1994-05-13 00:00:00.0
Return to Compliance Qualifier:	Observed
Violation Responsible Agency:	State
Scheduled Compliance Date:	Not reported

Map ID
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Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

Enforcement Identifier: 010
Date of Enforcement Action: 1992-05-20 00:00:00.0
Enforcement Responsible Agency: State
Enforcement Docket Number: Not reported
Enforcement Attorney: Not reported
Corrective Action Component: No
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: FINAL 3008(A) COMPLIANCE ORDER
Enforcement Responsible Person: R9STA
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: 68000
Paid Amount: 20000
Final Count: 1
Final Amount: 68000

Found Violation: No
Agency Which Determined Violation: Not reported
Violation Short Description: Not reported
Date Violation was Determined: Not reported
Actual Return to Compliance Date: Not reported
Return to Compliance Qualifier: Not reported
Violation Responsible Agency: Not reported
Scheduled Compliance Date: Not reported
Enforcement Identifier: Not reported
Date of Enforcement Action: Not reported
Enforcement Responsible Agency: Not reported
Enforcement Docket Number: Not reported
Enforcement Attorney: Not reported
Corrective Action Component: Not reported
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: Not reported
Enforcement Responsible Person: Not reported
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported

Map ID
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MAP FINDINGS

Site

Database(s)

EDR ID Number
 EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported
Found Violation:	Yes
Agency Which Determined Violation:	State
Violation Short Description:	Generators - Pre-transport
Date Violation was Determined:	2014-09-16 00:00:00.0
Actual Return to Compliance Date:	2014-10-16 00:00:00.0
Return to Compliance Qualifier:	Documented
Violation Responsible Agency:	State
Scheduled Compliance Date:	2014-10-16 00:00:00.0
Enforcement Identifier:	603
Date of Enforcement Action:	2014-09-16 00:00:00.0
Enforcement Responsible Agency:	State
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	No
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	WRITTEN INFORMAL
Enforcement Responsible Person:	Not reported
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported
Found Violation:	Yes
Agency Which Determined Violation:	State
Violation Short Description:	TSD - General
Date Violation was Determined:	1997-02-21 00:00:00.0
Actual Return to Compliance Date:	1997-03-20 00:00:00.0
Return to Compliance Qualifier:	Observed
Violation Responsible Agency:	State
Scheduled Compliance Date:	Not reported

Map ID
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Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

Enforcement Identifier:	Not reported
Date of Enforcement Action:	Not reported
Enforcement Responsible Agency:	Not reported
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	Not reported
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	Not reported
Enforcement Responsible Person:	Not reported
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported
Found Violation:	No
Agency Which Determined Violation:	Not reported
Violation Short Description:	Not reported
Date Violation was Determined:	Not reported
Actual Return to Compliance Date:	Not reported
Return to Compliance Qualifier:	Not reported
Violation Responsible Agency:	Not reported
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	Not reported
Date of Enforcement Action:	Not reported
Enforcement Responsible Agency:	Not reported
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	Not reported
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	Not reported
Enforcement Responsible Person:	Not reported
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported

Map ID
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MAP FINDINGS

Site

Database(s)

EDR ID Number
 EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

SEP Scheduled Completion Date: Not reported
 SEP Actual Date: Not reported
 SEP Defaulted Date: Not reported
 SEP Type: Not reported
 SEP Type Description: Not reported
 Proposed Amount: Not reported
 Final Monetary Amount: Not reported
 Paid Amount: Not reported
 Final Count: Not reported
 Final Amount: Not reported

Found Violation: No
 Agency Which Determined Violation: Not reported
 Violation Short Description: Not reported
 Date Violation was Determined: Not reported
 Actual Return to Compliance Date: Not reported
 Return to Compliance Qualifier: Not reported
 Violation Responsible Agency: Not reported
 Scheduled Compliance Date: Not reported
 Enforcement Identifier: Not reported
 Date of Enforcement Action: Not reported
 Enforcement Responsible Agency: Not reported
 Enforcement Docket Number: Not reported
 Enforcement Attorney: Not reported
 Corrective Action Component: Not reported
 Appeal Initiated Date: Not reported
 Appeal Resolution Date: Not reported
 Disposition Status Date: Not reported
 Disposition Status: Not reported
 Disposition Status Description: Not reported
 Consent/Final Order Sequence Number: Not reported
 Consent/Final Order Respondent Name: Not reported
 Consent/Final Order Lead Agency: Not reported
 Enforcement Type: Not reported
 Enforcement Responsible Person: Not reported
 Enforcement Responsible Sub-Organization: Not reported
 SEP Sequence Number: Not reported
 SEP Expenditure Amount: Not reported
 SEP Scheduled Completion Date: Not reported
 SEP Actual Date: Not reported
 SEP Defaulted Date: Not reported
 SEP Type: Not reported
 SEP Type Description: Not reported
 Proposed Amount: Not reported
 Final Monetary Amount: Not reported
 Paid Amount: Not reported
 Final Count: Not reported
 Final Amount: Not reported

Found Violation: Yes
 Agency Which Determined Violation: State
 Violation Short Description: Generators - Pre-transport
 Date Violation was Determined: 2017-09-20 00:00:00.0
 Actual Return to Compliance Date: Not reported
 Return to Compliance Qualifier: Not reported
 Violation Responsible Agency: State
 Scheduled Compliance Date: 2017-10-20 00:00:00.0

Map ID
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MAP FINDINGS

Site

Database(s)

EDR ID Number
 EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

Enforcement Identifier:	601
Date of Enforcement Action:	2017-09-20 00:00:00.0
Enforcement Responsible Agency:	State
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	No
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	FINAL 3008(A) COMPLIANCE ORDER
Enforcement Responsible Person:	Not reported
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported
Found Violation:	Yes
Agency Which Determined Violation:	State
Violation Short Description:	TSD - Financial Requirements
Date Violation was Determined:	1989-11-06 00:00:00.0
Actual Return to Compliance Date:	1990-05-21 00:00:00.0
Return to Compliance Qualifier:	Observed
Violation Responsible Agency:	State
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	002
Date of Enforcement Action:	1988-12-30 00:00:00.0
Enforcement Responsible Agency:	EPA
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	No
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	FINAL CIVIL JUDICIAL ACTION FOR IMMINENT AND SUBSTANTIAL ENDANGERMENT
Enforcement Responsible Person:	R9EPA
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported

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MAP FINDINGS

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Database(s)

EDR ID Number
 EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported
Found Violation:	Yes
Agency Which Determined Violation:	State
Violation Short Description:	Generators - General
Date Violation was Determined:	1993-07-01 00:00:00.0
Actual Return to Compliance Date:	1994-05-13 00:00:00.0
Return to Compliance Qualifier:	Observed
Violation Responsible Agency:	State
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	012
Date of Enforcement Action:	1993-07-01 00:00:00.0
Enforcement Responsible Agency:	State
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	No
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	WRITTEN INFORMAL
Enforcement Responsible Person:	R9STA
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported
Found Violation:	No
Agency Which Determined Violation:	Not reported
Violation Short Description:	Not reported
Date Violation was Determined:	Not reported
Actual Return to Compliance Date:	Not reported
Return to Compliance Qualifier:	Not reported
Violation Responsible Agency:	Not reported
Scheduled Compliance Date:	Not reported

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

Enforcement Identifier:	Not reported
Date of Enforcement Action:	Not reported
Enforcement Responsible Agency:	Not reported
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	Not reported
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	Not reported
Enforcement Responsible Person:	Not reported
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported
Found Violation:	No
Agency Which Determined Violation:	Not reported
Violation Short Description:	Not reported
Date Violation was Determined:	Not reported
Actual Return to Compliance Date:	Not reported
Return to Compliance Qualifier:	Not reported
Violation Responsible Agency:	Not reported
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	Not reported
Date of Enforcement Action:	Not reported
Enforcement Responsible Agency:	Not reported
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	Not reported
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	Not reported
Enforcement Responsible Person:	Not reported
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported

Map ID
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MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported
Final Amount: Not reported

Found Violation: Yes
Agency Which Determined Violation: State
Violation Short Description: TSD - General
Date Violation was Determined: 1988-01-07 00:00:00.0
Actual Return to Compliance Date: 1990-01-03 00:00:00.0
Return to Compliance Qualifier: Observed
Violation Responsible Agency: EPA
Scheduled Compliance Date: 1988-02-29 00:00:00.0
Enforcement Identifier: Not reported
Date of Enforcement Action: Not reported
Enforcement Responsible Agency: Not reported
Enforcement Docket Number: Not reported
Enforcement Attorney: Not reported
Corrective Action Component: Not reported
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: Not reported
Enforcement Responsible Person: Not reported
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported
Final Amount: Not reported

Found Violation: Yes
Agency Which Determined Violation: State
Violation Short Description: TSD - Financial Requirements
Date Violation was Determined: 1989-11-06 00:00:00.0
Actual Return to Compliance Date: 1990-05-21 00:00:00.0
Return to Compliance Qualifier: Observed
Violation Responsible Agency: State
Scheduled Compliance Date: Not reported

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Database(s)

EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

Enforcement Identifier: 004
Date of Enforcement Action: 1988-07-14 00:00:00.0
Enforcement Responsible Agency: State
Enforcement Docket Number: Not reported
Enforcement Attorney: Not reported
Corrective Action Component: No
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: FINAL 3008(A) COMPLIANCE ORDER
Enforcement Responsible Person: R9STA
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported
Final Amount: Not reported

Found Violation: Yes
Agency Which Determined Violation: State
Violation Short Description: TSD - General
Date Violation was Determined: 1993-07-01 00:00:00.0
Actual Return to Compliance Date: 1994-05-13 00:00:00.0
Return to Compliance Qualifier: Observed
Violation Responsible Agency: State
Scheduled Compliance Date: Not reported
Enforcement Identifier: 013
Date of Enforcement Action: 1994-03-09 00:00:00.0
Enforcement Responsible Agency: State
Enforcement Docket Number: Not reported
Enforcement Attorney: Not reported
Corrective Action Component: No
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: INITIAL 3008(A) COMPLIANCE
Enforcement Responsible Person: R9STA
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported

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Database(s)

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TECHALLOY WESTERN INC (Continued)

1000239144

SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: 1550
Final Monetary Amount: 750
Paid Amount: Not reported
Final Count: 1
Final Amount: 750

Found Violation: No
Agency Which Determined Violation: Not reported
Violation Short Description: Not reported
Date Violation was Determined: Not reported
Actual Return to Compliance Date: Not reported
Return to Compliance Qualifier: Not reported
Violation Responsible Agency: Not reported
Scheduled Compliance Date: Not reported
Enforcement Identifier: Not reported
Date of Enforcement Action: Not reported
Enforcement Responsible Agency: Not reported
Enforcement Docket Number: Not reported
Enforcement Attorney: Not reported
Corrective Action Component: Not reported
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: Not reported
Enforcement Responsible Person: Not reported
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported
Final Amount: Not reported

Found Violation: No
Agency Which Determined Violation: Not reported
Violation Short Description: Not reported
Date Violation was Determined: Not reported
Actual Return to Compliance Date: Not reported
Return to Compliance Qualifier: Not reported
Violation Responsible Agency: Not reported
Scheduled Compliance Date: Not reported

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MAP FINDINGS

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EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

Enforcement Identifier:	Not reported
Date of Enforcement Action:	Not reported
Enforcement Responsible Agency:	Not reported
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	Not reported
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	Not reported
Enforcement Responsible Person:	Not reported
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported
Found Violation:	Yes
Agency Which Determined Violation:	State
Violation Short Description:	Generators - Pre-transport
Date Violation was Determined:	2017-09-20 00:00:00.0
Actual Return to Compliance Date:	Not reported
Return to Compliance Qualifier:	Not reported
Violation Responsible Agency:	State
Scheduled Compliance Date:	2017-10-20 00:00:00.0
Enforcement Identifier:	601
Date of Enforcement Action:	2017-09-20 00:00:00.0
Enforcement Responsible Agency:	State
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	No
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	FINAL 3008(A) COMPLIANCE ORDER
Enforcement Responsible Person:	Not reported
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported

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Database(s)

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EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported
Final Amount: Not reported

Found Violation: No
Agency Which Determined Violation: Not reported
Violation Short Description: Not reported
Date Violation was Determined: Not reported
Actual Return to Compliance Date: Not reported
Return to Compliance Qualifier: Not reported
Violation Responsible Agency: Not reported
Scheduled Compliance Date: Not reported
Enforcement Identifier: Not reported
Date of Enforcement Action: Not reported
Enforcement Responsible Agency: Not reported
Enforcement Docket Number: Not reported
Enforcement Attorney: Not reported
Corrective Action Component: Not reported
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: Not reported
Enforcement Responsible Person: Not reported
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported
Final Amount: Not reported

Found Violation: No
Agency Which Determined Violation: Not reported
Violation Short Description: Not reported
Date Violation was Determined: Not reported
Actual Return to Compliance Date: Not reported
Return to Compliance Qualifier: Not reported
Violation Responsible Agency: Not reported
Scheduled Compliance Date: Not reported

Map ID
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MAP FINDINGS

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Database(s)

EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

Enforcement Identifier:	Not reported
Date of Enforcement Action:	Not reported
Enforcement Responsible Agency:	Not reported
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	Not reported
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	Not reported
Enforcement Responsible Person:	Not reported
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported
Found Violation:	Yes
Agency Which Determined Violation:	State
Violation Short Description:	Generators - Pre-transport
Date Violation was Determined:	2017-09-20 00:00:00.0
Actual Return to Compliance Date:	Not reported
Return to Compliance Qualifier:	Not reported
Violation Responsible Agency:	State
Scheduled Compliance Date:	2017-10-20 00:00:00.0
Enforcement Identifier:	601
Date of Enforcement Action:	2017-09-20 00:00:00.0
Enforcement Responsible Agency:	State
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	No
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	FINAL 3008(A) COMPLIANCE ORDER
Enforcement Responsible Person:	Not reported
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported

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MAP FINDINGS

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Database(s)

EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported
Final Amount: Not reported

Found Violation: No
Agency Which Determined Violation: Not reported
Violation Short Description: Not reported
Date Violation was Determined: Not reported
Actual Return to Compliance Date: Not reported
Return to Compliance Qualifier: Not reported
Violation Responsible Agency: Not reported
Scheduled Compliance Date: Not reported
Enforcement Identifier: Not reported
Date of Enforcement Action: Not reported
Enforcement Responsible Agency: Not reported
Enforcement Docket Number: Not reported
Enforcement Attorney: Not reported
Corrective Action Component: Not reported
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: Not reported
Enforcement Responsible Person: Not reported
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported
Final Amount: Not reported

Found Violation: No
Agency Which Determined Violation: Not reported
Violation Short Description: Not reported
Date Violation was Determined: Not reported
Actual Return to Compliance Date: Not reported
Return to Compliance Qualifier: Not reported
Violation Responsible Agency: Not reported
Scheduled Compliance Date: Not reported

Map ID
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MAP FINDINGS

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Database(s)

EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

Enforcement Identifier:	Not reported
Date of Enforcement Action:	Not reported
Enforcement Responsible Agency:	Not reported
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	Not reported
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	Not reported
Enforcement Responsible Person:	Not reported
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported
Found Violation:	No
Agency Which Determined Violation:	Not reported
Violation Short Description:	Not reported
Date Violation was Determined:	Not reported
Actual Return to Compliance Date:	Not reported
Return to Compliance Qualifier:	Not reported
Violation Responsible Agency:	Not reported
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	Not reported
Date of Enforcement Action:	Not reported
Enforcement Responsible Agency:	Not reported
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	Not reported
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	Not reported
Enforcement Responsible Person:	Not reported
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported

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Database(s)

EDR ID Number
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TECHALLOY WESTERN INC (Continued)

1000239144

SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported
Found Violation:	Yes
Agency Which Determined Violation:	State
Violation Short Description:	TSD - General
Date Violation was Determined:	1994-06-27 00:00:00.0
Actual Return to Compliance Date:	1994-08-29 00:00:00.0
Return to Compliance Qualifier:	Observed
Violation Responsible Agency:	State
Scheduled Compliance Date:	1994-07-16 00:00:00.0
Enforcement Identifier:	010
Date of Enforcement Action:	1992-05-20 00:00:00.0
Enforcement Responsible Agency:	State
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	No
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	FINAL 3008(A) COMPLIANCE ORDER
Enforcement Responsible Person:	R9STA
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	68000
Paid Amount:	20000
Final Count:	1
Final Amount:	68000
Found Violation:	No
Agency Which Determined Violation:	Not reported
Violation Short Description:	Not reported
Date Violation was Determined:	Not reported
Actual Return to Compliance Date:	Not reported
Return to Compliance Qualifier:	Not reported
Violation Responsible Agency:	Not reported
Scheduled Compliance Date:	Not reported

Map ID
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Database(s)

EDR ID Number
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TECHALLOY WESTERN INC (Continued)

1000239144

Enforcement Identifier:	Not reported
Date of Enforcement Action:	Not reported
Enforcement Responsible Agency:	Not reported
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	Not reported
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	Not reported
Enforcement Responsible Person:	Not reported
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported
Found Violation:	Yes
Agency Which Determined Violation:	State
Violation Short Description:	TSD IS-Ground-Water Monitoring
Date Violation was Determined:	1992-01-23 00:00:00.0
Actual Return to Compliance Date:	1993-09-13 00:00:00.0
Return to Compliance Qualifier:	Observed
Violation Responsible Agency:	State
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	001
Date of Enforcement Action:	1988-09-30 00:00:00.0
Enforcement Responsible Agency:	EPA
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	No
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	INITIAL CIVIL JUDICIAL ACTION FOR COMPLIANCE AND/OR MONETARY PENALTY
Enforcement Responsible Person:	R9EPA
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported

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Database(s)

EDR ID Number
 EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported
Found Violation:	Yes
Agency Which Determined Violation:	State
Violation Short Description:	TSD - General
Date Violation was Determined:	1991-03-04 00:00:00.0
Actual Return to Compliance Date:	1991-09-18 00:00:00.0
Return to Compliance Qualifier:	Observed
Violation Responsible Agency:	State
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	010
Date of Enforcement Action:	1992-05-20 00:00:00.0
Enforcement Responsible Agency:	State
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	No
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	FINAL 3008(A) COMPLIANCE ORDER
Enforcement Responsible Person:	R9STA
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	68000
Paid Amount:	20000
Final Count:	1
Final Amount:	68000
Found Violation:	No
Agency Which Determined Violation:	Not reported
Violation Short Description:	Not reported
Date Violation was Determined:	Not reported
Actual Return to Compliance Date:	Not reported
Return to Compliance Qualifier:	Not reported
Violation Responsible Agency:	Not reported
Scheduled Compliance Date:	Not reported

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

Enforcement Identifier:	Not reported
Date of Enforcement Action:	Not reported
Enforcement Responsible Agency:	Not reported
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	Not reported
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	Not reported
Enforcement Responsible Person:	Not reported
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported
Found Violation:	Yes
Agency Which Determined Violation:	State
Violation Short Description:	TSD - General
Date Violation was Determined:	1993-07-01 00:00:00.0
Actual Return to Compliance Date:	1994-05-13 00:00:00.0
Return to Compliance Qualifier:	Observed
Violation Responsible Agency:	State
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	013
Date of Enforcement Action:	1994-03-09 00:00:00.0
Enforcement Responsible Agency:	State
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	No
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	INITIAL 3008(A) COMPLIANCE
Enforcement Responsible Person:	R9STA
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported

Map ID
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Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	1550
Final Monetary Amount:	750
Paid Amount:	Not reported
Final Count:	1
Final Amount:	750
Found Violation:	Yes
Agency Which Determined Violation:	State
Violation Short Description:	TSD - General
Date Violation was Determined:	1993-07-01 00:00:00.0
Actual Return to Compliance Date:	1994-05-13 00:00:00.0
Return to Compliance Qualifier:	Observed
Violation Responsible Agency:	State
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	013
Date of Enforcement Action:	1994-03-09 00:00:00.0
Enforcement Responsible Agency:	State
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	No
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	INITIAL 3008(A) COMPLIANCE
Enforcement Responsible Person:	R9STA
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	1550
Final Monetary Amount:	750
Paid Amount:	Not reported
Final Count:	1
Final Amount:	750
Found Violation:	Yes
Agency Which Determined Violation:	State
Violation Short Description:	TSD - Financial Requirements
Date Violation was Determined:	1987-02-24 00:00:00.0
Actual Return to Compliance Date:	1993-09-13 00:00:00.0
Return to Compliance Qualifier:	Observed
Violation Responsible Agency:	State
Scheduled Compliance Date:	Not reported

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MAP FINDINGS

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Database(s)

EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

Enforcement Identifier: 001
Date of Enforcement Action: 1987-05-11 00:00:00.0
Enforcement Responsible Agency: State
Enforcement Docket Number: Not reported
Enforcement Attorney: Not reported
Corrective Action Component: No
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: WRITTEN INFORMAL
Enforcement Responsible Person: R9STA
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported
Final Amount: Not reported

Found Violation: No
Agency Which Determined Violation: Not reported
Violation Short Description: Not reported
Date Violation was Determined: Not reported
Actual Return to Compliance Date: Not reported
Return to Compliance Qualifier: Not reported
Violation Responsible Agency: Not reported
Scheduled Compliance Date: Not reported
Enforcement Identifier: Not reported
Date of Enforcement Action: Not reported
Enforcement Responsible Agency: Not reported
Enforcement Docket Number: Not reported
Enforcement Attorney: Not reported
Corrective Action Component: Not reported
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: Not reported
Enforcement Responsible Person: Not reported
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported

Map ID
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MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported
Final Amount: Not reported

Found Violation: No
Agency Which Determined Violation: Not reported
Violation Short Description: Not reported
Date Violation was Determined: Not reported
Actual Return to Compliance Date: Not reported
Return to Compliance Qualifier: Not reported
Violation Responsible Agency: Not reported
Scheduled Compliance Date: Not reported
Enforcement Identifier: Not reported
Date of Enforcement Action: Not reported
Enforcement Responsible Agency: Not reported
Enforcement Docket Number: Not reported
Enforcement Attorney: Not reported
Corrective Action Component: Not reported
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: Not reported
Enforcement Responsible Person: Not reported
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported
Final Amount: Not reported

Found Violation: No
Agency Which Determined Violation: Not reported
Violation Short Description: Not reported
Date Violation was Determined: Not reported
Actual Return to Compliance Date: Not reported
Return to Compliance Qualifier: Not reported
Violation Responsible Agency: Not reported
Scheduled Compliance Date: Not reported

Map ID
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MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

Enforcement Identifier:	Not reported
Date of Enforcement Action:	Not reported
Enforcement Responsible Agency:	Not reported
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	Not reported
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	Not reported
Enforcement Responsible Person:	Not reported
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported
Found Violation:	Yes
Agency Which Determined Violation:	State
Violation Short Description:	TSD - General
Date Violation was Determined:	1993-07-01 00:00:00.0
Actual Return to Compliance Date:	1994-05-13 00:00:00.0
Return to Compliance Qualifier:	Observed
Violation Responsible Agency:	State
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	012
Date of Enforcement Action:	1993-07-01 00:00:00.0
Enforcement Responsible Agency:	State
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	No
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	WRITTEN INFORMAL
Enforcement Responsible Person:	R9STA
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported

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MAP FINDINGS

Site

Database(s)

EDR ID Number
 EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported
Found Violation:	Yes
Agency Which Determined Violation:	State
Violation Short Description:	TSD - Financial Requirements
Date Violation was Determined:	1987-02-24 00:00:00.0
Actual Return to Compliance Date:	1993-09-13 00:00:00.0
Return to Compliance Qualifier:	Observed
Violation Responsible Agency:	State
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	001
Date of Enforcement Action:	1988-09-30 00:00:00.0
Enforcement Responsible Agency:	EPA
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	No
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	INITIAL CIVIL JUDICIAL ACTION FOR COMPLIANCE AND/OR MONETARY PENALTY
Enforcement Responsible Person:	R9EPA
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported
Found Violation:	Yes
Agency Which Determined Violation:	State
Violation Short Description:	TSD - Closure/Post-Closure
Date Violation was Determined:	2005-11-16 00:00:00.0
Actual Return to Compliance Date:	2005-12-16 00:00:00.0
Return to Compliance Qualifier:	Documented
Violation Responsible Agency:	State
Scheduled Compliance Date:	Not reported

Map ID
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Elevation

MAP FINDINGS

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Database(s)

EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

Enforcement Identifier: 200
Date of Enforcement Action: 2005-11-16 00:00:00.0
Enforcement Responsible Agency: State
Enforcement Docket Number: Not reported
Enforcement Attorney: Not reported
Corrective Action Component: No
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: Not reported
Enforcement Responsible Person: Not reported
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported
Final Amount: Not reported

Evaluation Action Summary:

Evaluation Date: 2017-09-20 00:00:00.0
Evaluation Responsible Agency: State
Found Violation: Yes
Evaluation Type Description: SIGNIFICANT NON-COMPLIER
Evaluation Responsible Person Identifier: Not reported
Evaluation Responsible Sub-Organization: Not reported
Actual Return to Compliance Date: Not reported
Scheduled Compliance Date: Not reported
Date of Request: Not reported
Date Response Received: Not reported
Request Agency: Not reported
Former Citation: Not reported

Evaluation Date: 1993-06-28 00:00:00.0
Evaluation Responsible Agency: State
Found Violation: Yes
Evaluation Type Description: COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier: R9STA
Evaluation Responsible Sub-Organization: Not reported
Actual Return to Compliance Date: 1994-05-13 00:00:00.0
Scheduled Compliance Date: Not reported
Date of Request: Not reported
Date Response Received: Not reported
Request Agency: Not reported
Former Citation: Not reported

Map ID
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MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

Evaluation Date: 2011-11-21 00:00:00.0
Evaluation Responsible Agency: State
Found Violation: No
Evaluation Type Description: COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier: Not reported
Evaluation Responsible Sub-Organization: Not reported
Actual Return to Compliance Date: Not reported
Scheduled Compliance Date: Not reported
Date of Request: Not reported
Date Response Received: Not reported
Request Agency: Not reported
Former Citation: Not reported

Evaluation Date: 2015-07-07 00:00:00.0
Evaluation Responsible Agency: State
Found Violation: No
Evaluation Type Description: FINANCIAL RECORD REVIEW
Evaluation Responsible Person Identifier: Not reported
Evaluation Responsible Sub-Organization: Not reported
Actual Return to Compliance Date: Not reported
Scheduled Compliance Date: Not reported
Date of Request: Not reported
Date Response Received: Not reported
Request Agency: Not reported
Former Citation: Not reported

Evaluation Date: 1989-01-28 00:00:00.0
Evaluation Responsible Agency: State
Found Violation: Yes
Evaluation Type Description: COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier: R9STA
Evaluation Responsible Sub-Organization: Not reported
Actual Return to Compliance Date: 1989-03-22 00:00:00.0
Scheduled Compliance Date: 1989-02-28 00:00:00.0
Date of Request: Not reported
Date Response Received: Not reported
Request Agency: Not reported
Former Citation: Not reported

Evaluation Date: 2001-01-10 00:00:00.0
Evaluation Responsible Agency: State
Found Violation: Yes
Evaluation Type Description: COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier: Not reported
Evaluation Responsible Sub-Organization: Not reported
Actual Return to Compliance Date: 2001-05-11 00:00:00.0
Scheduled Compliance Date: Not reported
Date of Request: Not reported
Date Response Received: Not reported
Request Agency: Not reported
Former Citation: Not reported

Evaluation Date: 2017-10-19 00:00:00.0
Evaluation Responsible Agency: State
Found Violation: No
Evaluation Type Description: COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier: Not reported

Map ID
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MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	Not reported
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	2017-09-20 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	SIGNIFICANT NON-COMPLIER
Evaluation Responsible Person Identifier:	Not reported
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	Not reported
Scheduled Compliance Date:	2017-10-20 00:00:00.0
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	2012-10-29 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	No
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	Not reported
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	Not reported
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	1997-02-21 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	R9STA
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	1997-03-07 00:00:00.0
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	2017-09-20 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	SIGNIFICANT NON-COMPLIER
Evaluation Responsible Person Identifier:	Not reported
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	Not reported
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported

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MAP FINDINGS

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Database(s)

EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	2006-10-26 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	No
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	Not reported
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	Not reported
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	1994-05-20 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	R9STA
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	1994-08-29 00:00:00.0
Scheduled Compliance Date:	1994-07-16 00:00:00.0
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	1989-10-26 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	R9STA
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	1990-01-03 00:00:00.0
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	1997-02-21 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	R9STA
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	1997-03-07 00:00:00.0
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	2001-12-13 00:00:00.0
Evaluation Responsible Agency:	State

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MAP FINDINGS

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Database(s)

EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

Found Violation:	No
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	Not reported
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	Not reported
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	1991-10-07 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	GROUNDWATER MONITORING EVALUATION
Evaluation Responsible Person Identifier:	R9STA
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	1993-09-13 00:00:00.0
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	1992-01-23 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	No
Evaluation Type Description:	SIGNIFICANT NON-COMPLIER
Evaluation Responsible Person Identifier:	Not reported
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	Not reported
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	1987-02-23 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	NON-FINANCIAL RECORD REVIEW
Evaluation Responsible Person Identifier:	R9STA
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	1990-01-03 00:00:00.0
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	1994-05-20 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	R9STA
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	1994-08-29 00:00:00.0

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Database(s)

EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

Scheduled Compliance Date: 1994-07-16 00:00:00.0
Date of Request: Not reported
Date Response Received: Not reported
Request Agency: Not reported
Former Citation: Not reported

Evaluation Date: 1993-06-28 00:00:00.0
Evaluation Responsible Agency: State
Found Violation: Yes
Evaluation Type Description: COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier: R9STA
Evaluation Responsible Sub-Organization: Not reported
Actual Return to Compliance Date: 1994-05-13 00:00:00.0
Scheduled Compliance Date: Not reported
Date of Request: Not reported
Date Response Received: Not reported
Request Agency: Not reported
Former Citation: Not reported

Evaluation Date: 1991-10-21 00:00:00.0
Evaluation Responsible Agency: EPA Contractor/Grantee
Found Violation: Yes
Evaluation Type Description: FINANCIAL RECORD REVIEW
Evaluation Responsible Person Identifier: R9EPA
Evaluation Responsible Sub-Organization: Not reported
Actual Return to Compliance Date: 1991-10-21 00:00:00.0
Scheduled Compliance Date: Not reported
Date of Request: Not reported
Date Response Received: Not reported
Request Agency: Not reported
Former Citation: Not reported

Evaluation Date: 1998-06-22 00:00:00.0
Evaluation Responsible Agency: State
Found Violation: No
Evaluation Type Description: COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier: R9STA
Evaluation Responsible Sub-Organization: Not reported
Actual Return to Compliance Date: Not reported
Scheduled Compliance Date: Not reported
Date of Request: Not reported
Date Response Received: Not reported
Request Agency: Not reported
Former Citation: Not reported

Evaluation Date: 1991-03-04 00:00:00.0
Evaluation Responsible Agency: State
Found Violation: Yes
Evaluation Type Description: COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier: R9STA
Evaluation Responsible Sub-Organization: Not reported
Actual Return to Compliance Date: 1991-09-18 00:00:00.0
Scheduled Compliance Date: Not reported
Date of Request: Not reported
Date Response Received: Not reported
Request Agency: Not reported
Former Citation: Not reported

Map ID
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MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

Evaluation Date: 1991-03-04 00:00:00.0
Evaluation Responsible Agency: State
Found Violation: Yes
Evaluation Type Description: COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier: R9STA
Evaluation Responsible Sub-Organization: Not reported
Actual Return to Compliance Date: 1991-09-18 00:00:00.0
Scheduled Compliance Date: Not reported
Date of Request: Not reported
Date Response Received: Not reported
Request Agency: Not reported
Former Citation: Not reported

Evaluation Date: 1989-11-06 00:00:00.0
Evaluation Responsible Agency: State
Found Violation: Yes
Evaluation Type Description: FINANCIAL RECORD REVIEW
Evaluation Responsible Person Identifier: R9STA
Evaluation Responsible Sub-Organization: Not reported
Actual Return to Compliance Date: 1990-05-21 00:00:00.0
Scheduled Compliance Date: Not reported
Date of Request: Not reported
Date Response Received: Not reported
Request Agency: Not reported
Former Citation: Not reported

Evaluation Date: 1987-12-28 00:00:00.0
Evaluation Responsible Agency: State
Found Violation: Yes
Evaluation Type Description: FINANCIAL RECORD REVIEW
Evaluation Responsible Person Identifier: R9STA
Evaluation Responsible Sub-Organization: Not reported
Actual Return to Compliance Date: 1993-09-13 00:00:00.0
Scheduled Compliance Date: Not reported
Date of Request: Not reported
Date Response Received: Not reported
Request Agency: Not reported
Former Citation: Not reported

Evaluation Date: 2001-01-10 00:00:00.0
Evaluation Responsible Agency: State
Found Violation: Yes
Evaluation Type Description: COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier: Not reported
Evaluation Responsible Sub-Organization: Not reported
Actual Return to Compliance Date: 2001-05-11 00:00:00.0
Scheduled Compliance Date: Not reported
Date of Request: Not reported
Date Response Received: Not reported
Request Agency: Not reported
Former Citation: Not reported

Evaluation Date: 2017-09-20 00:00:00.0
Evaluation Responsible Agency: State
Found Violation: Yes
Evaluation Type Description: SIGNIFICANT NON-COMPLIER
Evaluation Responsible Person Identifier: Not reported

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MAP FINDINGS

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Database(s)

EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	Not reported
Scheduled Compliance Date:	2017-10-20 00:00:00.0
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	1991-10-07 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	GROUNDWATER MONITORING EVALUATION
Evaluation Responsible Person Identifier:	R9STA
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	1993-09-13 00:00:00.0
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	2017-09-20 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	SIGNIFICANT NON-COMPLIER
Evaluation Responsible Person Identifier:	Not reported
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	Not reported
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	1993-06-28 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	R9STA
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	1994-05-13 00:00:00.0
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	1993-09-13 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	No
Evaluation Type Description:	NOT A SIGNIFICANT NON-COMPLIER
Evaluation Responsible Person Identifier:	Not reported
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	Not reported
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported

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Database(s)

EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	2001-01-10 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	No
Evaluation Type Description:	FINANCIAL RECORD REVIEW
Evaluation Responsible Person Identifier:	Not reported
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	Not reported
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	1989-10-26 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	R9STA
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	1990-01-03 00:00:00.0
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	1996-02-09 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	R9STA
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	1996-04-17 00:00:00.0
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	1993-07-23 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	No
Evaluation Type Description:	FINANCIAL RECORD REVIEW
Evaluation Responsible Person Identifier:	R9STA
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	Not reported
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	1987-02-24 00:00:00.0
Evaluation Responsible Agency:	State

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Database(s)

EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

Found Violation:	Yes
Evaluation Type Description:	FINANCIAL RECORD REVIEW
Evaluation Responsible Person Identifier:	R9STA
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	1993-09-13 00:00:00.0
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	1988-12-28 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	R9STA
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	1989-03-02 00:00:00.0
Scheduled Compliance Date:	1989-02-28 00:00:00.0
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	2001-01-10 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	Not reported
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	2001-05-11 00:00:00.0
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	2002-11-19 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	No
Evaluation Type Description:	FINANCIAL RECORD REVIEW
Evaluation Responsible Person Identifier:	Not reported
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	Not reported
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	2017-11-01 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	No
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	Not reported
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	Not reported

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TECHALLOY WESTERN INC (Continued)

1000239144

Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	1994-05-20 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	R9STA
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	1994-08-29 00:00:00.0
Scheduled Compliance Date:	1994-07-16 00:00:00.0
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	2007-06-18 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	Not reported
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	2007-07-18 00:00:00.0
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	1997-02-21 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	R9STA
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	1997-03-07 00:00:00.0
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	2010-11-30 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	Not reported
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	2010-11-30 00:00:00.0
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported

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Database(s)

EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

Evaluation Date:	1987-12-28 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	FINANCIAL RECORD REVIEW
Evaluation Responsible Person Identifier:	R9STA
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	1993-09-13 00:00:00.0
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	2004-04-27 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	Not reported
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	2004-05-27 00:00:00.0
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	1994-05-20 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	R9STA
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	1994-08-29 00:00:00.0
Scheduled Compliance Date:	1994-07-16 00:00:00.0
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	2017-09-20 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	SIGNIFICANT NON-COMPLIER
Evaluation Responsible Person Identifier:	Not reported
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	Not reported
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	1991-03-04 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	R9STA

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Database(s)

EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

Evaluation Responsible Sub-Organization: Not reported
Actual Return to Compliance Date: 1991-09-18 00:00:00.0
Scheduled Compliance Date: Not reported
Date of Request: Not reported
Date Response Received: Not reported
Request Agency: Not reported
Former Citation: Not reported

Evaluation Date: 1992-04-27 00:00:00.0
Evaluation Responsible Agency: State
Found Violation: No
Evaluation Type Description: COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier: R9STA
Evaluation Responsible Sub-Organization: Not reported
Actual Return to Compliance Date: Not reported
Scheduled Compliance Date: Not reported
Date of Request: Not reported
Date Response Received: Not reported
Request Agency: Not reported
Former Citation: Not reported

Evaluation Date: 2004-02-19 00:00:00.0
Evaluation Responsible Agency: State
Found Violation: No
Evaluation Type Description: COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier: Not reported
Evaluation Responsible Sub-Organization: Not reported
Actual Return to Compliance Date: Not reported
Scheduled Compliance Date: Not reported
Date of Request: Not reported
Date Response Received: Not reported
Request Agency: Not reported
Former Citation: Not reported

Evaluation Date: 1993-06-28 00:00:00.0
Evaluation Responsible Agency: State
Found Violation: Yes
Evaluation Type Description: COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier: R9STA
Evaluation Responsible Sub-Organization: Not reported
Actual Return to Compliance Date: 1994-05-13 00:00:00.0
Scheduled Compliance Date: Not reported
Date of Request: Not reported
Date Response Received: Not reported
Request Agency: Not reported
Former Citation: Not reported

Evaluation Date: 1988-12-01 00:00:00.0
Evaluation Responsible Agency: State
Found Violation: Yes
Evaluation Type Description: FINANCIAL RECORD REVIEW
Evaluation Responsible Person Identifier: R9STA
Evaluation Responsible Sub-Organization: Not reported
Actual Return to Compliance Date: 1990-05-21 00:00:00.0
Scheduled Compliance Date: Not reported
Date of Request: Not reported
Date Response Received: Not reported

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Database(s)

EDR ID Number
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TECHALLOY WESTERN INC (Continued)

1000239144

Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	1994-05-20 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	R9STA
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	1994-08-29 00:00:00.0
Scheduled Compliance Date:	1994-07-16 00:00:00.0
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	2017-09-22 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	No
Evaluation Type Description:	NOT A SIGNIFICANT NON-COMPLIER
Evaluation Responsible Person Identifier:	Not reported
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	Not reported
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	1988-12-01 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	FINANCIAL RECORD REVIEW
Evaluation Responsible Person Identifier:	R9STA
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	1990-05-21 00:00:00.0
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	2014-09-16 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	Not reported
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	2014-10-16 00:00:00.0
Scheduled Compliance Date:	2014-10-16 00:00:00.0
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	1987-02-23 00:00:00.0
Evaluation Responsible Agency:	State

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Database(s)

EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

Found Violation:	No
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	R9STA
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	Not reported
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	2005-05-16 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	No
Evaluation Type Description:	FINANCIAL RECORD REVIEW
Evaluation Responsible Person Identifier:	Not reported
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	Not reported
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	1993-06-28 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	R9STA
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	1994-05-13 00:00:00.0
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	2017-03-07 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	FOCUSED COMPLIANCE INSPECTION
Evaluation Responsible Person Identifier:	Not reported
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	2017-03-14 00:00:00.0
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	2014-10-16 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	No
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	Not reported
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	Not reported

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EDR ID Number
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TECHALLOY WESTERN INC (Continued)

1000239144

Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	2013-01-17 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	No
Evaluation Type Description:	FINANCIAL RECORD REVIEW
Evaluation Responsible Person Identifier:	Not reported
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	Not reported
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	2004-06-28 00:00:00.0
Evaluation Responsible Agency:	State Contractor/Grantee
Found Violation:	Yes
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	Not reported
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	2004-07-19 00:00:00.0
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	2006-09-22 00:00:00.0
Evaluation Responsible Agency:	EPA Contractor/Grantee
Found Violation:	Undetermined
Evaluation Type Description:	FINANCIAL RECORD REVIEW
Evaluation Responsible Person Identifier:	KSAVA
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	Not reported
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	2014-09-16 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	Not reported
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	2014-10-16 00:00:00.0
Scheduled Compliance Date:	2014-10-16 00:00:00.0
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported

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EDR ID Number
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TECHALLOY WESTERN INC (Continued)

1000239144

Evaluation Date: 1993-06-28 00:00:00.0
Evaluation Responsible Agency: State
Found Violation: Yes
Evaluation Type Description: COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier: R9STA
Evaluation Responsible Sub-Organization: Not reported
Actual Return to Compliance Date: 1994-05-13 00:00:00.0
Scheduled Compliance Date: Not reported
Date of Request: Not reported
Date Response Received: Not reported
Request Agency: Not reported
Former Citation: Not reported

Evaluation Date: 1996-02-09 00:00:00.0
Evaluation Responsible Agency: State
Found Violation: Yes
Evaluation Type Description: COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier: R9STA
Evaluation Responsible Sub-Organization: Not reported
Actual Return to Compliance Date: 1996-03-07 00:00:00.0
Scheduled Compliance Date: Not reported
Date of Request: Not reported
Date Response Received: Not reported
Request Agency: Not reported
Former Citation: Not reported

Evaluation Date: 1993-06-28 00:00:00.0
Evaluation Responsible Agency: State
Found Violation: Yes
Evaluation Type Description: COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier: R9STA
Evaluation Responsible Sub-Organization: Not reported
Actual Return to Compliance Date: 1994-05-13 00:00:00.0
Scheduled Compliance Date: Not reported
Date of Request: Not reported
Date Response Received: Not reported
Request Agency: Not reported
Former Citation: Not reported

Evaluation Date: 2002-10-29 00:00:00.0
Evaluation Responsible Agency: State
Found Violation: No
Evaluation Type Description: COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier: Not reported
Evaluation Responsible Sub-Organization: Not reported
Actual Return to Compliance Date: Not reported
Scheduled Compliance Date: Not reported
Date of Request: Not reported
Date Response Received: Not reported
Request Agency: Not reported
Former Citation: Not reported

Evaluation Date: 2014-09-16 00:00:00.0
Evaluation Responsible Agency: State
Found Violation: Yes
Evaluation Type Description: COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier: Not reported

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TECHALLOY WESTERN INC (Continued)

1000239144

Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	2014-10-16 00:00:00.0
Scheduled Compliance Date:	2014-10-16 00:00:00.0
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	1997-02-21 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	R9STA
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	1997-03-20 00:00:00.0
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	2008-04-22 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	No
Evaluation Type Description:	FINANCIAL RECORD REVIEW
Evaluation Responsible Person Identifier:	Not reported
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	Not reported
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	2005-12-08 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	No
Evaluation Type Description:	FINANCIAL RECORD REVIEW
Evaluation Responsible Person Identifier:	Not reported
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	Not reported
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	2017-09-20 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	SIGNIFICANT NON-COMPLIER
Evaluation Responsible Person Identifier:	Not reported
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	Not reported
Scheduled Compliance Date:	2017-10-20 00:00:00.0
Date of Request:	Not reported
Date Response Received:	Not reported

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	1989-11-06 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	FINANCIAL RECORD REVIEW
Evaluation Responsible Person Identifier:	R9STA
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	1990-05-21 00:00:00.0
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	1993-06-28 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	R9STA
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	1994-05-13 00:00:00.0
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	2014-10-16 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	No
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	Not reported
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	Not reported
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	1986-09-30 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	No
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	R9STA
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	Not reported
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	1988-01-07 00:00:00.0
Evaluation Responsible Agency:	State

Map ID
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MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

Found Violation:	Yes
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	R9STA
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	1990-01-03 00:00:00.0
Scheduled Compliance Date:	1988-02-29 00:00:00.0
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	1989-11-06 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	FINANCIAL RECORD REVIEW
Evaluation Responsible Person Identifier:	R9STA
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	1990-05-21 00:00:00.0
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	1993-06-28 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	R9STA
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	1994-05-13 00:00:00.0
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	2019-04-29 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	No
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	Not reported
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	Not reported
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	1993-03-11 00:00:00.0
Evaluation Responsible Agency:	EPA
Found Violation:	No
Evaluation Type Description:	CORRECTIVE ACTION COMPLIANCE EVALUATION
Evaluation Responsible Person Identifier:	R9EPA
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	Not reported

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Database(s)

EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	2017-09-20 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	SIGNIFICANT NON-COMPLIER
Evaluation Responsible Person Identifier:	Not reported
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	Not reported
Scheduled Compliance Date:	2017-10-20 00:00:00.0
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	2001-11-16 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	No
Evaluation Type Description:	FINANCIAL RECORD REVIEW
Evaluation Responsible Person Identifier:	Not reported
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	Not reported
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	2017-11-06 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	No
Evaluation Type Description:	FINANCIAL RECORD REVIEW
Evaluation Responsible Person Identifier:	Not reported
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	Not reported
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	2017-09-20 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	SIGNIFICANT NON-COMPLIER
Evaluation Responsible Person Identifier:	Not reported
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	Not reported
Scheduled Compliance Date:	2017-10-20 00:00:00.0
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported

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Database(s)

EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

Evaluation Date:	2011-01-20 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	No
Evaluation Type Description:	FINANCIAL RECORD REVIEW
Evaluation Responsible Person Identifier:	Not reported
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	Not reported
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	2006-10-24 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	No
Evaluation Type Description:	FINANCIAL RECORD REVIEW
Evaluation Responsible Person Identifier:	Not reported
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	Not reported
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	1996-01-08 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	No
Evaluation Type Description:	OPERATION AND MAINTENANCE INSPECTION
Evaluation Responsible Person Identifier:	R9STA
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	Not reported
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	1994-05-20 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	R9STA
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	1994-08-29 00:00:00.0
Scheduled Compliance Date:	1994-07-16 00:00:00.0
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	1999-02-24 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	No
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	Not reported

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Database(s)

EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	Not reported
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	1991-10-07 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	GROUNDWATER MONITORING EVALUATION
Evaluation Responsible Person Identifier:	R9STA
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	1993-09-13 00:00:00.0
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	1991-03-04 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	R9STA
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	1991-09-18 00:00:00.0
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	2005-07-27 00:00:00.0
Evaluation Responsible Agency:	State Contractor/Grantee
Found Violation:	No
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	Not reported
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	Not reported
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	1993-06-28 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	R9STA
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	1994-05-13 00:00:00.0
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported

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Database(s)

EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	1993-06-28 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	R9STA
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	1994-05-13 00:00:00.0
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	1987-02-24 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	FINANCIAL RECORD REVIEW
Evaluation Responsible Person Identifier:	R9STA
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	1993-09-13 00:00:00.0
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	2018-08-01 00:00:00.0
Evaluation Responsible Agency:	EPA
Found Violation:	No
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	DFERN
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	Not reported
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	2004-02-17 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	No
Evaluation Type Description:	FINANCIAL RECORD REVIEW
Evaluation Responsible Person Identifier:	Not reported
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	Not reported
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	2008-02-29 00:00:00.0
Evaluation Responsible Agency:	State

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Database(s)

EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

Found Violation:	No
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	Not reported
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	Not reported
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	1993-06-28 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	R9STA
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	1994-05-13 00:00:00.0
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	1987-02-24 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	FINANCIAL RECORD REVIEW
Evaluation Responsible Person Identifier:	R9STA
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	1993-09-13 00:00:00.0
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	2005-11-16 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	Not reported
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	2005-12-16 00:00:00.0
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported

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Database(s)

EDR ID Number
 EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

RCRA-LQG:
 Date Form Received by Agency: 2018-02-15 00:00:00.0
 Handler Name: CENTRAL WIRE INC
 Handler Address: 2500 SOUTH A STREET
 Handler City,State,Zip: PERRIS, CA 92570-9317
 EPA ID: CAD059277137
 Contact Name: STEFANO PELLEGRINI
 Contact Address: SOUTH A STREET
 Contact City,State,Zip: PERRIS, CA 92570-9317
 Contact Telephone: 951-657-2105
 Contact Fax: 951-943-6061
 Contact Email: STEFANO.PELLEGRINI@CENTRALWIRE.COM
 Contact Title: PLANT MANAGER
 EPA Region: 09
 Land Type: Private
 Federal Waste Generator Description: Large Quantity Generator
 Non-Notifier: Not reported
 Biennial Report Cycle: 2017
 Accessibility: Not reported
 Active Site Indicator: Handler Activities, Permitting Activities, Corrective Action Activities
 State District Owner: Not reported
 State District: Not reported
 Mailing Address: SOUTH A STREET
 Mailing City,State,Zip: PERRIS, CA 92570-9317
 Owner Name: CENTRAL WIRE
 Owner Type: Private
 Operator Name: CENTRAL WIRE
 Operator Type: Private
 Short-Term Generator Activity: No
 Importer Activity: No
 Mixed Waste Generator: No
 Transporter Activity: No
 Transfer Facility Activity: No
 Recycler Activity with Storage: No
 Small Quantity On-Site Burner Exemption: No
 Smelting Melting and Refining Furnace Exemption: No
 Underground Injection Control: No
 Off-Site Waste Receipt: No
 Universal Waste Indicator: No
 Universal Waste Destination Facility: No
 Federal Universal Waste: No
 Active Site Fed-Reg Treatment Storage and Disposal Facility: Land Disposal
 Active Site Converter Treatment storage and Disposal Facility: Not reported
 Active Site State-Reg Treatment Storage and Disposal Facility: Not reported
 Active Site State-Reg Handler: ---
 Federal Facility Indicator: Not reported
 Hazardous Secondary Material Indicator: NN
 Sub-Part K Indicator: Not reported
 Commercial TSD Indicator: No
 Treatment Storage and Disposal Type: Land Disposal, Storage, Treatment
 2018 GPRA Permit Baseline: Not on the Baseline
 2018 GPRA Renewals Baseline: Accomplished
 Permit Renewals Workload Universe: Not reported
 Permit Workload Universe: Not reported
 Permit Progress Universe: Land Disposal, Storage, Treatment
 Post-Closure Workload Universe: Land Disposal

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EDR ID Number
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TECHALLOY WESTERN INC (Continued)

1000239144

Closure Workload Universe:	Not reported
202 GPRA Corrective Action Baseline:	Yes
Corrective Action Workload Universe:	Yes
Subject to Corrective Action Universe:	Yes
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
TSDFs Potentially Subject to CA Under 3004 (u)/(v) Universe:	Yes
TSDFs Only Subject to CA under Discretionary Auth Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	Yes
Human Exposure Controls Indicator:	Yes
Groundwater Controls Indicator:	Yes
Operating TSDF Universe:	Not reported
Full Enforcement Universe:	Land Disposal
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Corrective Action, Post-Closure Care
Handler Date of Last Change:	2018-11-26 18:57:03.0
Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Recycler Activity Without Storage:	No
Manifest Broker:	No
Sub-Part P Indicator:	Not reported

Biennial: List of Years

Year: 2017

Click Here for Biennial Reporting System Data:
Year: 2015

Click Here for Biennial Reporting System Data:
Year: 2009

Click Here for Biennial Reporting System Data:
Year: 2007

Click Here for Biennial Reporting System Data:
Year: 2005

Click Here for Biennial Reporting System Data:
Year: 2003

Click Here for Biennial Reporting System Data:
Year: 2001

Click Here for Biennial Reporting System Data:

Hazardous Waste Summary:

Waste Code: D001
Waste Description: IGNITABLE WASTE

Waste Code: D002

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EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

Waste Description: CORROSIVE WASTE

Waste Code: D003
Waste Description: REACTIVE WASTE

Waste Code: D007
Waste Description: CHROMIUM

Waste Code: F006
Waste Description: WASTEWATER TREATMENT SLUDGES FROM ELECTROPLATING OPERATIONS, EXCEPT FROM THE FOLLOWING PROCESSES: (1) SULFURIC ACID ANODIZING OF ALUMINUM; (2) TIN PLATING ON CARBON STEEL; (3) ZINC PLATING (SEGREGATED BASIS) ON CARBON STEEL; (4) ALUMINUM OR ZINC-ALUMINUM PLATING ON CARBON STEEL; (5) CLEANING/STRIPPING ASSOCIATED WITH TIN, ZINC, AND ALUMINUM PLATING ON CARBON STEEL; AND (6) CHEMICAL ETCHING AND MILLING OF ALUMINUM.

Waste Code: F007
Waste Description: SPENT CYANIDE PLATING BATH SOLUTIONS FROM ELECTROPLATING OPERATIONS.

Waste Code: F008
Waste Description: PLATING BATH RESIDUES FROM THE BOTTOM OF PLATING BATHS FROM ELECTROPLATING OPERATIONS IN WHICH CYANIDES ARE USED IN THE PROCESS.

Handler - Owner Operator:

Owner/Operator Indicator: Operator
Owner/Operator Name: TECHALLOY CO. INC
Legal Status: Private
Date Became Current: 1966-01-01 00:00:00.
Date Ended Current: Not reported
Owner/Operator Address: Not reported
Owner/Operator City,State,Zip: Not reported
Owner/Operator Telephone: Not reported
Owner/Operator Telephone Ext: Not reported
Owner/Operator Fax: Not reported
Owner/Operator Email: Not reported

Owner/Operator Indicator: Owner
Owner/Operator Name: CENTRAL WIRE
Legal Status: Private
Date Became Current: 1966-01-01 00:00:00.
Date Ended Current: Not reported
Owner/Operator Address: 6509 OLSON ROAD
Owner/Operator City,State,Zip: UNION, IL 60180
Owner/Operator Telephone: 815-923-2131
Owner/Operator Telephone Ext: Not reported
Owner/Operator Fax: Not reported
Owner/Operator Email: Not reported

Owner/Operator Indicator: Owner
Owner/Operator Name: TECHALLOY CO. INC.
Legal Status: Private
Date Became Current: 1966-01-01 00:00:00.
Date Ended Current: Not reported
Owner/Operator Address: 370 FRANKLIN TURNPIKE
Owner/Operator City,State,Zip: MAHWAH, NJ 07430
Owner/Operator Telephone: Not reported

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Database(s)

EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported
Owner/Operator Indicator:	Owner
Owner/Operator Name:	TECHALLOY CO INC
Legal Status:	Private
Date Became Current:	1990-01-01 00:00:00.
Date Ended Current:	Not reported
Owner/Operator Address:	370 FRANKLIN TURNPIKE
Owner/Operator City,State,Zip:	MAHWAH, NJ 07430
Owner/Operator Telephone:	Not reported
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported
Owner/Operator Indicator:	Operator
Owner/Operator Name:	TECHALLOY CO. INC.
Legal Status:	Private
Date Became Current:	1966-01-01 00:00:00.
Date Ended Current:	Not reported
Owner/Operator Address:	Not reported
Owner/Operator City,State,Zip:	Not reported
Owner/Operator Telephone:	Not reported
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported
Owner/Operator Indicator:	Operator
Owner/Operator Name:	TECHALLOY CO. INC
Legal Status:	Private
Date Became Current:	1966-01-01 00:00:00.
Date Ended Current:	Not reported
Owner/Operator Address:	Not reported
Owner/Operator City,State,Zip:	Not reported
Owner/Operator Telephone:	Not reported
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported
Owner/Operator Indicator:	Owner
Owner/Operator Name:	CENTRAL WIRE
Legal Status:	Private
Date Became Current:	1966-01-01 00:00:00.
Date Ended Current:	Not reported
Owner/Operator Address:	6509 OLSON ROAD
Owner/Operator City,State,Zip:	UNION, IL 60180
Owner/Operator Telephone:	951-657-2105
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported
Owner/Operator Indicator:	Operator
Owner/Operator Name:	CENTRAL WIRE
Legal Status:	Private
Date Became Current:	1966-01-01 00:00:00.
Date Ended Current:	Not reported

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Database(s)

EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

Owner/Operator Address: 2500 SOUTH A STREET
Owner/Operator City,State,Zip: PERRIS, CA 92570-9317
Owner/Operator Telephone: 951-657-2105
Owner/Operator Telephone Ext: Not reported
Owner/Operator Fax: Not reported
Owner/Operator Email: STEFANO.PELLEGRINI@CENTRALWIRE.COM

Owner/Operator Indicator: Operator
Owner/Operator Name: KEN GOLD
Legal Status: Private
Date Became Current: 1990-01-01 00:00:00.
Date Ended Current: Not reported
Owner/Operator Address: Not reported
Owner/Operator City,State,Zip: Not reported
Owner/Operator Telephone: Not reported
Owner/Operator Telephone Ext: Not reported
Owner/Operator Fax: Not reported
Owner/Operator Email: Not reported

Owner/Operator Indicator: Owner
Owner/Operator Name: TECHALLOY CO. INC
Legal Status: Private
Date Became Current: 1966-01-01 00:00:00.
Date Ended Current: Not reported
Owner/Operator Address: 6509 OLSON ROAD
Owner/Operator City,State,Zip: UNION, IL 60180
Owner/Operator Telephone: 815-923-2131
Owner/Operator Telephone Ext: Not reported
Owner/Operator Fax: Not reported
Owner/Operator Email: Not reported

Owner/Operator Indicator: Owner
Owner/Operator Name: TECHALLOY CO INC
Legal Status: Private
Date Became Current: Not reported
Date Ended Current: Not reported
Owner/Operator Address: 84 BUSINESS PARK RD
Owner/Operator City,State,Zip: ARMONK, NY 10504
Owner/Operator Telephone: 914-273-4500
Owner/Operator Telephone Ext: Not reported
Owner/Operator Fax: Not reported
Owner/Operator Email: Not reported

Owner/Operator Indicator: Operator
Owner/Operator Name: CENTRAL WIRE
Legal Status: Private
Date Became Current: 1966-01-01 00:00:00.
Date Ended Current: Not reported
Owner/Operator Address: Not reported
Owner/Operator City,State,Zip: Not reported
Owner/Operator Telephone: Not reported
Owner/Operator Telephone Ext: Not reported
Owner/Operator Fax: Not reported
Owner/Operator Email: Not reported

Owner/Operator Indicator: Operator
Owner/Operator Name: TECHALLOY WESTERN INC

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TECHALLOY WESTERN INC (Continued)

1000239144

Legal Status: Private
Date Became Current: Not reported
Date Ended Current: Not reported
Owner/Operator Address: 2500 S A STREET
Owner/Operator City,State,Zip: CITY NOT REPORTED, CA 99999
Owner/Operator Telephone: 714-657-2105
Owner/Operator Telephone Ext: Not reported
Owner/Operator Fax: Not reported
Owner/Operator Email: Not reported

Owner/Operator Indicator: Owner
Owner/Operator Name: TECHALLOY CO. INC
Legal Status: Private
Date Became Current: 1966-01-01 00:00:00.
Date Ended Current: Not reported
Owner/Operator Address: P.O. BOX 423
Owner/Operator City,State,Zip: UNION, IL 60180
Owner/Operator Telephone: Not reported
Owner/Operator Telephone Ext: Not reported
Owner/Operator Fax: Not reported
Owner/Operator Email: Not reported

Historic Generators:

Receive Date: 2010-02-23 00:00:00.0
Handler Name: TECHALLOY CO. INC
Federal Waste Generator Description: Large Quantity Generator
State District Owner: Not reported
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: No
Non Storage Recycler Activity: Not reported
Electronic Manifest Broker: Not reported

Receive Date: 2016-02-18 00:00:00.0
Handler Name: CENTRAL WIRE
Federal Waste Generator Description: Large Quantity Generator
State District Owner: Not reported
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: No
Non Storage Recycler Activity: Not reported
Electronic Manifest Broker: Not reported

Receive Date: 2018-02-15 00:00:00.0
Handler Name: CENTRAL WIRE INC
Federal Waste Generator Description: Large Quantity Generator
State District Owner: Not reported
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No

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TECHALLOY WESTERN INC (Continued)

1000239144

Spent Lead Acid Battery Exporter:	No
Current Record:	Yes
Non Storage Recycler Activity:	No
Electronic Manifest Broker:	No
Receive Date:	1996-09-01 00:00:00.0
Handler Name:	TECHALLOY WESTERN INC
Federal Waste Generator Description:	Large Quantity Generator
State District Owner:	Not reported
Large Quantity Handler of Universal Waste:	No
Recognized Trader Importer:	No
Recognized Trader Exporter:	No
Spent Lead Acid Battery Importer:	No
Spent Lead Acid Battery Exporter:	No
Current Record:	No
Non Storage Recycler Activity:	Not reported
Electronic Manifest Broker:	Not reported
Receive Date:	1980-08-18 00:00:00.0
Handler Name:	TECHALLOY WESTERN INC
Federal Waste Generator Description:	Large Quantity Generator
State District Owner:	Not reported
Large Quantity Handler of Universal Waste:	No
Recognized Trader Importer:	No
Recognized Trader Exporter:	No
Spent Lead Acid Battery Importer:	No
Spent Lead Acid Battery Exporter:	No
Current Record:	No
Non Storage Recycler Activity:	Not reported
Electronic Manifest Broker:	Not reported
Receive Date:	1980-08-18 00:00:00.0
Handler Name:	TECHALLOY WESTERN INC
Federal Waste Generator Description:	Large Quantity Generator
State District Owner:	Not reported
Large Quantity Handler of Universal Waste:	No
Recognized Trader Importer:	No
Recognized Trader Exporter:	No
Spent Lead Acid Battery Importer:	No
Spent Lead Acid Battery Exporter:	No
Current Record:	No
Non Storage Recycler Activity:	Not reported
Electronic Manifest Broker:	Not reported
Receive Date:	1998-02-05 00:00:00.0
Handler Name:	TECHALLOY WESTERN INC
Federal Waste Generator Description:	Large Quantity Generator
State District Owner:	Not reported
Large Quantity Handler of Universal Waste:	No
Recognized Trader Importer:	No
Recognized Trader Exporter:	No
Spent Lead Acid Battery Importer:	No
Spent Lead Acid Battery Exporter:	No
Current Record:	No
Non Storage Recycler Activity:	Not reported
Electronic Manifest Broker:	Not reported

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TECHALLOY WESTERN INC (Continued)

1000239144

Receive Date: 1990-04-16 00:00:00.0
Handler Name: TECHALLOY CO INC
Federal Waste Generator Description: Large Quantity Generator
State District Owner: Not reported
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: No
Non Storage Recycler Activity: Not reported
Electronic Manifest Broker: Not reported

Receive Date: 1992-02-28 00:00:00.0
Handler Name: TECHALLOY CO., INC.
Federal Waste Generator Description: Large Quantity Generator
State District Owner: Not reported
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: No
Non Storage Recycler Activity: Not reported
Electronic Manifest Broker: Not reported

Receive Date: 1994-04-11 00:00:00.0
Handler Name: TECHALLOY CO. INC.
Federal Waste Generator Description: Large Quantity Generator
State District Owner: Not reported
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: No
Non Storage Recycler Activity: Not reported
Electronic Manifest Broker: Not reported

Receive Date: 1996-02-29 00:00:00.0
Handler Name: TECHALLOY CO INC
Federal Waste Generator Description: Large Quantity Generator
State District Owner: Not reported
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: No
Non Storage Recycler Activity: Not reported
Electronic Manifest Broker: Not reported

Receive Date: 1999-03-04 00:00:00.0
Handler Name: TECHALLAY CO
Federal Waste Generator Description: Large Quantity Generator
State District Owner: Not reported
Large Quantity Handler of Universal Waste: No

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TECHALLOY WESTERN INC (Continued)

1000239144

Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: No
Non Storage Recycler Activity: Not reported
Electronic Manifest Broker: Not reported

Receive Date: 2000-10-12 00:00:00.0
Handler Name: TECHALLOY CO., INC.
Federal Waste Generator Description: Large Quantity Generator
State District Owner: Not reported
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: No
Non Storage Recycler Activity: Not reported
Electronic Manifest Broker: Not reported

Receive Date: 2002-02-27 00:00:00.0
Handler Name: TECHALLOY CO INC
Federal Waste Generator Description: Large Quantity Generator
State District Owner: Not reported
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: No
Non Storage Recycler Activity: Not reported
Electronic Manifest Broker: Not reported

Receive Date: 2004-03-01 00:00:00.0
Handler Name: TECHALLOY CO INC
Federal Waste Generator Description: Small Quantity Generator
State District Owner: Not reported
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: No
Non Storage Recycler Activity: Not reported
Electronic Manifest Broker: Not reported

Receive Date: 2006-02-17 00:00:00.0
Handler Name: TECHALLOY CO. INC.
Federal Waste Generator Description: Small Quantity Generator
State District Owner: Not reported
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: No

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TECHALLOY WESTERN INC (Continued)

1000239144

Non Storage Recycler Activity: Not reported
Electronic Manifest Broker: Not reported

Receive Date: 2008-02-13 00:00:00.0
Handler Name: TECHALLOY CO. INC
Federal Waste Generator Description: Small Quantity Generator
State District Owner: Not reported
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: No
Non Storage Recycler Activity: Not reported
Electronic Manifest Broker: Not reported

List of NAICS Codes and Descriptions:

NAICS Code: 331222
NAICS Description: STEEL WIRE DRAWING

NAICS Code: 332112
NAICS Description: NONFERROUS FORGING

Facility Has Received Notices of Violation:

Found Violation: Yes
Agency Which Determined Violation: State
Violation Short Description: Generators - Pre-transport
Date Violation was Determined: 2017-09-20 00:00:00.0
Actual Return to Compliance Date: Not reported
Return to Compliance Qualifier: Not reported
Violation Responsible Agency: State
Scheduled Compliance Date: Not reported
Enforcement Identifier: Not reported
Date of Enforcement Action: Not reported
Enforcement Responsible Agency: Not reported
Enforcement Docket Number: Not reported
Enforcement Attorney: Not reported
Corrective Action Component: Not reported
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: Not reported
Enforcement Responsible Person: Not reported
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported

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TECHALLOY WESTERN INC (Continued)

1000239144

Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported
Found Violation:	Yes
Agency Which Determined Violation:	State
Violation Short Description:	Generators - General
Date Violation was Determined:	1993-07-01 00:00:00.0
Actual Return to Compliance Date:	1994-05-13 00:00:00.0
Return to Compliance Qualifier:	Observed
Violation Responsible Agency:	State
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	013
Date of Enforcement Action:	1994-03-09 00:00:00.0
Enforcement Responsible Agency:	State
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	No
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	INITIAL 3008(A) COMPLIANCE
Enforcement Responsible Person:	R9STA
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	1550
Final Monetary Amount:	750
Paid Amount:	Not reported
Final Count:	1
Final Amount:	750
Found Violation:	No
Agency Which Determined Violation:	Not reported
Violation Short Description:	Not reported
Date Violation was Determined:	Not reported
Actual Return to Compliance Date:	Not reported
Return to Compliance Qualifier:	Not reported
Violation Responsible Agency:	Not reported
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	Not reported
Date of Enforcement Action:	Not reported
Enforcement Responsible Agency:	Not reported
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported

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TECHALLOY WESTERN INC (Continued)

1000239144

Corrective Action Component:	Not reported
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	Not reported
Enforcement Responsible Person:	Not reported
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported
Found Violation:	No
Agency Which Determined Violation:	Not reported
Violation Short Description:	Not reported
Date Violation was Determined:	Not reported
Actual Return to Compliance Date:	Not reported
Return to Compliance Qualifier:	Not reported
Violation Responsible Agency:	Not reported
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	Not reported
Date of Enforcement Action:	Not reported
Enforcement Responsible Agency:	Not reported
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	Not reported
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	Not reported
Enforcement Responsible Person:	Not reported
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported

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TECHALLOY WESTERN INC (Continued)

1000239144

Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported
Found Violation:	Yes
Agency Which Determined Violation:	State
Violation Short Description:	TSD - General
Date Violation was Determined:	1989-01-28 00:00:00.0
Actual Return to Compliance Date:	1989-03-22 00:00:00.0
Return to Compliance Qualifier:	Observed
Violation Responsible Agency:	State
Scheduled Compliance Date:	1989-02-28 00:00:00.0
Enforcement Identifier:	006
Date of Enforcement Action:	1989-02-09 00:00:00.0
Enforcement Responsible Agency:	State
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	No
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	WRITTEN INFORMAL
Enforcement Responsible Person:	R9STA
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported
Found Violation:	Yes
Agency Which Determined Violation:	State
Violation Short Description:	TSD - General Facility Standards
Date Violation was Determined:	2001-01-10 00:00:00.0
Actual Return to Compliance Date:	2001-05-11 00:00:00.0
Return to Compliance Qualifier:	Documented
Violation Responsible Agency:	State
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	200
Date of Enforcement Action:	2001-01-10 00:00:00.0
Enforcement Responsible Agency:	State
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported

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TECHALLOY WESTERN INC (Continued)

1000239144

Corrective Action Component:	No
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	Not reported
Enforcement Responsible Person:	Not reported
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported
Found Violation:	No
Agency Which Determined Violation:	Not reported
Violation Short Description:	Not reported
Date Violation was Determined:	Not reported
Actual Return to Compliance Date:	Not reported
Return to Compliance Qualifier:	Not reported
Violation Responsible Agency:	Not reported
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	Not reported
Date of Enforcement Action:	Not reported
Enforcement Responsible Agency:	Not reported
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	Not reported
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	Not reported
Enforcement Responsible Person:	Not reported
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported

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TECHALLOY WESTERN INC (Continued)

1000239144

Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported
Found Violation:	Yes
Agency Which Determined Violation:	State
Violation Short Description:	Generators - Pre-transport
Date Violation was Determined:	2017-09-20 00:00:00.0
Actual Return to Compliance Date:	Not reported
Return to Compliance Qualifier:	Not reported
Violation Responsible Agency:	State
Scheduled Compliance Date:	2017-10-20 00:00:00.0
Enforcement Identifier:	601
Date of Enforcement Action:	2017-09-20 00:00:00.0
Enforcement Responsible Agency:	State
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	No
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	FINAL 3008(A) COMPLIANCE ORDER
Enforcement Responsible Person:	Not reported
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported
Found Violation:	No
Agency Which Determined Violation:	Not reported
Violation Short Description:	Not reported
Date Violation was Determined:	Not reported
Actual Return to Compliance Date:	Not reported
Return to Compliance Qualifier:	Not reported
Violation Responsible Agency:	Not reported
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	Not reported
Date of Enforcement Action:	Not reported
Enforcement Responsible Agency:	Not reported
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported

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TECHALLOY WESTERN INC (Continued)

1000239144

Corrective Action Component:	Not reported
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	Not reported
Enforcement Responsible Person:	Not reported
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported
Found Violation:	Yes
Agency Which Determined Violation:	State
Violation Short Description:	TSD - General
Date Violation was Determined:	1997-02-21 00:00:00.0
Actual Return to Compliance Date:	1997-03-07 00:00:00.0
Return to Compliance Qualifier:	Observed
Violation Responsible Agency:	State
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	Not reported
Date of Enforcement Action:	Not reported
Enforcement Responsible Agency:	Not reported
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	Not reported
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	Not reported
Enforcement Responsible Person:	Not reported
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported

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TECHALLOY WESTERN INC (Continued)

1000239144

Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported
Found Violation:	Yes
Agency Which Determined Violation:	State
Violation Short Description:	Generators - Pre-transport
Date Violation was Determined:	2017-09-20 00:00:00.0
Actual Return to Compliance Date:	Not reported
Return to Compliance Qualifier:	Not reported
Violation Responsible Agency:	State
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	Not reported
Date of Enforcement Action:	Not reported
Enforcement Responsible Agency:	Not reported
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	Not reported
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	Not reported
Enforcement Responsible Person:	Not reported
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported
Found Violation:	No
Agency Which Determined Violation:	Not reported
Violation Short Description:	Not reported
Date Violation was Determined:	Not reported
Actual Return to Compliance Date:	Not reported
Return to Compliance Qualifier:	Not reported
Violation Responsible Agency:	Not reported
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	Not reported
Date of Enforcement Action:	Not reported
Enforcement Responsible Agency:	Not reported
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported

Map ID
Direction
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Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

Corrective Action Component:	Not reported
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	Not reported
Enforcement Responsible Person:	Not reported
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported
Found Violation:	Yes
Agency Which Determined Violation:	State
Violation Short Description:	TSD - General
Date Violation was Determined:	1994-06-27 00:00:00.0
Actual Return to Compliance Date:	1994-08-29 00:00:00.0
Return to Compliance Qualifier:	Observed
Violation Responsible Agency:	State
Scheduled Compliance Date:	1994-07-16 00:00:00.0
Enforcement Identifier:	014
Date of Enforcement Action:	1994-06-27 00:00:00.0
Enforcement Responsible Agency:	State
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	No
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	WRITTEN INFORMAL
Enforcement Responsible Person:	R9STA
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported

Map ID
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MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported
Found Violation:	Yes
Agency Which Determined Violation:	State
Violation Short Description:	TSD - General
Date Violation was Determined:	1989-10-26 00:00:00.0
Actual Return to Compliance Date:	1990-01-03 00:00:00.0
Return to Compliance Qualifier:	Observed
Violation Responsible Agency:	State
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	007
Date of Enforcement Action:	1989-12-08 00:00:00.0
Enforcement Responsible Agency:	State
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	No
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	WRITTEN INFORMAL
Enforcement Responsible Person:	R9STA
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported
Found Violation:	Yes
Agency Which Determined Violation:	State
Violation Short Description:	LDR - General
Date Violation was Determined:	1997-02-21 00:00:00.0
Actual Return to Compliance Date:	1997-03-07 00:00:00.0
Return to Compliance Qualifier:	Observed
Violation Responsible Agency:	State
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	Not reported
Date of Enforcement Action:	Not reported
Enforcement Responsible Agency:	Not reported
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported

Map ID
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MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

Corrective Action Component:	Not reported
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	Not reported
Enforcement Responsible Person:	Not reported
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported
Found Violation:	No
Agency Which Determined Violation:	Not reported
Violation Short Description:	Not reported
Date Violation was Determined:	Not reported
Actual Return to Compliance Date:	Not reported
Return to Compliance Qualifier:	Not reported
Violation Responsible Agency:	Not reported
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	Not reported
Date of Enforcement Action:	Not reported
Enforcement Responsible Agency:	Not reported
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	Not reported
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	Not reported
Enforcement Responsible Person:	Not reported
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported

Map ID
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MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported
Found Violation:	Yes
Agency Which Determined Violation:	State
Violation Short Description:	TSD IS-Ground-Water Monitoring
Date Violation was Determined:	1992-01-23 00:00:00.0
Actual Return to Compliance Date:	1993-09-13 00:00:00.0
Return to Compliance Qualifier:	Observed
Violation Responsible Agency:	State
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	011
Date of Enforcement Action:	1992-05-20 00:00:00.0
Enforcement Responsible Agency:	State
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	No
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	INITIAL 3008(A) COMPLIANCE
Enforcement Responsible Person:	R9STA
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	71250
Final Monetary Amount:	71250
Paid Amount:	71250
Final Count:	1
Final Amount:	71250
Found Violation:	No
Agency Which Determined Violation:	Not reported
Violation Short Description:	Not reported
Date Violation was Determined:	Not reported
Actual Return to Compliance Date:	Not reported
Return to Compliance Qualifier:	Not reported
Violation Responsible Agency:	Not reported
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	Not reported
Date of Enforcement Action:	Not reported
Enforcement Responsible Agency:	Not reported
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported

Map ID
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Database(s)

EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

Corrective Action Component:	Not reported
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	Not reported
Enforcement Responsible Person:	Not reported
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported
Found Violation:	Yes
Agency Which Determined Violation:	State
Violation Short Description:	TSD - General
Date Violation was Determined:	1987-02-23 00:00:00.0
Actual Return to Compliance Date:	1990-01-03 00:00:00.0
Return to Compliance Qualifier:	Observed
Violation Responsible Agency:	State
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	Not reported
Date of Enforcement Action:	Not reported
Enforcement Responsible Agency:	Not reported
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	Not reported
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	Not reported
Enforcement Responsible Person:	Not reported
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported

Map ID
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MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported
Found Violation:	Yes
Agency Which Determined Violation:	State
Violation Short Description:	TSD - General
Date Violation was Determined:	1994-06-27 00:00:00.0
Actual Return to Compliance Date:	1994-08-29 00:00:00.0
Return to Compliance Qualifier:	Observed
Violation Responsible Agency:	State
Scheduled Compliance Date:	1994-07-16 00:00:00.0
Enforcement Identifier:	014
Date of Enforcement Action:	1994-06-27 00:00:00.0
Enforcement Responsible Agency:	State
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	No
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	WRITTEN INFORMAL
Enforcement Responsible Person:	R9STA
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported
Found Violation:	Yes
Agency Which Determined Violation:	State
Violation Short Description:	TSD - General
Date Violation was Determined:	1993-07-01 00:00:00.0
Actual Return to Compliance Date:	1994-05-13 00:00:00.0
Return to Compliance Qualifier:	Observed
Violation Responsible Agency:	State
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	012
Date of Enforcement Action:	1993-07-01 00:00:00.0
Enforcement Responsible Agency:	State
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported

Map ID
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Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

Corrective Action Component:	No
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	WRITTEN INFORMAL
Enforcement Responsible Person:	R9STA
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported
Found Violation:	Yes
Agency Which Determined Violation:	EPA
Violation Short Description:	TSD - Financial Requirements
Date Violation was Determined:	1991-10-21 00:00:00.0
Actual Return to Compliance Date:	1991-10-21 00:00:00.0
Return to Compliance Qualifier:	Observed
Violation Responsible Agency:	EPA
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	Not reported
Date of Enforcement Action:	Not reported
Enforcement Responsible Agency:	Not reported
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	Not reported
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	Not reported
Enforcement Responsible Person:	Not reported
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported

Map ID
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MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported
Final Amount: Not reported

Found Violation: No
Agency Which Determined Violation: Not reported
Violation Short Description: Not reported
Date Violation was Determined: Not reported
Actual Return to Compliance Date: Not reported
Return to Compliance Qualifier: Not reported
Violation Responsible Agency: Not reported
Scheduled Compliance Date: Not reported
Enforcement Identifier: Not reported
Date of Enforcement Action: Not reported
Enforcement Responsible Agency: Not reported
Enforcement Docket Number: Not reported
Enforcement Attorney: Not reported
Corrective Action Component: Not reported
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: Not reported
Enforcement Responsible Person: Not reported
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported
Final Amount: Not reported

Found Violation: Yes
Agency Which Determined Violation: State
Violation Short Description: TSD - General
Date Violation was Determined: 1991-03-04 00:00:00.0
Actual Return to Compliance Date: 1991-09-18 00:00:00.0
Return to Compliance Qualifier: Observed
Violation Responsible Agency: State
Scheduled Compliance Date: Not reported
Enforcement Identifier: 009
Date of Enforcement Action: 1991-04-17 00:00:00.0
Enforcement Responsible Agency: State
Enforcement Docket Number: Not reported
Enforcement Attorney: Not reported

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MAP FINDINGS

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Database(s)

EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

Corrective Action Component:	No
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	WRITTEN INFORMAL
Enforcement Responsible Person:	R9STA
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported
Found Violation:	Yes
Agency Which Determined Violation:	State
Violation Short Description:	TSD - General
Date Violation was Determined:	1991-03-04 00:00:00.0
Actual Return to Compliance Date:	1991-09-18 00:00:00.0
Return to Compliance Qualifier:	Observed
Violation Responsible Agency:	State
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	009
Date of Enforcement Action:	1991-04-17 00:00:00.0
Enforcement Responsible Agency:	State
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	No
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	WRITTEN INFORMAL
Enforcement Responsible Person:	R9STA
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported

Map ID
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MAP FINDINGS

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Database(s)

EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported
Found Violation:	Yes
Agency Which Determined Violation:	State
Violation Short Description:	TSD - Financial Requirements
Date Violation was Determined:	1989-11-06 00:00:00.0
Actual Return to Compliance Date:	1990-05-21 00:00:00.0
Return to Compliance Qualifier:	Observed
Violation Responsible Agency:	State
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	010
Date of Enforcement Action:	1992-05-20 00:00:00.0
Enforcement Responsible Agency:	State
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	No
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	FINAL 3008(A) COMPLIANCE ORDER
Enforcement Responsible Person:	R9STA
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	68000
Paid Amount:	20000
Final Count:	1
Final Amount:	68000
Found Violation:	Yes
Agency Which Determined Violation:	State
Violation Short Description:	TSD - Financial Requirements
Date Violation was Determined:	1987-12-28 00:00:00.0
Actual Return to Compliance Date:	1993-09-13 00:00:00.0
Return to Compliance Qualifier:	Observed
Violation Responsible Agency:	State
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	003
Date of Enforcement Action:	1988-02-05 00:00:00.0
Enforcement Responsible Agency:	State
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported

Map ID
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MAP FINDINGS

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Database(s)

EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

Corrective Action Component:	No
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	WRITTEN INFORMAL
Enforcement Responsible Person:	R9STA
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported
Found Violation:	Yes
Agency Which Determined Violation:	State
Violation Short Description:	TSD - Preparedness and Prevention
Date Violation was Determined:	2001-01-10 00:00:00.0
Actual Return to Compliance Date:	2001-05-11 00:00:00.0
Return to Compliance Qualifier:	Documented
Violation Responsible Agency:	State
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	200
Date of Enforcement Action:	2001-01-10 00:00:00.0
Enforcement Responsible Agency:	State
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	No
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	Not reported
Enforcement Responsible Person:	Not reported
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported

Map ID
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MAP FINDINGS

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Database(s)

EDR ID Number
 EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported
Found Violation:	Yes
Agency Which Determined Violation:	State
Violation Short Description:	Generators - Pre-transport
Date Violation was Determined:	2017-09-20 00:00:00.0
Actual Return to Compliance Date:	Not reported
Return to Compliance Qualifier:	Not reported
Violation Responsible Agency:	State
Scheduled Compliance Date:	2017-10-20 00:00:00.0
Enforcement Identifier:	601
Date of Enforcement Action:	2017-09-20 00:00:00.0
Enforcement Responsible Agency:	State
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	No
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	FINAL 3008(A) COMPLIANCE ORDER
Enforcement Responsible Person:	Not reported
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported
Found Violation:	Yes
Agency Which Determined Violation:	State
Violation Short Description:	TSD IS-Ground-Water Monitoring
Date Violation was Determined:	1992-01-23 00:00:00.0
Actual Return to Compliance Date:	1993-09-13 00:00:00.0
Return to Compliance Qualifier:	Observed
Violation Responsible Agency:	State
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	002
Date of Enforcement Action:	1988-12-30 00:00:00.0
Enforcement Responsible Agency:	EPA
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported

Map ID
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MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

Corrective Action Component:	No
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	FINAL CIVIL JUDICIAL ACTION FOR IMMEDIATE AND SUBSTANTIAL ENDANGERMENT
Enforcement Responsible Person:	R9EPA
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported
Found Violation:	Yes
Agency Which Determined Violation:	State
Violation Short Description:	Generators - Pre-transport
Date Violation was Determined:	2017-09-20 00:00:00.0
Actual Return to Compliance Date:	Not reported
Return to Compliance Qualifier:	Not reported
Violation Responsible Agency:	State
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	Not reported
Date of Enforcement Action:	Not reported
Enforcement Responsible Agency:	Not reported
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	Not reported
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	Not reported
Enforcement Responsible Person:	Not reported
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported

Map ID
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Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported
Found Violation:	Yes
Agency Which Determined Violation:	State
Violation Short Description:	TSD - General
Date Violation was Determined:	1993-07-01 00:00:00.0
Actual Return to Compliance Date:	1994-05-13 00:00:00.0
Return to Compliance Qualifier:	Observed
Violation Responsible Agency:	State
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	012
Date of Enforcement Action:	1993-07-01 00:00:00.0
Enforcement Responsible Agency:	State
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	No
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	WRITTEN INFORMAL
Enforcement Responsible Person:	R9STA
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported
Found Violation:	No
Agency Which Determined Violation:	Not reported
Violation Short Description:	Not reported
Date Violation was Determined:	Not reported
Actual Return to Compliance Date:	Not reported
Return to Compliance Qualifier:	Not reported
Violation Responsible Agency:	Not reported
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	Not reported
Date of Enforcement Action:	Not reported
Enforcement Responsible Agency:	Not reported
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported

Map ID
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MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

Corrective Action Component:	Not reported
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	Not reported
Enforcement Responsible Person:	Not reported
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported
Found Violation:	No
Agency Which Determined Violation:	Not reported
Violation Short Description:	Not reported
Date Violation was Determined:	Not reported
Actual Return to Compliance Date:	Not reported
Return to Compliance Qualifier:	Not reported
Violation Responsible Agency:	Not reported
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	Not reported
Date of Enforcement Action:	Not reported
Enforcement Responsible Agency:	Not reported
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	Not reported
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	Not reported
Enforcement Responsible Person:	Not reported
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported

Map ID
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MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported
Found Violation:	Yes
Agency Which Determined Violation:	State
Violation Short Description:	TSD - General
Date Violation was Determined:	1989-10-26 00:00:00.0
Actual Return to Compliance Date:	1990-01-03 00:00:00.0
Return to Compliance Qualifier:	Observed
Violation Responsible Agency:	State
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	008
Date of Enforcement Action:	1990-03-05 00:00:00.0
Enforcement Responsible Agency:	State
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	No
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	INITIAL 3008(A) COMPLIANCE
Enforcement Responsible Person:	R9STA
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported
Found Violation:	Yes
Agency Which Determined Violation:	State
Violation Short Description:	TSD - General
Date Violation was Determined:	1996-02-09 00:00:00.0
Actual Return to Compliance Date:	1996-04-17 00:00:00.0
Return to Compliance Qualifier:	Observed
Violation Responsible Agency:	State
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	015
Date of Enforcement Action:	1996-02-09 00:00:00.0
Enforcement Responsible Agency:	State
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported

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Database(s)

EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

Corrective Action Component:	No
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	WRITTEN INFORMAL
Enforcement Responsible Person:	R9STA
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported
Found Violation:	No
Agency Which Determined Violation:	Not reported
Violation Short Description:	Not reported
Date Violation was Determined:	Not reported
Actual Return to Compliance Date:	Not reported
Return to Compliance Qualifier:	Not reported
Violation Responsible Agency:	Not reported
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	Not reported
Date of Enforcement Action:	Not reported
Enforcement Responsible Agency:	Not reported
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	Not reported
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	Not reported
Enforcement Responsible Person:	Not reported
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported

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Database(s)

EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported
Found Violation:	Yes
Agency Which Determined Violation:	State
Violation Short Description:	TSD - Financial Requirements
Date Violation was Determined:	1987-02-24 00:00:00.0
Actual Return to Compliance Date:	1993-09-13 00:00:00.0
Return to Compliance Qualifier:	Observed
Violation Responsible Agency:	State
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	002
Date of Enforcement Action:	1988-12-30 00:00:00.0
Enforcement Responsible Agency:	EPA
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	No
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	FINAL CIVIL JUDICIAL ACTION FOR IMMINENT AND SUBSTANTIAL ENDANGERMENT
Enforcement Responsible Person:	R9EPA
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported
Found Violation:	Yes
Agency Which Determined Violation:	State
Violation Short Description:	TSD - General
Date Violation was Determined:	1988-12-28 00:00:00.0
Actual Return to Compliance Date:	1989-03-02 00:00:00.0
Return to Compliance Qualifier:	Observed
Violation Responsible Agency:	State
Scheduled Compliance Date:	1989-02-28 00:00:00.0
Enforcement Identifier:	005
Date of Enforcement Action:	1989-01-09 00:00:00.0
Enforcement Responsible Agency:	State
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported

Map ID
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MAP FINDINGS

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Database(s)

EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

Corrective Action Component:	No
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	WRITTEN INFORMAL
Enforcement Responsible Person:	R9STA
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported
Found Violation:	Yes
Agency Which Determined Violation:	State
Violation Short Description:	TSD - Tank System Standards
Date Violation was Determined:	2001-01-10 00:00:00.0
Actual Return to Compliance Date:	2001-05-11 00:00:00.0
Return to Compliance Qualifier:	Documented
Violation Responsible Agency:	State
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	200
Date of Enforcement Action:	2001-01-10 00:00:00.0
Enforcement Responsible Agency:	State
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	No
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	Not reported
Enforcement Responsible Person:	Not reported
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported

Map ID
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MAP FINDINGS

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Database(s)

EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported
Final Amount: Not reported

Found Violation: No
Agency Which Determined Violation: Not reported
Violation Short Description: Not reported
Date Violation was Determined: Not reported
Actual Return to Compliance Date: Not reported
Return to Compliance Qualifier: Not reported
Violation Responsible Agency: Not reported
Scheduled Compliance Date: Not reported
Enforcement Identifier: Not reported
Date of Enforcement Action: Not reported
Enforcement Responsible Agency: Not reported
Enforcement Docket Number: Not reported
Enforcement Attorney: Not reported
Corrective Action Component: Not reported
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: Not reported
Enforcement Responsible Person: Not reported
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported
Final Amount: Not reported

Found Violation: No
Agency Which Determined Violation: Not reported
Violation Short Description: Not reported
Date Violation was Determined: Not reported
Actual Return to Compliance Date: Not reported
Return to Compliance Qualifier: Not reported
Violation Responsible Agency: Not reported
Scheduled Compliance Date: Not reported
Enforcement Identifier: Not reported
Date of Enforcement Action: Not reported
Enforcement Responsible Agency: Not reported
Enforcement Docket Number: Not reported
Enforcement Attorney: Not reported

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Database(s)

EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

Corrective Action Component:	Not reported
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	Not reported
Enforcement Responsible Person:	Not reported
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported
Found Violation:	Yes
Agency Which Determined Violation:	State
Violation Short Description:	Generators - General
Date Violation was Determined:	1994-06-27 00:00:00.0
Actual Return to Compliance Date:	1994-08-29 00:00:00.0
Return to Compliance Qualifier:	Observed
Violation Responsible Agency:	State
Scheduled Compliance Date:	1994-07-16 00:00:00.0
Enforcement Identifier:	010
Date of Enforcement Action:	1992-05-20 00:00:00.0
Enforcement Responsible Agency:	State
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	No
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	FINAL 3008(A) COMPLIANCE ORDER
Enforcement Responsible Person:	R9STA
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported

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Database(s)

EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

Proposed Amount:	Not reported
Final Monetary Amount:	68000
Paid Amount:	20000
Final Count:	1
Final Amount:	68000
Found Violation:	Yes
Agency Which Determined Violation:	State
Violation Short Description:	Generators - General
Date Violation was Determined:	2007-06-18 00:00:00.0
Actual Return to Compliance Date:	2007-07-18 00:00:00.0
Return to Compliance Qualifier:	Observed
Violation Responsible Agency:	State
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	601
Date of Enforcement Action:	2007-06-18 00:00:00.0
Enforcement Responsible Agency:	State
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	No
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	WRITTEN INFORMAL
Enforcement Responsible Person:	Not reported
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported
Found Violation:	Yes
Agency Which Determined Violation:	State
Violation Short Description:	TSD - General
Date Violation was Determined:	1997-02-21 00:00:00.0
Actual Return to Compliance Date:	1997-03-07 00:00:00.0
Return to Compliance Qualifier:	Observed
Violation Responsible Agency:	State
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	Not reported
Date of Enforcement Action:	Not reported
Enforcement Responsible Agency:	Not reported
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported

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Database(s)

EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

Corrective Action Component:	Not reported
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	Not reported
Enforcement Responsible Person:	Not reported
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported
Found Violation:	Yes
Agency Which Determined Violation:	State
Violation Short Description:	TSD - Container Use and Management
Date Violation was Determined:	2010-11-30 00:00:00.0
Actual Return to Compliance Date:	2010-11-30 00:00:00.0
Return to Compliance Qualifier:	Documented
Violation Responsible Agency:	State
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	301
Date of Enforcement Action:	2010-11-30 00:00:00.0
Enforcement Responsible Agency:	State
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	No
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	Not reported
Enforcement Responsible Person:	Not reported
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported

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Database(s)

EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported
Found Violation:	Yes
Agency Which Determined Violation:	State
Violation Short Description:	TSD - Financial Requirements
Date Violation was Determined:	1987-12-28 00:00:00.0
Actual Return to Compliance Date:	1993-09-13 00:00:00.0
Return to Compliance Qualifier:	Observed
Violation Responsible Agency:	State
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	001
Date of Enforcement Action:	1988-09-30 00:00:00.0
Enforcement Responsible Agency:	EPA
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	No
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	INITIAL CIVIL JUDICIAL ACTION FOR COMPLIANCE AND/OR MONETARY PENALTY
Enforcement Responsible Person:	R9EPA
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported
Found Violation:	Yes
Agency Which Determined Violation:	State
Violation Short Description:	TSD - Closure/Post-Closure
Date Violation was Determined:	2004-04-27 00:00:00.0
Actual Return to Compliance Date:	2004-05-27 00:00:00.0
Return to Compliance Qualifier:	Documented
Violation Responsible Agency:	State
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	200
Date of Enforcement Action:	2004-04-27 00:00:00.0
Enforcement Responsible Agency:	State
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

Corrective Action Component:	No
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	Not reported
Enforcement Responsible Person:	Not reported
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported
Found Violation:	Yes
Agency Which Determined Violation:	State
Violation Short Description:	TSD - General
Date Violation was Determined:	1994-06-27 00:00:00.0
Actual Return to Compliance Date:	1994-08-29 00:00:00.0
Return to Compliance Qualifier:	Observed
Violation Responsible Agency:	State
Scheduled Compliance Date:	1994-07-16 00:00:00.0
Enforcement Identifier:	010
Date of Enforcement Action:	1992-05-20 00:00:00.0
Enforcement Responsible Agency:	State
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	No
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	FINAL 3008(A) COMPLIANCE ORDER
Enforcement Responsible Person:	R9STA
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

Proposed Amount:	Not reported
Final Monetary Amount:	68000
Paid Amount:	20000
Final Count:	1
Final Amount:	68000
Found Violation:	Yes
Agency Which Determined Violation:	State
Violation Short Description:	Generators - Pre-transport
Date Violation was Determined:	2017-09-20 00:00:00.0
Actual Return to Compliance Date:	Not reported
Return to Compliance Qualifier:	Not reported
Violation Responsible Agency:	State
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	Not reported
Date of Enforcement Action:	Not reported
Enforcement Responsible Agency:	Not reported
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	Not reported
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	Not reported
Enforcement Responsible Person:	Not reported
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported
Found Violation:	Yes
Agency Which Determined Violation:	State
Violation Short Description:	TSD - General
Date Violation was Determined:	1991-03-04 00:00:00.0
Actual Return to Compliance Date:	1991-09-18 00:00:00.0
Return to Compliance Qualifier:	Observed
Violation Responsible Agency:	State
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	010
Date of Enforcement Action:	1992-05-20 00:00:00.0
Enforcement Responsible Agency:	State
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported

Map ID
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MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

Corrective Action Component:	No
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	FINAL 3008(A) COMPLIANCE ORDER
Enforcement Responsible Person:	R9STA
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	68000
Paid Amount:	20000
Final Count:	1
Final Amount:	68000
Found Violation:	No
Agency Which Determined Violation:	Not reported
Violation Short Description:	Not reported
Date Violation was Determined:	Not reported
Actual Return to Compliance Date:	Not reported
Return to Compliance Qualifier:	Not reported
Violation Responsible Agency:	Not reported
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	Not reported
Date of Enforcement Action:	Not reported
Enforcement Responsible Agency:	Not reported
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	Not reported
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	Not reported
Enforcement Responsible Person:	Not reported
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported

Map ID
Direction
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MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported
Final Amount: Not reported

Found Violation: No
Agency Which Determined Violation: Not reported
Violation Short Description: Not reported
Date Violation was Determined: Not reported
Actual Return to Compliance Date: Not reported
Return to Compliance Qualifier: Not reported
Violation Responsible Agency: Not reported
Scheduled Compliance Date: Not reported
Enforcement Identifier: Not reported
Date of Enforcement Action: Not reported
Enforcement Responsible Agency: Not reported
Enforcement Docket Number: Not reported
Enforcement Attorney: Not reported
Corrective Action Component: Not reported
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: Not reported
Enforcement Responsible Person: Not reported
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported
Final Amount: Not reported

Found Violation: Yes
Agency Which Determined Violation: State
Violation Short Description: Generators - General
Date Violation was Determined: 1993-07-01 00:00:00.0
Actual Return to Compliance Date: 1994-05-13 00:00:00.0
Return to Compliance Qualifier: Observed
Violation Responsible Agency: State
Scheduled Compliance Date: Not reported
Enforcement Identifier: 010
Date of Enforcement Action: 1992-05-20 00:00:00.0
Enforcement Responsible Agency: State
Enforcement Docket Number: Not reported
Enforcement Attorney: Not reported

Map ID
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MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

Corrective Action Component:	No
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	FINAL 3008(A) COMPLIANCE ORDER
Enforcement Responsible Person:	R9STA
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	68000
Paid Amount:	20000
Final Count:	1
Final Amount:	68000
Found Violation:	Yes
Agency Which Determined Violation:	State
Violation Short Description:	TSD - Financial Requirements
Date Violation was Determined:	1988-12-01 00:00:00.0
Actual Return to Compliance Date:	1990-05-21 00:00:00.0
Return to Compliance Qualifier:	Observed
Violation Responsible Agency:	State
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	004
Date of Enforcement Action:	1988-07-14 00:00:00.0
Enforcement Responsible Agency:	State
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	No
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	FINAL 3008(A) COMPLIANCE ORDER
Enforcement Responsible Person:	R9STA
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported

Map ID
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MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported
Found Violation:	Yes
Agency Which Determined Violation:	State
Violation Short Description:	Generators - General
Date Violation was Determined:	1994-06-27 00:00:00.0
Actual Return to Compliance Date:	1994-08-29 00:00:00.0
Return to Compliance Qualifier:	Observed
Violation Responsible Agency:	State
Scheduled Compliance Date:	1994-07-16 00:00:00.0
Enforcement Identifier:	014
Date of Enforcement Action:	1994-06-27 00:00:00.0
Enforcement Responsible Agency:	State
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	No
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	WRITTEN INFORMAL
Enforcement Responsible Person:	R9STA
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported
Found Violation:	No
Agency Which Determined Violation:	Not reported
Violation Short Description:	Not reported
Date Violation was Determined:	Not reported
Actual Return to Compliance Date:	Not reported
Return to Compliance Qualifier:	Not reported
Violation Responsible Agency:	Not reported
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	Not reported
Date of Enforcement Action:	Not reported
Enforcement Responsible Agency:	Not reported
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported

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MAP FINDINGS

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Database(s)

EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

Corrective Action Component:	Not reported
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	Not reported
Enforcement Responsible Person:	Not reported
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported
Found Violation:	Yes
Agency Which Determined Violation:	State
Violation Short Description:	TSD - Financial Requirements
Date Violation was Determined:	1988-12-01 00:00:00.0
Actual Return to Compliance Date:	1990-05-21 00:00:00.0
Return to Compliance Qualifier:	Observed
Violation Responsible Agency:	State
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	010
Date of Enforcement Action:	1992-05-20 00:00:00.0
Enforcement Responsible Agency:	State
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	No
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	FINAL 3008(A) COMPLIANCE ORDER
Enforcement Responsible Person:	R9STA
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported

Map ID
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MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

Proposed Amount:	Not reported
Final Monetary Amount:	68000
Paid Amount:	20000
Final Count:	1
Final Amount:	68000
Found Violation:	Yes
Agency Which Determined Violation:	State
Violation Short Description:	Generators - Pre-transport
Date Violation was Determined:	2014-09-16 00:00:00.0
Actual Return to Compliance Date:	2014-10-16 00:00:00.0
Return to Compliance Qualifier:	Documented
Violation Responsible Agency:	State
Scheduled Compliance Date:	2014-10-16 00:00:00.0
Enforcement Identifier:	603
Date of Enforcement Action:	2014-09-16 00:00:00.0
Enforcement Responsible Agency:	State
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	No
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	WRITTEN INFORMAL
Enforcement Responsible Person:	Not reported
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported
Found Violation:	No
Agency Which Determined Violation:	Not reported
Violation Short Description:	Not reported
Date Violation was Determined:	Not reported
Actual Return to Compliance Date:	Not reported
Return to Compliance Qualifier:	Not reported
Violation Responsible Agency:	Not reported
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	Not reported
Date of Enforcement Action:	Not reported
Enforcement Responsible Agency:	Not reported
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported

Map ID
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MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

Corrective Action Component:	Not reported
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	Not reported
Enforcement Responsible Person:	Not reported
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported
Found Violation:	No
Agency Which Determined Violation:	Not reported
Violation Short Description:	Not reported
Date Violation was Determined:	Not reported
Actual Return to Compliance Date:	Not reported
Return to Compliance Qualifier:	Not reported
Violation Responsible Agency:	Not reported
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	Not reported
Date of Enforcement Action:	Not reported
Enforcement Responsible Agency:	Not reported
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	Not reported
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	Not reported
Enforcement Responsible Person:	Not reported
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported

Map ID
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MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported
Found Violation:	Yes
Agency Which Determined Violation:	State
Violation Short Description:	TSD - General
Date Violation was Determined:	1993-07-01 00:00:00.0
Actual Return to Compliance Date:	1994-05-13 00:00:00.0
Return to Compliance Qualifier:	Observed
Violation Responsible Agency:	State
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	010
Date of Enforcement Action:	1992-05-20 00:00:00.0
Enforcement Responsible Agency:	State
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	No
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	FINAL 3008(A) COMPLIANCE ORDER
Enforcement Responsible Person:	R9STA
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	68000
Paid Amount:	20000
Final Count:	1
Final Amount:	68000
Found Violation:	Yes
Agency Which Determined Violation:	State
Violation Short Description:	State Statute or Regulation
Date Violation was Determined:	2017-03-07 00:00:00.0
Actual Return to Compliance Date:	2017-03-14 00:00:00.0
Return to Compliance Qualifier:	Observed
Violation Responsible Agency:	State
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	306
Date of Enforcement Action:	2017-03-07 00:00:00.0
Enforcement Responsible Agency:	State
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported

Map ID
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MAP FINDINGS

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Database(s)

EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

Corrective Action Component:	No
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	Not reported
Enforcement Responsible Person:	Not reported
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported
Found Violation:	No
Agency Which Determined Violation:	Not reported
Violation Short Description:	Not reported
Date Violation was Determined:	Not reported
Actual Return to Compliance Date:	Not reported
Return to Compliance Qualifier:	Not reported
Violation Responsible Agency:	Not reported
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	Not reported
Date of Enforcement Action:	Not reported
Enforcement Responsible Agency:	Not reported
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	Not reported
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	Not reported
Enforcement Responsible Person:	Not reported
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported

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MAP FINDINGS

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Database(s)

EDR ID Number
 EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

Proposed Amount: Not reported
 Final Monetary Amount: Not reported
 Paid Amount: Not reported
 Final Count: Not reported
 Final Amount: Not reported

Found Violation: No
 Agency Which Determined Violation: Not reported
 Violation Short Description: Not reported
 Date Violation was Determined: Not reported
 Actual Return to Compliance Date: Not reported
 Return to Compliance Qualifier: Not reported
 Violation Responsible Agency: Not reported
 Scheduled Compliance Date: Not reported
 Enforcement Identifier: Not reported
 Date of Enforcement Action: Not reported
 Enforcement Responsible Agency: Not reported
 Enforcement Docket Number: Not reported
 Enforcement Attorney: Not reported
 Corrective Action Component: Not reported
 Appeal Initiated Date: Not reported
 Appeal Resolution Date: Not reported
 Disposition Status Date: Not reported
 Disposition Status: Not reported
 Disposition Status Description: Not reported
 Consent/Final Order Sequence Number: Not reported
 Consent/Final Order Respondent Name: Not reported
 Consent/Final Order Lead Agency: Not reported
 Enforcement Type: Not reported
 Enforcement Responsible Person: Not reported
 Enforcement Responsible Sub-Organization: Not reported
 SEP Sequence Number: Not reported
 SEP Expenditure Amount: Not reported
 SEP Scheduled Completion Date: Not reported
 SEP Actual Date: Not reported
 SEP Defaulted Date: Not reported
 SEP Type: Not reported
 SEP Type Description: Not reported
 Proposed Amount: Not reported
 Final Monetary Amount: Not reported
 Paid Amount: Not reported
 Final Count: Not reported
 Final Amount: Not reported

Found Violation: Yes
 Agency Which Determined Violation: State
 Violation Short Description: Generators - General
 Date Violation was Determined: 2004-06-28 00:00:00.0
 Actual Return to Compliance Date: 2004-07-19 00:00:00.0
 Return to Compliance Qualifier: Observed
 Violation Responsible Agency: State
 Scheduled Compliance Date: Not reported
 Enforcement Identifier: 501
 Date of Enforcement Action: 2004-06-28 00:00:00.0
 Enforcement Responsible Agency: State
 Enforcement Docket Number: Not reported
 Enforcement Attorney: Not reported

Map ID
Direction
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Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

Corrective Action Component:	No
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	WRITTEN INFORMAL
Enforcement Responsible Person:	Not reported
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported
Found Violation:	Unknown
Agency Which Determined Violation:	Not reported
Violation Short Description:	Not reported
Date Violation was Determined:	Not reported
Actual Return to Compliance Date:	Not reported
Return to Compliance Qualifier:	Not reported
Violation Responsible Agency:	Not reported
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	Not reported
Date of Enforcement Action:	Not reported
Enforcement Responsible Agency:	Not reported
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	Not reported
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	Not reported
Enforcement Responsible Person:	Not reported
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported
Found Violation:	Yes
Agency Which Determined Violation:	State
Violation Short Description:	Generators - Pre-transport
Date Violation was Determined:	2014-09-16 00:00:00.0
Actual Return to Compliance Date:	2014-10-16 00:00:00.0
Return to Compliance Qualifier:	Documented
Violation Responsible Agency:	State
Scheduled Compliance Date:	2014-10-16 00:00:00.0
Enforcement Identifier:	603
Date of Enforcement Action:	2014-09-16 00:00:00.0
Enforcement Responsible Agency:	State
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	No
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	WRITTEN INFORMAL
Enforcement Responsible Person:	Not reported
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported
Found Violation:	Yes
Agency Which Determined Violation:	State
Violation Short Description:	TSD - General
Date Violation was Determined:	1993-07-01 00:00:00.0
Actual Return to Compliance Date:	1994-05-13 00:00:00.0
Return to Compliance Qualifier:	Observed
Violation Responsible Agency:	State
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	010
Date of Enforcement Action:	1992-05-20 00:00:00.0
Enforcement Responsible Agency:	State
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported

Map ID
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MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

Corrective Action Component:	No
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	FINAL 3008(A) COMPLIANCE ORDER
Enforcement Responsible Person:	R9STA
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	68000
Paid Amount:	20000
Final Count:	1
Final Amount:	68000
Found Violation:	Yes
Agency Which Determined Violation:	State
Violation Short Description:	TSD - General
Date Violation was Determined:	1996-02-09 00:00:00.0
Actual Return to Compliance Date:	1996-03-07 00:00:00.0
Return to Compliance Qualifier:	Observed
Violation Responsible Agency:	State
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	015
Date of Enforcement Action:	1996-02-09 00:00:00.0
Enforcement Responsible Agency:	State
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	No
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	WRITTEN INFORMAL
Enforcement Responsible Person:	R9STA
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported

Map ID
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MAP FINDINGS

Site

Database(s)

EDR ID Number
 EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported
Found Violation:	Yes
Agency Which Determined Violation:	State
Violation Short Description:	TSD - General
Date Violation was Determined:	1993-07-01 00:00:00.0
Actual Return to Compliance Date:	1994-05-13 00:00:00.0
Return to Compliance Qualifier:	Observed
Violation Responsible Agency:	State
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	010
Date of Enforcement Action:	1992-05-20 00:00:00.0
Enforcement Responsible Agency:	State
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	No
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	FINAL 3008(A) COMPLIANCE ORDER
Enforcement Responsible Person:	R9STA
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	68000
Paid Amount:	20000
Final Count:	1
Final Amount:	68000
Found Violation:	No
Agency Which Determined Violation:	Not reported
Violation Short Description:	Not reported
Date Violation was Determined:	Not reported
Actual Return to Compliance Date:	Not reported
Return to Compliance Qualifier:	Not reported
Violation Responsible Agency:	Not reported
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	Not reported
Date of Enforcement Action:	Not reported
Enforcement Responsible Agency:	Not reported
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported

Map ID
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MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

Corrective Action Component:	Not reported
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	Not reported
Enforcement Responsible Person:	Not reported
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported
Found Violation:	Yes
Agency Which Determined Violation:	State
Violation Short Description:	Generators - Pre-transport
Date Violation was Determined:	2014-09-16 00:00:00.0
Actual Return to Compliance Date:	2014-10-16 00:00:00.0
Return to Compliance Qualifier:	Documented
Violation Responsible Agency:	State
Scheduled Compliance Date:	2014-10-16 00:00:00.0
Enforcement Identifier:	603
Date of Enforcement Action:	2014-09-16 00:00:00.0
Enforcement Responsible Agency:	State
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	No
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	WRITTEN INFORMAL
Enforcement Responsible Person:	Not reported
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported

Map ID
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MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported
Found Violation:	Yes
Agency Which Determined Violation:	State
Violation Short Description:	TSD - General
Date Violation was Determined:	1997-02-21 00:00:00.0
Actual Return to Compliance Date:	1997-03-20 00:00:00.0
Return to Compliance Qualifier:	Observed
Violation Responsible Agency:	State
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	Not reported
Date of Enforcement Action:	Not reported
Enforcement Responsible Agency:	Not reported
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	Not reported
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	Not reported
Enforcement Responsible Person:	Not reported
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported
Found Violation:	No
Agency Which Determined Violation:	Not reported
Violation Short Description:	Not reported
Date Violation was Determined:	Not reported
Actual Return to Compliance Date:	Not reported
Return to Compliance Qualifier:	Not reported
Violation Responsible Agency:	Not reported
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	Not reported
Date of Enforcement Action:	Not reported
Enforcement Responsible Agency:	Not reported
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported

Map ID
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MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

Corrective Action Component:	Not reported
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	Not reported
Enforcement Responsible Person:	Not reported
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported
Found Violation:	No
Agency Which Determined Violation:	Not reported
Violation Short Description:	Not reported
Date Violation was Determined:	Not reported
Actual Return to Compliance Date:	Not reported
Return to Compliance Qualifier:	Not reported
Violation Responsible Agency:	Not reported
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	Not reported
Date of Enforcement Action:	Not reported
Enforcement Responsible Agency:	Not reported
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	Not reported
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	Not reported
Enforcement Responsible Person:	Not reported
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported

Map ID
Direction
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Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported
Found Violation:	Yes
Agency Which Determined Violation:	State
Violation Short Description:	Generators - Pre-transport
Date Violation was Determined:	2017-09-20 00:00:00.0
Actual Return to Compliance Date:	Not reported
Return to Compliance Qualifier:	Not reported
Violation Responsible Agency:	State
Scheduled Compliance Date:	2017-10-20 00:00:00.0
Enforcement Identifier:	601
Date of Enforcement Action:	2017-09-20 00:00:00.0
Enforcement Responsible Agency:	State
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	No
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	FINAL 3008(A) COMPLIANCE ORDER
Enforcement Responsible Person:	Not reported
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported
Found Violation:	Yes
Agency Which Determined Violation:	State
Violation Short Description:	TSD - Financial Requirements
Date Violation was Determined:	1989-11-06 00:00:00.0
Actual Return to Compliance Date:	1990-05-21 00:00:00.0
Return to Compliance Qualifier:	Observed
Violation Responsible Agency:	State
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	002
Date of Enforcement Action:	1988-12-30 00:00:00.0
Enforcement Responsible Agency:	EPA
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported

Map ID
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MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

Corrective Action Component:	No
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	FINAL CIVIL JUDICIAL ACTION FOR IMMEDIATE AND SUBSTANTIAL ENDANGERMENT
Enforcement Responsible Person:	R9EPA
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported
Found Violation:	Yes
Agency Which Determined Violation:	State
Violation Short Description:	Generators - General
Date Violation was Determined:	1993-07-01 00:00:00.0
Actual Return to Compliance Date:	1994-05-13 00:00:00.0
Return to Compliance Qualifier:	Observed
Violation Responsible Agency:	State
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	012
Date of Enforcement Action:	1993-07-01 00:00:00.0
Enforcement Responsible Agency:	State
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	No
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	WRITTEN INFORMAL
Enforcement Responsible Person:	R9STA
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported

Map ID
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MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported
Final Amount: Not reported

Found Violation: No
Agency Which Determined Violation: Not reported
Violation Short Description: Not reported
Date Violation was Determined: Not reported
Actual Return to Compliance Date: Not reported
Return to Compliance Qualifier: Not reported
Violation Responsible Agency: Not reported
Scheduled Compliance Date: Not reported
Enforcement Identifier: Not reported
Date of Enforcement Action: Not reported
Enforcement Responsible Agency: Not reported
Enforcement Docket Number: Not reported
Enforcement Attorney: Not reported
Corrective Action Component: Not reported
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: Not reported
Enforcement Responsible Person: Not reported
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported
Final Amount: Not reported

Found Violation: No
Agency Which Determined Violation: Not reported
Violation Short Description: Not reported
Date Violation was Determined: Not reported
Actual Return to Compliance Date: Not reported
Return to Compliance Qualifier: Not reported
Violation Responsible Agency: Not reported
Scheduled Compliance Date: Not reported
Enforcement Identifier: Not reported
Date of Enforcement Action: Not reported
Enforcement Responsible Agency: Not reported
Enforcement Docket Number: Not reported
Enforcement Attorney: Not reported

Map ID
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MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

Corrective Action Component:	Not reported
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	Not reported
Enforcement Responsible Person:	Not reported
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported
Found Violation:	Yes
Agency Which Determined Violation:	State
Violation Short Description:	TSD - General
Date Violation was Determined:	1988-01-07 00:00:00.0
Actual Return to Compliance Date:	1990-01-03 00:00:00.0
Return to Compliance Qualifier:	Observed
Violation Responsible Agency:	EPA
Scheduled Compliance Date:	1988-02-29 00:00:00.0
Enforcement Identifier:	Not reported
Date of Enforcement Action:	Not reported
Enforcement Responsible Agency:	Not reported
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	Not reported
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	Not reported
Enforcement Responsible Person:	Not reported
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported

Map ID
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MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported
Found Violation:	Yes
Agency Which Determined Violation:	State
Violation Short Description:	TSD - Financial Requirements
Date Violation was Determined:	1989-11-06 00:00:00.0
Actual Return to Compliance Date:	1990-05-21 00:00:00.0
Return to Compliance Qualifier:	Observed
Violation Responsible Agency:	State
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	004
Date of Enforcement Action:	1988-07-14 00:00:00.0
Enforcement Responsible Agency:	State
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	No
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	FINAL 3008(A) COMPLIANCE ORDER
Enforcement Responsible Person:	R9STA
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported
Found Violation:	Yes
Agency Which Determined Violation:	State
Violation Short Description:	TSD - General
Date Violation was Determined:	1993-07-01 00:00:00.0
Actual Return to Compliance Date:	1994-05-13 00:00:00.0
Return to Compliance Qualifier:	Observed
Violation Responsible Agency:	State
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	013
Date of Enforcement Action:	1994-03-09 00:00:00.0
Enforcement Responsible Agency:	State
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported

Map ID
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Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

Corrective Action Component:	No
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	INITIAL 3008(A) COMPLIANCE
Enforcement Responsible Person:	R9STA
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	1550
Final Monetary Amount:	750
Paid Amount:	Not reported
Final Count:	1
Final Amount:	750
Found Violation:	No
Agency Which Determined Violation:	Not reported
Violation Short Description:	Not reported
Date Violation was Determined:	Not reported
Actual Return to Compliance Date:	Not reported
Return to Compliance Qualifier:	Not reported
Violation Responsible Agency:	Not reported
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	Not reported
Date of Enforcement Action:	Not reported
Enforcement Responsible Agency:	Not reported
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	Not reported
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	Not reported
Enforcement Responsible Person:	Not reported
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported

Map ID
 Direction
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 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
 EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported
Found Violation:	No
Agency Which Determined Violation:	Not reported
Violation Short Description:	Not reported
Date Violation was Determined:	Not reported
Actual Return to Compliance Date:	Not reported
Return to Compliance Qualifier:	Not reported
Violation Responsible Agency:	Not reported
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	Not reported
Date of Enforcement Action:	Not reported
Enforcement Responsible Agency:	Not reported
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	Not reported
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	Not reported
Enforcement Responsible Person:	Not reported
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported
Found Violation:	Yes
Agency Which Determined Violation:	State
Violation Short Description:	Generators - Pre-transport
Date Violation was Determined:	2017-09-20 00:00:00.0
Actual Return to Compliance Date:	Not reported
Return to Compliance Qualifier:	Not reported
Violation Responsible Agency:	State
Scheduled Compliance Date:	2017-10-20 00:00:00.0
Enforcement Identifier:	601
Date of Enforcement Action:	2017-09-20 00:00:00.0
Enforcement Responsible Agency:	State
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported

Map ID
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MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

Corrective Action Component:	No
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	FINAL 3008(A) COMPLIANCE ORDER
Enforcement Responsible Person:	Not reported
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported
Found Violation:	No
Agency Which Determined Violation:	Not reported
Violation Short Description:	Not reported
Date Violation was Determined:	Not reported
Actual Return to Compliance Date:	Not reported
Return to Compliance Qualifier:	Not reported
Violation Responsible Agency:	Not reported
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	Not reported
Date of Enforcement Action:	Not reported
Enforcement Responsible Agency:	Not reported
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	Not reported
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	Not reported
Enforcement Responsible Person:	Not reported
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported

Map ID
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Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported
Final Amount: Not reported

Found Violation: No
Agency Which Determined Violation: Not reported
Violation Short Description: Not reported
Date Violation was Determined: Not reported
Actual Return to Compliance Date: Not reported
Return to Compliance Qualifier: Not reported
Violation Responsible Agency: Not reported
Scheduled Compliance Date: Not reported
Enforcement Identifier: Not reported
Date of Enforcement Action: Not reported
Enforcement Responsible Agency: Not reported
Enforcement Docket Number: Not reported
Enforcement Attorney: Not reported
Corrective Action Component: Not reported
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: Not reported
Enforcement Responsible Person: Not reported
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported
Final Amount: Not reported

Found Violation: Yes
Agency Which Determined Violation: State
Violation Short Description: Generators - Pre-transport
Date Violation was Determined: 2017-09-20 00:00:00.0
Actual Return to Compliance Date: Not reported
Return to Compliance Qualifier: Not reported
Violation Responsible Agency: State
Scheduled Compliance Date: 2017-10-20 00:00:00.0
Enforcement Identifier: 601
Date of Enforcement Action: 2017-09-20 00:00:00.0
Enforcement Responsible Agency: State
Enforcement Docket Number: Not reported
Enforcement Attorney: Not reported

Map ID
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MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

Corrective Action Component:	No
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	FINAL 3008(A) COMPLIANCE ORDER
Enforcement Responsible Person:	Not reported
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported
Found Violation:	No
Agency Which Determined Violation:	Not reported
Violation Short Description:	Not reported
Date Violation was Determined:	Not reported
Actual Return to Compliance Date:	Not reported
Return to Compliance Qualifier:	Not reported
Violation Responsible Agency:	Not reported
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	Not reported
Date of Enforcement Action:	Not reported
Enforcement Responsible Agency:	Not reported
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	Not reported
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	Not reported
Enforcement Responsible Person:	Not reported
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported

Map ID
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Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported
Final Amount: Not reported

Found Violation: No
Agency Which Determined Violation: Not reported
Violation Short Description: Not reported
Date Violation was Determined: Not reported
Actual Return to Compliance Date: Not reported
Return to Compliance Qualifier: Not reported
Violation Responsible Agency: Not reported
Scheduled Compliance Date: Not reported
Enforcement Identifier: Not reported
Date of Enforcement Action: Not reported
Enforcement Responsible Agency: Not reported
Enforcement Docket Number: Not reported
Enforcement Attorney: Not reported
Corrective Action Component: Not reported
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: Not reported
Enforcement Responsible Person: Not reported
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported
Final Amount: Not reported

Found Violation: No
Agency Which Determined Violation: Not reported
Violation Short Description: Not reported
Date Violation was Determined: Not reported
Actual Return to Compliance Date: Not reported
Return to Compliance Qualifier: Not reported
Violation Responsible Agency: Not reported
Scheduled Compliance Date: Not reported
Enforcement Identifier: Not reported
Date of Enforcement Action: Not reported
Enforcement Responsible Agency: Not reported
Enforcement Docket Number: Not reported
Enforcement Attorney: Not reported

Map ID
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MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

Corrective Action Component:	Not reported
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	Not reported
Enforcement Responsible Person:	Not reported
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported
Found Violation:	Yes
Agency Which Determined Violation:	State
Violation Short Description:	TSD - General
Date Violation was Determined:	1994-06-27 00:00:00.0
Actual Return to Compliance Date:	1994-08-29 00:00:00.0
Return to Compliance Qualifier:	Observed
Violation Responsible Agency:	State
Scheduled Compliance Date:	1994-07-16 00:00:00.0
Enforcement Identifier:	010
Date of Enforcement Action:	1992-05-20 00:00:00.0
Enforcement Responsible Agency:	State
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	No
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	FINAL 3008(A) COMPLIANCE ORDER
Enforcement Responsible Person:	R9STA
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported

Map ID
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MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

Proposed Amount:	Not reported
Final Monetary Amount:	68000
Paid Amount:	20000
Final Count:	1
Final Amount:	68000
Found Violation:	No
Agency Which Determined Violation:	Not reported
Violation Short Description:	Not reported
Date Violation was Determined:	Not reported
Actual Return to Compliance Date:	Not reported
Return to Compliance Qualifier:	Not reported
Violation Responsible Agency:	Not reported
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	Not reported
Date of Enforcement Action:	Not reported
Enforcement Responsible Agency:	Not reported
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	Not reported
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	Not reported
Enforcement Responsible Person:	Not reported
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported
Found Violation:	Yes
Agency Which Determined Violation:	State
Violation Short Description:	TSD IS-Ground-Water Monitoring
Date Violation was Determined:	1992-01-23 00:00:00.0
Actual Return to Compliance Date:	1993-09-13 00:00:00.0
Return to Compliance Qualifier:	Observed
Violation Responsible Agency:	State
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	001
Date of Enforcement Action:	1988-09-30 00:00:00.0
Enforcement Responsible Agency:	EPA
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported

Map ID
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MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

Corrective Action Component:	No
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	INITIAL CIVIL JUDICIAL ACTION FOR COMPLIANCE AND/OR MONETARY PENALTY
Enforcement Responsible Person:	R9EPA
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported
Found Violation:	Yes
Agency Which Determined Violation:	State
Violation Short Description:	TSD - General
Date Violation was Determined:	1991-03-04 00:00:00.0
Actual Return to Compliance Date:	1991-09-18 00:00:00.0
Return to Compliance Qualifier:	Observed
Violation Responsible Agency:	State
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	010
Date of Enforcement Action:	1992-05-20 00:00:00.0
Enforcement Responsible Agency:	State
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	No
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	FINAL 3008(A) COMPLIANCE ORDER
Enforcement Responsible Person:	R9STA
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported

Map ID
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MAP FINDINGS

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Database(s)

EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

Proposed Amount: Not reported
Final Monetary Amount: 68000
Paid Amount: 20000
Final Count: 1
Final Amount: 68000

Found Violation: No
Agency Which Determined Violation: Not reported
Violation Short Description: Not reported
Date Violation was Determined: Not reported
Actual Return to Compliance Date: Not reported
Return to Compliance Qualifier: Not reported
Violation Responsible Agency: Not reported
Scheduled Compliance Date: Not reported
Enforcement Identifier: Not reported
Date of Enforcement Action: Not reported
Enforcement Responsible Agency: Not reported
Enforcement Docket Number: Not reported
Enforcement Attorney: Not reported
Corrective Action Component: Not reported
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: Not reported
Enforcement Responsible Person: Not reported
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported
Final Amount: Not reported

Found Violation: Yes
Agency Which Determined Violation: State
Violation Short Description: TSD - General
Date Violation was Determined: 1993-07-01 00:00:00.0
Actual Return to Compliance Date: 1994-05-13 00:00:00.0
Return to Compliance Qualifier: Observed
Violation Responsible Agency: State
Scheduled Compliance Date: Not reported
Enforcement Identifier: 013
Date of Enforcement Action: 1994-03-09 00:00:00.0
Enforcement Responsible Agency: State
Enforcement Docket Number: Not reported
Enforcement Attorney: Not reported

Map ID
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MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

Corrective Action Component:	No
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	INITIAL 3008(A) COMPLIANCE
Enforcement Responsible Person:	R9STA
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	1550
Final Monetary Amount:	750
Paid Amount:	Not reported
Final Count:	1
Final Amount:	750
Found Violation:	Yes
Agency Which Determined Violation:	State
Violation Short Description:	TSD - General
Date Violation was Determined:	1993-07-01 00:00:00.0
Actual Return to Compliance Date:	1994-05-13 00:00:00.0
Return to Compliance Qualifier:	Observed
Violation Responsible Agency:	State
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	013
Date of Enforcement Action:	1994-03-09 00:00:00.0
Enforcement Responsible Agency:	State
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	No
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	INITIAL 3008(A) COMPLIANCE
Enforcement Responsible Person:	R9STA
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported

Map ID
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MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

Proposed Amount:	1550
Final Monetary Amount:	750
Paid Amount:	Not reported
Final Count:	1
Final Amount:	750
Found Violation:	Yes
Agency Which Determined Violation:	State
Violation Short Description:	TSD - Financial Requirements
Date Violation was Determined:	1987-02-24 00:00:00.0
Actual Return to Compliance Date:	1993-09-13 00:00:00.0
Return to Compliance Qualifier:	Observed
Violation Responsible Agency:	State
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	001
Date of Enforcement Action:	1987-05-11 00:00:00.0
Enforcement Responsible Agency:	State
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	No
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	WRITTEN INFORMAL
Enforcement Responsible Person:	R9STA
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported
Found Violation:	No
Agency Which Determined Violation:	Not reported
Violation Short Description:	Not reported
Date Violation was Determined:	Not reported
Actual Return to Compliance Date:	Not reported
Return to Compliance Qualifier:	Not reported
Violation Responsible Agency:	Not reported
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	Not reported
Date of Enforcement Action:	Not reported
Enforcement Responsible Agency:	Not reported
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

Corrective Action Component:	Not reported
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	Not reported
Enforcement Responsible Person:	Not reported
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported
Found Violation:	No
Agency Which Determined Violation:	Not reported
Violation Short Description:	Not reported
Date Violation was Determined:	Not reported
Actual Return to Compliance Date:	Not reported
Return to Compliance Qualifier:	Not reported
Violation Responsible Agency:	Not reported
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	Not reported
Date of Enforcement Action:	Not reported
Enforcement Responsible Agency:	Not reported
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	Not reported
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	Not reported
Enforcement Responsible Person:	Not reported
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported
Final Amount: Not reported

Found Violation: No
Agency Which Determined Violation: Not reported
Violation Short Description: Not reported
Date Violation was Determined: Not reported
Actual Return to Compliance Date: Not reported
Return to Compliance Qualifier: Not reported
Violation Responsible Agency: Not reported
Scheduled Compliance Date: Not reported
Enforcement Identifier: Not reported
Date of Enforcement Action: Not reported
Enforcement Responsible Agency: Not reported
Enforcement Docket Number: Not reported
Enforcement Attorney: Not reported
Corrective Action Component: Not reported
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: Not reported
Enforcement Responsible Person: Not reported
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported
Final Amount: Not reported

Found Violation: Yes
Agency Which Determined Violation: State
Violation Short Description: TSD - General
Date Violation was Determined: 1993-07-01 00:00:00.0
Actual Return to Compliance Date: 1994-05-13 00:00:00.0
Return to Compliance Qualifier: Observed
Violation Responsible Agency: State
Scheduled Compliance Date: Not reported
Enforcement Identifier: 012
Date of Enforcement Action: 1993-07-01 00:00:00.0
Enforcement Responsible Agency: State
Enforcement Docket Number: Not reported
Enforcement Attorney: Not reported

Map ID
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MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

Corrective Action Component:	No
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	WRITTEN INFORMAL
Enforcement Responsible Person:	R9STA
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported
Found Violation:	Yes
Agency Which Determined Violation:	State
Violation Short Description:	TSD - Financial Requirements
Date Violation was Determined:	1987-02-24 00:00:00.0
Actual Return to Compliance Date:	1993-09-13 00:00:00.0
Return to Compliance Qualifier:	Observed
Violation Responsible Agency:	State
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	001
Date of Enforcement Action:	1988-09-30 00:00:00.0
Enforcement Responsible Agency:	EPA
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	No
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	INITIAL CIVIL JUDICIAL ACTION FOR COMPLIANCE AND/OR MONETARY PENALTY
Enforcement Responsible Person:	R9EPA
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported

Map ID
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MAP FINDINGS

Site

Database(s)

EDR ID Number
 EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported
Found Violation:	Yes
Agency Which Determined Violation:	State
Violation Short Description:	TSD - Closure/Post-Closure
Date Violation was Determined:	2005-11-16 00:00:00.0
Actual Return to Compliance Date:	2005-12-16 00:00:00.0
Return to Compliance Qualifier:	Documented
Violation Responsible Agency:	State
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	200
Date of Enforcement Action:	2005-11-16 00:00:00.0
Enforcement Responsible Agency:	State
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	No
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	Not reported
Enforcement Responsible Person:	Not reported
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported

Evaluation Action Summary:	
Evaluation Date:	2017-09-20 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	SIGNIFICANT NON-COMPLIER
Evaluation Responsible Person Identifier:	Not reported
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	Not reported
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported

Map ID
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Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

Evaluation Date: 1993-06-28 00:00:00.0
Evaluation Responsible Agency: State
Found Violation: Yes
Evaluation Type Description: COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier: R9STA
Evaluation Responsible Sub-Organization: Not reported
Actual Return to Compliance Date: 1994-05-13 00:00:00.0
Scheduled Compliance Date: Not reported
Date of Request: Not reported
Date Response Received: Not reported
Request Agency: Not reported
Former Citation: Not reported

Evaluation Date: 2011-11-21 00:00:00.0
Evaluation Responsible Agency: State
Found Violation: No
Evaluation Type Description: COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier: Not reported
Evaluation Responsible Sub-Organization: Not reported
Actual Return to Compliance Date: Not reported
Scheduled Compliance Date: Not reported
Date of Request: Not reported
Date Response Received: Not reported
Request Agency: Not reported
Former Citation: Not reported

Evaluation Date: 2015-07-07 00:00:00.0
Evaluation Responsible Agency: State
Found Violation: No
Evaluation Type Description: FINANCIAL RECORD REVIEW
Evaluation Responsible Person Identifier: Not reported
Evaluation Responsible Sub-Organization: Not reported
Actual Return to Compliance Date: Not reported
Scheduled Compliance Date: Not reported
Date of Request: Not reported
Date Response Received: Not reported
Request Agency: Not reported
Former Citation: Not reported

Evaluation Date: 1989-01-28 00:00:00.0
Evaluation Responsible Agency: State
Found Violation: Yes
Evaluation Type Description: COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier: R9STA
Evaluation Responsible Sub-Organization: Not reported
Actual Return to Compliance Date: 1989-03-22 00:00:00.0
Scheduled Compliance Date: 1989-02-28 00:00:00.0
Date of Request: Not reported
Date Response Received: Not reported
Request Agency: Not reported
Former Citation: Not reported

Evaluation Date: 2001-01-10 00:00:00.0
Evaluation Responsible Agency: State
Found Violation: Yes
Evaluation Type Description: COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier: Not reported

Map ID
Direction
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Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

Evaluation Responsible Sub-Organization: Not reported
Actual Return to Compliance Date: 2001-05-11 00:00:00.0
Scheduled Compliance Date: Not reported
Date of Request: Not reported
Date Response Received: Not reported
Request Agency: Not reported
Former Citation: Not reported

Evaluation Date: 2017-10-19 00:00:00.0
Evaluation Responsible Agency: State
Found Violation: No
Evaluation Type Description: COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier: Not reported
Evaluation Responsible Sub-Organization: Not reported
Actual Return to Compliance Date: Not reported
Scheduled Compliance Date: Not reported
Date of Request: Not reported
Date Response Received: Not reported
Request Agency: Not reported
Former Citation: Not reported

Evaluation Date: 2017-09-20 00:00:00.0
Evaluation Responsible Agency: State
Found Violation: Yes
Evaluation Type Description: SIGNIFICANT NON-COMPLIER
Evaluation Responsible Person Identifier: Not reported
Evaluation Responsible Sub-Organization: Not reported
Actual Return to Compliance Date: Not reported
Scheduled Compliance Date: 2017-10-20 00:00:00.0
Date of Request: Not reported
Date Response Received: Not reported
Request Agency: Not reported
Former Citation: Not reported

Evaluation Date: 2012-10-29 00:00:00.0
Evaluation Responsible Agency: State
Found Violation: No
Evaluation Type Description: COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier: Not reported
Evaluation Responsible Sub-Organization: Not reported
Actual Return to Compliance Date: Not reported
Scheduled Compliance Date: Not reported
Date of Request: Not reported
Date Response Received: Not reported
Request Agency: Not reported
Former Citation: Not reported

Evaluation Date: 1997-02-21 00:00:00.0
Evaluation Responsible Agency: State
Found Violation: Yes
Evaluation Type Description: COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier: R9STA
Evaluation Responsible Sub-Organization: Not reported
Actual Return to Compliance Date: 1997-03-07 00:00:00.0
Scheduled Compliance Date: Not reported
Date of Request: Not reported
Date Response Received: Not reported

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	2017-09-20 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	SIGNIFICANT NON-COMPLIER
Evaluation Responsible Person Identifier:	Not reported
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	Not reported
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	2006-10-26 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	No
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	Not reported
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	Not reported
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	1994-05-20 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	R9STA
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	1994-08-29 00:00:00.0
Scheduled Compliance Date:	1994-07-16 00:00:00.0
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	1989-10-26 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	R9STA
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	1990-01-03 00:00:00.0
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	1997-02-21 00:00:00.0
Evaluation Responsible Agency:	State

Map ID
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MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

Found Violation:	Yes
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	R9STA
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	1997-03-07 00:00:00.0
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	2001-12-13 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	No
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	Not reported
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	Not reported
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	1991-10-07 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	GROUNDWATER MONITORING EVALUATION
Evaluation Responsible Person Identifier:	R9STA
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	1993-09-13 00:00:00.0
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	1992-01-23 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	No
Evaluation Type Description:	SIGNIFICANT NON-COMPLIER
Evaluation Responsible Person Identifier:	Not reported
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	Not reported
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	1987-02-23 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	NON-FINANCIAL RECORD REVIEW
Evaluation Responsible Person Identifier:	R9STA
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	1990-01-03 00:00:00.0

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MAP FINDINGS

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Database(s)

EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	1994-05-20 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	R9STA
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	1994-08-29 00:00:00.0
Scheduled Compliance Date:	1994-07-16 00:00:00.0
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	1993-06-28 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	R9STA
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	1994-05-13 00:00:00.0
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	1991-10-21 00:00:00.0
Evaluation Responsible Agency:	EPA Contractor/Grantee
Found Violation:	Yes
Evaluation Type Description:	FINANCIAL RECORD REVIEW
Evaluation Responsible Person Identifier:	R9EPA
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	1991-10-21 00:00:00.0
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	1998-06-22 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	No
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	R9STA
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	Not reported
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported

Map ID
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MAP FINDINGS

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Database(s)

EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

Evaluation Date: 1991-03-04 00:00:00.0
Evaluation Responsible Agency: State
Found Violation: Yes
Evaluation Type Description: COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier: R9STA
Evaluation Responsible Sub-Organization: Not reported
Actual Return to Compliance Date: 1991-09-18 00:00:00.0
Scheduled Compliance Date: Not reported
Date of Request: Not reported
Date Response Received: Not reported
Request Agency: Not reported
Former Citation: Not reported

Evaluation Date: 1991-03-04 00:00:00.0
Evaluation Responsible Agency: State
Found Violation: Yes
Evaluation Type Description: COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier: R9STA
Evaluation Responsible Sub-Organization: Not reported
Actual Return to Compliance Date: 1991-09-18 00:00:00.0
Scheduled Compliance Date: Not reported
Date of Request: Not reported
Date Response Received: Not reported
Request Agency: Not reported
Former Citation: Not reported

Evaluation Date: 1989-11-06 00:00:00.0
Evaluation Responsible Agency: State
Found Violation: Yes
Evaluation Type Description: FINANCIAL RECORD REVIEW
Evaluation Responsible Person Identifier: R9STA
Evaluation Responsible Sub-Organization: Not reported
Actual Return to Compliance Date: 1990-05-21 00:00:00.0
Scheduled Compliance Date: Not reported
Date of Request: Not reported
Date Response Received: Not reported
Request Agency: Not reported
Former Citation: Not reported

Evaluation Date: 1987-12-28 00:00:00.0
Evaluation Responsible Agency: State
Found Violation: Yes
Evaluation Type Description: FINANCIAL RECORD REVIEW
Evaluation Responsible Person Identifier: R9STA
Evaluation Responsible Sub-Organization: Not reported
Actual Return to Compliance Date: 1993-09-13 00:00:00.0
Scheduled Compliance Date: Not reported
Date of Request: Not reported
Date Response Received: Not reported
Request Agency: Not reported
Former Citation: Not reported

Evaluation Date: 2001-01-10 00:00:00.0
Evaluation Responsible Agency: State
Found Violation: Yes
Evaluation Type Description: COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier: Not reported

Map ID
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MAP FINDINGS

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Database(s)

EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

Evaluation Responsible Sub-Organization: Not reported
Actual Return to Compliance Date: 2001-05-11 00:00:00.0
Scheduled Compliance Date: Not reported
Date of Request: Not reported
Date Response Received: Not reported
Request Agency: Not reported
Former Citation: Not reported

Evaluation Date: 2017-09-20 00:00:00.0
Evaluation Responsible Agency: State
Found Violation: Yes
Evaluation Type Description: SIGNIFICANT NON-COMPLIER
Evaluation Responsible Person Identifier: Not reported
Evaluation Responsible Sub-Organization: Not reported
Actual Return to Compliance Date: Not reported
Scheduled Compliance Date: 2017-10-20 00:00:00.0
Date of Request: Not reported
Date Response Received: Not reported
Request Agency: Not reported
Former Citation: Not reported

Evaluation Date: 1991-10-07 00:00:00.0
Evaluation Responsible Agency: State
Found Violation: Yes
Evaluation Type Description: GROUNDWATER MONITORING EVALUATION
Evaluation Responsible Person Identifier: R9STA
Evaluation Responsible Sub-Organization: Not reported
Actual Return to Compliance Date: 1993-09-13 00:00:00.0
Scheduled Compliance Date: Not reported
Date of Request: Not reported
Date Response Received: Not reported
Request Agency: Not reported
Former Citation: Not reported

Evaluation Date: 2017-09-20 00:00:00.0
Evaluation Responsible Agency: State
Found Violation: Yes
Evaluation Type Description: SIGNIFICANT NON-COMPLIER
Evaluation Responsible Person Identifier: Not reported
Evaluation Responsible Sub-Organization: Not reported
Actual Return to Compliance Date: Not reported
Scheduled Compliance Date: Not reported
Date of Request: Not reported
Date Response Received: Not reported
Request Agency: Not reported
Former Citation: Not reported

Evaluation Date: 1993-06-28 00:00:00.0
Evaluation Responsible Agency: State
Found Violation: Yes
Evaluation Type Description: COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier: R9STA
Evaluation Responsible Sub-Organization: Not reported
Actual Return to Compliance Date: 1994-05-13 00:00:00.0
Scheduled Compliance Date: Not reported
Date of Request: Not reported
Date Response Received: Not reported

Map ID
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MAP FINDINGS

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Database(s)

EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	1993-09-13 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	No
Evaluation Type Description:	NOT A SIGNIFICANT NON-COMPLIER
Evaluation Responsible Person Identifier:	Not reported
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	Not reported
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	2001-01-10 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	No
Evaluation Type Description:	FINANCIAL RECORD REVIEW
Evaluation Responsible Person Identifier:	Not reported
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	Not reported
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	1989-10-26 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	R9STA
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	1990-01-03 00:00:00.0
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	1996-02-09 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	R9STA
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	1996-04-17 00:00:00.0
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	1993-07-23 00:00:00.0
Evaluation Responsible Agency:	State

Map ID
Direction
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Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

Found Violation:	No
Evaluation Type Description:	FINANCIAL RECORD REVIEW
Evaluation Responsible Person Identifier:	R9STA
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	Not reported
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	1987-02-24 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	FINANCIAL RECORD REVIEW
Evaluation Responsible Person Identifier:	R9STA
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	1993-09-13 00:00:00.0
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	1988-12-28 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	R9STA
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	1989-03-02 00:00:00.0
Scheduled Compliance Date:	1989-02-28 00:00:00.0
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	2001-01-10 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	Not reported
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	2001-05-11 00:00:00.0
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	2002-11-19 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	No
Evaluation Type Description:	FINANCIAL RECORD REVIEW
Evaluation Responsible Person Identifier:	Not reported
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	Not reported

Map ID
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MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	2017-11-01 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	No
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	Not reported
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	Not reported
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	1994-05-20 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	R9STA
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	1994-08-29 00:00:00.0
Scheduled Compliance Date:	1994-07-16 00:00:00.0
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	2007-06-18 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	Not reported
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	2007-07-18 00:00:00.0
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	1997-02-21 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	R9STA
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	1997-03-07 00:00:00.0
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported

Map ID
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MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

Evaluation Date: 2010-11-30 00:00:00.0
Evaluation Responsible Agency: State
Found Violation: Yes
Evaluation Type Description: COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier: Not reported
Evaluation Responsible Sub-Organization: Not reported
Actual Return to Compliance Date: 2010-11-30 00:00:00.0
Scheduled Compliance Date: Not reported
Date of Request: Not reported
Date Response Received: Not reported
Request Agency: Not reported
Former Citation: Not reported

Evaluation Date: 1987-12-28 00:00:00.0
Evaluation Responsible Agency: State
Found Violation: Yes
Evaluation Type Description: FINANCIAL RECORD REVIEW
Evaluation Responsible Person Identifier: R9STA
Evaluation Responsible Sub-Organization: Not reported
Actual Return to Compliance Date: 1993-09-13 00:00:00.0
Scheduled Compliance Date: Not reported
Date of Request: Not reported
Date Response Received: Not reported
Request Agency: Not reported
Former Citation: Not reported

Evaluation Date: 2004-04-27 00:00:00.0
Evaluation Responsible Agency: State
Found Violation: Yes
Evaluation Type Description: COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier: Not reported
Evaluation Responsible Sub-Organization: Not reported
Actual Return to Compliance Date: 2004-05-27 00:00:00.0
Scheduled Compliance Date: Not reported
Date of Request: Not reported
Date Response Received: Not reported
Request Agency: Not reported
Former Citation: Not reported

Evaluation Date: 1994-05-20 00:00:00.0
Evaluation Responsible Agency: State
Found Violation: Yes
Evaluation Type Description: COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier: R9STA
Evaluation Responsible Sub-Organization: Not reported
Actual Return to Compliance Date: 1994-08-29 00:00:00.0
Scheduled Compliance Date: 1994-07-16 00:00:00.0
Date of Request: Not reported
Date Response Received: Not reported
Request Agency: Not reported
Former Citation: Not reported

Evaluation Date: 2017-09-20 00:00:00.0
Evaluation Responsible Agency: State
Found Violation: Yes
Evaluation Type Description: SIGNIFICANT NON-COMPLIER
Evaluation Responsible Person Identifier: Not reported

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Database(s)

EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	Not reported
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	1991-03-04 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	R9STA
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	1991-09-18 00:00:00.0
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	1992-04-27 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	No
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	R9STA
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	Not reported
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	2004-02-19 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	No
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	Not reported
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	Not reported
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	1993-06-28 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	R9STA
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	1994-05-13 00:00:00.0
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported

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MAP FINDINGS

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Database(s)

EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	1988-12-01 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	FINANCIAL RECORD REVIEW
Evaluation Responsible Person Identifier:	R9STA
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	1990-05-21 00:00:00.0
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	1994-05-20 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	R9STA
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	1994-08-29 00:00:00.0
Scheduled Compliance Date:	1994-07-16 00:00:00.0
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	2017-09-22 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	No
Evaluation Type Description:	NOT A SIGNIFICANT NON-COMPLIER
Evaluation Responsible Person Identifier:	Not reported
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	Not reported
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	1988-12-01 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	FINANCIAL RECORD REVIEW
Evaluation Responsible Person Identifier:	R9STA
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	1990-05-21 00:00:00.0
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	2014-09-16 00:00:00.0
Evaluation Responsible Agency:	State

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Database(s)

EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

Found Violation:	Yes
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	Not reported
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	2014-10-16 00:00:00.0
Scheduled Compliance Date:	2014-10-16 00:00:00.0
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	1987-02-23 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	No
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	R9STA
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	Not reported
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	2005-05-16 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	No
Evaluation Type Description:	FINANCIAL RECORD REVIEW
Evaluation Responsible Person Identifier:	Not reported
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	Not reported
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	1993-06-28 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	R9STA
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	1994-05-13 00:00:00.0
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	2017-03-07 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	FOCUSED COMPLIANCE INSPECTION
Evaluation Responsible Person Identifier:	Not reported
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	2017-03-14 00:00:00.0

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Database(s)

EDR ID Number
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TECHALLOY WESTERN INC (Continued)

1000239144

Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	2014-10-16 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	No
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	Not reported
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	Not reported
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	2013-01-17 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	No
Evaluation Type Description:	FINANCIAL RECORD REVIEW
Evaluation Responsible Person Identifier:	Not reported
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	Not reported
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	2004-06-28 00:00:00.0
Evaluation Responsible Agency:	State Contractor/Grantee
Found Violation:	Yes
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	Not reported
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	2004-07-19 00:00:00.0
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	2006-09-22 00:00:00.0
Evaluation Responsible Agency:	EPA Contractor/Grantee
Found Violation:	Undetermined
Evaluation Type Description:	FINANCIAL RECORD REVIEW
Evaluation Responsible Person Identifier:	KSAVA
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	Not reported
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported

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MAP FINDINGS

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Database(s)

EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

Evaluation Date: 2014-09-16 00:00:00.0
Evaluation Responsible Agency: State
Found Violation: Yes
Evaluation Type Description: COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier: Not reported
Evaluation Responsible Sub-Organization: Not reported
Actual Return to Compliance Date: 2014-10-16 00:00:00.0
Scheduled Compliance Date: 2014-10-16 00:00:00.0
Date of Request: Not reported
Date Response Received: Not reported
Request Agency: Not reported
Former Citation: Not reported

Evaluation Date: 1993-06-28 00:00:00.0
Evaluation Responsible Agency: State
Found Violation: Yes
Evaluation Type Description: COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier: R9STA
Evaluation Responsible Sub-Organization: Not reported
Actual Return to Compliance Date: 1994-05-13 00:00:00.0
Scheduled Compliance Date: Not reported
Date of Request: Not reported
Date Response Received: Not reported
Request Agency: Not reported
Former Citation: Not reported

Evaluation Date: 1996-02-09 00:00:00.0
Evaluation Responsible Agency: State
Found Violation: Yes
Evaluation Type Description: COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier: R9STA
Evaluation Responsible Sub-Organization: Not reported
Actual Return to Compliance Date: 1996-03-07 00:00:00.0
Scheduled Compliance Date: Not reported
Date of Request: Not reported
Date Response Received: Not reported
Request Agency: Not reported
Former Citation: Not reported

Evaluation Date: 1993-06-28 00:00:00.0
Evaluation Responsible Agency: State
Found Violation: Yes
Evaluation Type Description: COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier: R9STA
Evaluation Responsible Sub-Organization: Not reported
Actual Return to Compliance Date: 1994-05-13 00:00:00.0
Scheduled Compliance Date: Not reported
Date of Request: Not reported
Date Response Received: Not reported
Request Agency: Not reported
Former Citation: Not reported

Evaluation Date: 2002-10-29 00:00:00.0
Evaluation Responsible Agency: State
Found Violation: No
Evaluation Type Description: COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier: Not reported

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Database(s)

EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

Evaluation Responsible Sub-Organization: Not reported
Actual Return to Compliance Date: Not reported
Scheduled Compliance Date: Not reported
Date of Request: Not reported
Date Response Received: Not reported
Request Agency: Not reported
Former Citation: Not reported

Evaluation Date: 2014-09-16 00:00:00.0
Evaluation Responsible Agency: State
Found Violation: Yes
Evaluation Type Description: COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier: Not reported
Evaluation Responsible Sub-Organization: Not reported
Actual Return to Compliance Date: 2014-10-16 00:00:00.0
Scheduled Compliance Date: 2014-10-16 00:00:00.0
Date of Request: Not reported
Date Response Received: Not reported
Request Agency: Not reported
Former Citation: Not reported

Evaluation Date: 1997-02-21 00:00:00.0
Evaluation Responsible Agency: State
Found Violation: Yes
Evaluation Type Description: COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier: R9STA
Evaluation Responsible Sub-Organization: Not reported
Actual Return to Compliance Date: 1997-03-20 00:00:00.0
Scheduled Compliance Date: Not reported
Date of Request: Not reported
Date Response Received: Not reported
Request Agency: Not reported
Former Citation: Not reported

Evaluation Date: 2008-04-22 00:00:00.0
Evaluation Responsible Agency: State
Found Violation: No
Evaluation Type Description: FINANCIAL RECORD REVIEW
Evaluation Responsible Person Identifier: Not reported
Evaluation Responsible Sub-Organization: Not reported
Actual Return to Compliance Date: Not reported
Scheduled Compliance Date: Not reported
Date of Request: Not reported
Date Response Received: Not reported
Request Agency: Not reported
Former Citation: Not reported

Evaluation Date: 2005-12-08 00:00:00.0
Evaluation Responsible Agency: State
Found Violation: No
Evaluation Type Description: FINANCIAL RECORD REVIEW
Evaluation Responsible Person Identifier: Not reported
Evaluation Responsible Sub-Organization: Not reported
Actual Return to Compliance Date: Not reported
Scheduled Compliance Date: Not reported
Date of Request: Not reported
Date Response Received: Not reported

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Database(s)

EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	2017-09-20 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	SIGNIFICANT NON-COMPLIER
Evaluation Responsible Person Identifier:	Not reported
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	Not reported
Scheduled Compliance Date:	2017-10-20 00:00:00.0
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	1989-11-06 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	FINANCIAL RECORD REVIEW
Evaluation Responsible Person Identifier:	R9STA
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	1990-05-21 00:00:00.0
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	1993-06-28 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	R9STA
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	1994-05-13 00:00:00.0
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	2014-10-16 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	No
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	Not reported
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	Not reported
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	1986-09-30 00:00:00.0
Evaluation Responsible Agency:	State

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Database(s)

EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

Found Violation:	No
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	R9STA
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	Not reported
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	1988-01-07 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	R9STA
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	1990-01-03 00:00:00.0
Scheduled Compliance Date:	1988-02-29 00:00:00.0
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	1989-11-06 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	FINANCIAL RECORD REVIEW
Evaluation Responsible Person Identifier:	R9STA
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	1990-05-21 00:00:00.0
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	1993-06-28 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	R9STA
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	1994-05-13 00:00:00.0
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	2019-04-29 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	No
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	Not reported
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	Not reported

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EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

Scheduled Compliance Date: Not reported
Date of Request: Not reported
Date Response Received: Not reported
Request Agency: Not reported
Former Citation: Not reported

Evaluation Date: 1993-03-11 00:00:00.0
Evaluation Responsible Agency: EPA
Found Violation: No
Evaluation Type Description: CORRECTIVE ACTION COMPLIANCE EVALUATION
Evaluation Responsible Person Identifier: R9EPA
Evaluation Responsible Sub-Organization: Not reported
Actual Return to Compliance Date: Not reported
Scheduled Compliance Date: Not reported
Date of Request: Not reported
Date Response Received: Not reported
Request Agency: Not reported
Former Citation: Not reported

Evaluation Date: 2017-09-20 00:00:00.0
Evaluation Responsible Agency: State
Found Violation: Yes
Evaluation Type Description: SIGNIFICANT NON-COMPLIER
Evaluation Responsible Person Identifier: Not reported
Evaluation Responsible Sub-Organization: Not reported
Actual Return to Compliance Date: Not reported
Scheduled Compliance Date: 2017-10-20 00:00:00.0
Date of Request: Not reported
Date Response Received: Not reported
Request Agency: Not reported
Former Citation: Not reported

Evaluation Date: 2001-11-16 00:00:00.0
Evaluation Responsible Agency: State
Found Violation: No
Evaluation Type Description: FINANCIAL RECORD REVIEW
Evaluation Responsible Person Identifier: Not reported
Evaluation Responsible Sub-Organization: Not reported
Actual Return to Compliance Date: Not reported
Scheduled Compliance Date: Not reported
Date of Request: Not reported
Date Response Received: Not reported
Request Agency: Not reported
Former Citation: Not reported

Evaluation Date: 2017-11-06 00:00:00.0
Evaluation Responsible Agency: State
Found Violation: No
Evaluation Type Description: FINANCIAL RECORD REVIEW
Evaluation Responsible Person Identifier: Not reported
Evaluation Responsible Sub-Organization: Not reported
Actual Return to Compliance Date: Not reported
Scheduled Compliance Date: Not reported
Date of Request: Not reported
Date Response Received: Not reported
Request Agency: Not reported
Former Citation: Not reported

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

Evaluation Date:	2017-09-20 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	SIGNIFICANT NON-COMPLIER
Evaluation Responsible Person Identifier:	Not reported
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	Not reported
Scheduled Compliance Date:	2017-10-20 00:00:00.0
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	2011-01-20 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	No
Evaluation Type Description:	FINANCIAL RECORD REVIEW
Evaluation Responsible Person Identifier:	Not reported
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	Not reported
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	2006-10-24 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	No
Evaluation Type Description:	FINANCIAL RECORD REVIEW
Evaluation Responsible Person Identifier:	Not reported
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	Not reported
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	1996-01-08 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	No
Evaluation Type Description:	OPERATION AND MAINTENANCE INSPECTION
Evaluation Responsible Person Identifier:	R9STA
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	Not reported
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	1994-05-20 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	R9STA

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	1994-08-29 00:00:00.0
Scheduled Compliance Date:	1994-07-16 00:00:00.0
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	1999-02-24 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	No
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	Not reported
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	Not reported
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	1991-10-07 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	GROUNDWATER MONITORING EVALUATION
Evaluation Responsible Person Identifier:	R9STA
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	1993-09-13 00:00:00.0
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	1991-03-04 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	R9STA
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	1991-09-18 00:00:00.0
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	2005-07-27 00:00:00.0
Evaluation Responsible Agency:	State Contractor/Grantee
Found Violation:	No
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	Not reported
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	Not reported
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported

Map ID
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Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	1993-06-28 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	R9STA
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	1994-05-13 00:00:00.0
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	1993-06-28 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	R9STA
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	1994-05-13 00:00:00.0
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	1987-02-24 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	FINANCIAL RECORD REVIEW
Evaluation Responsible Person Identifier:	R9STA
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	1993-09-13 00:00:00.0
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	2018-08-01 00:00:00.0
Evaluation Responsible Agency:	EPA
Found Violation:	No
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	DFERN
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	Not reported
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	2004-02-17 00:00:00.0
Evaluation Responsible Agency:	State

Map ID
Direction
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Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

Found Violation:	No
Evaluation Type Description:	FINANCIAL RECORD REVIEW
Evaluation Responsible Person Identifier:	Not reported
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	Not reported
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	2008-02-29 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	No
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	Not reported
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	Not reported
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	1993-06-28 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	R9STA
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	1994-05-13 00:00:00.0
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	1987-02-24 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	FINANCIAL RECORD REVIEW
Evaluation Responsible Person Identifier:	R9STA
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	1993-09-13 00:00:00.0
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	2005-11-16 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	Not reported
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	2005-12-16 00:00:00.0

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MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported

Map ID
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MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

US INST CONTROLS:

Name: CENTRAL WIRE INC
Address: 2500 SOUTH A STREET
Address 2: Not reported
City,State,Zip: PERRIS, CA 92570-9317
EPA ID: CAD059277137
Action Name: Not reported
Action ID: Not reported
Operable Unit: Not reported
Actual Date: Not reported
Contaminated Media: Not reported
Event Code: CA772ID
Contact Name: STEFANO PELLEGRINI
Contact Telephone: 951-657-2105
Event: INSTITUTIONAL CONTROLS ESTABLISHED-INFORMATIONAL DEVICE
Federal Facility: Not reported
Fiscal Year: Not reported
NPL Status: Not reported
Superfund Alternative Agreement: Not reported
Latitude: Not reported
Longitude: Not reported

SLIC REG 8:

Name: TECHALLOY
Address: 2500 A STREET
City: PERRIS
Type: Soil and Groundwater
Facility Status: 6
Staff: Dixie Lass, Tel 909-782-3295, LAND DISPOSAL
Substance: METALS,TDS
Lead Agency: U.S. Environmental Protection Agency
Location Code: Not reported
Thomas Bros Code: Not reported

HIST UST:

Name: TECHALLOY WESTERN, INC.
Address: 2500 "A" ST.
City,State,Zip: PERRIS, CA 92370
File Number: Not reported
URL: Not reported
Region: STATE
Facility ID: 00000049274
Facility Type: Other
Other Type: WIRE REDRAWING
Contact Name: KEN GOLD
Telephone: 7146572105
Owner Name: TECHALLOY WESTERN, INC.
Owner Address: 2500 "A" ST.
Owner City,St,Zip: PERRIS, CA 92370
Total Tanks: 0001

Tank Num: 001
Container Num: 027586
Year Installed: Not reported
Tank Capacity: 00001000
Tank Used for: PRODUCT

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MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

Type of Fuel: REGULAR
Container Construction Thickness: Not reported
Leak Detection: Pressure Test

DEED:

Name: TECHALLOY BRINE FAC
Address: 2500 A STREET
City,State,Zip: PERRIS, CA 92570
Envirostor ID: L10008950711
Area: Not reported
Sub Area: Not reported
Site Type: LANDFILL
Status: COMPLETED - CASE CLOSED
Agency: SWRCB
Covenant Uploaded: Y
Deed Date(s): 01/08/1990
File Name: Geotracker Land Use/Deed Restrictions

LDS:

Name: TECHALLOY BRINE FAC
Address: 2500 A STREET
City,State,Zip: PERRIS, CA 92570

Global Id: L10008950711
Latitude: 33.75148
Longitude: -117.2374
Case Type: Land Disposal Site
Status: Completed - Case Closed
Status Date: 12/06/2013
Lead Agency: DEPARTMENT OF TOXIC SUBSTANCES CONTROL
Caseworker: Not reported
Local Agency: Not reported
RB Case Number: Not reported
LOC Case Number: 80001433
File Location: DTSC
Potential Media Affect: Not reported
EDR Link ID: L10008950711
Potential Contaminants of Concern: Not reported
Site History: Techalloy Company, Inc. operates a steel wire manufacturing facility in Perris, CA. From 1966 to 1979, Techalloy discharged acidic hazardous wastes (containing high levels of chromium, nickel, fluoride, copper, and nitrate) to three lined surface impoundments at the site under Board Order No. 88-66 and Resolution No. 66-38. In Oct. 1984, during removal of residual solid wastes from the impoundments, the liner puncture was discovered. Subsurface investigations (13 soil boreholes and 23 monitoring wells) performed in 1985 and 1986. These investigations concluded that groundwater contamination by total dissolved solids and heavy metals. Additional groundwater monitoring wells installed in June 1990 to investigate the extent of contaminant plumes. The site closure plan was approved by the Regional Board, State Dept. of Toxic Substances Control (DTSC), and the USEPA. The installation of a low permeability closure cap over the three surface impoundments completed in July 1989. The Regional Board issued Order No. 90-145 for post-closure groundwater monitoring at the site on October 9, 1990. Since this is a hazardous waste facility, DTSC is the lead agency for site closure and

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MAP FINDINGS

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Database(s)

EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

groundwater monitoring program for the site. The Regional Board issued Order No. 90-145 for post-closure groundwater monitoring at the site on October 9, 1990. Since this is a hazardous waste facility, DTSC is the lead agency for site closure and groundwater monitoring program for the site. In May 1996, DTSC issued a hazardous waste post-closure facility permit for this facility. The Regional Board is a responsible agency (but a lead agency in enforcing the requirements in Order No. 90-145) and requests that a copy of the groundwater monitoring report be submitted as well. Techalloy is conducting post-closure groundwater monitoring and cap inspection and maintenance as directed by DTSC under a Post-closure Facility Permit (EnviroStor ID 80001433). The Regional Board rescinded Order No. 90-145 on December 6, 2013. Go to Techalloy (Global ID# SLT8R1924097) in Geotracker to view groundwater monitoring reports. Also, go to DTSC's EnviroStor database to access all technical reports (post-closure facility permit, land use covenant, monitoring reports, etc.) for Techalloy (EnviroStar ID # 80001433, Facility EPA ID# CAD059277137).

[Click here to access the California GeoTracker records for this facility:](#)

US FIN ASSUR:

Name: CENTRAL WIRE INC
Address: 2500 SOUTH A STREET
City,State,Zip: PERRIS, CA
EPA ID: CAD059277137
County: Not reported
Mechanism type: X
Mechanism Type Description: STANDBY TRUST FUND
Cost estimate: 1668000
Face value: 0
Effective date: 2011-06-06 00:00:00
Provider: THE BANK NEW YORK MELLON
EPA region: 9

Name: CENTRAL WIRE INC
Address: 2500 SOUTH A STREET
City,State,Zip: PERRIS, CA
EPA ID: CAD059277137
County: Not reported
Mechanism type: L
Mechanism Type Description: LETTER OF CREDIT
Cost estimate: 256825
Face value: 1924825
Effective date: 2011-05-18 00:00:00
Provider: ROYAL BANK OF CANADA
EPA region: 9

Name: CENTRAL WIRE INC
Address: 2500 SOUTH A STREET
City,State,Zip: PERRIS, CA
EPA ID: CAD059277137
County: Not reported
Mechanism type: X
Mechanism Type Description: STANDBY TRUST FUND
Cost estimate: 256825

Map ID
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MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

Face value: 0
Effective date: 2011-06-06 00:00:00
Provider: THE BANK NEW YORK MELLON
EPA region: 9

Name: CENTRAL WIRE INC
Address: 2500 SOUTH A STREET
City,State,Zip: PERRIS, CA
EPA ID: CAD059277137
County: Not reported
Mechanism type: L
Mechanism Type Description: LETTER OF CREDIT
Cost estimate: 1703028
Face value: 2000000
Effective date: 2015-06-24 00:00:00
Provider: HSBC BANK USA, N.A.
EPA region: 9

Name: CENTRAL WIRE INC
Address: 2500 SOUTH A STREET
City,State,Zip: PERRIS, CA
EPA ID: CAD059277137
County: Not reported
Mechanism type: X
Mechanism Type Description: STANDBY TRUST FUND
Cost estimate: 1703028
Face value: 0
Effective date: 2015-06-24 00:00:00
Provider: HSBC BANK USA, N.A.
EPA region: 9

Name: CENTRAL WIRE INC
Address: 2500 SOUTH A STREET
City,State,Zip: PERRIS, CA
EPA ID: CAD059277137
County: Not reported
Mechanism type: L
Mechanism Type Description: LETTER OF CREDIT
Cost estimate: 1668000
Face value: 1924825
Effective date: 2011-05-18 00:00:00
Provider: ROYAL BANK OF CANADA
EPA region: 9

2020 COR ACTION:
EPA ID: CAD059277137
Region: 9
Action: Remedy Construction

NPDES:
Name: TECHALLOY CO INC
Address: 2500 S A ST
City,State,Zip: PERRIS, CA 92570
Facility Status: Active
NPDES Number: CAS000001
Region: 8

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MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

Agency Number: 0
Regulatory Measure ID: 210657
Place ID: Not reported
Order Number: 97-03-DWQ
WDID: 8 33I000148
Regulatory Measure Type: Enrollee
Program Type: Industrial
Adoption Date Of Regulatory Measure: Not reported
Effective Date Of Regulatory Measure: 02/24/1992
Termination Date Of Regulatory Measure: Not reported
Expiration Date Of Regulatory Measure: Not reported
Discharge Address: 2500 S A ST
Discharge Name: Central Wire Inc
Discharge City: Perris
Discharge State: California
Discharge Zip: 92570
Status: Not reported
Status Date: Not reported
Operator Name: Not reported
Operator Address: Not reported
Operator City: Not reported
Operator State: Not reported
Operator Zip: Not reported

NPDES as of 03/2018:

NPDES Number: CAS000001
Status: Active
Agency Number: 0
Region: 8
Regulatory Measure ID: 210657
Order Number: 97-03-DWQ
Regulatory Measure Type: Enrollee
Place ID: Not reported
WDID: 8 33I000148
Program Type: Industrial
Adoption Date Of Regulatory Measure: Not reported
Effective Date Of Regulatory Measure: 02/24/1992
Expiration Date Of Regulatory Measure: Not reported
Termination Date Of Regulatory Measure: Not reported
Discharge Name: Central Wire Inc
Discharge Address: 2500 S A ST
Discharge City: Perris
Discharge State: California
Discharge Zip: 92570
Received Date: Not reported
Processed Date: Not reported
Status: Not reported
Status Date: Not reported
Place Size: Not reported
Place Size Unit: Not reported
Contact: Not reported
Contact Title: Not reported
Contact Phone: Not reported
Contact Phone Ext: Not reported
Contact Email: Not reported
Operator Name: Not reported
Operator Address: Not reported
Operator City: Not reported

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MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

Operator State:	Not reported
Operator Zip:	Not reported
Operator Contact:	Not reported
Operator Contact Title:	Not reported
Operator Contact Phone:	Not reported
Operator Contact Phone Ext:	Not reported
Operator Contact Email:	Not reported
Operator Type:	Not reported
Developer:	Not reported
Developer Address:	Not reported
Developer City:	Not reported
Developer State:	Not reported
Developer Zip:	Not reported
Developer Contact:	Not reported
Developer Contact Title:	Not reported
Constype Linear Utility Ind:	Not reported
Emergency Phone:	Not reported
Emergency Phone Ext:	Not reported
Constype Above Ground Ind:	Not reported
Constype Below Ground Ind:	Not reported
Constype Cable Line Ind:	Not reported
Constype Comm Line Ind:	Not reported
Constype Commercial Ind:	Not reported
Constype Electrical Line Ind:	Not reported
Constype Gas Line Ind:	Not reported
Constype Industrial Ind:	Not reported
Constype Other Description:	Not reported
Constype Other Ind:	Not reported
Constype Recons Ind:	Not reported
Constype Residential Ind:	Not reported
Constype Transport Ind:	Not reported
Constype Utility Description:	Not reported
Constype Utility Ind:	Not reported
Constype Water Sewer Ind:	Not reported
Dir Discharge Uswater Ind:	Not reported
Receiving Water Name:	Not reported
Certifier:	Not reported
Certifier Title:	Not reported
Certification Date:	Not reported
Primary Sic:	Not reported
Secondary Sic:	Not reported
Tertiary Sic:	Not reported
NPDES Number:	Not reported
Status:	Not reported
Agency Number:	Not reported
Region:	8
Regulatory Measure ID:	210657
Order Number:	Not reported
Regulatory Measure Type:	Industrial
Place ID:	Not reported
WDID:	8 33I000148
Program Type:	Not reported
Adoption Date Of Regulatory Measure:	Not reported
Effective Date Of Regulatory Measure:	Not reported
Expiration Date Of Regulatory Measure:	Not reported
Termination Date Of Regulatory Measure:	Not reported

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Site

Database(s)

EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

Discharge Name:	Not reported
Discharge Address:	Not reported
Discharge City:	Not reported
Discharge State:	Not reported
Discharge Zip:	Not reported
Received Date:	05/09/2008
Processed Date:	02/24/1992
Status:	Active
Status Date:	02/24/1992
Place Size:	20
Place Size Unit:	Acres
Contact:	George Wood
Contact Title:	Not reported
Contact Phone:	951-657-2105
Contact Phone Ext:	Not reported
Contact Email:	gwood@centralwire.com
Operator Name:	Central Wire Inc
Operator Address:	2500 S A ST
Operator City:	Perris
Operator State:	California
Operator Zip:	92570
Operator Contact:	George Wood
Operator Contact Title:	Not reported
Operator Contact Phone:	951-657-2105
Operator Contact Phone Ext:	Not reported
Operator Contact Email:	gwood@centralwire.com
Operator Type:	Other
Developer:	Not reported
Developer Address:	Not reported
Developer City:	Not reported
Developer State:	California
Developer Zip:	Not reported
Developer Contact:	Not reported
Developer Contact Title:	Not reported
Constype Linear Utility Ind:	Not reported
Emergency Phone:	Not reported
Emergency Phone Ext:	Not reported
Constype Above Ground Ind:	Not reported
Constype Below Ground Ind:	Not reported
Constype Cable Line Ind:	Not reported
Constype Comm Line Ind:	Not reported
Constype Commercial Ind:	Not reported
Constype Electrical Line Ind:	Not reported
Constype Gas Line Ind:	Not reported
Constype Industrial Ind:	Not reported
Constype Other Description:	Not reported
Constype Other Ind:	Not reported
Constype Recons Ind:	Not reported
Constype Residential Ind:	Not reported
Constype Transport Ind:	Not reported
Constype Utility Description:	Not reported
Constype Utility Ind:	Not reported
Constype Water Sewer Ind:	Not reported
Dir Discharge Uswater Ind:	N
Receiving Water Name:	San Jacinto River
Certifier:	George Wood
Certifier Title:	Operations Manager

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Database(s)

EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

Certification Date: 17-JUN-15
Primary Sic: 3315-Steel Wiredrawing and Steel Nails and Spikes
Secondary Sic: Not reported
Tertiary Sic: Not reported

Name: TECHALLOY CO INC
Address: 2500 S A ST
City,State,Zip: PERRIS, CA 92570
Facility Status: Not reported
NPDES Number: Not reported
Region: Not reported
Agency Number: Not reported
Regulatory Measure ID: Not reported
Place ID: Not reported
Order Number: Not reported
WDID: 8 33I000148
Regulatory Measure Type: Industrial
Program Type: Not reported
Adoption Date Of Regulatory Measure: Not reported
Effective Date Of Regulatory Measure: Not reported
Termination Date Of Regulatory Measure: Not reported
Expiration Date Of Regulatory Measure: Not reported
Discharge Address: Not reported
Discharge Name: Not reported
Discharge City: Not reported
Discharge State: Not reported
Discharge Zip: Not reported
Status: Active
Status Date: 02/24/1992
Operator Name: Central Wire Inc
Operator Address: 2500 S A ST
Operator City: Perris
Operator State: California
Operator Zip: 92570

NPDES as of 03/2018:

NPDES Number: CAS000001
Status: Active
Agency Number: 0
Region: 8
Regulatory Measure ID: 210657
Order Number: 97-03-DWQ
Regulatory Measure Type: Enrollee
Place ID: Not reported
WDID: 8 33I000148
Program Type: Industrial
Adoption Date Of Regulatory Measure: Not reported
Effective Date Of Regulatory Measure: 02/24/1992
Expiration Date Of Regulatory Measure: Not reported
Termination Date Of Regulatory Measure: Not reported
Discharge Name: Central Wire Inc
Discharge Address: 2500 S A ST
Discharge City: Perris
Discharge State: California
Discharge Zip: 92570
Received Date: Not reported
Processed Date: Not reported

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

Status:	Not reported
Status Date:	Not reported
Place Size:	Not reported
Place Size Unit:	Not reported
Contact:	Not reported
Contact Title:	Not reported
Contact Phone:	Not reported
Contact Phone Ext:	Not reported
Contact Email:	Not reported
Operator Name:	Not reported
Operator Address:	Not reported
Operator City:	Not reported
Operator State:	Not reported
Operator Zip:	Not reported
Operator Contact:	Not reported
Operator Contact Title:	Not reported
Operator Contact Phone:	Not reported
Operator Contact Phone Ext:	Not reported
Operator Contact Email:	Not reported
Operator Type:	Not reported
Developer:	Not reported
Developer Address:	Not reported
Developer City:	Not reported
Developer State:	Not reported
Developer Zip:	Not reported
Developer Contact:	Not reported
Developer Contact Title:	Not reported
Constype Linear Utility Ind:	Not reported
Emergency Phone:	Not reported
Emergency Phone Ext:	Not reported
Constype Above Ground Ind:	Not reported
Constype Below Ground Ind:	Not reported
Constype Cable Line Ind:	Not reported
Constype Comm Line Ind:	Not reported
Constype Commercial Ind:	Not reported
Constype Electrical Line Ind:	Not reported
Constype Gas Line Ind:	Not reported
Constype Industrial Ind:	Not reported
Constype Other Description:	Not reported
Constype Other Ind:	Not reported
Constype Recons Ind:	Not reported
Constype Residential Ind:	Not reported
Constype Transport Ind:	Not reported
Constype Utility Description:	Not reported
Constype Utility Ind:	Not reported
Constype Water Sewer Ind:	Not reported
Dir Discharge Uswater Ind:	Not reported
Receiving Water Name:	Not reported
Certifier:	Not reported
Certifier Title:	Not reported
Certification Date:	Not reported
Primary Sic:	Not reported
Secondary Sic:	Not reported
Tertiary Sic:	Not reported
NPDES Number:	Not reported
Status:	Not reported

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

Agency Number:	Not reported
Region:	8
Regulatory Measure ID:	210657
Order Number:	Not reported
Regulatory Measure Type:	Industrial
Place ID:	Not reported
WDID:	8 331000148
Program Type:	Not reported
Adoption Date Of Regulatory Measure:	Not reported
Effective Date Of Regulatory Measure:	Not reported
Expiration Date Of Regulatory Measure:	Not reported
Termination Date Of Regulatory Measure:	Not reported
Discharge Name:	Not reported
Discharge Address:	Not reported
Discharge City:	Not reported
Discharge State:	Not reported
Discharge Zip:	Not reported
Received Date:	05/09/2008
Processed Date:	02/24/1992
Status:	Active
Status Date:	02/24/1992
Place Size:	20
Place Size Unit:	Acres
Contact:	George Wood
Contact Title:	Not reported
Contact Phone:	951-657-2105
Contact Phone Ext:	Not reported
Contact Email:	gwood@centralwire.com
Operator Name:	Central Wire Inc
Operator Address:	2500 S A ST
Operator City:	Perris
Operator State:	California
Operator Zip:	92570
Operator Contact:	George Wood
Operator Contact Title:	Not reported
Operator Contact Phone:	951-657-2105
Operator Contact Phone Ext:	Not reported
Operator Contact Email:	gwood@centralwire.com
Operator Type:	Other
Developer:	Not reported
Developer Address:	Not reported
Developer City:	Not reported
Developer State:	California
Developer Zip:	Not reported
Developer Contact:	Not reported
Developer Contact Title:	Not reported
Constype Linear Utility Ind:	Not reported
Emergency Phone:	Not reported
Emergency Phone Ext:	Not reported
Constype Above Ground Ind:	Not reported
Constype Below Ground Ind:	Not reported
Constype Cable Line Ind:	Not reported
Constype Comm Line Ind:	Not reported
Constype Commercial Ind:	Not reported
Constype Electrical Line Ind:	Not reported
Constype Gas Line Ind:	Not reported
Constype Industrial Ind:	Not reported

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

Constype Other Description: Not reported
Constype Other Ind: Not reported
Constype Recons Ind: Not reported
Constype Residential Ind: Not reported
Constype Transport Ind: Not reported
Constype Utility Description: Not reported
Constype Utility Ind: Not reported
Constype Water Sewer Ind: Not reported
Dir Discharge Uswater Ind: N
Receiving Water Name: San Jacinto River
Certifier: George Wood
Certifier Title: Operations Manager
Certification Date: 17-JUN-15
Primary Sic: 3315-Steel Wiredrawing and Steel Nails and Spikes
Secondary Sic: Not reported
Tertiary Sic: Not reported

WDS:

Name: BRINE FACPERRIS
Address: 2500 A ST
City: PERRIS
Facility ID: Santa Ana River 332024001
Facility Type: Industrial - Facility that treats and/or disposes of liquid or semisolid wastes from any servicing, producing, manufacturing or processing operation of whatever nature, including mining, gravel washing, geothermal operations, air conditioning, ship building and repairing, oil production, storage and disposal operations, water pumping.
Facility Status: Active - Any facility with a continuous or seasonal discharge that is under Waste Discharge Requirements.
NPDES Number: Not reported
Subregion: 8
Facility Telephone: Not reported
Facility Contact: KEN GOLD
Agency Name: TECHALLOY COMPANY INC.
Agency Address: 2500 A STREET
Agency City,St,Zip: PERRIS 92570
Agency Contact: KEN GOLD
Agency Telephone: 9096572105
Agency Type: Private
SIC Code: 3351
SIC Code 2: Not reported
Primary Waste Type: Hazardous/Influent or Solid Wastes that contain toxic, corrosive, ignitable or reactive substances and must be managed according to applicable DOHS standards.
Primary Waste: PROCES
Waste Type2: Not reported
Waste2: Process Waste (Waste produced as part of the industrial/manufacturing process)
Primary Waste Type: Hazardous/Influent or Solid Wastes that contain toxic, corrosive, ignitable or reactive substances and must be managed according to applicable DOHS standards.
Secondary Waste: Not reported
Secondary Waste Type: Not reported
Design Flow: 0
Baseline Flow: 0

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

Reclamation: No reclamation requirements associated with this facility.
POTW: The facility is not a POTW.
Treat To Water: Minor Threat to Water Quality. A violation of a regional board order should cause a relatively minor impairment of beneficial uses compared to a major or minor threat. Not: All nurds without a TTWQ will be considered a minor threat to water quality unless coded at a higher Level. A Zero (0) may be used to code those NURDS that are found to represent no threat to water quality.
Complexity: Category B - Any facility having a physical, chemical, or biological waste treatment system (except for septic systems with subsurface disposal), or any Class II or III disposal site, or facilities without treatment systems that are complex, such as marinas with petroleum products, solid wastes, and sewage pump out facilities.

CIWQS:

Name: TECHALLOY CO INC
Address: 2500 S A ST
City,State,Zip: PERRIS, CA 92570
Agency: Central Wire Inc
Agency Address: 2500 S A ST, Perris, CA 92570
Place/Project Type: Industrial - Steel Wiredrawing and Steel Nails and Spikes
SIC/NAICS: 3315
Region: 8
Program: INDSTW
Regulatory Measure Status: Active
Regulatory Measure Type: Storm water industrial
Order Number: 2014-0057-DWQ
WDID: 8 33I000148
NPDES Number: CAS000001
Adoption Date: Not reported
Effective Date: 02/24/1992
Termination Date: Not reported
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: 33.75269
Longitude: -117.23528

CERS:

Name: TECHALLOY
Address: 2500 A STREET
City,State,Zip: PERRIS, CA
Site ID: 232865
CERS ID: 33340012
CERS Description: State Response

Affiliation:

Affiliation Type Desc: Regional Board Caseworker
Entity Name: JOANNE LEE - SANTA ANA RWQCB (REGION 8)
Entity Title: Not reported
Affiliation Address: 3737 MAIN STREET, SUITE 500
Affiliation City: RIVERSIDE
Affiliation State: CA

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: Supervisor
Entity Name: Referred - Not Assigned
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: TECHALLOY BRINE FAC
Address: 2500 A STREET
City,State,Zip: PERRIS, CA 92570
Site ID: 213368
CERS ID: L10008950711
CERS Description: Land Disposal Site

Affiliation:

Affiliation Type Desc: Regional Board Caseworker
Entity Name: JOANNE LEE - 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: Not reported

Name: TECHALLOY
Address: 2500 A STREET
City,State,Zip: PERRIS, CA
Site ID: 232865
CERS ID: SLT8R1924097
CERS Description: Cleanup Program Site

Affiliation:

Affiliation Type Desc: Regional Board Caseworker
Entity Name: JOANNE LEE - 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: Not reported

Affiliation Type Desc: Supervisor
Entity Name: Referred - Not Assigned
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

TECHALLOY WESTERN INC (Continued)

1000239144

Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Name: TECHALLOY CO INC
Address: 2500 S A ST
City,State,Zip: PERRIS, CA 92570
Site ID: 543951
CERS ID: 258839
CERS Description: Industrial Facility Storm Water

Evaluation:
Eval General Type: Compliance Evaluation Inspection
Eval Date: 04-07-2016
Violations Found: No
Eval Type: Industrial Storm Water Compliance Evaluation
Eval Notes: The facility SWPPP, Monitoring Plan, and sampling results were available for review on-site. Raw material and finished products were stored in-door. Mr. George explained that a drainage culvert receives storm water from the north eastern side of the property and discharge onto vacant land on southern periphery of the property through subsurface drainage system. Storm water from rest of the property discharges toward the same vacant land through sheet flow. The facility recently changed a name from Techalloy Co. Inc to Central Wire. The discharger was advised to submit change of information if there is no change in the ownership of the business. During inspection discharger was also informed to look into exceedances of certain pollutants and improve BMPs at the site.
Eval Division: Water Boards
Eval Program: INDSTW
Eval Source: SMARTS

Affiliation:
Affiliation Type Desc: Owner/Operator
Entity Name: Central Wire Inc
Entity Title: Operator
Affiliation Address: 2500 S A ST
Affiliation City: Perris
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 92570
Affiliation Phone: 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: 10/28/2020	Source: EPA
Date Data Arrived at EDR: 11/05/2020	Telephone: N/A
Date Made Active in Reports: 11/25/2020	Last EDR Contact: 11/05/2020
Number of Days to Update: 20	Next Scheduled EDR Contact: 01/11/2021
	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 6
Telephone: 214-655-6659

EPA Region 3
Telephone 215-814-5418

EPA Region 7
Telephone: 913-551-7247

EPA Region 4
Telephone 404-562-8033

EPA Region 8
Telephone: 303-312-6774

EPA Region 5
Telephone 312-886-6686

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: 10/28/2020	Source: EPA
Date Data Arrived at EDR: 11/05/2020	Telephone: N/A
Date Made Active in Reports: 11/25/2020	Last EDR Contact: 11/05/2020
Number of Days to Update: 20	Next Scheduled EDR Contact: 01/11/2021
	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.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

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: 10/28/2020
Date Data Arrived at EDR: 11/05/2020
Date Made Active in Reports: 11/25/2020
Number of Days to Update: 20

Source: EPA
Telephone: N/A
Last EDR Contact: 11/05/2020
Next Scheduled EDR Contact: 01/11/2021
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: 10/02/2020
Next Scheduled EDR Contact: 01/11/2021
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 known 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: 10/28/2020
Date Data Arrived at EDR: 11/05/2020
Date Made Active in Reports: 11/25/2020
Number of Days to Update: 20

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 11/05/2020
Next Scheduled EDR Contact: 01/25/2021
Data Release Frequency: Quarterly

Federal CERCLIS NFRAP site list

SEMS-ARCHIVE: Superfund Enterprise Management System Archive

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

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: 10/28/2020	Source: EPA
Date Data Arrived at EDR: 11/05/2020	Telephone: 800-424-9346
Date Made Active in Reports: 11/25/2020	Last EDR Contact: 11/05/2020
Number of Days to Update: 20	Next Scheduled EDR Contact: 01/25/2021
	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: 06/15/2020	Source: EPA
Date Data Arrived at EDR: 06/22/2020	Telephone: 800-424-9346
Date Made Active in Reports: 09/17/2020	Last EDR Contact: 09/22/2020
Number of Days to Update: 87	Next Scheduled EDR Contact: 01/04/2021
	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: 06/15/2020	Source: Environmental Protection Agency
Date Data Arrived at EDR: 06/22/2020	Telephone: (415) 495-8895
Date Made Active in Reports: 09/18/2020	Last EDR Contact: 09/22/2020
Number of Days to Update: 88	Next Scheduled EDR Contact: 01/04/2021
	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: 06/15/2020	Source: Environmental Protection Agency
Date Data Arrived at EDR: 06/22/2020	Telephone: (415) 495-8895
Date Made Active in Reports: 09/18/2020	Last EDR Contact: 09/22/2020
Number of Days to Update: 88	Next Scheduled EDR Contact: 01/04/2021
	Data Release Frequency: Quarterly

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

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: 06/15/2020	Source: Environmental Protection Agency
Date Data Arrived at EDR: 06/22/2020	Telephone: (415) 495-8895
Date Made Active in Reports: 09/18/2020	Last EDR Contact: 09/22/2020
Number of Days to Update: 88	Next Scheduled EDR Contact: 01/04/2021
	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: 06/15/2020	Source: Environmental Protection Agency
Date Data Arrived at EDR: 06/22/2020	Telephone: (415) 495-8895
Date Made Active in Reports: 09/18/2020	Last EDR Contact: 09/22/2020
Number of Days to Update: 88	Next Scheduled EDR Contact: 01/04/2021
	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: 08/06/2020	Source: Department of the Navy
Date Data Arrived at EDR: 08/21/2020	Telephone: 843-820-7326
Date Made Active in Reports: 11/11/2020	Last EDR Contact: 11/05/2020
Number of Days to Update: 82	Next Scheduled EDR Contact: 02/22/2021
	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: 10/28/2020	Source: Environmental Protection Agency
Date Data Arrived at EDR: 11/05/2020	Telephone: 703-603-0695
Date Made Active in Reports: 11/18/2020	Last EDR Contact: 11/05/2020
Number of Days to Update: 13	Next Scheduled EDR Contact: 03/08/2021
	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: 10/28/2020	Source: Environmental Protection Agency
Date Data Arrived at EDR: 11/05/2020	Telephone: 703-603-0695
Date Made Active in Reports: 11/18/2020	Last EDR Contact: 11/05/2020
Number of Days to Update: 13	Next Scheduled EDR Contact: 03/08/2021
	Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

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: 06/15/2020

Date Data Arrived at EDR: 06/22/2020

Date Made Active in Reports: 09/17/2020

Number of Days to Update: 87

Source: National Response Center, United States Coast Guard

Telephone: 202-267-2180

Last EDR Contact: 09/22/2020

Next Scheduled EDR Contact: 01/04/2021

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: 07/27/2020

Date Data Arrived at EDR: 07/27/2020

Date Made Active in Reports: 10/08/2020

Number of Days to Update: 73

Source: Department of Toxic Substances Control

Telephone: 916-323-3400

Last EDR Contact: 10/26/2020

Next Scheduled EDR Contact: 02/08/2021

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 identifies 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: 07/27/2020

Date Data Arrived at EDR: 07/27/2020

Date Made Active in Reports: 10/08/2020

Number of Days to Update: 73

Source: Department of Toxic Substances Control

Telephone: 916-323-3400

Last EDR Contact: 10/26/2020

Next Scheduled EDR Contact: 02/08/2021

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 inventory of solid waste disposal facilities or landfills. These may be active or inactive facilities or open dumps that failed to meet RCRA Section 4004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 05/11/2020

Date Data Arrived at EDR: 05/12/2020

Date Made Active in Reports: 07/27/2020

Number of Days to Update: 76

Source: Department of Resources Recycling and Recovery

Telephone: 916-341-6320

Last EDR Contact: 11/10/2020

Next Scheduled EDR Contact: 02/22/2021

Data Release Frequency: Quarterly

State and tribal leaking storage tank lists

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

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	Source: California Regional Water Quality Control Board Victorville Branch Office (6)
Date Data Arrived at EDR: 06/07/2005	Telephone: 760-241-7365
Date Made Active in Reports: 06/29/2005	Last EDR Contact: 09/12/2011
Number of Days to Update: 22	Next Scheduled EDR Contact: 12/26/2011
	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	Source: California Regional Water Quality Control Board Central Valley Region (5)
Date Data Arrived at EDR: 07/22/2008	Telephone: 916-464-4834
Date Made Active in Reports: 07/31/2008	Last EDR Contact: 07/01/2011
Number of Days to Update: 9	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	Source: California Regional Water Quality Control Board Los Angeles Region (4)
Date Data Arrived at EDR: 09/07/2004	Telephone: 213-576-6710
Date Made Active in Reports: 10/12/2004	Last EDR Contact: 09/06/2011
Number of Days to Update: 35	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	Source: California Regional Water Quality Control Board Central Coast Region (3)
Date Data Arrived at EDR: 05/19/2003	Telephone: 805-542-4786
Date Made Active in Reports: 06/02/2003	Last EDR Contact: 07/18/2011
Number of Days to Update: 14	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	Source: California Regional Water Quality Control Board San Francisco Bay Region (2)
Date Data Arrived at EDR: 10/20/2004	Telephone: 510-622-2433
Date Made Active in Reports: 11/19/2004	Last EDR Contact: 09/19/2011
Number of Days to Update: 30	Next Scheduled EDR Contact: 01/02/2012
	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: 09/08/2020	Source: State Water Resources Control Board
Date Data Arrived at EDR: 09/08/2020	Telephone: see region list
Date Made Active in Reports: 11/30/2020	Last EDR Contact: 09/08/2020
Number of Days to Update: 83	Next Scheduled EDR Contact: 12/21/2020
	Data Release Frequency: Quarterly

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

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	Source: California Regional Water Quality Control Board North Coast (1)
Date Data Arrived at EDR: 02/28/2001	Telephone: 707-570-3769
Date Made Active in Reports: 03/29/2001	Last EDR Contact: 08/01/2011
Number of Days to Update: 29	Next Scheduled EDR Contact: 11/14/2011
	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	Source: California Regional Water Quality Control Board Santa Ana Region (8)
Date Data Arrived at EDR: 02/15/2005	Telephone: 909-782-4496
Date Made Active in Reports: 03/28/2005	Last EDR Contact: 08/15/2011
Number of Days to Update: 41	Next Scheduled EDR Contact: 11/28/2011
	Data Release Frequency: No Update Planned

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	Source: California Regional Water Quality Control Board San Diego Region (9)
Date Data Arrived at EDR: 04/23/2001	Telephone: 858-637-5595
Date Made Active in Reports: 05/21/2001	Last EDR Contact: 09/26/2011
Number of Days to Update: 28	Next Scheduled EDR Contact: 01/09/2012
	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	Source: California Regional Water Quality Control Board Lahontan Region (6)
Date Data Arrived at EDR: 09/10/2003	Telephone: 530-542-5572
Date Made Active in Reports: 10/07/2003	Last EDR Contact: 09/12/2011
Number of Days to Update: 27	Next Scheduled EDR Contact: 12/26/2011
	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	Source: California Regional Water Quality Control Board Colorado River Basin Region (7)
Date Data Arrived at EDR: 02/26/2004	Telephone: 760-776-8943
Date Made Active in Reports: 03/24/2004	Last EDR Contact: 08/01/2011
Number of Days to Update: 27	Next Scheduled EDR Contact: 11/14/2011
	Data Release Frequency: No Update Planned

INDIAN LUST R10: Leaking Underground Storage Tanks on Indian Land

LUSTs on Indian land in Alaska, Idaho, Oregon and Washington.

Date of Government Version: 04/14/2020	Source: EPA Region 10
Date Data Arrived at EDR: 05/20/2020	Telephone: 206-553-2857
Date Made Active in Reports: 08/12/2020	Last EDR Contact: 10/23/2020
Number of Days to Update: 84	Next Scheduled EDR Contact: 02/01/2021
	Data Release Frequency: Varies

INDIAN LUST R1: Leaking Underground Storage Tanks on Indian Land

A listing of leaking underground storage tank locations on Indian Land.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 04/29/2020
Date Data Arrived at EDR: 05/20/2020
Date Made Active in Reports: 08/12/2020
Number of Days to Update: 84

Source: EPA Region 1
Telephone: 617-918-1313
Last EDR Contact: 10/23/2020
Next Scheduled EDR Contact: 02/01/2021
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: 04/14/2020
Date Data Arrived at EDR: 05/26/2020
Date Made Active in Reports: 08/12/2020
Number of Days to Update: 78

Source: EPA Region 4
Telephone: 404-562-8677
Last EDR Contact: 10/23/2020
Next Scheduled EDR Contact: 02/01/2021
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: 04/14/2020
Date Data Arrived at EDR: 05/20/2020
Date Made Active in Reports: 08/12/2020
Number of Days to Update: 84

Source: EPA, Region 5
Telephone: 312-886-7439
Last EDR Contact: 10/23/2020
Next Scheduled EDR Contact: 02/01/2021
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: 04/08/2020
Date Data Arrived at EDR: 05/20/2020
Date Made Active in Reports: 08/12/2020
Number of Days to Update: 84

Source: Environmental Protection Agency
Telephone: 415-972-3372
Last EDR Contact: 10/23/2020
Next Scheduled EDR Contact: 02/01/2021
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: 04/14/2020
Date Data Arrived at EDR: 05/20/2020
Date Made Active in Reports: 08/12/2020
Number of Days to Update: 84

Source: EPA Region 8
Telephone: 303-312-6271
Last EDR Contact: 10/23/2020
Next Scheduled EDR Contact: 02/01/2021
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: 04/15/2020
Date Data Arrived at EDR: 05/20/2020
Date Made Active in Reports: 08/12/2020
Number of Days to Update: 84

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 10/23/2020
Next Scheduled EDR Contact: 02/01/2021
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: 04/08/2020
Date Data Arrived at EDR: 05/20/2020
Date Made Active in Reports: 08/12/2020
Number of Days to Update: 84

Source: EPA Region 6
Telephone: 214-665-6597
Last EDR Contact: 10/23/2020
Next Scheduled EDR Contact: 02/01/2021
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

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: 09/08/2020	Source: State Water Resources Control Board
Date Data Arrived at EDR: 09/08/2020	Telephone: 866-480-1028
Date Made Active in Reports: 11/30/2020	Last EDR Contact: 09/08/2020
Number of Days to Update: 83	Next Scheduled EDR Contact: 12/21/2020
	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	Source: California Regional Water Quality Control Board, North Coast Region (1)
Date Data Arrived at EDR: 04/07/2003	Telephone: 707-576-2220
Date Made Active in Reports: 04/25/2003	Last EDR Contact: 08/01/2011
Number of Days to Update: 18	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	Source: Regional Water Quality Control Board San Francisco Bay Region (2)
Date Data Arrived at EDR: 10/20/2004	Telephone: 510-286-0457
Date Made Active in Reports: 11/19/2004	Last EDR Contact: 09/19/2011
Number of Days to Update: 30	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	Source: California Regional Water Quality Control Board Central Coast Region (3)
Date Data Arrived at EDR: 05/18/2006	Telephone: 805-549-3147
Date Made Active in Reports: 06/15/2006	Last EDR Contact: 07/18/2011
Number of Days to Update: 28	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	Source: Region Water Quality Control Board Los Angeles Region (4)
Date Data Arrived at EDR: 11/18/2004	Telephone: 213-576-6600
Date Made Active in Reports: 01/04/2005	Last EDR Contact: 07/01/2011
Number of Days to Update: 47	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	Source: Regional Water Quality Control Board Central Valley Region (5)
Date Data Arrived at EDR: 04/05/2005	Telephone: 916-464-3291
Date Made Active in Reports: 04/21/2005	Last EDR Contact: 09/12/2011
Number of Days to Update: 16	Next Scheduled EDR Contact: 12/26/2011
	Data Release Frequency: No Update Planned

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

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: 07/21/2020
Date Data Arrived at EDR: 09/03/2020
Date Made Active in Reports: 11/25/2020
Number of Days to Update: 83

Source: FEMA
Telephone: 202-646-5797
Last EDR Contact: 10/01/2020
Next Scheduled EDR Contact: 01/18/2021
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

UST: Active UST Facilities

Active UST facilities gathered from the local regulatory agencies

Date of Government Version: 09/08/2020	Source: SWRCB
Date Data Arrived at EDR: 09/08/2020	Telephone: 916-341-5851
Date Made Active in Reports: 11/30/2020	Last EDR Contact: 09/08/2020
Number of Days to Update: 83	Next Scheduled EDR Contact: 12/21/2020
	Data Release Frequency: Semi-Annually

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: 05/26/2020	Source: State Water Resources Control Board
Date Data Arrived at EDR: 06/09/2020	Telephone: 916-327-7844
Date Made Active in Reports: 08/20/2020	Last EDR Contact: 09/08/2020
Number of Days to Update: 72	Next Scheduled EDR Contact: 12/21/2020
	Data Release Frequency: Varies

MILITARY UST SITES: Military UST Sites (GEOTRACKER)

Military ust sites

Date of Government Version: 09/08/2020	Source: State Water Resources Control Board
Date Data Arrived at EDR: 09/08/2020	Telephone: 866-480-1028
Date Made Active in Reports: 11/30/2020	Last EDR Contact: 09/08/2020
Number of Days to Update: 83	Next Scheduled EDR Contact: 12/21/2020
	Data Release Frequency: Varies

AST: Aboveground Petroleum Storage Tank Facilities

A listing of aboveground storage tank petroleum storage tank locations.

Date of Government Version: 07/06/2016	Source: California Environmental Protection Agency
Date Data Arrived at EDR: 07/12/2016	Telephone: 916-327-5092
Date Made Active in Reports: 09/19/2016	Last EDR Contact: 09/15/2020
Number of Days to Update: 69	Next Scheduled EDR Contact: 12/28/2020
	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: 04/03/2020	Source: EPA Region 7
Date Data Arrived at EDR: 05/20/2020	Telephone: 913-551-7003
Date Made Active in Reports: 08/12/2020	Last EDR Contact: 10/23/2020
Number of Days to Update: 84	Next Scheduled EDR Contact: 02/01/2021
	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: 04/08/2020	Source: EPA Region 6
Date Data Arrived at EDR: 05/20/2020	Telephone: 214-665-7591
Date Made Active in Reports: 08/12/2020	Last EDR Contact: 10/23/2020
Number of Days to Update: 84	Next Scheduled EDR Contact: 02/01/2021
	Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

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: 04/14/2020	Source: EPA Region 8
Date Data Arrived at EDR: 05/20/2020	Telephone: 303-312-6137
Date Made Active in Reports: 08/13/2020	Last EDR Contact: 10/23/2020
Number of Days to Update: 85	Next Scheduled EDR Contact: 02/01/2021
	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: 04/14/2020	Source: EPA Region 4
Date Data Arrived at EDR: 05/26/2020	Telephone: 404-562-9424
Date Made Active in Reports: 08/12/2020	Last EDR Contact: 10/23/2020
Number of Days to Update: 78	Next Scheduled EDR Contact: 02/01/2021
	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: 04/14/2020	Source: EPA Region 5
Date Data Arrived at EDR: 05/20/2020	Telephone: 312-886-6136
Date Made Active in Reports: 08/12/2020	Last EDR Contact: 10/23/2020
Number of Days to Update: 84	Next Scheduled EDR Contact: 02/01/2021
	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: 04/14/2020	Source: EPA Region 10
Date Data Arrived at EDR: 05/20/2020	Telephone: 206-553-2857
Date Made Active in Reports: 08/12/2020	Last EDR Contact: 10/23/2020
Number of Days to Update: 84	Next Scheduled EDR Contact: 02/01/2021
	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: 04/29/2020	Source: EPA, Region 1
Date Data Arrived at EDR: 05/20/2020	Telephone: 617-918-1313
Date Made Active in Reports: 08/12/2020	Last EDR Contact: 10/23/2020
Number of Days to Update: 84	Next Scheduled EDR Contact: 02/01/2021
	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: 04/08/2020	Source: EPA Region 9
Date Data Arrived at EDR: 05/20/2020	Telephone: 415-972-3368
Date Made Active in Reports: 08/12/2020	Last EDR Contact: 10/23/2020
Number of Days to Update: 84	Next Scheduled EDR Contact: 02/01/2021
	Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

State and tribal voluntary cleanup sites

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	Source: EPA, Region 1
Date Data Arrived at EDR: 09/29/2015	Telephone: 617-918-1102
Date Made Active in Reports: 02/18/2016	Last EDR Contact: 09/16/2020
Number of Days to Update: 142	Next Scheduled EDR Contact: 01/04/2021
	Data Release Frequency: Varies

INDIAN VCP R7: Voluntary Cleanup Priority Listing

A listing of voluntary cleanup priority sites located on Indian Land located in Region 7.

Date of Government Version: 03/20/2008	Source: EPA, Region 7
Date Data Arrived at EDR: 04/22/2008	Telephone: 913-551-7365
Date Made Active in Reports: 05/19/2008	Last EDR Contact: 04/20/2009
Number of Days to Update: 27	Next Scheduled EDR Contact: 07/20/2009
	Data Release Frequency: Varies

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: 07/27/2020	Source: Department of Toxic Substances Control
Date Data Arrived at EDR: 07/27/2020	Telephone: 916-323-3400
Date Made Active in Reports: 10/08/2020	Last EDR Contact: 10/26/2020
Number of Days to Update: 73	Next Scheduled EDR Contact: 02/08/2021
	Data Release Frequency: Quarterly

State and tribal Brownfields sites

BROWNFIELDS: Considered Brownfields 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: 06/22/2020	Source: State Water Resources Control Board
Date Data Arrived at EDR: 06/22/2020	Telephone: 916-323-7905
Date Made Active in Reports: 09/04/2020	Last EDR Contact: 09/22/2020
Number of Days to Update: 74	Next Scheduled EDR Contact: 01/04/2021
	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: 06/01/2020	Source: Environmental Protection Agency
Date Data Arrived at EDR: 06/02/2020	Telephone: 202-566-2777
Date Made Active in Reports: 06/09/2020	Last EDR Contact: 09/15/2020
Number of Days to Update: 7	Next Scheduled EDR Contact: 12/28/2020
	Data Release Frequency: Semi-Annually

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

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	Source: State Water Resources Control Board
Date Data Arrived at EDR: 04/10/2000	Telephone: 916-227-4448
Date Made Active in Reports: 05/10/2000	Last EDR Contact: 10/20/2020
Number of Days to Update: 30	Next Scheduled EDR Contact: 02/08/2021
	Data Release Frequency: No Update Planned

SWRCY: Recycler Database

A listing of recycling facilities in California.

Date of Government Version: 09/08/2020	Source: Department of Conservation
Date Data Arrived at EDR: 09/08/2020	Telephone: 916-323-3836
Date Made Active in Reports: 11/30/2020	Last EDR Contact: 09/08/2020
Number of Days to Update: 83	Next Scheduled EDR Contact: 12/21/2020
	Data Release Frequency: Quarterly

HAULERS: Registered Waste Tire Haulers Listing

A listing of registered waste tire haulers.

Date of Government Version: 05/28/2020	Source: Integrated Waste Management Board
Date Data Arrived at EDR: 05/29/2020	Telephone: 916-341-6422
Date Made Active in Reports: 08/12/2020	Last EDR Contact: 11/05/2020
Number of Days to Update: 75	Next Scheduled EDR Contact: 02/22/2021
	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	Source: Environmental Protection Agency
Date Data Arrived at EDR: 12/03/2007	Telephone: 703-308-8245
Date Made Active in Reports: 01/24/2008	Last EDR Contact: 10/20/2020
Number of Days to Update: 52	Next Scheduled EDR Contact: 02/08/2021
	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	Source: Environmental Protection Agency
Date Data Arrived at EDR: 08/09/2004	Telephone: 800-424-9346
Date Made Active in Reports: 09/17/2004	Last EDR Contact: 06/09/2004
Number of Days to Update: 39	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	Source: EPA, Region 9
Date Data Arrived at EDR: 05/07/2009	Telephone: 415-947-4219
Date Made Active in Reports: 09/21/2009	Last EDR Contact: 10/13/2020
Number of Days to Update: 137	Next Scheduled EDR Contact: 02/01/2021
	Data Release Frequency: No Update Planned

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

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	Source: Department of Health & Human Services, Indian Health Service
Date Data Arrived at EDR: 08/06/2014	Telephone: 301-443-1452
Date Made Active in Reports: 01/29/2015	Last EDR Contact: 10/30/2020
Number of Days to Update: 176	Next Scheduled EDR Contact: 02/08/2021
	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: 03/18/2020	Source: Drug Enforcement Administration
Date Data Arrived at EDR: 03/19/2020	Telephone: 202-307-1000
Date Made Active in Reports: 06/09/2020	Last EDR Contact: 11/16/2020
Number of Days to Update: 82	Next Scheduled EDR Contact: 03/08/2021
	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	Source: Department of Toxic Substance Control
Date Data Arrived at EDR: 08/03/2006	Telephone: 916-323-3400
Date Made Active in Reports: 08/24/2006	Last EDR Contact: 02/23/2009
Number of Days to Update: 21	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: 07/27/2020	Source: Department of Toxic Substances Control
Date Data Arrived at EDR: 07/27/2020	Telephone: 916-323-3400
Date Made Active in Reports: 10/08/2020	Last EDR Contact: 10/26/2020
Number of Days to Update: 73	Next Scheduled EDR Contact: 02/08/2021
	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: 06/30/2019	Source: Department of Toxic Substances Control
Date Data Arrived at EDR: 05/28/2020	Telephone: 916-255-6504
Date Made Active in Reports: 08/12/2020	Last EDR Contact: 11/11/2020
Number of Days to Update: 76	Next Scheduled EDR Contact: 01/18/2021
	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.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 07/20/2020
Date Data Arrived at EDR: 07/21/2020
Date Made Active in Reports: 10/07/2020
Number of Days to Update: 78

Source: CalEPA
Telephone: 916-323-2514
Last EDR Contact: 10/19/2020
Next Scheduled EDR Contact: 02/01/2021
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: 03/18/2020
Date Data Arrived at EDR: 03/19/2020
Date Made Active in Reports: 06/09/2020
Number of Days to Update: 82

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 11/16/2020
Next Scheduled EDR Contact: 03/08/2021
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: 09/08/2020
Date Data Arrived at EDR: 09/08/2020
Date Made Active in Reports: 12/01/2020
Number of Days to Update: 84

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 09/08/2020
Next Scheduled EDR Contact: 12/21/2020
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: 05/20/2020
Date Data Arrived at EDR: 05/20/2020
Date Made Active in Reports: 08/06/2020
Number of Days to Update: 78

Source: Department of Public Health
Telephone: 707-463-4466
Last EDR Contact: 11/16/2020
Next Scheduled EDR Contact: 03/08/2021
Data Release Frequency: Annually

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

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	Source: State Water Resources Control Board
Date Data Arrived at EDR: 01/25/1991	Telephone: 916-341-5851
Date Made Active in Reports: 02/12/1991	Last EDR Contact: 07/26/2001
Number of Days to Update: 18	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: 08/03/2020	Source: San Francisco County Department of Public Health
Date Data Arrived at EDR: 08/05/2020	Telephone: 415-252-3896
Date Made Active in Reports: 10/22/2020	Last EDR Contact: 10/28/2020
Number of Days to Update: 78	Next Scheduled EDR Contact: 02/15/2021
	Data Release Frequency: Varies

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: 07/20/2020	Source: California Environmental Protection Agency
Date Data Arrived at EDR: 07/21/2020	Telephone: 916-323-2514
Date Made Active in Reports: 10/07/2020	Last EDR Contact: 10/19/2020
Number of Days to Update: 78	Next Scheduled EDR Contact: 02/01/2021
	Data Release Frequency: Quarterly

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	Source: California Environmental Protection Agency
Date Data Arrived at EDR: 09/05/1995	Telephone: 916-341-5851
Date Made Active in Reports: 09/29/1995	Last EDR Contact: 12/28/1998
Number of Days to Update: 24	Next Scheduled EDR Contact: N/A
	Data Release Frequency: No Update Planned

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: 08/26/2020	Source: Department of Toxic Substances Control
Date Data Arrived at EDR: 08/28/2020	Telephone: 916-323-3400
Date Made Active in Reports: 11/17/2020	Last EDR Contact: 11/23/2020
Number of Days to Update: 81	Next Scheduled EDR Contact: 03/15/2021
	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: 10/28/2020	Source: Environmental Protection Agency
Date Data Arrived at EDR: 11/05/2020	Telephone: 202-564-6023
Date Made Active in Reports: 11/25/2020	Last EDR Contact: 11/05/2020
Number of Days to Update: 20	Next Scheduled EDR Contact: 01/11/2021
	Data Release Frequency: Semi-Annually

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

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: 08/31/2020	Source: DTSC and SWRCB
Date Data Arrived at EDR: 08/31/2020	Telephone: 916-323-3400
Date Made Active in Reports: 11/20/2020	Last EDR Contact: 12/01/2020
Number of Days to Update: 81	Next Scheduled EDR Contact: 03/15/2021
	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: 06/22/2020	Source: U.S. Department of Transportation
Date Data Arrived at EDR: 06/23/2020	Telephone: 202-366-4555
Date Made Active in Reports: 09/17/2020	Last EDR Contact: 09/22/2020
Number of Days to Update: 86	Next Scheduled EDR Contact: 01/04/2021
	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: 06/30/2020	Source: Office of Emergency Services
Date Data Arrived at EDR: 07/21/2020	Telephone: 916-845-8400
Date Made Active in Reports: 10/07/2020	Last EDR Contact: 10/19/2020
Number of Days to Update: 78	Next Scheduled EDR Contact: 02/01/2021
	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: 09/08/2020	Source: State Water Quality Control Board
Date Data Arrived at EDR: 09/08/2020	Telephone: 866-480-1028
Date Made Active in Reports: 11/30/2020	Last EDR Contact: 09/08/2020
Number of Days to Update: 83	Next Scheduled EDR Contact: 12/21/2020
	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: 09/08/2020	Source: State Water Resources Control Board
Date Data Arrived at EDR: 09/08/2020	Telephone: 866-480-1028
Date Made Active in Reports: 11/30/2020	Last EDR Contact: 09/08/2020
Number of Days to Update: 83	Next Scheduled EDR Contact: 12/21/2020
	Data Release Frequency: Quarterly

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

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	Source: FirstSearch
Date Data Arrived at EDR: 01/03/2013	Telephone: N/A
Date Made Active in Reports: 02/22/2013	Last EDR Contact: 01/03/2013
Number of Days to Update: 50	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: 06/15/2020	Source: Environmental Protection Agency
Date Data Arrived at EDR: 06/22/2020	Telephone: (415) 495-8895
Date Made Active in Reports: 09/18/2020	Last EDR Contact: 09/22/2020
Number of Days to Update: 88	Next Scheduled EDR Contact: 01/04/2021
	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: 08/05/2020	Source: U.S. Army Corps of Engineers
Date Data Arrived at EDR: 08/13/2020	Telephone: 202-528-4285
Date Made Active in Reports: 10/21/2020	Last EDR Contact: 11/17/2020
Number of Days to Update: 69	Next Scheduled EDR Contact: 03/01/2021
	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	Source: USGS
Date Data Arrived at EDR: 11/10/2006	Telephone: 888-275-8747
Date Made Active in Reports: 01/11/2007	Last EDR Contact: 10/13/2020
Number of Days to Update: 62	Next Scheduled EDR Contact: 01/25/2021
	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	Source: U.S. Geological Survey
Date Data Arrived at EDR: 04/11/2018	Telephone: 888-275-8747
Date Made Active in Reports: 11/06/2019	Last EDR Contact: 10/08/2020
Number of Days to Update: 574	Next Scheduled EDR Contact: 01/18/2021
	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.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

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: 11/09/2020
Next Scheduled EDR Contact: 02/22/2021
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: 06/15/2020
Date Data Arrived at EDR: 06/22/2020
Date Made Active in Reports: 09/10/2020
Number of Days to Update: 80

Source: Environmental Protection Agency
Telephone: 202-566-1917
Last EDR Contact: 09/22/2020
Next Scheduled EDR Contact: 01/04/2021
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: 11/02/2020
Next Scheduled EDR Contact: 02/15/2021
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: 11/06/2020
Next Scheduled EDR Contact: 02/15/2021
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: 06/17/2020
Date Made Active in Reports: 09/10/2020
Number of Days to Update: 85

Source: EPA
Telephone: 202-260-5521
Last EDR Contact: 09/18/2020
Next Scheduled EDR Contact: 12/28/2020
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.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 12/31/2018
Date Data Arrived at EDR: 08/14/2020
Date Made Active in Reports: 11/04/2020
Number of Days to Update: 82

Source: EPA
Telephone: 202-566-0250
Last EDR Contact: 11/17/2020
Next Scheduled EDR Contact: 03/01/2021
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: 07/20/2020
Date Data Arrived at EDR: 07/21/2020
Date Made Active in Reports: 10/08/2020
Number of Days to Update: 79

Source: EPA
Telephone: 202-564-4203
Last EDR Contact: 10/19/2020
Next Scheduled EDR Contact: 02/01/2021
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: 10/28/2020
Date Data Arrived at EDR: 11/05/2020
Date Made Active in Reports: 11/25/2020
Number of Days to Update: 20

Source: EPA
Telephone: 703-416-0223
Last EDR Contact: 11/05/2020
Next Scheduled EDR Contact: 12/14/2020
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: 07/24/2020
Date Data Arrived at EDR: 08/03/2020
Date Made Active in Reports: 10/21/2020
Number of Days to Update: 79

Source: Environmental Protection Agency
Telephone: 202-564-8600
Last EDR Contact: 10/14/2020
Next Scheduled EDR Contact: 02/01/2021
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

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

PRP: Potentially Responsible Parties

A listing of verified Potentially Responsible Parties

Date of Government Version: 04/27/2020	Source: EPA
Date Data Arrived at EDR: 05/06/2020	Telephone: 202-564-6023
Date Made Active in Reports: 06/09/2020	Last EDR Contact: 11/05/2020
Number of Days to Update: 34	Next Scheduled EDR Contact: 02/15/2021
	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	Source: EPA
Date Data Arrived at EDR: 10/11/2019	Telephone: 202-566-0500
Date Made Active in Reports: 12/20/2019	Last EDR Contact: 10/02/2020
Number of Days to Update: 70	Next Scheduled EDR Contact: 01/18/2021
	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	Source: Environmental Protection Agency
Date Data Arrived at EDR: 11/23/2016	Telephone: 202-564-2501
Date Made Active in Reports: 02/10/2017	Last EDR Contact: 10/01/2020
Number of Days to Update: 79	Next Scheduled EDR Contact: 01/18/2021
	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	Source: EPA/Office of Prevention, Pesticides and Toxic Substances
Date Data Arrived at EDR: 04/16/2009	Telephone: 202-566-1667
Date Made Active in Reports: 05/11/2009	Last EDR Contact: 08/18/2017
Number of Days to Update: 25	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	Source: EPA
Date Data Arrived at EDR: 04/16/2009	Telephone: 202-566-1667
Date Made Active in Reports: 05/11/2009	Last EDR Contact: 08/18/2017
Number of Days to Update: 25	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: 08/05/2020	Source: Nuclear Regulatory Commission
Date Data Arrived at EDR: 08/10/2020	Telephone: 301-415-7169
Date Made Active in Reports: 10/08/2020	Last EDR Contact: 10/13/2020
Number of Days to Update: 59	Next Scheduled EDR Contact: 01/31/2021
	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	Source: Department of Energy
Date Data Arrived at EDR: 12/04/2019	Telephone: 202-586-8719
Date Made Active in Reports: 01/15/2020	Last EDR Contact: 12/01/2020
Number of Days to Update: 42	Next Scheduled EDR Contact: 03/15/2021
	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	Source: Environmental Protection Agency
Date Data Arrived at EDR: 03/05/2019	Telephone: N/A
Date Made Active in Reports: 11/11/2019	Last EDR Contact: 11/30/2020
Number of Days to Update: 251	Next Scheduled EDR Contact: 03/15/2021
	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	Source: Environmental Protection Agency
Date Data Arrived at EDR: 11/06/2019	Telephone: 202-566-0517
Date Made Active in Reports: 02/10/2020	Last EDR Contact: 11/06/2021
Number of Days to Update: 96	Next Scheduled EDR Contact: 02/15/2021
	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	Source: Environmental Protection Agency
Date Data Arrived at EDR: 07/01/2019	Telephone: 202-343-9775
Date Made Active in Reports: 09/23/2019	Last EDR Contact: 09/24/2020
Number of Days to Update: 84	Next Scheduled EDR Contact: 01/11/2021
	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	Source: Environmental Protection Agency
Date Data Arrived at EDR: 03/01/2007	Telephone: 202-564-2501
Date Made Active in Reports: 04/10/2007	Last EDR Contact: 12/17/2007
Number of Days to Update: 40	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.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

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 Transportation, 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 Transportation, Office of Pipeline Safety
Telephone: 202-366-4595
Last EDR Contact: 10/27/2020
Next Scheduled EDR Contact: 02/08/2021
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: 06/30/2020
Date Data Arrived at EDR: 07/15/2020
Date Made Active in Reports: 07/21/2020
Number of Days to Update: 6

Source: Department of Justice, Consent Decree Library
Telephone: Varies
Last EDR Contact: 10/01/2020
Next Scheduled EDR Contact: 01/18/2021
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: 12/31/2017
Date Data Arrived at EDR: 06/22/2020
Date Made Active in Reports: 11/20/2020
Number of Days to Update: 151

Source: EPA/NTIS
Telephone: 800-424-9346
Last EDR Contact: 09/22/2020
Next Scheduled EDR Contact: 01/04/2021
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: 10/06/2020
Next Scheduled EDR Contact: 01/18/2021
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: 11/06/2020
Next Scheduled EDR Contact: 02/15/2021
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.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

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: 11/20/2020
Next Scheduled EDR Contact: 03/01/2021
Data Release Frequency: Varies

LEAD SMELTER 1: Lead Smelter Sites

A listing of former lead smelter site locations.

Date of Government Version: 10/28/2020
Date Data Arrived at EDR: 11/05/2020
Date Made Active in Reports: 11/25/2020
Number of Days to Update: 20

Source: Environmental Protection Agency
Telephone: 703-603-8787
Last EDR Contact: 11/05/2020
Next Scheduled EDR Contact: 01/11/2021
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 1931 and 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: 09/10/2020
Date Data Arrived at EDR: 09/15/2020
Date Made Active in Reports: 11/20/2020
Number of Days to Update: 66

Source: DOL, Mine Safety & Health Admi
Telephone: 202-693-9424
Last EDR Contact: 11/24/2020
Next Scheduled EDR Contact: 03/15/2021
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.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 08/04/2020
Date Data Arrived at EDR: 08/25/2020
Date Made Active in Reports: 11/18/2020
Number of Days to Update: 85

Source: Department of Labor, Mine Safety and Health Administration
Telephone: 303-231-5959
Last EDR Contact: 11/23/2020
Next Scheduled EDR Contact: 03/08/2021
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: 05/06/2020
Date Data Arrived at EDR: 05/27/2020
Date Made Active in Reports: 08/13/2020
Number of Days to Update: 78

Source: USGS
Telephone: 703-648-7709
Last EDR Contact: 11/25/2020
Next Scheduled EDR Contact: 03/08/2021
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: 11/25/2020
Next Scheduled EDR Contact: 03/08/2021
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: 06/22/2020
Date Data Arrived at EDR: 06/22/2020
Date Made Active in Reports: 09/10/2020
Number of Days to Update: 80

Source: Department of Interior
Telephone: 202-208-2609
Last EDR Contact: 12/01/2020
Next Scheduled EDR Contact: 03/22/2021
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: 09/04/2020
Date Data Arrived at EDR: 09/15/2020
Date Made Active in Reports: 11/20/2020
Number of Days to Update: 66

Source: EPA
Telephone: (415) 947-8000
Last EDR Contact: 12/01/2020
Next Scheduled EDR Contact: 03/15/2021
Data Release Frequency: Quarterly

ECHO: Enforcement & Compliance History Information

ECHO provides integrated compliance and enforcement information for about 800,000 regulated facilities nationwide.

Date of Government Version: 06/27/2020
Date Data Arrived at EDR: 07/02/2020
Date Made Active in Reports: 09/28/2020
Number of Days to Update: 88

Source: Environmental Protection Agency
Telephone: 202-564-2280
Last EDR Contact: 10/06/2020
Next Scheduled EDR Contact: 01/18/2021
Data Release Frequency: Quarterly

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	Source: Environmental Protection Agency
Date Data Arrived at EDR: 07/26/2018	Telephone: 202-564-0527
Date Made Active in Reports: 10/05/2018	Last EDR Contact: 11/17/2020
Number of Days to Update: 71	Next Scheduled EDR Contact: 03/08/2021
	Data Release Frequency: Varies

UXO: Unexploded Ordnance Sites

A listing of unexploded ordnance site locations

Date of Government Version: 12/31/2018	Source: Department of Defense
Date Data Arrived at EDR: 07/02/2020	Telephone: 703-704-1564
Date Made Active in Reports: 09/17/2020	Last EDR Contact: 10/08/2020
Number of Days to Update: 77	Next Scheduled EDR Contact: 01/25/2021
	Data Release Frequency: Varies

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: 08/17/2020	Source: EPA
Date Data Arrived at EDR: 08/17/2020	Telephone: 800-385-6164
Date Made Active in Reports: 10/21/2020	Last EDR Contact: 11/13/2020
Number of Days to Update: 65	Next Scheduled EDR Contact: 03/01/2021
	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	Source: Department of Health Services
Date Data Arrived at EDR: 07/27/1994	Telephone: 916-255-2118
Date Made Active in Reports: 08/02/1994	Last EDR Contact: 05/31/1994
Number of Days to Update: 6	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: 06/22/2020	Source: CAL EPA/Office of Emergency Information
Date Data Arrived at EDR: 06/22/2020	Telephone: 916-323-3400
Date Made Active in Reports: 09/04/2020	Last EDR Contact: 09/23/2020
Number of Days to Update: 74	Next Scheduled EDR Contact: 01/04/2021
	Data Release Frequency: Quarterly

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	Source: Livermore-Pleasanton Fire Department
Date Data Arrived at EDR: 05/14/2019	Telephone: 925-454-2361
Date Made Active in Reports: 07/17/2019	Last EDR Contact: 11/13/2020
Number of Days to Update: 64	Next Scheduled EDR Contact: 02/22/2021
	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

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 08/19/2020
Date Data Arrived at EDR: 08/21/2020
Date Made Active in Reports: 09/04/2020
Number of Days to Update: 14

Source: South Coast Air Quality Management District
Telephone: 909-396-3211
Last EDR Contact: 11/16/2020
Next Scheduled EDR Contact: 03/08/2021
Data Release Frequency: Varies

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: 08/25/2020
Date Data Arrived at EDR: 08/26/2020
Date Made Active in Reports: 11/13/2020
Number of Days to Update: 79

Source: Antelope Valley Air Quality Management District
Telephone: 661-723-8070
Last EDR Contact: 11/23/2020
Next Scheduled EDR Contact: 03/15/2021
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: 08/06/2020
Date Data Arrived at EDR: 08/28/2020
Date Made Active in Reports: 11/17/2020
Number of Days to Update: 81

Source: Department of Toxic Substance Control
Telephone: 916-327-4498
Last EDR Contact: 11/23/2020
Next Scheduled EDR Contact: 03/15/2021
Data Release Frequency: Annually

EMI: Emissions Inventory Data

Toxics and criteria pollutant emissions data collected by the ARB and local air pollution agencies.

Date of Government Version: 12/31/2018
Date Data Arrived at EDR: 06/16/2020
Date Made Active in Reports: 08/28/2020
Number of Days to Update: 73

Source: California Air Resources Board
Telephone: 916-322-2990
Last EDR Contact: 09/18/2020
Next Scheduled EDR Contact: 12/28/2020
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: 07/20/2020
Date Data Arrived at EDR: 07/21/2020
Date Made Active in Reports: 10/07/2020
Number of Days to Update: 78

Source: State Water Resources Control Board
Telephone: 916-445-9379
Last EDR Contact: 10/19/2020
Next Scheduled EDR Contact: 02/01/2021
Data Release Frequency: Varies

Financial Assurance 1: Financial Assurance Information Listing

Financial Assurance information

Date of Government Version: 07/13/2020
Date Data Arrived at EDR: 07/16/2020
Date Made Active in Reports: 09/29/2020
Number of Days to Update: 75

Source: Department of Toxic Substances Control
Telephone: 916-255-3628
Last EDR Contact: 10/13/2020
Next Scheduled EDR Contact: 02/01/2021
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.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 08/05/2020
Date Data Arrived at EDR: 08/05/2020
Date Made Active in Reports: 10/23/2020
Number of Days to Update: 79

Source: California Integrated Waste Management Board
Telephone: 916-341-6066
Last EDR Contact: 11/04/2020
Next Scheduled EDR Contact: 02/22/2021
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: 12/31/2019
Date Data Arrived at EDR: 04/15/2020
Date Made Active in Reports: 07/02/2020
Number of Days to Update: 78

Source: California Environmental Protection Agency
Telephone: 916-255-1136
Last EDR Contact: 10/05/2020
Next Scheduled EDR Contact: 01/18/2021
Data Release Frequency: Annually

ICE: ICE

Contains data pertaining to the Permitted Facilities with Inspections / Enforcements sites tracked in Envirostor.

Date of Government Version: 08/17/2020
Date Data Arrived at EDR: 08/17/2020
Date Made Active in Reports: 11/05/2020
Number of Days to Update: 80

Source: Department of Toxic Substances Control
Telephone: 877-786-9427
Last EDR Contact: 11/13/2020
Next Scheduled EDR Contact: 03/01/2021
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: 08/17/2020
Date Data Arrived at EDR: 08/17/2020
Date Made Active in Reports: 11/05/2020
Number of Days to Update: 80

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 11/13/2020
Next Scheduled EDR Contact: 03/01/2021
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: 07/06/2020
Date Data Arrived at EDR: 07/07/2020
Date Made Active in Reports: 09/17/2020
Number of Days to Update: 72

Source: Department of Toxic Substances Control
Telephone: 916-440-7145
Last EDR Contact: 10/06/2020
Next Scheduled EDR Contact: 01/18/2021
Data Release Frequency: Quarterly

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

MINES: Mines Site Location Listing

A listing of mine site locations from the Office of Mine Reclamation.

Date of Government Version: 09/08/2020	Source: Department of Conservation
Date Data Arrived at EDR: 09/08/2020	Telephone: 916-322-1080
Date Made Active in Reports: 11/30/2020	Last EDR Contact: 09/08/2020
Number of Days to Update: 83	Next Scheduled EDR Contact: 12/21/2020
	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: 08/31/2020	Source: Department of Public Health
Date Data Arrived at EDR: 08/31/2020	Telephone: 916-558-1784
Date Made Active in Reports: 11/20/2020	Last EDR Contact: 12/01/2020
Number of Days to Update: 81	Next Scheduled EDR Contact: 03/15/2021
	Data Release Frequency: Varies

NPDES: NPDES Permits Listing

A listing of NPDES permits, including stormwater.

Date of Government Version: 08/10/2020	Source: State Water Resources Control Board
Date Data Arrived at EDR: 08/10/2020	Telephone: 916-445-9379
Date Made Active in Reports: 10/29/2020	Last EDR Contact: 11/09/2020
Number of Days to Update: 80	Next Scheduled EDR Contact: 02/22/2021
	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: 08/31/2020	Source: Department of Pesticide Regulation
Date Data Arrived at EDR: 08/31/2020	Telephone: 916-445-4038
Date Made Active in Reports: 11/20/2020	Last EDR Contact: 12/01/2020
Number of Days to Update: 81	Next Scheduled EDR Contact: 03/15/2021
	Data Release Frequency: Quarterly

PROC: Certified Processors Database

A listing of certified processors.

Date of Government Version: 09/08/2020	Source: Department of Conservation
Date Data Arrived at EDR: 09/08/2020	Telephone: 916-323-3836
Date Made Active in Reports: 12/01/2020	Last EDR Contact: 09/08/2020
Number of Days to Update: 84	Next Scheduled EDR Contact: 12/21/2020
	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: 08/21/2020	Source: State Water Resources Control Board
Date Data Arrived at EDR: 08/21/2020	Telephone: 916-445-3846
Date Made Active in Reports: 08/27/2020	Last EDR Contact: 08/20/2020
Number of Days to Update: 6	Next Scheduled EDR Contact: 12/28/2020
	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: 09/08/2020	Source: Department of Conservation
Date Data Arrived at EDR: 09/08/2020	Telephone: 916-445-2408
Date Made Active in Reports: 12/01/2020	Last EDR Contact: 09/08/2020
Number of Days to Update: 84	Next Scheduled EDR Contact: 12/21/2020
	Data Release Frequency: Varies

UIC GEO: Underground Injection Control Sites (GEOTRACKER)

Underground control injection sites

Date of Government Version: 09/08/2020	Source: State Water Resource Control Board
Date Data Arrived at EDR: 09/08/2020	Telephone: 866-480-1028
Date Made Active in Reports: 11/30/2020	Last EDR Contact: 09/08/2020
Number of Days to Update: 83	Next Scheduled EDR Contact: 12/21/2020
	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	Source: RWQCB, Central Valley Region
Date Data Arrived at EDR: 01/07/2020	Telephone: 559-445-5577
Date Made Active in Reports: 03/09/2020	Last EDR Contact: 10/09/2020
Number of Days to Update: 62	Next Scheduled EDR Contact: 01/18/2021
	Data Release Frequency: Varies

WDS: Waste Discharge System

Sites which have been issued waste discharge requirements.

Date of Government Version: 06/19/2007	Source: State Water Resources Control Board
Date Data Arrived at EDR: 06/20/2007	Telephone: 916-341-5227
Date Made Active in Reports: 06/29/2007	Last EDR Contact: 11/13/2020
Number of Days to Update: 9	Next Scheduled EDR Contact: 03/01/2021
	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	Source: Los Angeles Water Quality Control Board
Date Data Arrived at EDR: 07/21/2009	Telephone: 213-576-6726
Date Made Active in Reports: 08/03/2009	Last EDR Contact: 09/16/2020
Number of Days to Update: 13	Next Scheduled EDR Contact: 01/04/2021
	Data Release Frequency: No Update Planned

MILITARY PRIV SITES: Military Privatized Sites (GEOTRACKER)

Military privatized sites

Date of Government Version: 09/08/2020	Source: State Water Resources Control Board
Date Data Arrived at EDR: 09/08/2020	Telephone: 866-480-1028
Date Made Active in Reports: 11/30/2020	Last EDR Contact: 09/08/2020
Number of Days to Update: 83	Next Scheduled EDR Contact: 12/21/2020
	Data Release Frequency: Varies

PROJECT: Project Sites (GEOTRACKER)

Projects sites

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 09/08/2020
Date Data Arrived at EDR: 09/08/2020
Date Made Active in Reports: 11/30/2020
Number of Days to Update: 83

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 09/08/2020
Next Scheduled EDR Contact: 12/21/2020
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: 09/08/2020
Date Data Arrived at EDR: 09/08/2020
Date Made Active in Reports: 12/01/2020
Number of Days to Update: 84

Source: State Water Resources Control Board
Telephone: 916-341-5810
Last EDR Contact: 09/08/2020
Next Scheduled EDR Contact: 12/21/2020
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: 08/31/2020
Date Data Arrived at EDR: 08/31/2020
Date Made Active in Reports: 11/20/2020
Number of Days to Update: 81

Source: State Water Resources Control Board
Telephone: 866-794-4977
Last EDR Contact: 12/01/2020
Next Scheduled EDR Contact: 03/01/2021
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: 07/20/2020
Date Data Arrived at EDR: 07/21/2020
Date Made Active in Reports: 10/07/2020
Number of Days to Update: 78

Source: California Environmental Protection Agency
Telephone: 916-323-2514
Last EDR Contact: 10/19/2020
Next Scheduled EDR Contact: 02/01/2021
Data Release Frequency: Varies

NON-CASE INFO: Non-Case Information Sites (GEOTRACKER)

Non-Case Information sites

Date of Government Version: 09/08/2020
Date Data Arrived at EDR: 09/08/2020
Date Made Active in Reports: 11/30/2020
Number of Days to Update: 83

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 09/08/2020
Next Scheduled EDR Contact: 12/21/2020
Data Release Frequency: Varies

OTHER OIL GAS: Other Oil & Gas Projects Sites (GEOTRACKER)

Other Oil & Gas Projects sites

Date of Government Version: 09/08/2020
Date Data Arrived at EDR: 09/08/2020
Date Made Active in Reports: 11/30/2020
Number of Days to Update: 83

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 09/08/2020
Next Scheduled EDR Contact: 12/21/2020
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

PROD WATER PONDS: Produced Water Ponds Sites (GEOTRACKER)

Produced water ponds sites

Date of Government Version: 09/08/2020
Date Data Arrived at EDR: 09/08/2020
Date Made Active in Reports: 11/30/2020
Number of Days to Update: 83

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 09/08/2020
Next Scheduled EDR Contact: 12/21/2020
Data Release Frequency: Varies

SAMPLING POINT: Sampling Point ? Public Sites (GEOTRACKER)

Sampling point - public sites

Date of Government Version: 09/08/2020
Date Data Arrived at EDR: 09/08/2020
Date Made Active in Reports: 11/30/2020
Number of Days to Update: 83

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 09/08/2020
Next Scheduled EDR Contact: 12/21/2020
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: 09/08/2020
Date Data Arrived at EDR: 09/08/2020
Date Made Active in Reports: 11/30/2020
Number of Days to Update: 83

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 09/08/2020
Next Scheduled EDR Contact: 12/21/2020
Data Release Frequency: Varies

PCS: Permit Compliance System

PCS is a computerized management information system that contains data on National Pollutant Discharge Elimination System (NPDES) permit holding facilities. PCS tracks the permit, compliance, and enforcement status of NPDES facilities.

Date of Government Version: 07/14/2011
Date Data Arrived at EDR: 08/05/2011
Date Made Active in Reports: 09/29/2011
Number of Days to Update: 55

Source: EPA, Office of Water
Telephone: 202-564-2496
Last EDR Contact: 10/02/2020
Next Scheduled EDR Contact: 01/18/2021
Data Release Frequency: Semi-Annually

PCS INACTIVE: Listing of Inactive PCS Permits

An inactive permit is a facility that has shut down or is no longer discharging.

Date of Government Version: 11/05/2014
Date Data Arrived at EDR: 01/06/2015
Date Made Active in Reports: 05/06/2015
Number of Days to Update: 120

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 10/02/2020
Next Scheduled EDR Contact: 01/18/2021
Data Release Frequency: Semi-Annually

PCS ENF: Enforcement data

No description is available for this data

Date of Government Version: 12/31/2014
Date Data Arrived at EDR: 02/05/2015
Date Made Active in Reports: 03/06/2015
Number of Days to Update: 29

Source: EPA
Telephone: 202-564-2497
Last EDR Contact: 10/02/2020
Next Scheduled EDR Contact: 01/18/2021
Data Release Frequency: Varies

MINES MRDS: Mineral Resources Data System

Mineral Resources Data System

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

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: 11/25/2020
Next Scheduled EDR Contact: 03/08/2021
Data Release Frequency: Varies

HWTS: Hazardous Waste Tracking System

DTSC maintains the Hazardous Waste Tracking System that stores ID number information since the early 1980s and manifest data since 1993. The system collects both manifest copies from the generator and destination facility.

Date of Government Version: 10/13/2020
Date Data Arrived at EDR: 10/14/2020
Date Made Active in Reports: 11/03/2020
Number of Days to Update: 20

Source: Department of Toxic Substances Control
Telephone: 916-324-2444
Last EDR Contact: 10/01/2020
Next Scheduled EDR Contact: 01/18/2021
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.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

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

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: 10/01/2020
Next Scheduled EDR Contact: 01/18/2021
Data Release Frequency: Semi-Annually

UST ALAMEDA: Underground Tanks

Underground storage tank sites located in Alameda county.

Date of Government Version: 06/30/2020
Date Data Arrived at EDR: 07/01/2020
Date Made Active in Reports: 07/17/2020
Number of Days to Update: 16

Source: Alameda County Environmental Health Services
Telephone: 510-567-6700
Last EDR Contact: 10/01/2020
Next Scheduled EDR Contact: 01/18/2021
Data Release Frequency: Semi-Annually

AMADOR COUNTY:

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

CUPA AMADOR: CUPA Facility List Cupa Facility List

Date of Government Version: 05/18/2020
Date Data Arrived at EDR: 05/19/2020
Date Made Active in Reports: 06/01/2020
Number of Days to Update: 13

Source: Amador County Environmental Health
Telephone: 209-223-6439
Last EDR Contact: 10/19/2020
Next Scheduled EDR Contact: 02/15/2021
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: 10/01/2020
Next Scheduled EDR Contact: 01/18/2021
Data Release Frequency: No Update Planned

CALVERAS COUNTY:

CUPA CALVERAS: CUPA Facility Listing Cupa Facility Listing

Date of Government Version: 06/17/2020
Date Data Arrived at EDR: 06/18/2020
Date Made Active in Reports: 09/02/2020
Number of Days to Update: 76

Source: Calveras County Environmental Health
Telephone: 209-754-6399
Last EDR Contact: 10/01/2020
Next Scheduled EDR Contact: 01/04/2021
Data Release Frequency: Quarterly

COLUSA COUNTY:

CUPA COLUSA: CUPA Facility List Cupa facility list.

Date of Government Version: 04/06/2020
Date Data Arrived at EDR: 04/23/2020
Date Made Active in Reports: 07/10/2020
Number of Days to Update: 78

Source: Health & Human Services
Telephone: 530-458-0396
Last EDR Contact: 10/28/2020
Next Scheduled EDR Contact: 02/15/2021
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: 07/16/2020
Date Data Arrived at EDR: 07/22/2020
Date Made Active in Reports: 10/08/2020
Number of Days to Update: 78

Source: Contra Costa Health Services Department
Telephone: 925-646-2286
Last EDR Contact: 10/20/2020
Next Scheduled EDR Contact: 02/08/2021
Data Release Frequency: Semi-Annually

DEL NORTE COUNTY:

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

CUPA DEL NORTE: CUPA Facility List Cupa Facility list

Date of Government Version: 06/08/2020
Date Data Arrived at EDR: 08/13/2020
Date Made Active in Reports: 10/22/2020
Number of Days to Update: 70

Source: Del Norte County Environmental Health Division
Telephone: 707-465-0426
Last EDR Contact: 10/20/2020
Next Scheduled EDR Contact: 02/08/2021
Data Release Frequency: Varies

EL DORADO COUNTY:

CUPA EL DORADO: CUPA Facility List CUPA facility list.

Date of Government Version: 08/13/2020
Date Data Arrived at EDR: 08/13/2020
Date Made Active in Reports: 10/22/2020
Number of Days to Update: 70

Source: El Dorado County Environmental Management Department
Telephone: 530-621-6623
Last EDR Contact: 10/20/2020
Next Scheduled EDR Contact: 02/08/2021
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: 06/30/2020
Date Data Arrived at EDR: 07/01/2020
Date Made Active in Reports: 09/17/2020
Number of Days to Update: 78

Source: Dept. of Community Health
Telephone: 559-445-3271
Last EDR Contact: 10/02/2020
Next Scheduled EDR Contact: 01/11/2021
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: 10/13/2020
Next Scheduled EDR Contact: 02/01/2021
Data Release Frequency: No Update Planned

HUMBOLDT COUNTY:

CUPA HUMBOLDT: CUPA Facility List CUPA facility list.

Date of Government Version: 08/13/2020
Date Data Arrived at EDR: 08/17/2020
Date Made Active in Reports: 11/05/2020
Number of Days to Update: 80

Source: Humboldt County Environmental Health
Telephone: N/A
Last EDR Contact: 11/11/2020
Next Scheduled EDR Contact: 03/01/2021
Data Release Frequency: Semi-Annually

IMPERIAL COUNTY:

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

CUPA IMPERIAL: CUPA Facility List Cupa facility list.

Date of Government Version: 07/14/2020
Date Data Arrived at EDR: 07/16/2020
Date Made Active in Reports: 09/29/2020
Number of Days to Update: 75

Source: San Diego Border Field Office
Telephone: 760-339-2777
Last EDR Contact: 10/13/2020
Next Scheduled EDR Contact: 02/01/2021
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: 11/11/2020
Next Scheduled EDR Contact: 03/01/2021
Data Release Frequency: Varies

KERN COUNTY:

CUPA KERN: CUPA Facility List

A listing of sites included in the Kern County Hazardous Material Business Plan.

Date of Government Version: 07/28/2020
Date Data Arrived at EDR: 07/30/2020
Date Made Active in Reports: 10/13/2020
Number of Days to Update: 75

Source: Kern County Public Health
Telephone: 661-321-3000
Last EDR Contact: 10/28/2020
Next Scheduled EDR Contact: 02/15/2021
Data Release Frequency: Varies

UST KERN: Underground Storage Tank Sites & Tank Listing Kern County Sites and Tanks Listing.

Date of Government Version: 07/28/2020
Date Data Arrived at EDR: 07/30/2020
Date Made Active in Reports: 10/14/2020
Number of Days to Update: 76

Source: Kern County Environment Health Services Department
Telephone: 661-862-8700
Last EDR Contact: 10/28/2020
Next Scheduled EDR Contact: 02/15/2021
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: 05/11/2020
Date Data Arrived at EDR: 05/12/2020
Date Made Active in Reports: 07/27/2020
Number of Days to Update: 76

Source: Kings County Department of Public Health
Telephone: 559-584-1411
Last EDR Contact: 11/20/2020
Next Scheduled EDR Contact: 03/01/2021
Data Release Frequency: Varies

LAKE COUNTY:

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

CUPA LAKE: CUPA Facility List Cupa facility list

Date of Government Version: 08/13/2020
Date Data Arrived at EDR: 08/13/2020
Date Made Active in Reports: 10/23/2020
Number of Days to Update: 71

Source: Lake County Environmental Health
Telephone: 707-263-1164
Last EDR Contact: 10/07/2020
Next Scheduled EDR Contact: 01/25/2021
Data Release Frequency: Varies

LASSEN COUNTY:

CUPA LASSEN: CUPA Facility List Cupa facility list

Date of Government Version: 07/31/2020
Date Data Arrived at EDR: 08/21/2020
Date Made Active in Reports: 11/09/2020
Number of Days to Update: 80

Source: Lassen County Environmental Health
Telephone: 530-251-8528
Last EDR Contact: 10/13/2020
Next Scheduled EDR Contact: 02/01/2021
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: 09/10/2020
Next Scheduled EDR Contact: 12/28/2020
Data Release Frequency: No Update Planned

HMS LOS ANGELES: HMS: Street Number List

Industrial Waste and Underground Storage Tank Sites.

Date of Government Version: 07/06/2020
Date Data Arrived at EDR: 07/10/2020
Date Made Active in Reports: 09/28/2020
Number of Days to Update: 80

Source: Department of Public Works
Telephone: 626-458-3517
Last EDR Contact: 10/01/2020
Next Scheduled EDR Contact: 01/18/2021
Data Release Frequency: Semi-Annually

LF LOS ANGELES: List of Solid Waste Facilities Solid Waste Facilities in Los Angeles County.

Date of Government Version: 07/13/2020
Date Data Arrived at EDR: 07/13/2020
Date Made Active in Reports: 09/29/2020
Number of Days to Update: 78

Source: La County Department of Public Works
Telephone: 818-458-5185
Last EDR Contact: 10/09/2020
Next Scheduled EDR Contact: 01/25/2021
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: 12/31/2019
Date Data Arrived at EDR: 08/17/2020
Date Made Active in Reports: 11/05/2020
Number of Days to Update: 80

Source: Engineering & Construction Division
Telephone: 213-473-7869
Last EDR Contact: 10/07/2020
Next Scheduled EDR Contact: 01/25/2021
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

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	Source: Los Angeles Fire Department
Date Data Arrived at EDR: 06/25/2019	Telephone: 213-978-3800
Date Made Active in Reports: 08/22/2019	Last EDR Contact: 09/25/2020
Number of Days to Update: 58	Next Scheduled EDR Contact: 01/04/2021
	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	Source: Los Angeles County Department of Public Works
Date Data Arrived at EDR: 04/17/2019	Telephone: 626-458-6973
Date Made Active in Reports: 05/29/2019	Last EDR Contact: 10/12/2020
Number of Days to Update: 42	Next Scheduled EDR Contact: 01/25/2021
	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	Source: Los Angeles Fire Department
Date Data Arrived at EDR: 06/25/2019	Telephone: 213-978-3800
Date Made Active in Reports: 08/22/2019	Last EDR Contact: 09/25/2020
Number of Days to Update: 58	Next Scheduled EDR Contact: 01/04/2021
	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	Source: Los Angeles Fire Department
Date Data Arrived at EDR: 06/25/2019	Telephone: 213-978-3800
Date Made Active in Reports: 08/22/2019	Last EDR Contact: 09/25/2020
Number of Days to Update: 58	Next Scheduled EDR Contact: 01/04/2021
	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: 03/25/2020	Source: Community Health Services
Date Data Arrived at EDR: 04/14/2020	Telephone: 323-890-7806
Date Made Active in Reports: 07/01/2020	Last EDR Contact: 10/09/2020
Number of Days to Update: 78	Next Scheduled EDR Contact: 01/25/2021
	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	Source: City of El Segundo Fire Department
Date Data Arrived at EDR: 04/19/2017	Telephone: 310-524-2236
Date Made Active in Reports: 05/10/2017	Last EDR Contact: 10/07/2020
Number of Days to Update: 21	Next Scheduled EDR Contact: 01/25/2021
	Data Release Frequency: No Update Planned

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

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	Source: City of Long Beach Fire Department
Date Data Arrived at EDR: 04/23/2019	Telephone: 562-570-2563
Date Made Active in Reports: 06/27/2019	Last EDR Contact: 10/13/2020
Number of Days to Update: 65	Next Scheduled EDR Contact: 02/01/2021
	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	Source: City of Torrance Fire Department
Date Data Arrived at EDR: 07/30/2019	Telephone: 310-618-2973
Date Made Active in Reports: 10/02/2019	Last EDR Contact: 10/05/2020
Number of Days to Update: 64	Next Scheduled EDR Contact: 02/01/2021
	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: 08/10/2020	Source: Madera County Environmental Health
Date Data Arrived at EDR: 08/12/2020	Telephone: 559-675-7823
Date Made Active in Reports: 10/23/2020	Last EDR Contact: 11/11/2020
Number of Days to Update: 72	Next Scheduled EDR Contact: 03/01/2021
	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	Source: Public Works Department Waste Management
Date Data Arrived at EDR: 10/04/2018	Telephone: 415-473-6647
Date Made Active in Reports: 11/02/2018	Last EDR Contact: 09/23/2020
Number of Days to Update: 29	Next Scheduled EDR Contact: 01/11/2021
	Data Release Frequency: Semi-Annually

MERCED COUNTY:

CUPA MERCED: CUPA Facility List
CUPA facility list.

Date of Government Version: 07/28/2020	Source: Merced County Environmental Health
Date Data Arrived at EDR: 07/30/2020	Telephone: 209-381-1094
Date Made Active in Reports: 07/31/2020	Last EDR Contact: 11/11/2020
Number of Days to Update: 1	Next Scheduled EDR Contact: 03/01/2021
	Data Release Frequency: Varies

MONO COUNTY:

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

CUPA MONO: CUPA Facility List CUPA Facility List

Date of Government Version: 08/20/2020
Date Data Arrived at EDR: 08/24/2020
Date Made Active in Reports: 11/09/2020
Number of Days to Update: 77

Source: Mono County Health Department
Telephone: 760-932-5580
Last EDR Contact: 11/15/2020
Next Scheduled EDR Contact: 03/08/3021
Data Release Frequency: Varies

MONTEREY COUNTY:

CUPA MONTEREY: CUPA Facility Listing

CUPA Program listing from the Environmental Health Division.

Date of Government Version: 07/13/2020
Date Data Arrived at EDR: 07/15/2020
Date Made Active in Reports: 07/31/2020
Number of Days to Update: 16

Source: Monterey County Health Department
Telephone: 831-796-1297
Last EDR Contact: 09/23/2020
Next Scheduled EDR Contact: 01/11/2021
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: 11/16/2020
Next Scheduled EDR Contact: 03/08/2021
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: 11/16/2020
Next Scheduled EDR Contact: 03/08/2021
Data Release Frequency: No Update Planned

NEVADA COUNTY:

CUPA NEVADA: CUPA Facility List

CUPA facility list.

Date of Government Version: 07/29/2020
Date Data Arrived at EDR: 07/30/2020
Date Made Active in Reports: 10/13/2020
Number of Days to Update: 75

Source: Community Development Agency
Telephone: 530-265-1467
Last EDR Contact: 10/20/2020
Next Scheduled EDR Contact: 02/08/2021
Data Release Frequency: Varies

ORANGE COUNTY:

IND_SITE ORANGE: List of Industrial Site Cleanups Petroleum and non-petroleum spills.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 06/10/2020
Date Data Arrived at EDR: 08/03/2020
Date Made Active in Reports: 10/19/2020
Number of Days to Update: 77

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 11/02/2020
Next Scheduled EDR Contact: 02/15/2021
Data Release Frequency: Annually

LUST ORANGE: List of Underground Storage Tank Cleanups
Orange County Underground Storage Tank Cleanups (LUST).

Date of Government Version: 07/02/2020
Date Data Arrived at EDR: 08/05/2020
Date Made Active in Reports: 10/23/2020
Number of Days to Update: 79

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 11/02/2020
Next Scheduled EDR Contact: 02/15/2021
Data Release Frequency: Quarterly

UST ORANGE: List of Underground Storage Tank Facilities
Orange County Underground Storage Tank Facilities (UST).

Date of Government Version: 07/01/2020
Date Data Arrived at EDR: 08/03/2020
Date Made Active in Reports: 10/19/2020
Number of Days to Update: 77

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 11/03/2020
Next Scheduled EDR Contact: 02/15/2021
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: 11/24/2020
Date Data Arrived at EDR: 11/24/2020
Date Made Active in Reports: 11/25/2020
Number of Days to Update: 1

Source: Placer County Health and Human Services
Telephone: 530-745-2363
Last EDR Contact: 11/23/2020
Next Scheduled EDR Contact: 03/15/2021
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: 10/13/2020
Next Scheduled EDR Contact: 02/01/2021
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: 10/06/2020
Date Data Arrived at EDR: 10/07/2020
Date Made Active in Reports: 11/03/2020
Number of Days to Update: 27

Source: Department of Environmental Health
Telephone: 951-358-5055
Last EDR Contact: 09/15/2020
Next Scheduled EDR Contact: 12/28/2020
Data Release Frequency: Quarterly

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

UST RIVERSIDE: Underground Storage Tank Tank List

Underground storage tank sites located in Riverside county.

Date of Government Version: 10/06/2020
Date Data Arrived at EDR: 10/07/2020
Date Made Active in Reports: 11/03/2020
Number of Days to Update: 27

Source: Department of Environmental Health
Telephone: 951-358-5055
Last EDR Contact: 09/10/2020
Next Scheduled EDR Contact: 12/28/2020
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: 02/18/2020
Date Data Arrived at EDR: 03/31/2020
Date Made Active in Reports: 06/15/2020
Number of Days to Update: 76

Source: Sacramento County Environmental Management
Telephone: 916-875-8406
Last EDR Contact: 10/02/2020
Next Scheduled EDR Contact: 01/11/2021
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: 02/24/2020
Date Data Arrived at EDR: 03/31/2020
Date Made Active in Reports: 06/17/2020
Number of Days to Update: 78

Source: Sacramento County Environmental Management
Telephone: 916-875-8406
Last EDR Contact: 10/02/2020
Next Scheduled EDR Contact: 01/11/2021
Data Release Frequency: Quarterly

SAN BENITO COUNTY:

CUPA SAN BENITO: CUPA Facility List

Cupa facility list

Date of Government Version: 08/04/2020
Date Data Arrived at EDR: 08/05/2020
Date Made Active in Reports: 10/22/2020
Number of Days to Update: 78

Source: San Benito County Environmental Health
Telephone: N/A
Last EDR Contact: 10/28/2020
Next Scheduled EDR Contact: 02/15/2021
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: 08/04/2020
Date Data Arrived at EDR: 08/05/2020
Date Made Active in Reports: 10/26/2020
Number of Days to Update: 82

Source: San Bernardino County Fire Department Hazardous Materials Division
Telephone: 909-387-3041
Last EDR Contact: 10/28/2020
Next Scheduled EDR Contact: 02/15/2021
Data Release Frequency: Quarterly

SAN DIEGO COUNTY:

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

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: 08/31/2020
Date Data Arrived at EDR: 08/31/2020
Date Made Active in Reports: 11/23/2020
Number of Days to Update: 84

Source: Hazardous Materials Management Division
Telephone: 619-338-2268
Last EDR Contact: 12/01/2020
Next Scheduled EDR Contact: 03/15/2021
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: 11/16/2020
Next Scheduled EDR Contact: 02/01/2021
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: 07/14/2020
Date Data Arrived at EDR: 07/16/2020
Date Made Active in Reports: 09/29/2020
Number of Days to Update: 75

Source: Department of Environmental Health
Telephone: 858-505-6874
Last EDR Contact: 10/13/2020
Next Scheduled EDR Contact: 02/01/2021
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: 11/23/2020
Next Scheduled EDR Contact: 03/15/2021
Data Release Frequency: No Update Planned

SAN FRANCISCO COUNTY:

CUPA SAN FRANCISCO CO: CUPA Facility Listing

Cupa facilities

Date of Government Version: 08/03/2020
Date Data Arrived at EDR: 08/05/2020
Date Made Active in Reports: 10/22/2020
Number of Days to Update: 78

Source: San Francisco County Department of Environmental Health
Telephone: 415-252-3896
Last EDR Contact: 10/28/2020
Next Scheduled EDR Contact: 02/15/2021
Data Release Frequency: Varies

LUST SAN FRANCISCO: Local Oversight Facilities

A listing of leaking underground storage tank sites located in San Francisco county.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

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: 10/28/2020
Next Scheduled EDR Contact: 02/15/2021
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: 08/03/2020
Date Data Arrived at EDR: 08/05/2020
Date Made Active in Reports: 10/26/2020
Number of Days to Update: 82

Source: Department of Public Health
Telephone: 415-252-3920
Last EDR Contact: 10/28/2020
Next Scheduled EDR Contact: 02/15/2021
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: 09/10/2020
Next Scheduled EDR Contact: 12/28/2020
Data Release Frequency: Semi-Annually

SAN LUIS OBISPO COUNTY:

CUPA SAN LUIS OBISPO: CUPA Facility List

Cupa Facility List.

Date of Government Version: 07/27/2020
Date Data Arrived at EDR: 08/12/2020
Date Made Active in Reports: 10/26/2020
Number of Days to Update: 75

Source: San Luis Obispo County Public Health Department
Telephone: 805-781-5596
Last EDR Contact: 11/11/2020
Next Scheduled EDR Contact: 03/01/2021
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: 09/11/2020
Next Scheduled EDR Contact: 12/21/2020
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: 12/01/2020
Next Scheduled EDR Contact: 03/22/2021
Data Release Frequency: Semi-Annually

SANTA BARBARA COUNTY:

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

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: 11/11/2020
Next Scheduled EDR Contact: 03/01/2021
Data Release Frequency: No Update Planned

SANTA CLARA COUNTY:

CUPA SANTA CLARA: Cupa Facility List

Cupa facility list

Date of Government Version: 08/20/2020
Date Data Arrived at EDR: 08/20/2020
Date Made Active in Reports: 11/09/2020
Number of Days to Update: 81

Source: Department of Environmental Health
Telephone: 408-918-1973
Last EDR Contact: 11/11/2020
Next Scheduled EDR Contact: 03/01/2021
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: 11/16/2020
Next Scheduled EDR Contact: 03/08/2021
Data Release Frequency: No Update Planned

SAN JOSE HAZMAT: Hazardous Material Facilities

Hazardous material facilities, including underground storage tank sites.

Date of Government Version: 07/30/2020
Date Data Arrived at EDR: 07/31/2020
Date Made Active in Reports: 10/16/2020
Number of Days to Update: 77

Source: City of San Jose Fire Department
Telephone: 408-535-7694
Last EDR Contact: 10/28/2020
Next Scheduled EDR Contact: 02/15/2021
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: 11/11/2020
Next Scheduled EDR Contact: 03/01/2021
Data Release Frequency: Varies

SHASTA COUNTY:

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

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: 11/11/2020
Next Scheduled EDR Contact: 03/01/2021
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: 06/03/2019
Next Scheduled EDR Contact: 03/15/2021
Data Release Frequency: Quarterly

UST SOLANO: Underground Storage Tanks

Underground storage tank sites located in Solano county.

Date of Government Version: 08/25/2020
Date Data Arrived at EDR: 08/26/2020
Date Made Active in Reports: 09/16/2020
Number of Days to Update: 21

Source: Solano County Department of Environmental Management
Telephone: 707-784-6770
Last EDR Contact: 11/23/2020
Next Scheduled EDR Contact: 03/15/2021
Data Release Frequency: Quarterly

SONOMA COUNTY:

CUPA SONOMA: Cupa Facility List Cupa Facility list

Date of Government Version: 07/07/2020
Date Data Arrived at EDR: 07/08/2020
Date Made Active in Reports: 09/25/2020
Number of Days to Update: 79

Source: County of Sonoma Fire & Emergency Services Department
Telephone: 707-565-1174
Last EDR Contact: 09/16/2020
Next Scheduled EDR Contact: 01/04/2021
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: 07/01/2020
Date Data Arrived at EDR: 07/02/2020
Date Made Active in Reports: 09/17/2020
Number of Days to Update: 77

Source: Department of Health Services
Telephone: 707-565-6565
Last EDR Contact: 09/16/2020
Next Scheduled EDR Contact: 01/04/2021
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 Environmental Protection
Telephone: 209-525-6751
Last EDR Contact: 10/02/2020
Next Scheduled EDR Contact: 01/25/2021
Data Release Frequency: Varies

SUTTER COUNTY:

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

UST SUTTER: Underground Storage Tanks

Underground storage tank sites located in Sutter county.

Date of Government Version: 08/25/2020
Date Data Arrived at EDR: 08/26/2020
Date Made Active in Reports: 11/17/2020
Number of Days to Update: 83

Source: Sutter County Environmental Health Services
Telephone: 530-822-7500
Last EDR Contact: 11/23/2020
Next Scheduled EDR Contact: 03/15/2021
Data Release Frequency: Semi-Annually

TEHAMA COUNTY:

CUPA TEHAMA: CUPA Facility List

Cupa facilities

Date of Government Version: 08/11/2020
Date Data Arrived at EDR: 08/12/2020
Date Made Active in Reports: 10/26/2020
Number of Days to Update: 75

Source: Tehama County Department of Environmental Health
Telephone: 530-527-8020
Last EDR Contact: 11/11/2020
Next Scheduled EDR Contact: 02/15/2021
Data Release Frequency: Varies

TRINITY COUNTY:

CUPA TRINITY: CUPA Facility List

Cupa facility list

Date of Government Version: 07/14/2020
Date Data Arrived at EDR: 07/16/2020
Date Made Active in Reports: 09/29/2020
Number of Days to Update: 75

Source: Department of Toxic Substances Control
Telephone: 760-352-0381
Last EDR Contact: 10/13/2020
Next Scheduled EDR Contact: 02/01/2021
Data Release Frequency: Varies

TULARE COUNTY:

CUPA TULARE: CUPA Facility List

Cupa program facilities

Date of Government Version: 08/06/2020
Date Data Arrived at EDR: 08/06/2020
Date Made Active in Reports: 10/26/2020
Number of Days to Update: 81

Source: Tulare County Environmental Health Services Division
Telephone: 559-624-7400
Last EDR Contact: 10/28/2020
Next Scheduled EDR Contact: 02/15/2021
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: Division of Environmental Health
Telephone: 209-533-5633
Last EDR Contact: 10/13/2020
Next Scheduled EDR Contact: 02/01/2021
Data Release Frequency: Varies

VENTURA COUNTY:

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

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: 07/10/2020	Source: Ventura County Environmental Health Division
Date Data Arrived at EDR: 07/22/2020	Telephone: 805-654-2813
Date Made Active in Reports: 10/08/2020	Last EDR Contact: 10/19/2020
Number of Days to Update: 78	Next Scheduled EDR Contact: 02/01/2021
	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	Source: Environmental Health Division
Date Data Arrived at EDR: 12/01/2011	Telephone: 805-654-2813
Date Made Active in Reports: 01/19/2012	Last EDR Contact: 09/23/2020
Number of Days to Update: 49	Next Scheduled EDR Contact: 01/11/2021
	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	Source: Environmental Health Division
Date Data Arrived at EDR: 06/24/2008	Telephone: 805-654-2813
Date Made Active in Reports: 07/31/2008	Last EDR Contact: 11/05/2020
Number of Days to Update: 37	Next Scheduled EDR Contact: 02/22/2021
	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: 07/10/2020	Source: Ventura County Resource Management Agency
Date Data Arrived at EDR: 07/22/2020	Telephone: 805-654-2813
Date Made Active in Reports: 10/07/2020	Last EDR Contact: 10/19/2020
Number of Days to Update: 77	Next Scheduled EDR Contact: 02/01/2021
	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: 08/26/2020	Source: Environmental Health Division
Date Data Arrived at EDR: 09/08/2020	Telephone: 805-654-2813
Date Made Active in Reports: 12/01/2020	Last EDR Contact: 09/08/2020
Number of Days to Update: 84	Next Scheduled EDR Contact: 12/21/2020
	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: 06/23/2020	Source: Yolo County Department of Health
Date Data Arrived at EDR: 06/29/2020	Telephone: 530-666-8646
Date Made Active in Reports: 09/15/2020	Last EDR Contact: 10/07/2020
Number of Days to Update: 78	Next Scheduled EDR Contact: 01/11/2021
	Data Release Frequency: Annually

YUBA COUNTY:

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

CUPA YUBA: CUPA Facility List

CUPA facility listing for Yuba County.

Date of Government Version: 08/06/2020
Date Data Arrived at EDR: 08/07/2020
Date Made Active in Reports: 10/26/2020
Number of Days to Update: 80

Source: Yuba County Environmental Health Department
Telephone: 530-749-7523
Last EDR Contact: 11/03/2020
Next Scheduled EDR Contact: 02/08/2021
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: 08/10/2020
Date Data Arrived at EDR: 10/20/2020
Date Made Active in Reports: 11/02/2020
Number of Days to Update: 13

Source: Department of Energy & Environmental Protection
Telephone: 860-424-3375
Last EDR Contact: 11/09/2020
Next Scheduled EDR Contact: 02/22/2021
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: 10/09/2020
Next Scheduled EDR Contact: 01/18/2021
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: 04/29/2020
Date Made Active in Reports: 07/10/2020
Number of Days to Update: 72

Source: Department of Environmental Conservation
Telephone: 518-402-8651
Last EDR Contact: 10/30/2020
Next Scheduled EDR Contact: 02/08/2021
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: 10/07/2020
Next Scheduled EDR Contact: 01/25/2021
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: 11/11/2020
Next Scheduled EDR Contact: 03/01/2021
Data Release Frequency: Annually

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

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: 09/02/2020

Next Scheduled EDR Contact: 12/21/2020

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

TRACT 31304
MOUNTAIN AVENUE/MCPHERSON ROAD
PERRIS, CA 92570

TARGET PROPERTY COORDINATES

Latitude (North): 33.767495 - 33° 46' 2.98"
Longitude (West): 117.248531 - 117° 14' 54.71"
Universal Transverse Mercator: Zone 11
UTM X (Meters): 476985.8
UTM Y (Meters): 3736210.8
Elevation: 1547 ft. above sea level

USGS TOPOGRAPHIC MAP

Target Property Map:	5641330 PERRIS, CA
Version Date:	2012
Southeast Map:	5641314 ROMOLAND, CA
Version Date:	2012
Southwest Map:	5636473 LAKE ELSINORE, CA
Version Date:	2012
Northwest Map:	5641324 STEELE PEAK, 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).

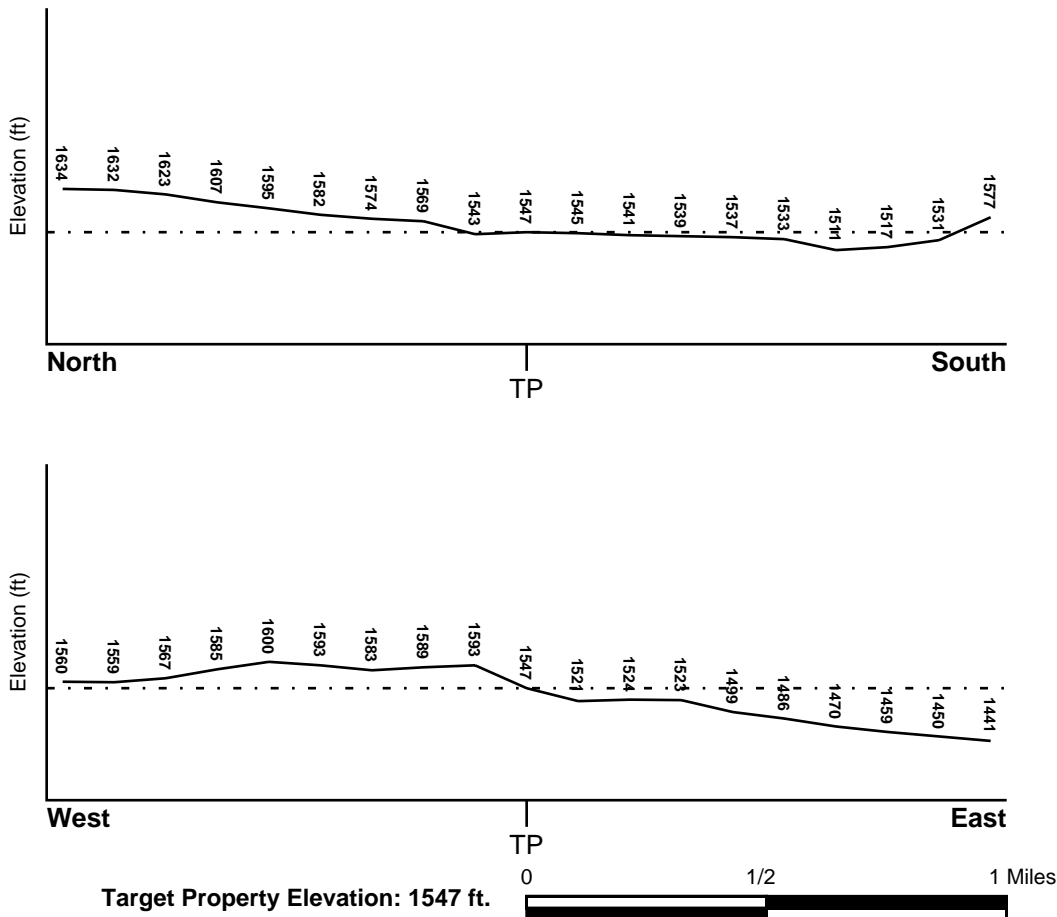
TOPOGRAPHIC INFORMATION

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 ESE

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

<u>Flood Plain Panel at Target Property</u>	<u>FEMA Source Type</u>
06065C1440H	FEMA FIRM Flood data
<u>Additional Panels in search area:</u>	<u>FEMA Source Type</u>
0602451425A	FEMA Q3 Flood data
0602580010D	FEMA Q3 Flood data
0602451450C	FEMA Q3 Flood data

NATIONAL WETLAND INVENTORY

<u>NWI Quad at Target Property</u>	<u>NWI Electronic Data Coverage</u>
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.

<u>MAP ID</u>	<u>LOCATION FROM TP</u>	<u>GENERAL DIRECTION GROUNDWATER FLOW</u>
Not Reported		

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

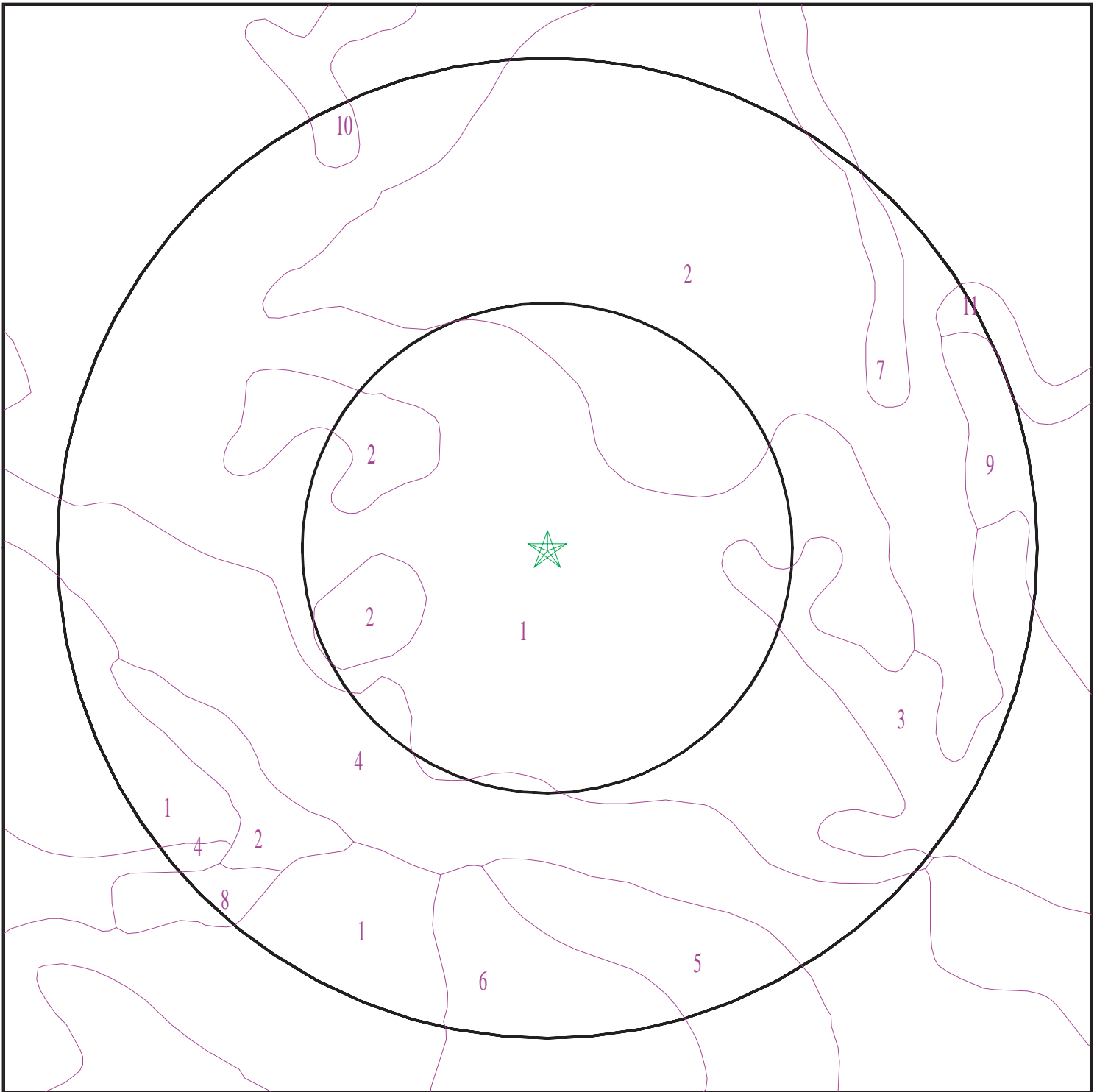
Era: Mesozoic
System: Cretaceous
Series: Cretaceous granitic rocks
Code: Kg *(decoded above as Era, System & Series)*

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 - 6286613.2s



- ★ Target Property
- SSURGO Soil
- Water



SITE NAME: Tract 31304
ADDRESS: Mountain Avenue/Mcpherson Road
Perris CA 92570
LAT/LONG: 33.767495 / 117.248531

CLIENT: Geotek
CONTACT: Kyle Mchargue
INQUIRY #: 6286613.2s
DATE: December 02, 2020 5:49 pm

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: VISTA

Soil Surface Texture: coarse 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: Low

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
Layer	Boundary		Soil Texture Class	Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
	Upper	Lower		AASHTO Group	Unified Soil		
1	0 inches	14 inches	coarse sandy loam	Granular materials (35 pct. or less passing No. 200), Stone Fragments, Gravel and Sand.	Not reported	Max: 0.42 Min: 0	Max: Min:
2	14 inches	24 inches	coarse sandy loam	Granular materials (35 pct. or less passing No. 200), Stone Fragments, Gravel and Sand.	Not reported	Max: 0.42 Min: 0	Max: Min:
3	24 inches	27 inches	weathered bedrock	Granular materials (35 pct. or less passing No. 200), Stone Fragments, Gravel and Sand.	Not reported	Max: 0.42 Min: 0	Max: Min:

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Map ID: 2

Soil Component Name: Cieneba

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: 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							
Layer	Boundary		Soil Texture Class	Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
	Upper	Lower		AASHTO Group	Unified Soil		
1	0 inches	14 inches	sandy loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	Not reported	Max: 0.42 Min: 0	Max: Min:
2	14 inches	22 inches	weathered bedrock	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	Not reported	Max: 0.42 Min: 0	Max: Min:

Soil Map ID: 3

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: Well drained

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Low

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
Layer	Boundary		Soil Texture Class	Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
	Upper	Lower		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: 4

Soil Component Name: VISTA

Soil Surface Texture: coarse 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: Low

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
Layer	Boundary		Soil Texture Class	Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
	Upper	Lower		AASHTO Group	Unified Soil		
1	0 inches	14 inches	coarse sandy loam	Granular materials (35 pct. or less passing No. 200), Stone Fragments, Gravel and Sand.	Not reported	Max: 0.42 Min: 0	Max: Min:
2	14 inches	24 inches	coarse sandy loam	Granular materials (35 pct. or less passing No. 200), Stone Fragments, Gravel and Sand.	Not reported	Max: 0.42 Min: 0	Max: Min:
3	24 inches	29 inches	weathered bedrock	Granular materials (35 pct. or less passing No. 200), Stone Fragments, Gravel and Sand.	Not reported	Max: 0.42 Min: 0	Max: Min:

Soil Map ID: 5

Soil Component Name: MONSERATE

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: Low

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
Layer	Boundary		Soil Texture Class	Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
	Upper	Lower		AASHTO Group	Unified Soil		
1	0 inches	9 inches	sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 14 Min: 4	Max: 8.4 Min: 6.6
2	9 inches	27 inches	sandy clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 14 Min: 4	Max: 8.4 Min: 6.6
3	27 inches	44 inches	indurated	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 14 Min: 4	Max: 8.4 Min: 6.6
4	44 inches	57 inches	cemented	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 14 Min: 4	Max: 8.4 Min: 6.6
5	57 inches	70 inches	loamy coarse sand	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 14 Min: 4	Max: 8.4 Min: 6.6

Soil Map ID: 6

Soil Component Name: MONSERATE

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: Low

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
Layer	Boundary		Soil Texture Class	Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
	Upper	Lower		AASHTO Group	Unified Soil		
1	0 inches	9 inches	sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 14 Min: 4	Max: 8.4 Min: 6.6
2	9 inches	27 inches	sandy clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 14 Min: 4	Max: 8.4 Min: 6.6
3	27 inches	44 inches	indurated	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 14 Min: 4	Max: 8.4 Min: 6.6
4	44 inches	57 inches	cemented	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 14 Min: 4	Max: 8.4 Min: 6.6
5	57 inches	70 inches	loamy coarse sand	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 14 Min: 4	Max: 8.4 Min: 6.6

Soil Map ID: 7

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

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
Layer	Boundary		Soil Texture Class	Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
	Upper	Lower		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: 8

Soil Component Name: VISTA

Soil Surface Texture: coarse 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: Low

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
Layer	Boundary		Soil Texture Class	Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
	Upper	Lower		AASHTO Group	Unified Soil		
1	0 inches	14 inches	coarse sandy loam	Granular materials (35 pct. or less passing No. 200), Stone Fragments, Gravel and Sand.	Not reported	Max: 0.42 Min: 0	Max: Min:
2	14 inches	24 inches	coarse sandy loam	Granular materials (35 pct. or less passing No. 200), Stone Fragments, Gravel and Sand.	Not reported	Max: 0.42 Min: 0	Max: Min:
3	24 inches	27 inches	weathered bedrock	Granular materials (35 pct. or less passing No. 200), Stone Fragments, Gravel and Sand.	Not reported	Max: 0.42 Min: 0	Max: Min:

Soil Map ID: 9

Soil Component Name: MONSERATE

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: Low

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
Layer	Boundary		Soil Texture Class	Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
	Upper	Lower		AASHTO Group	Unified Soil		
1	0 inches	9 inches	sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 14 Min: 4	Max: 8.4 Min: 6.6
2	9 inches	27 inches	sandy clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 14 Min: 4	Max: 8.4 Min: 6.6
3	27 inches	44 inches	indurated	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 14 Min: 4	Max: 8.4 Min: 6.6
4	44 inches	57 inches	cemented	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 14 Min: 4	Max: 8.4 Min: 6.6
5	57 inches	70 inches	loamy coarse sand	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 14 Min: 4	Max: 8.4 Min: 6.6

Soil Map ID: 10

Soil Component Name: CIENEBA

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: Somewhat excessively 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							
Layer	Boundary		Soil Texture Class	Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
	Upper	Lower		AASHTO Group	Unified Soil		
1	0 inches	14 inches	sandy loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	Not reported	Max: 0.42 Min: 0	Max: Min:
2	14 inches	22 inches	weathered bedrock	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	Not reported	Max: 0.42 Min: 0	Max: Min:

Soil Map ID: 11

Soil Component Name: VISTA

Soil Surface Texture: coarse 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: Low

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
Layer	Boundary		Soil Texture Class	Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
	Upper	Lower		AASHTO Group	Unified Soil		
1	0 inches	14 inches	coarse sandy loam	Granular materials (35 pct. or less passing No. 200), Stone Fragments, Gravel and Sand.	Not reported	Max: 0.42 Min: 0	Max: Min:

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
Layer	Boundary		Soil Texture Class	Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
	Upper	Lower		AASHTO Group	Unified Soil		
2	14 inches	24 inches	coarse sandy loam	Granular materials (35 pct. or less passing No. 200), Stone Fragments, Gravel and Sand.	Not reported	Max: 0.42 Min: 0	Max: Min:
3	24 inches	27 inches	weathered bedrock	Granular materials (35 pct. or less passing No. 200), Stone Fragments, Gravel and Sand.	Not reported	Max: 0.42 Min: 0	Max: Min:

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

<u>DATABASE</u>	<u>SEARCH DISTANCE (miles)</u>
Federal USGS	1.000
Federal FRDS PWS	Nearest PWS within 1 mile
State Database	1.000

FEDERAL USGS WELL INFORMATION

<u>MAP ID</u>	<u>WELL ID</u>	<u>LOCATION FROM TP</u>
No Wells Found		

FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

<u>MAP ID</u>	<u>WELL ID</u>	<u>LOCATION FROM TP</u>

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

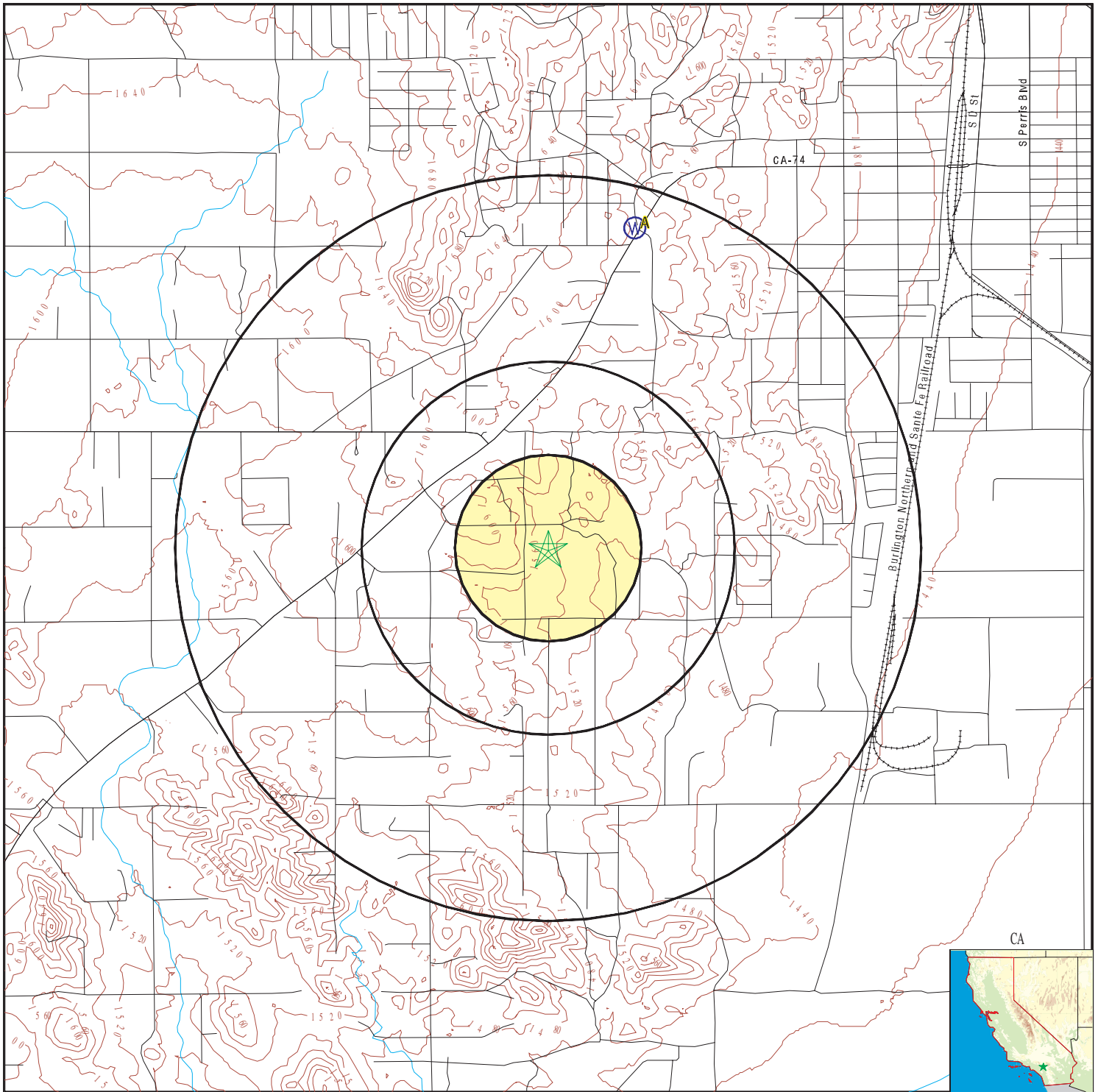
<u>MAP ID</u>	<u>WELL ID</u>	<u>LOCATION FROM TP</u>
No PWS System Found		









Note: PWS System location is not always the same as well location.






STATE DATABASE WELL INFORMATION

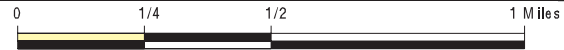
<u>MAP ID</u>	<u>WELL ID</u>	<u>LOCATION FROM TP</u>
A1	CAEDF0000052961	1/2 - 1 Mile NNE
A2	CAEDF0000133316	1/2 - 1 Mile NNE
A3	CAEDF0000140917	1/2 - 1 Mile NNE
A4	CAEDF0000117405	1/2 - 1 Mile NNE
A5	CAEDF0000022033	1/2 - 1 Mile NNE
A6	CAEDF0000038157	1/2 - 1 Mile NNE
A7	CAEDF0000088350	1/2 - 1 Mile NNE
A8	CAEDF0000006944	1/2 - 1 Mile NNE
A9	CAEDF0000103922	1/2 - 1 Mile NNE

PHYSICAL SETTING SOURCE MAP - 6286613.2s



-  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
-  Indeterminate Groundwater Flow at Location
-  Groundwater Flow Varies at Location
-  Closest Hydrogeological Data
-  Oil, gas or related wells



SITE NAME: Tract 31304
 ADDRESS: Mountain Avenue/Mcpherson Road
 Perris CA 92570
 LAT/LONG: 33.767495 / 117.248531

CLIENT: Geotek
 CONTACT: Kyle Mcharge
 INQUIRY #: 6286613.2s
 DATE: December 02, 2020 5:48 pm

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

Database EDR ID Number

A1
NNE
1/2 - 1 Mile
Higher

CA WELLS CAEDF0000052961

Well ID:	T0606500588-MW-8	Well Type:	MONITORING
Source:	EDF	Other Name:	MW-8
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=T0606500588&assigned_name=MW-8&store_num=		
GeoTracker Data:	https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=T0606500588&assigned_name=MW-8		

A2
NNE
1/2 - 1 Mile
Higher

CA WELLS CAEDF0000133316

Well ID:	T0606500588-MW-1	Well Type:	MONITORING
Source:	EDF	Other Name:	MW-1
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=T0606500588&assigned_name=MW-1&store_num=		
GeoTracker Data:	https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=T0606500588&assigned_name=MW-1		

A3
NNE
1/2 - 1 Mile
Higher

CA WELLS CAEDF0000140917

Well ID:	T0606500588-MW-2	Well Type:	MONITORING
Source:	EDF	Other Name:	MW-2
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=T0606500588&assigned_name=MW-2&store_num=		
GeoTracker Data:	https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=T0606500588&assigned_name=MW-2		

A4
NNE
1/2 - 1 Mile
Higher

CA WELLS CAEDF0000117405

Well ID:	T0606500588-MW-4	Well Type:	MONITORING
Source:	EDF	Other Name:	MW-4
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=T0606500588&assigned_name=MW-4&store_num=		
GeoTracker Data:	https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=T0606500588&assigned_name=MW-4		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

Database EDR ID Number

A5
NNE
1/2 - 1 Mile
Higher

CA WELLS CAEDF0000022033

Well ID:	T0606500588-MW-5	Well Type:	MONITORING
Source:	EDF	Other Name:	MW-5
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=T0606500588&assigned_name=MW-5&store_num=		
GeoTracker Data:	https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=T0606500588&assigned_name=MW-5		

A6
NNE
1/2 - 1 Mile
Higher

CA WELLS CAEDF0000038157

Well ID:	T0606500588-MW-3	Well Type:	MONITORING
Source:	EDF	Other Name:	MW-3
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=T0606500588&assigned_name=MW-3&store_num=		
GeoTracker Data:	https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=T0606500588&assigned_name=MW-3		

A7
NNE
1/2 - 1 Mile
Higher

CA WELLS CAEDF0000088350

Well ID:	T0606500588-TOW-1	Well Type:	MONITORING
Source:	EDF	Other Name:	TOW-1
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=T0606500588&assigned_name=TOW-1&store_num=		
GeoTracker Data:	https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=T0606500588&assigned_name=TOW-1		

A8
NNE
1/2 - 1 Mile
Higher

CA WELLS CAEDF0000006944

Well ID:	T0606500588-MW-6	Well Type:	MONITORING
Source:	EDF	Other Name:	MW-6
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=T0606500588&assigned_name=MW-6&store_num=		
GeoTracker Data:	https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=T0606500588&assigned_name=MW-6		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
 Direction
 Distance
 Elevation

Database EDR ID Number

A9
NNE
1/2 - 1 Mile
Higher

CA WELLS CAEDF0000103922

Well ID:	T0606500588-MW-7	Well Type:	MONITORING
Source:	EDF	Other Name:	MW-7
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=T0606500588&assigned_name=MW-7&store_num=		
GeoTracker Data:	https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=T0606500588&assigned_name=MW-7		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS RADON

AREA RADON INFORMATION

State Database: CA Radon

Radon Test Results

Zipcode	Num Tests	> 4 pCi/L
92570	2	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.

OTHER STATE DATABASE INFORMATION

Groundwater Ambient Monitoring & Assessment Program

State Water Resources Control Board

Telephone: 916-341-5577

The GAMA Program is California's comprehensive groundwater quality monitoring program. GAMA collects data by testing the untreated, raw water in different types of wells for naturally-occurring and man-made chemicals. The GAMA data includes Domestic, Monitoring and Municipal well types from the following sources, Department of Water Resources, Department of Health Services, EDF, Agricultural Lands, Lawrence Livermore National Laboratory, Department of Pesticide Regulation, United States Geological Survey, Groundwater Ambient Monitoring and Assessment Program and Local Groundwater Projects.

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.

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

PHYSICAL SETTING SOURCE RECORDS SEARCHED

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.

EPA Radon Zones

Source: EPA

Telephone: 703-356-4020

Sections 307 & 309 of IRRA 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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**PACIFIC COMMUNITIES BUILDER, INC.
TRACT No. 31304
PERRIS, RIVERSIDE COUNTY, CALIFORNIA**

**PROJECT No. 2359-CR
DECEMBER 10, 2020**

APPENDIX F

PROJECT TEAM QUALIFICATIONS





Edward H. LaMont, CEG, PG

Branch Manager

Areas of Expertise

Geotechnical Field Investigations
Grading and Earthwork Construction
Industry Standard of Care
Hillside, Liquefaction, Seismic Hazard,
Fault Analyses and Forensic Studies.

Education

Bachelor of Science in Geology, Cal
State University, Northridge

Registrations

Registered Geologist, PG 6025
Certified Engineering Geologist, CEG
1892

Certifications

OSHA 40-Hr HAZWOPER Training
OSHA 8-Hour Refresher
First Aid/CPR

Professional Affiliations

Association of Engineering Geologist
South Coast Geological Society
San Diego Association of Geologist
Inland Geological Society
BIA Riverside
BIA San Diego

Professional Experience

Mr. LaMont has been involved with numerous public works, residential and commercial earthwork projects within the southern California area. Many residential and public works projects have been successfully completed across southern and central California. Projects include fault and subsidence studies, fault evaluations, various commercial and residential site developments, FEMA levee certifications and military construction projects. These projects have generally included preliminary geotechnical investigations, slope stability evaluations, review and design recommendations, street improvements construction and testing services, and project management.

In addition, Mr. LaMont has performed governmental review of geotechnical reports for the County of Orange. Mr. LaMont has also completed geotechnical studies for the Riverside County Flood Control and Cities of Banning, Chino, Corona, Palm Springs, Lancaster and Victorville, to name a few.

Representative Project Experience

Project experience has included residential and commercial developments, for various land developers including Melia Homes, Meritage Homes, Frontier Enterprises, DR Horton, Integral Communities, Taylor-Morrison, Warmington Homes, Shea Homes, etc. Mr. LaMont has also completed geotechnical investigations and performed project management for numerous residential tracts and commercial facilities all across Southern California.

Professional History

Branch Manager/Principal Geologist - Riverside GeoTek, Inc.,
2004 to present

Vice President, Principal Geologist - GeoSoils, Inc., Santa Ana,
2003 to 2004

Geotechnical Reviewer, Engineering Geologist - County of
Orange, 2001 to 2003.

Project Geologist - GeoSoils, Inc., Santa Ana, California, 1994 to
2001.

Staff/Project Geologist - GeoSoils, Inc., Carlsbad, California, 1988
to 1994.



Anna M. Scott

Project Geologist

Education

B.S., Geology, University of California,
Riverside

Professional Experience

Ms. Anna Scott has over 30 years of geotechnical experience and has worked on or managed a wide range of geotechnical projects throughout southern California, including the High Desert, Inland Empire, Antelope Valley, Coachella Valley, Orange County and Bakersfield area. Her geotechnical experience has ranged from field and laboratory technician to field, staff and project geologist. Ms. Scott's responsibilities include preparation of proposals, preliminary geotechnical investigations, seismic studies, settlement monitor installation and studies, and field studies as a technician and geologist for large grading projects. Ms. Scott has performed Phase I and II ESAs for various property acquisitions and transfers throughout southern California.

Representative Project Experience

Ms. Scott has worked on numerous projects throughout southern California. Her experience includes working with various entities including the public and private sectors. Her vast knowledge includes geotechnical, environmental and materials services. This experience has been attained through small and large projects over the numerous years of her career.

Employment History

GeoTek, Inc., Riverside-Project Geologist, February 2005 – Present

GeoSoils, Inc., Santa Ana, September 1987 – February 2005



Kyle R. McHargue, PG

Project Geologist

Registrations

Registered Geologist, PG 9790

Education

B.A., Geology, University of Hawaii,
Manoa

Certifications

OSHA 40-Hr HAZWOPER Training

OSHA 10-Hour Construction Safety and
Health Training

Nuclear Gauge Certified

APNGA Radiation Safety Officer Certified
First Aid/CPR

Professional Affiliations

BIA Riverside

BIA Leaders of Tomorrow

Professional Experience

Mr, Kyle McHargue has over 7 years of geotechnical experience working on or managed a diverse range of geotechnical projects throughout Southern California through Riverside, San Bernardino, Orange, San Diego and Alameda counties. His geotechnical experience has ranged from staff and project geologist. Mr. McHargue's responsibilities include preparation of proposals, project management, preliminary geotechnical investigations, fault hazard investigations, landslide investigations, seismic refraction surveys, settlement monitoring, percolation and infiltration studies, manure and methane evaluations, and field studies as a field and project geologist for a diverse range of grading projects. Mr. McHargue has performed Phase I and Phase II Environmental Site Assessments for various property acquisitions and transfers in Riverside, Orange, San Diego, Los Angeles, San Bernardino, Kern, Fresno and Imperial Counties in California and Maricopa County in Arizona. Mr. McHargue also over 5 years field and office experience in land surveying and Storm Water Pollution Prevention Program (SWPPP) inspections.

Representative Project Experience-

Corona, Riverside County, California - Project Manager. Directed a geotechnical investigation, fault hazard and landslide investigation, slope stability analysis and Phase I Environmental Site Assessment for the Chaudhuri Estates hillside residential development.

Wildomar, Riverside County, California – Field Geologist. Supervised rough grading operations for 84-lot residential subdivision. In field challenges included stabilization fill design, fault hazard mapping, and high groundwater mitigation design.

Temecula, Riverside County, California – Project Geologist. Performed AP Fault Zone investigation, geotechnical and infiltration investigations for two adjacent commercial projects.

Ontario, San Bernardino County, California – Project and Field Geologist. Performed geotechnical, infiltration and manure/methane investigations for 121-acre development. Also supervised rough grading operations for a residential development included field mapping, field recommendations for remedial grading and preparation of reports and geologic maps.

Temecula, Riverside County, California – Field Geologist. Forensic distress investigation for religious center's structural & wall failures.

Anaheim Hills, Orange County, California – Project Geologist. Planned and performed geotechnical, infiltration investigations including all report preparation and slope stability analysis.

Employment History

GeoTek, Inc., Riverside-Project Geologist Jan. 2019 – Present

LGC Geo-Environmental, Inc., Temecula-Staff/Project Geologist Feb. 2015 – Jan. 2019

LGC Geo-Environmental, Inc., Temecula-Staff Geologist Dec. 2013 – Feb. 2015



J. MICHAEL BATTEN, CAC, CEM, REPA

Principal Environmental Services Manager

Education

BS in Geology, California State University, Fresno 1988

Registrations

- Certified Asbestos Consultant (CA #95-1721)
- Licensed Asbestos Abatement Consultant (NV #IJPM0655)
- Certified Environmental Manager (NV #1782)
- Asbestos Professional Inspector (IL #100-11092)
- Registered Environmental Property Assessor (#113162)
- Certified Lead Inspector Assessor (CA #4358)
- Certified Lead Inspector (EPA #LBP-I-1162326-1)
- Certified Lead Risk Assessor (EPA #LBP-R-1162326-1)

Certifications

- AHERA Certified Asbestos Building Inspector, Management Planner, Project Designer, & Contractor/Supervisor
- EPA Accredited Lead-based Paint Inspector & Risk Assessor
- OSHA HAZWOPER certified worker & supervisor
- OSHA Construction Safety & Health (10-Hour)

Affiliations

- American Society of Testing and Materials
- National Registry of Environmental Professionals

Professional Experience

Mr. Batten has over 30 years of environmental experience, throughout which he has conducted and managed numerous environmental investigations, assessments, and remediations. He has prepared several NEPA assessments, USEPA EIS, and CEQA EIR reports. In addition, Mr. Batten has extensive experience in conducting asbestos and lead-based paint surveys and preparing management plans, including remediation design, for asbestos and lead present in buildings.

Project Experience

- **Phase I Environmental Site Assessments:** Mr. Batten has conducted more than 2,000 Phase I Environmental Site Assessments in 27 states, including Brownfield studies under USEPA grants.
- **Phase II Environmental Site Assessments:** Mr. Batten has conducted more than 150 Phase II Environmental Assessments, including Brownfield studies under USEPA grants.
- **Site Characterizations and Remediations:** Mr. Batten has experience conducting numerous site characterizations and remediations, including obtaining regulatory closure.
- **NEPA Studies:** Mr. Batten has conducted more than 200 NEPA studies, including Environmental Assessments, Environmental Impact Reports/Environmental Impact Studies, in eight states. The agencies involved include USEPA, FCC, BLM, National Park Service, and California EPA.
- **Asbestos Services:** Mr. Batten has conducted over 600 asbestos surveys in several states. He has also prepared numerous Asbestos Management Plans, prepared design plans, and monitored numerous abatement projects.
- **Lead-Based Paint Services:** Mr. Batten has conducted numerous Lead-Based Paint surveys.
- **Landfills:** Mr. Batten has conducted investigations and overseen remediations on landfills in Fresno, California and Henderson, Nevada.
- **Other Services:** Mr. Batten has been called upon to conduct less usual services on occasion, including mold consultation and investigation, radon studies, vapor intrusion studies, and indoor air quality studies.

J. MICHAEL BATTEN, continued...



Professional History

Environmental Services Manager. GeoTek, Inc., 2001 to present.

Director of Environmental Services. ATC Associates, Inc., 1999 to 2001.

Director of Operations. Hygienetics Environmental Services, Inc., 1997 to 1999.

Project Manager. AllWest Environmental, Inc., 1996 to 1997.

Project Manager. Citadel Environmental Services, Inc., 2/1996 to 9/1996.

Project Manager. Boelter Environmental consultants, 3/1995 to 9/1995.

Senior Staff Geologist. Converse Consultants, 1992 to 1995.

Staff Geologist. Converse Environmental West, 1991 to 1992.

Project Geologist. Krazan and Associates, 1990 to 1991.

Environmental Technician. Krazan and Associates, 1989 to 1990.

National Registry of Environmental Professionals

For
Environmental Certifications

This is to Certify that

Michael J Batten

having successfully demonstrated to the Academic Board of this organization the required level of knowledge and ability, is here by awarded the distinction of

Registered Environmental Property Assessor

together with all rights, benefits and privileges attached thereto and that the name and title of the aforementioned registrant is today placed upon the register of the organization.

Given under our hands on this 15 day of June, 2013.


Executive Director



113162

Registrant Number

United States Environmental Protection Agency

This is to certify that



J M Batten

Inspector

has fulfilled the requirements of the Toxic Substances Control Act (TSCA) Section 402, and has received certification to conduct lead-based paint activities pursuant to 40 CFR Part 745.226 as:

In the Jurisdiction of:

All EPA Administered Lead-based Paint Activities Program States, Tribes and Territories

March 14, 2022

This certification is valid from the date of issuance and expires

LBP-I-1162326-2

Certification #

December 08, 2018

Issued On

A handwritten signature in black ink, appearing to read "Adrienne Priselac".

Adrienne Priselac, Manager, Toxics Office

Land Division



United States Environmental Protection Agency

This is to certify that



J M Batten

has fulfilled the requirements of the Toxic Substances Control Act (TSCA) Section 402, and has received certification to conduct lead-based paint activities pursuant to 40 CFR Part 745.226 as:

Risk Assessor

In the Jurisdiction of:

All EPA Administered Lead-based Paint Activities Program States, Tribes and Territories

This certification is valid from the date of issuance and expires March 14, 2022

LBP-R-1162326-2

Certification #

December 08, 2018

Issued On

A handwritten signature in black ink, appearing to read "Adrienne Priselac".

Adrienne Priselac, Manager, Toxics Office

Land Division



DEPARTMENT OF INDUSTRIAL RELATIONS

Division of Occupational Safety and Health

Asbestos Certification & Training Unit

1750 Howe Avenue, Suite 460

Sacramento, CA 95825

(916) 574-2993 Office <http://www.dir.ca.gov/dosh/asbestos.html> acru@dir.ca.gov



505011721C

109

115

October 08, 2020

J. Michael Batten
8240 Edmond Street
Las Vegas NV 89139

Dear Certified Asbestos Consultant or Technician:

Enclosed is your certification card. **To maintain your certification, you must abide by the rules printed on the back of the certification card.**

Your certification is valid for a period of one year. If you wish to renew your certification, you must apply for renewal at least 60 days before the expiration date shown on your card. [8 CCR 341.15(h)(1)].

Please hold and do not send copies of your required AHERA refresher renewal certificates to our office until you apply for renewal of your certification.

Certificates must be kept current if you are actively working as a CAC or CSST. The grace period is only for those who are not actively working as an asbestos consultant or site surveillance technician.

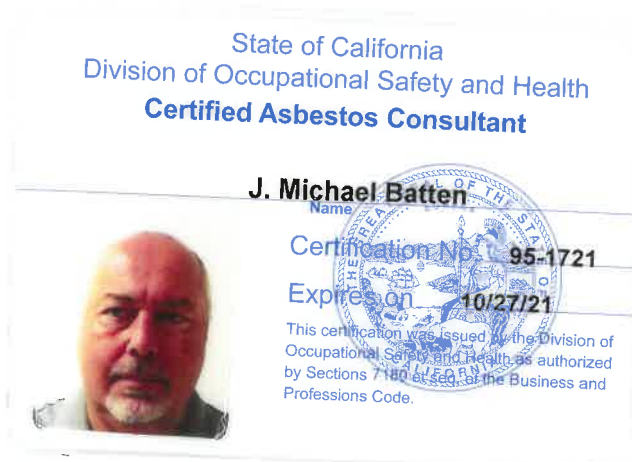
Please notify our office via U.S. Postal Service or other carrier of any changes in your mailing or work address within 15 days of the change.

Sincerely,

Jeff Ferrell
Senior Safety Engineer

Attachment: Certification Card

cc: File



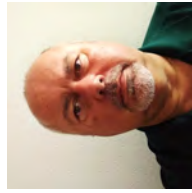


STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC HEALTH



LEAD-RELATED CONSTRUCTION CERTIFICATE

INDIVIDUAL:



Michael Batten

CERTIFICATE TYPE:

Lead Inspector/Assessor

NUMBER:

LRC-00002629

EXPIRATION DATE:

11/17/2021

Disclaimer: This document alone should not be relied upon to confirm certification status. Compare the individual's photo and name to another valid form of government issued photo identification. Verify the individual's certification status by searching for Lead-Related Construction Professionals at www.cdph.ca.gov/programs/clppb or calling (800) 597-LEAD.



525-535 West Jefferson Street • Springfield, Illinois 62761-0001 • www.dph.illinois.gov

MICHAEL BATTEN
8240 EDMOND STREET
LAS VEGAS, NV 89139

8/19/2020



ASBESTOS PROFESSIONAL LICENSE ID NUMBER: 11092

Enclosed is your Asbestos Professional License. Please note the expiration date on the card and in the image depicted below.

COPY OF THE ASBESTOS PROFESSIONAL LICENSE

Front of License

Back of License

	ASBESTOS PROFESSIONAL LICENSE	ENDORSEMENTS	TC EXPIRES
ID NUMBER 100 - 11092	ISSUED 8/19/2020	INSPECTOR	8/10/2021
EXPIRES 05/15/2021		Alteration of this license shall result in legal action This license issued under authority of the State of Illinois Department of Public Health This license is valid only when accompanied by a valid training course certificate.	
MICHAEL BATTEN 8240 EDMOND STREET LAS VEGAS, NV 89139 Environmental Health			

If you have any questions or need further assistance, contact the Asbestos Program at (217)782-3517 or fax (217)785-5897.

Our WEB address is: dph.illinois.gov/topics-services/environmental-health-protection/asbestos
EMAIL Address: dph.asbestos@illinois.gov

State of Nevada



Department of Conservation and Natural Resources
Division of Environmental Protection

This is to certify that

Michael J Batten

having given satisfactory evidence of the necessary qualifications as required by the Nevada Revised Statute 459.400 to 459.600, inclusive, and Nevada Administrative Code 459.970 to 459.9729, inclusive, has been granted certification as a

Environmental Manager

in the State of Nevada

In testimony whereof, witness the signature of the Administrator and the Seal of the State of Nevada.

1782

Certification Number

8/31/2021

Expiration Date

A handwritten signature in black ink, appearing to read "Greg Lovato".

Greg Lovato, Administrator



State of Nevada Department of Business & Industry
Industrial Relations (DIR)

STATE OF NEVADA
DEPARTMENT OF BUSINESS AND INDUSTRY
DIVISION OF INDUSTRIAL RELATIONS
Occupational Safety and Health Administration
Asbestos Control Program

Certifies That J. Michael Batten
Geotek Insite Inc.
is Licensed As Asbestos Abatement Consultant

License No. IJPM-655 Expiration Date 03/05/2021

Signature Of Licensee *J. Michael Batten*

M & C Environmental Training

Asbestos Inspector
Refresher Training Course

J. Michael Batten

Has successfully completed the Asbestos Inspector Refresher course approved by the California Division of Occupational Safety and Health for purposes of certification required by Title 8, Article 2.7, Chapter 3.2, Section 341.16 and the accreditation required under the Toxic Substances Control Act, Title II. Conducted by M&C Environmental Training Inc., 1619 Beverly Place, Berkeley, California, Tel. # (510) 521 - 1388

Course Approval Number: CA-003-06

Location: Oakland, California	Expiration: March 5, 2021
Date: March 5, 2020	
Director of Training: John McGlinchey	

Certificate Number 47300 IR

M & C Environmental Training

Asbestos Management Planner
Refresher Training Course

J. Michael Batten

Has successfully completed the Asbestos Management Planner Refresher course approved by the California Division of Occupational Safety and Health for purposes of certification required by Title 8, Article 2.7, Chapter 3.2, Section 341.16 and the accreditation required under the Toxic Substances Control Act, Title II. Conducted by M&C Environmental Training Inc., 1619 Beverly Place, Berkeley, California, Tel. # (510) 521 - 1388

Course Approval Number: CA-003-08

Location: Oakland, California	Expiration: March 5, 2021
Date: March 5, 2020	
Director of Training: John McGlinchey	

Certificate Number 47314 PR

M & C Environmental Training

Asbestos Contractor/Supervisor
Refresher Training Course

J. Michael Batten

Has successfully completed the Asbestos Contractor/Supervisor Refresher course approved by the California Division of Occupational Safety and Health for purposes of certification required by Title 8, Article 2.7, Chapter 3.2, Section 341.16 and the accreditation required under the Toxic Substances Control Act, Title II. Conducted by M&C Environmental Training Inc., 1619 Beverly Place, Berkeley, California, Tel. # (510) 521 - 1388

Course Approval Number: CA-003-04

Location: Oakland, California	Expiration: September 11, 2020
Date: September 11, 2019	
Director of Training: John McGlinchey	

Certificate Number 46376 SR

M & C Environmental Training

Asbestos Project Designer
Refresher Training Course

J. Michael Batten

Has successfully completed the Asbestos Project Designer Refresher course approved by the California Division of Occupational Safety and Health for purposes of certification required by Title 8, Article 2.7, Chapter 3.2, Section 341.16 and the accreditation required under the Toxic Substances Control Act, Title II. Conducted by M&C Environmental Training Inc., 1619 Beverly Place, Berkeley, California, Tel. # (510) 521 - 1388

Course Approval Number: CA-003-10

Location: Oakland, California	Expiration: September 11, 2020
Date: September 11, 2019	
Director of Training: John McGlinchey	

Certificate Number 46347 DR



This is to Certify that
Michael Batten
Has Satisfactorily Completed Training in Accordance
with Applicable Rules and Regulations
Asbestos Building Inspector
Refresher

Completed: 3/19/2019 Expires: 3/19/2020
Certificate: BIR1903190998

2019 Occupational Training & Supply, Inc.
7233 Adams Street • Willowbrook, IL 60527 • (630) 656-3900

OSHA 002340551 

U.S. Department of Labor
Occupational Safety and Health Administration

Michael Batten

has successfully completed a 10-hour Occupational Safety and Health
Training Course in

Construction Safety & Health

Kenner Costen *12/2/09*

(Trainer) (Date)



AIRPORT LAND USE COMMISSION RIVERSIDE COUNTY

June 1, 2021

Ms. Chantal Power, Project Planner
City of Perris Planning Division
135 N. D Street
Perris CA 92570-2200

CHAIR
Steven Stewart
Palm Springs

VICE CHAIR
Steve Manos
Lake Elsinore

COMMISSIONERS

Arthur Butler
Riverside

John Lyon
Riverside

Russell Betts
Desert Hot Springs

Richard Stewart
Moreno Valley

Gary Youmans
Temecula

STAFF

Director
Paul Rull

Simon A. Housman
Danie! Zerda
Barbara Santos

County Administrative Center
4080 Lamon St., 14th Floor
Riverside, CA 92501
(951) 955-5132

www.rcaluc.org

RE: AIRPORT LAND USE COMMISSION (ALUC) DEVELOPMENT REVIEW – DIRECTOR’S DETERMINATION

File No.: ZAP1021PV21
Related File No.: PLN21-0002 (Development Plan Review), TTM37904 (Tentative Tract Map)
APNs: 342-080-039, 342-080-040, 342-080-041, 342-080-042

Dear Ms. Power:

Under the delegation of the Riverside County Airport Land Use Commission (ALUC) pursuant to Policy 1.5.2(d) of the Countywide Policies of the 2004 Riverside County Airport Land Use Compatibility Plan, staff reviewed City of Perris Case No. PLN21-0002 (Development Plan Review), TTM37904 (Tentative Tract Map), a proposal to establish a 201 unit Planned Residential Development on 40.4 acres located on the northeast corner of McPherson Road and Mountain Avenue.

The site is located within Compatibility Zone E of the Perris Valley Airport Influence Area and also within Compatibility Zone E of March Air Reserve Base/Inland Port Airport Influence Area, where residential density is not restricted.

The elevation of Runway 15-33 at Perris Valley Airport is approximately 1,413 feet above mean sea level (AMSL) at its northerly terminus. At a distance of 7,440 feet from the project to the nearest point on the runway, Federal Aviation Administration Obstruction Evaluation Service (FAA OES) review would be required for any new structures with an elevation at top point of roof exceeding 1,487 feet AMSL. The proposed site elevation is 1,468 feet AMSL, with maximum proposed building heights of 21 feet, for a top point elevation of 1,489. Therefore, Federal Aviation Administration (FAA) obstruction evaluation review for height/elevation reasons was required. The project applicant submitted Form 7460-1 to the FAA OES, and FAA OES assigned Aeronautical Study Numbers 2021-AWP-2923-OE, 2021-AWP-2924-OE, 2021-AWP-2925-OE, and 2021-AWP-2926-OE to this proposal. The aeronautical studies revealed that the proposed buildings would not exceed obstruction standards and would not be a hazard to air navigation, provided conditions are met. Therefore, FAA OES issued “Determination of No Hazard to Air Navigation” letters on March 23, 2021. The FAA OES conditions have been incorporated into ALUC’s conditions listed below.

Land use practices that attract or sustain hazardous wildlife populations on or near airports significantly increase the potential of Bird Aircraft Strike Hazards (BASH). The FAA strongly recommends that storm water management systems located within 5,000 or 10,000 feet of the Airport Operations Area, depending on the type of aircraft, be designed and operated so as not to create above-ground standing water. To facilitate the control of hazardous wildlife, the FAA

AIRPORT LAND USE COMMISSION

recommends the use of steep-sided, rip-rap lined, narrow, linearly shaped water detention basins. All vegetation in and around detention basins that provide food or cover for hazardous wildlife should be eliminated. (FAA Advisory Circular 5200-33C). The nearest portion of the project is located 7,440 feet from the runway, and therefore would be subject to the above requirement.

The project would utilize bioretention basins, which are to be avoided in Zone D due to the potential that such areas could provide food, water, and shelter for hazardous wildlife. Pursuant to the study "Wildlife Hazard Management at Riverside County Airports: Background and Policy", October 2018, by Mead & Hunt, which is the basis of the brochure titled "Airports, Wildlife and Stormwater Management", such basins are potentially suitable within 10,000 feet of the airport only with appropriate criteria: the basin is used in conjunction with appropriate landscaping for such uses as adjacent to structures, parking islands, medians, site entrances, planter boxes; and vegetation is carefully selected so as not to provide food, shelter, nesting, roosting, or water for wildlife. The project has been conditioned to be consistent with the basin criteria (as well as providing 48-hour draw down of the basin).

As ALUC Director, I hereby find the above-referenced project **CONSISTENT** with the 2010/2011 Perris Valley Airport Land Use Compatibility Plan, and the 2014 March Air Reserve Base/Inland Port Airport Land Use Compatibility Plan, provided that the City of Perris applies the following recommended conditions:

CONDITIONS:

1. Any new outdoor lighting that is installed shall be hooded or shielded so as to prevent either the spillage of lumens or reflection into the sky. Outdoor lighting shall be downward facing.
2. The following uses/activities are not included in the proposed project and shall be prohibited at this site:
 - (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. (Such uses include landscaping utilizing water features, aquaculture, production of cereal grains, sunflower, and row crops, composting operations, trash transfer stations that are open on one or more sides, recycling centers containing putrescible wastes, construction and demolition debris facilities, fly ash disposal, and incinerators.)
 - (d) Any use which would generate electrical interference that may be detrimental to the operation of aircraft and/or aircraft instrumentation.

AIRPORT LAND USE COMMISSION

- (e) Any use which results in a hazard to flight, including physical (e.g., tall objects), visual, and electronic forms of interference with the safety of aircraft operations.
3. The attached "Notice of Airport in Vicinity" shall be provided to all prospective purchasers and occupants of the property.
 4. Any proposed stormwater basins or facilities shall be designed and maintained to provide for a maximum 48-hour detention period following the design storm, and remain totally dry between rainfalls. Vegetation in and around the stormwater basins that would provide food or cover for birds would be incompatible with airport operations and shall not be utilized in project landscaping. Trees shall be spaced so as to prevent large expanses of contiguous canopy, when mature. Landscaping in and around the stormwater basin(s) shall not include trees or shrubs that produce seeds, fruits, or berries. Stormwater basins shall be consistent with the 2018 "Wildlife Hazard Management at Riverside County Airports" policies.

Landscaping in the stormwater basin, if not rip-rap, should be in accordance with the guidance provided in ALUC "LANDSCAPING NEAR AIRPORTS" brochure, and the "AIRPORTS, WILDLIFE AND STORMWATER MANAGEMENT" brochure available at RCALUC.ORG which list acceptable plants from Riverside County Landscaping Guide or other alternative landscaping as may be recommended by a qualified wildlife hazard biologist.

A notice sign, in a form similar to that attached hereto, shall be permanently affixed to the stormwater basin with the following language: "There is an airport nearby. This stormwater basin is designed to hold stormwater for only 48 hours and not attract birds. Proper maintenance is necessary to avoid bird strikes". The sign will also include the name, telephone number or other contact information of the person or entity responsible to monitor the stormwater basin

5. The Federal Aviation Administration has conducted aeronautical studies of the proposed project (Aeronautical Study Nos. 2021-AWP-2923-OE, 2021-AWP-2924-OE, 2021-AWP-2925-OE, and 2021-AWP-2926-OE) and has determined that neither marking nor lighting of the structure(s) is necessary for aviation safety. However, if marking and/or lighting for aviation safety are accomplished on a voluntary basis, such marking and/or lighting (if any) shall be installed in accordance with FAA Advisory Circular 70/7460-1 L Change 2 and shall be maintained in accordance therewith for the life of the project.
6. The proposed buildings shall not exceed a height of 21 feet above ground level and a maximum elevation at top point of 1,589 feet above mean sea level.
7. The maximum height and top point elevation specified above shall not be amended without further review by the Airport Land Use Commission and the Federal Aviation Administration; provided, however, that reduction in structure height or elevation shall not require further review by the Airport Land Use Commission.
8. Temporary construction equipment used during actual construction of the structure(s) shall not exceed 21 feet in height and a maximum elevation of 1,589 feet above mean sea level, unless separate notice is provided to the Federal Aviation Administration through

AIRPORT LAND USE COMMISSION

the Form 7460-1 process.

9. Within five (5) days after construction of any individual building reaches its greatest height, FAA Form 7460-2 (Part II), Notice of Actual Construction or Alteration, shall be completed by the project proponent or his/her designee and e-filed with the Federal Aviation Administration. (Go to <https://oeaaa.faa.gov> for instructions.) This requirement is also applicable in the event the project is abandoned or a decision is made not to construct the applicable structure(s).

If you have any questions please contact me at (951) 955-6893.

Sincerely,
RIVERSIDE COUNTY AIRPORT LAND USE COMMISSION



Paul Rull, ALUC Director

Attachments: Notice of Airport in Vicinity
Aeronautical Study No. 2021-AWP-2923-OE, 2021-AWP-2924-OE, 2021-AWP-2925-OE, and 2021-AWP-2926-OE

cc: Pacific Communities, Tony Arnest (applicant)
Jo Howard (representative)
West Coast Fund, LLC (property owner)
Pat Conatser, Airport Manager, Perris Valley Airport
Gary Gosliga, Airport Manager, March Inland Port Airport Authority
Doug Waters, Deputy Base Civil Engineer, March Air Reserve Base
ALUC Case File

Y:\AIRPORT CASE FILES\Perris Valley\ZAP1021PV21\ZAP1021PV21.LTR.doc

NOTICE OF AIRPORT IN VICINITY

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 & Professions Code Section 11010 (b) (13)(A)

NOTICE

**THERE IS AN AIRPORT NEARBY.
THIS STORM WATER BASIN IS DESIGNED TO HOLD
STORM WATER FOR ONLY 48 HOURS AND
NOT TO ATTRACT BIRDS
PROPER MAINTENANCE IS NECESSARY TO AVOID
BIRD STRIKES**



IF THIS BASIN IS OVERGROWN, PLEASE CONTACT:

Name: _____

Phone: _____



Mail Processing Center
Federal Aviation Administration
Southwest Regional Office
Obstruction Evaluation Group
10101 Hillwood Parkway
Fort Worth, TX 76177

Aeronautical Study No.
2021-AWP-2926-OE

Issued Date: 03/23/2021

Tony Arnest
Pacific Communities
1000 Dove Street
Suite 300
Newport Beach, CA 92660

**** DETERMINATION OF NO HAZARD TO AIR NAVIGATION ****

The Federal Aviation Administration has conducted an aeronautical study under the provisions of 49 U.S.C., Section 44718 and if applicable Title 14 of the Code of Federal Regulations, part 77, concerning:

Structure: Building Northwest Corner
Location: Perris, CA
Latitude: 33-46-06.29N NAD 83
Longitude: 117-14-58.59W
Heights: 1568 feet site elevation (SE)
21 feet above ground level (AGL)
1589 feet above mean sea level (AMSL)

This aeronautical study revealed that the structure does not exceed obstruction standards and would not be a hazard to air navigation provided the following condition(s), if any, is(are) met:

It is required that FAA Form 7460-2, Notice of Actual Construction or Alteration, be e-filed any time the project is abandoned or:

- At least 10 days prior to start of construction (7460-2, Part 1)
 Within 5 days after the construction reaches its greatest height (7460-2, Part 2)

Based on this evaluation, marking and lighting are not necessary for aviation safety. However, if marking/lighting are accomplished on a voluntary basis, we recommend it be installed in accordance with FAA Advisory circular 70/7460-1 M.

The structure considered under this study lies in proximity to an airport and occupants may be subjected to noise from aircraft operating to and from the airport.

This determination expires on 09/23/2022 unless:

- (a) the construction is started (not necessarily completed) and FAA Form 7460-2, Notice of Actual Construction or Alteration, is received by this office.
- (b) extended, revised, or terminated by the issuing office.

- (c) the construction is subject to the licensing authority of the Federal Communications Commission (FCC) and an application for a construction permit has been filed, as required by the FCC, within 6 months of the date of this determination. In such case, the determination expires on the date prescribed by the FCC for completion of construction, or the date the FCC denies the application.

NOTE: REQUEST FOR EXTENSION OF THE EFFECTIVE PERIOD OF THIS DETERMINATION MUST BE E-FILED AT LEAST 15 DAYS PRIOR TO THE EXPIRATION DATE. AFTER RE-EVALUATION OF CURRENT OPERATIONS IN THE AREA OF THE STRUCTURE TO DETERMINE THAT NO SIGNIFICANT AERONAUTICAL CHANGES HAVE OCCURRED, YOUR DETERMINATION MAY BE ELIGIBLE FOR ONE EXTENSION OF THE EFFECTIVE PERIOD.

This determination is based, in part, on the foregoing description which includes specific coordinates, heights, frequency(ies) and power. Any changes in coordinates, heights, and frequencies or use of greater power, except those frequencies specified in the Colo Void Clause Coalition; Antenna System Co-Location; Voluntary Best Practices, effective 21 Nov 2007, will void this determination. Any future construction or alteration, including increase to heights, power, or the addition of other transmitters, requires separate notice to the FAA. This determination includes all previously filed frequencies and power for this structure.

If construction or alteration is dismantled or destroyed, you must submit notice to the FAA within 5 days after the construction or alteration is dismantled or destroyed.

This determination does include temporary construction equipment such as cranes, derricks, etc., which may be used during actual construction of the structure. However, this equipment shall not exceed the overall heights as indicated above. Equipment which has a height greater than the studied structure requires separate notice to the FAA.

This determination concerns the effect of this structure on the safe and efficient use of navigable airspace by aircraft and does not relieve the sponsor of compliance responsibilities relating to any law, ordinance, or regulation of any Federal, State, or local government body.

If we can be of further assistance, please contact our office at (847) 294-7575, or vivian.vilaro@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2021-AWP-2926-OE.

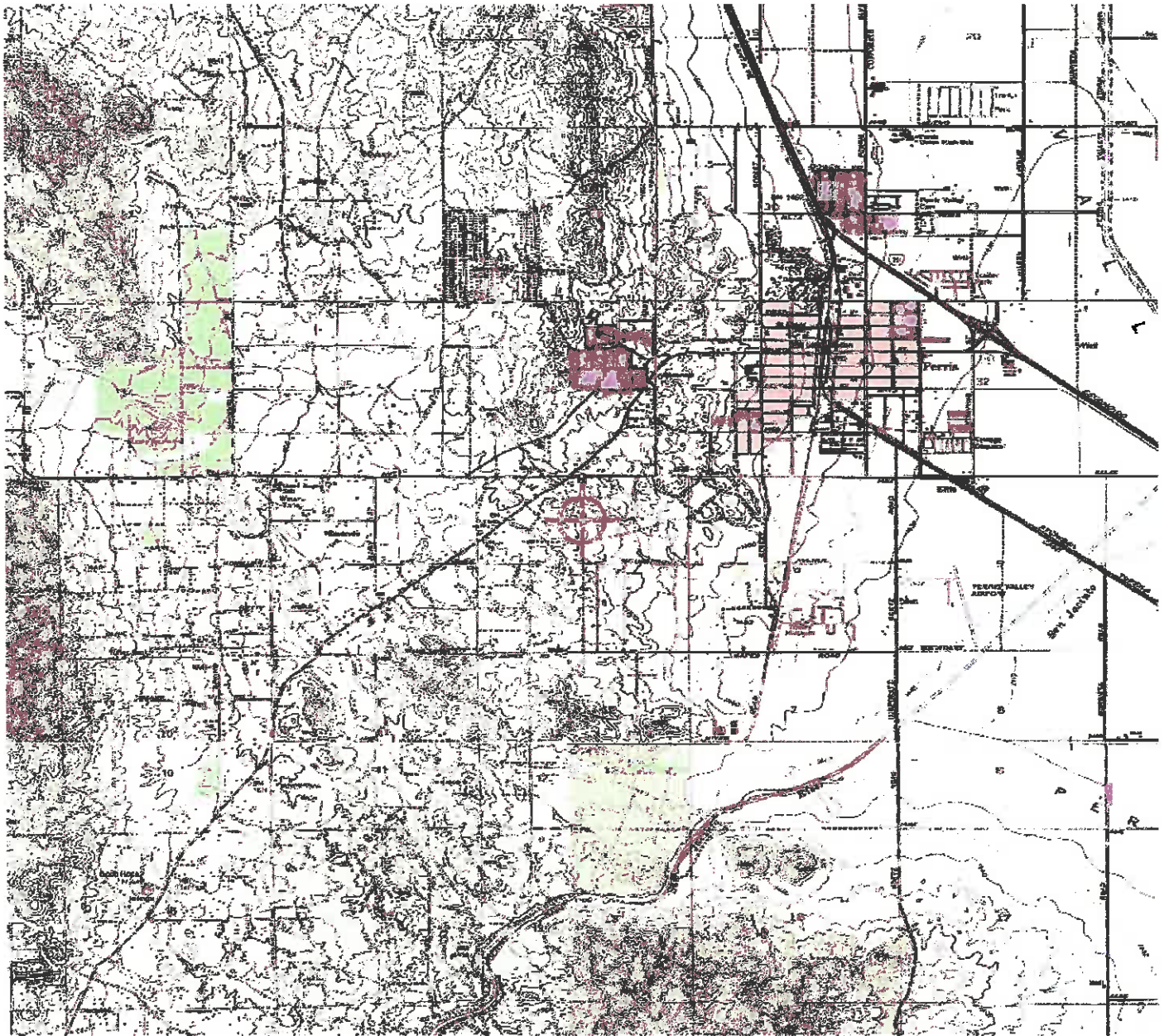
Signature Control No: 471767065-475363224

(DNE)

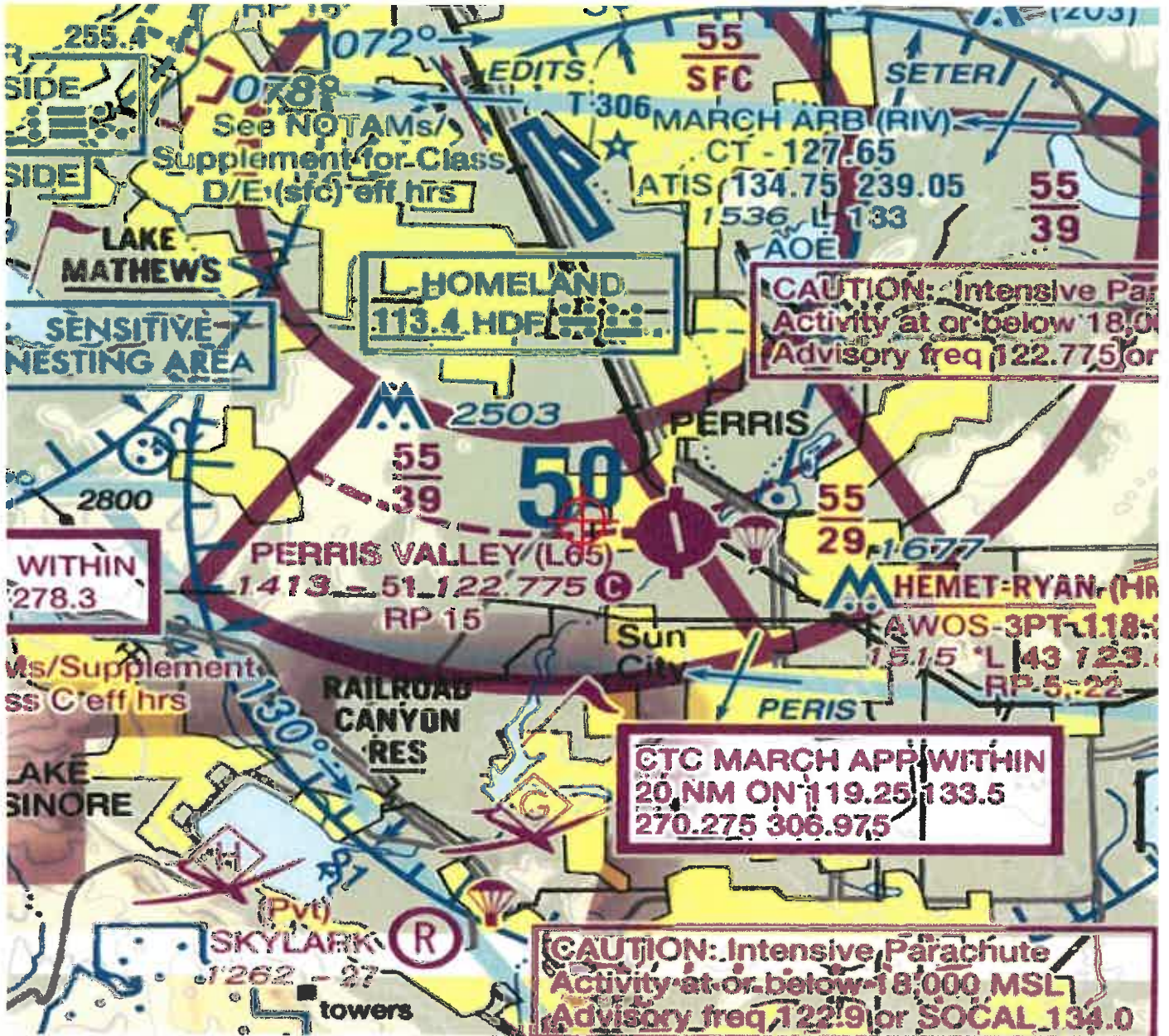
Vivian Vilaro
Specialist

Attachment(s)
Map(s)

TOPO Map for ASN 2021-AWP-2926-OE



Sectional Map for ASN 2021-AWP-2926-OE





Mail Processing Center
 Federal Aviation Administration
 Southwest Regional Office
 Obstruction Evaluation Group
 10101 Hillwood Parkway
 Fort Worth, TX 76177

Aeronautical Study No.
 2021-AWP-2925-OE

Issued Date: 03/23/2021

Tony Arnest
 Pacific Communities
 1000 Dove Street
 Suite 300
 Newport Beach, CA 92660

**** DETERMINATION OF NO HAZARD TO AIR NAVIGATION ****

The Federal Aviation Administration has conducted an aeronautical study under the provisions of 49 U.S.C., Section 44718 and if applicable Title 14 of the Code of Federal Regulations, part 77, concerning:

Structure: Building Northeast Corner
 Location: Perris, CA
 Latitude: 33-46-06.03N NAD 83
 Longitude: 117-14-44.60W
 Heights: 1525 feet site elevation (SE)
 21 feet above ground level (AGL)
 1546 feet above mean sea level (AMSL)

This aeronautical study revealed that the structure does not exceed obstruction standards and would not be a hazard to air navigation provided the following condition(s), if any, is(are) met:

It is required that FAA Form 7460-2, Notice of Actual Construction or Alteration, be e-filed any time the project is abandoned or:

- At least 10 days prior to start of construction (7460-2, Part 1)
- Within 5 days after the construction reaches its greatest height (7460-2, Part 2)

Based on this evaluation, marking and lighting are not necessary for aviation safety. However, if marking/lighting are accomplished on a voluntary basis, we recommend it be installed in accordance with FAA Advisory circular 70/7460-1 M.

The structure considered under this study lies in proximity to an airport and occupants may be subjected to noise from aircraft operating to and from the airport.

This determination expires on 09/23/2022 unless:

- (a) the construction is started (not necessarily completed) and FAA Form 7460-2, Notice of Actual Construction or Alteration, is received by this office.
- (b) extended, revised, or terminated by the issuing office.

- (c) the construction is subject to the licensing authority of the Federal Communications Commission (FCC) and an application for a construction permit has been filed, as required by the FCC, within 6 months of the date of this determination. In such case, the determination expires on the date prescribed by the FCC for completion of construction, or the date the FCC denies the application.

NOTE: REQUEST FOR EXTENSION OF THE EFFECTIVE PERIOD OF THIS DETERMINATION MUST BE E-FILED AT LEAST 15 DAYS PRIOR TO THE EXPIRATION DATE. AFTER RE-EVALUATION OF CURRENT OPERATIONS IN THE AREA OF THE STRUCTURE TO DETERMINE THAT NO SIGNIFICANT AERONAUTICAL CHANGES HAVE OCCURRED, YOUR DETERMINATION MAY BE ELIGIBLE FOR ONE EXTENSION OF THE EFFECTIVE PERIOD.

This determination is based, in part, on the foregoing description which includes specific coordinates, heights, frequency(ies) and power. Any changes in coordinates, heights, and frequencies or use of greater power, except those frequencies specified in the Colo Void Clause Coalition; Antenna System Co-Location; Voluntary Best Practices, effective 21 Nov 2007, will void this determination. Any future construction or alteration, including increase to heights, power, or the addition of other transmitters, requires separate notice to the FAA. This determination includes all previously filed frequencies and power for this structure.

If construction or alteration is dismantled or destroyed, you must submit notice to the FAA within 5 days after the construction or alteration is dismantled or destroyed.

This determination does include temporary construction equipment such as cranes, derricks, etc., which may be used during actual construction of the structure. However, this equipment shall not exceed the overall heights as indicated above. Equipment which has a height greater than the studied structure requires separate notice to the FAA.

This determination concerns the effect of this structure on the safe and efficient use of navigable airspace by aircraft and does not relieve the sponsor of compliance responsibilities relating to any law, ordinance, or regulation of any Federal, State, or local government body.

If we can be of further assistance, please contact our office at (847) 294-7575, or vivian.vilaro@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2021-AWP-2925-OE.

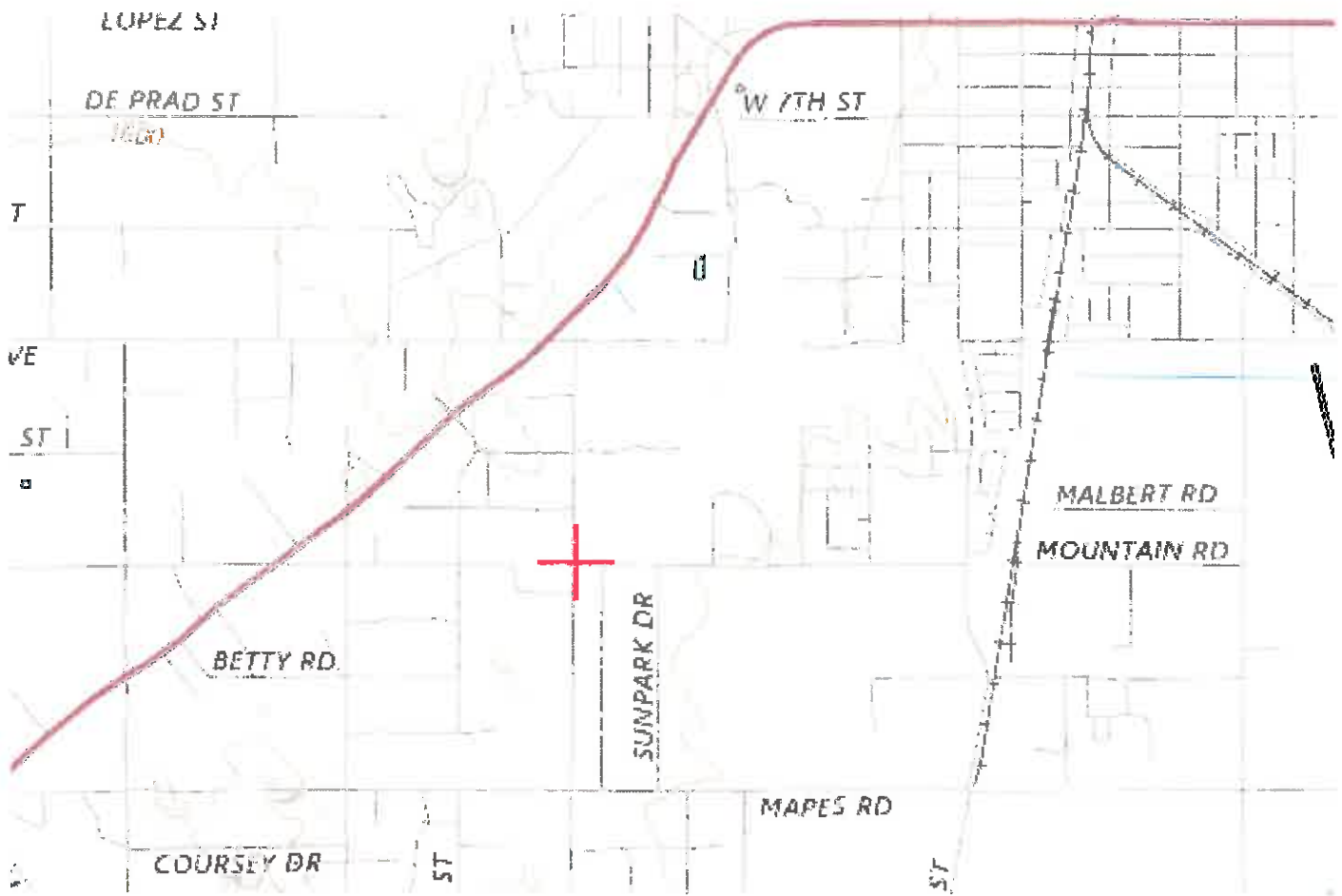
Signature Control No: 471767063-475363227

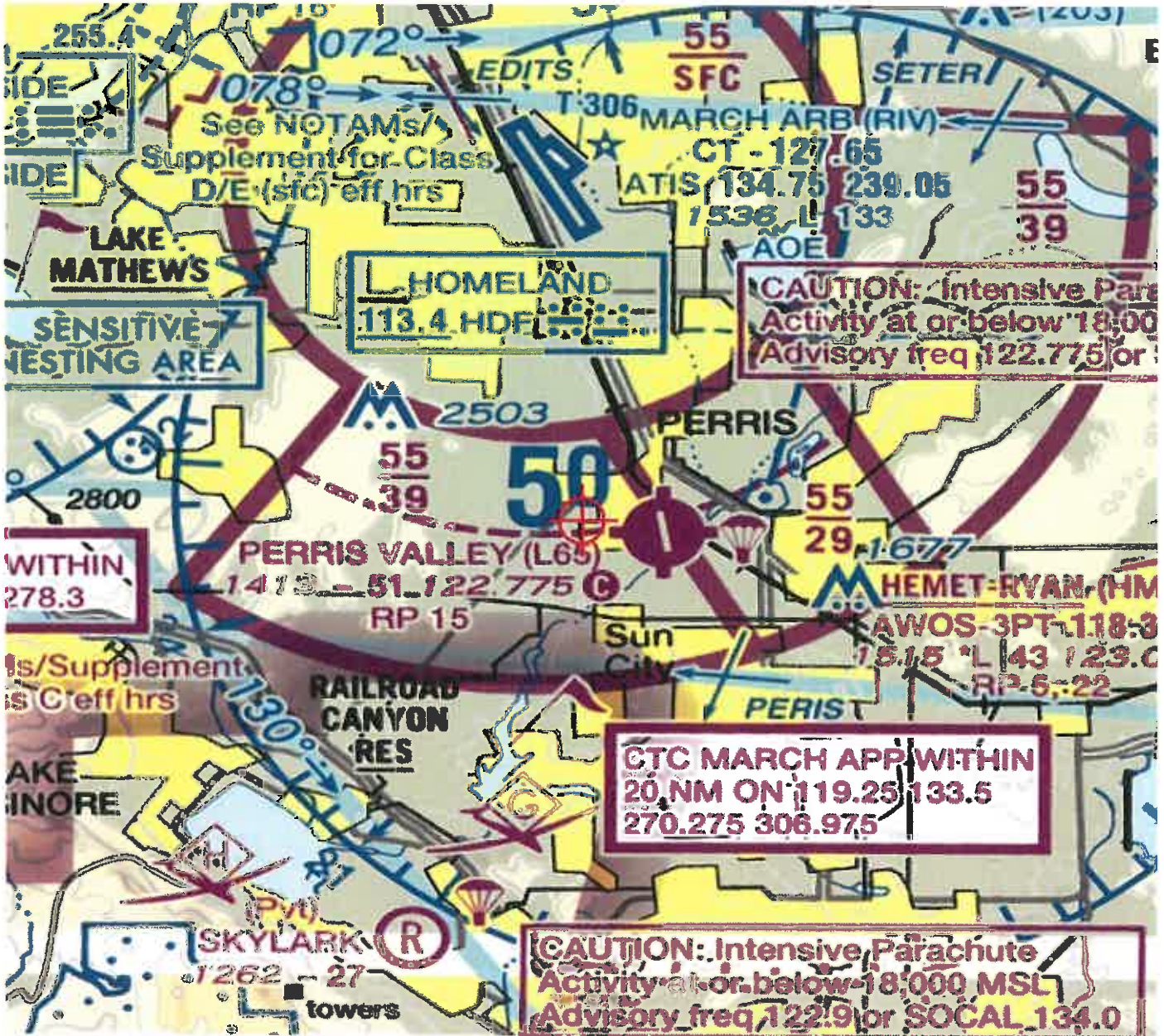
Vivian Vilaro
Specialist

(DNE)

Attachment(s)
Map(s)

TOPO Map for ASN 2021-AWP-2925-OE







Mail Processing Center
Federal Aviation Administration
Southwest Regional Office
Obstruction Evaluation Group
10101 Hillwood Parkway
Fort Worth, TX 76177

Aeronautical Study No.
2021-AWP-2924-OE

Issued Date: 03/23/2021

Tony Arnest
Pacific Communities
1000 Dove Street
Suite 300
Newport Beach, CA 92660

**** DETERMINATION OF NO HAZARD TO AIR NAVIGATION ****

The Federal Aviation Administration has conducted an aeronautical study under the provisions of 49 U.S.C., Section 44718 and if applicable Title 14 of the Code of Federal Regulations, part 77, concerning:

Structure: Building Southwest Corner
Location: Perris, CA
Latitude: 33-45-53.44N NAD 83
Longitude: 117-14-58.34W
Heights: 1542 feet site elevation (SE)
21 feet above ground level (AGL)
1563 feet above mean sea level (AMSL)

This aeronautical study revealed that the structure does not exceed obstruction standards and would not be a hazard to air navigation provided the following condition(s), if any, is(are) met:

It is required that FAA Form 7460-2, Notice of Actual Construction or Alteration, be e-filed any time the project is abandoned or:

- At least 10 days prior to start of construction (7460-2, Part 1)
 Within 5 days after the construction reaches its greatest height (7460-2, Part 2)

Based on this evaluation, marking and lighting are not necessary for aviation safety. However, if marking/lighting are accomplished on a voluntary basis, we recommend it be installed in accordance with FAA Advisory circular 70/7460-1 M.

The structure considered under this study lies in proximity to an airport and occupants may be subjected to noise from aircraft operating to and from the airport.

This determination expires on 09/23/2022 unless:

- (a) the construction is started (not necessarily completed) and FAA Form 7460-2, Notice of Actual Construction or Alteration, is received by this office.
- (b) extended, revised, or terminated by the issuing office.

- (c) the construction is subject to the licensing authority of the Federal Communications Commission (FCC) and an application for a construction permit has been filed, as required by the FCC, within 6 months of the date of this determination. In such case, the determination expires on the date prescribed by the FCC for completion of construction, or the date the FCC denies the application.

NOTE: REQUEST FOR EXTENSION OF THE EFFECTIVE PERIOD OF THIS DETERMINATION MUST BE E-FILED AT LEAST 15 DAYS PRIOR TO THE EXPIRATION DATE. AFTER RE-EVALUATION OF CURRENT OPERATIONS IN THE AREA OF THE STRUCTURE TO DETERMINE THAT NO SIGNIFICANT AERONAUTICAL CHANGES HAVE OCCURRED, YOUR DETERMINATION MAY BE ELIGIBLE FOR ONE EXTENSION OF THE EFFECTIVE PERIOD.

This determination is based, in part, on the foregoing description which includes specific coordinates, heights, frequency(ies) and power. Any changes in coordinates, heights, and frequencies or use of greater power, except those frequencies specified in the Colo Void Clause Coalition; Antenna System Co-Location; Voluntary Best Practices, effective 21 Nov 2007, will void this determination. Any future construction or alteration, including increase to heights, power, or the addition of other transmitters, requires separate notice to the FAA. This determination includes all previously filed frequencies and power for this structure.

If construction or alteration is dismantled or destroyed, you must submit notice to the FAA within 5 days after the construction or alteration is dismantled or destroyed.

This determination does include temporary construction equipment such as cranes, derricks, etc., which may be used during actual construction of the structure. However, this equipment shall not exceed the overall heights as indicated above. Equipment which has a height greater than the studied structure requires separate notice to the FAA.

This determination concerns the effect of this structure on the safe and efficient use of navigable airspace by aircraft and does not relieve the sponsor of compliance responsibilities relating to any law, ordinance, or regulation of any Federal, State, or local government body.

If we can be of further assistance, please contact our office at (847) 294-7575, or vivian.vilaro@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2021-AWP-2924-OE.

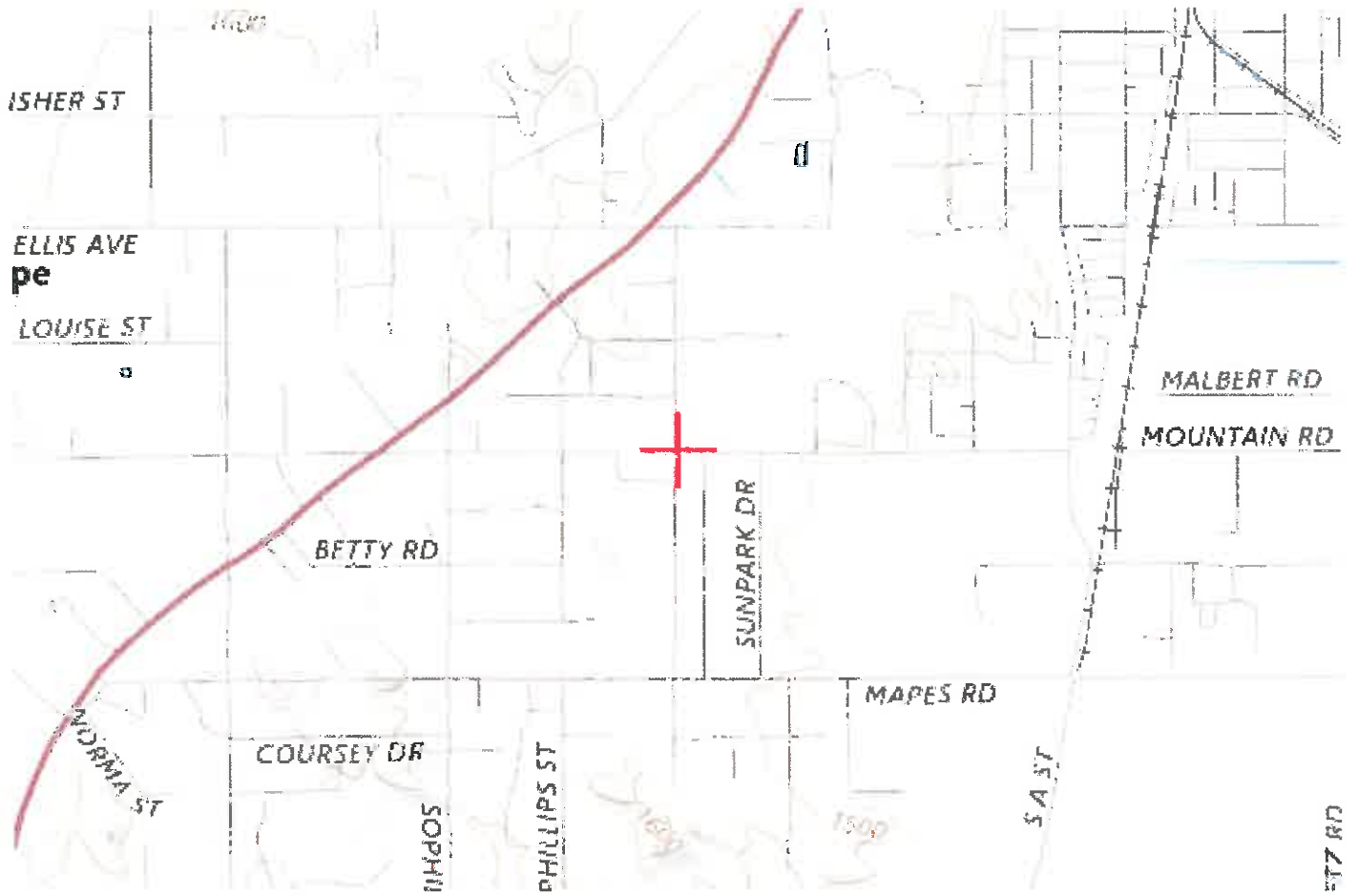
Signature Control No: 471767061-475363225

(DNE)

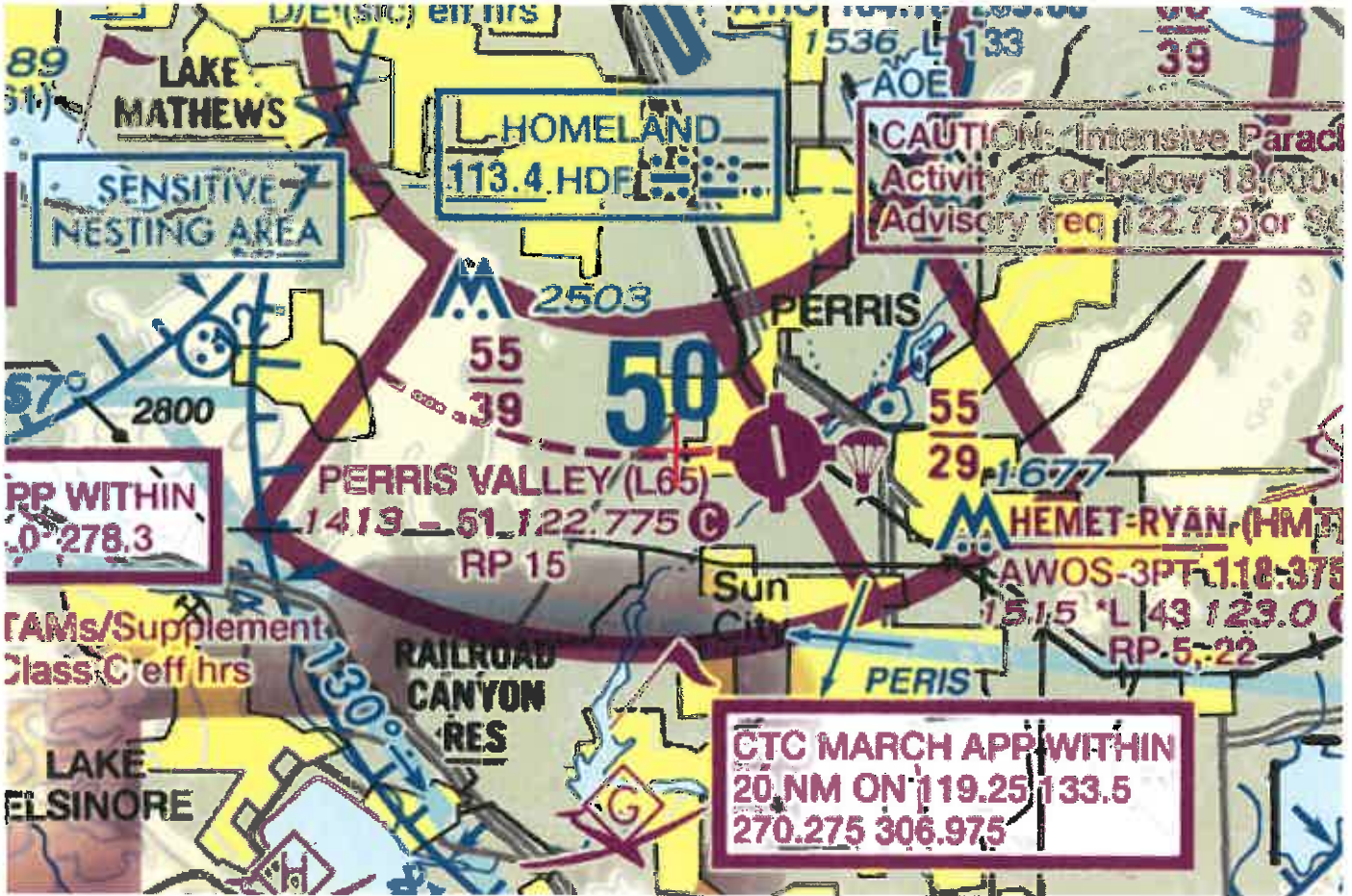
Vivian Vilaro
Specialist

Attachment(s)
Map(s)

TOPO Map for ASN 2021-AWP-2924-OE



Sectional Map for ASN 2021-AWP-2924-OE





Mail Processing Center
 Federal Aviation Administration
 Southwest Regional Office
 Obstruction Evaluation Group
 10101 Hillwood Parkway
 Fort Worth, TX 76177

Aeronautical Study No.
 2021-AWP-2923-OE

Issued Date: 03/23/2021

Tony Arnest
 Pacific Communities
 1000 Dove Street
 Suite 300
 Newport Beach, CA 92660

**** DETERMINATION OF NO HAZARD TO AIR NAVIGATION ****

The Federal Aviation Administration has conducted an aeronautical study under the provisions of 49 U.S.C., Section 44718 and if applicable Title 14 of the Code of Federal Regulations, part 77, concerning:

Structure: Building Southeast Corner
 Location: Perris, CA
 Latitude: 33-45-53.51N NAD 83
 Longitude: 117-14-44.12W
 Heights: 1506 feet site elevation (SE)
 21 feet above ground level (AGL)
 1527 feet above mean sea level (AMSL)

This aeronautical study revealed that the structure does not exceed obstruction standards and would not be a hazard to air navigation provided the following condition(s), if any, is(are) met:

It is required that FAA Form 7460-2, Notice of Actual Construction or Alteration, be e-filed any time the project is abandoned or:

- At least 10 days prior to start of construction (7460-2, Part 1)
- Within 5 days after the construction reaches its greatest height (7460-2, Part 2)

Based on this evaluation, marking and lighting are not necessary for aviation safety. However, if marking/lighting are accomplished on a voluntary basis, we recommend it be installed in accordance with FAA Advisory circular 70/7460-1 M.

The structure considered under this study lies in proximity to an airport and occupants may be subjected to noise from aircraft operating to and from the airport.

This determination expires on 09/23/2022 unless:

- (a) the construction is started (not necessarily completed) and FAA Form 7460-2, Notice of Actual Construction or Alteration, is received by this office.
- (b) extended, revised, or terminated by the issuing office.

- (c) the construction is subject to the licensing authority of the Federal Communications Commission (FCC) and an application for a construction permit has been filed, as required by the FCC, within 6 months of the date of this determination. In such case, the determination expires on the date prescribed by the FCC for completion of construction, or the date the FCC denies the application.

NOTE: REQUEST FOR EXTENSION OF THE EFFECTIVE PERIOD OF THIS DETERMINATION MUST BE E-FILED AT LEAST 15 DAYS PRIOR TO THE EXPIRATION DATE. AFTER RE-EVALUATION OF CURRENT OPERATIONS IN THE AREA OF THE STRUCTURE TO DETERMINE THAT NO SIGNIFICANT AERONAUTICAL CHANGES HAVE OCCURRED, YOUR DETERMINATION MAY BE ELIGIBLE FOR ONE EXTENSION OF THE EFFECTIVE PERIOD.

This determination is based, in part, on the foregoing description which includes specific coordinates, heights, frequency(ies) and power. Any changes in coordinates, heights, and frequencies or use of greater power, except those frequencies specified in the Colo Void Clause Coalition; Antenna System Co-Location; Voluntary Best Practices, effective 21 Nov 2007, will void this determination. Any future construction or alteration, including increase to heights, power, or the addition of other transmitters, requires separate notice to the FAA. This determination includes all previously filed frequencies and power for this structure.

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This determination concerns the effect of this structure on the safe and efficient use of navigable airspace by aircraft and does not relieve the sponsor of compliance responsibilities relating to any law, ordinance, or regulation of any Federal, State, or local government body.

If we can be of further assistance, please contact our office at (847) 294-7575, or vivian.vilaro@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2021-AWP-2923-OE.

Signature Control No: 471767059-475363226

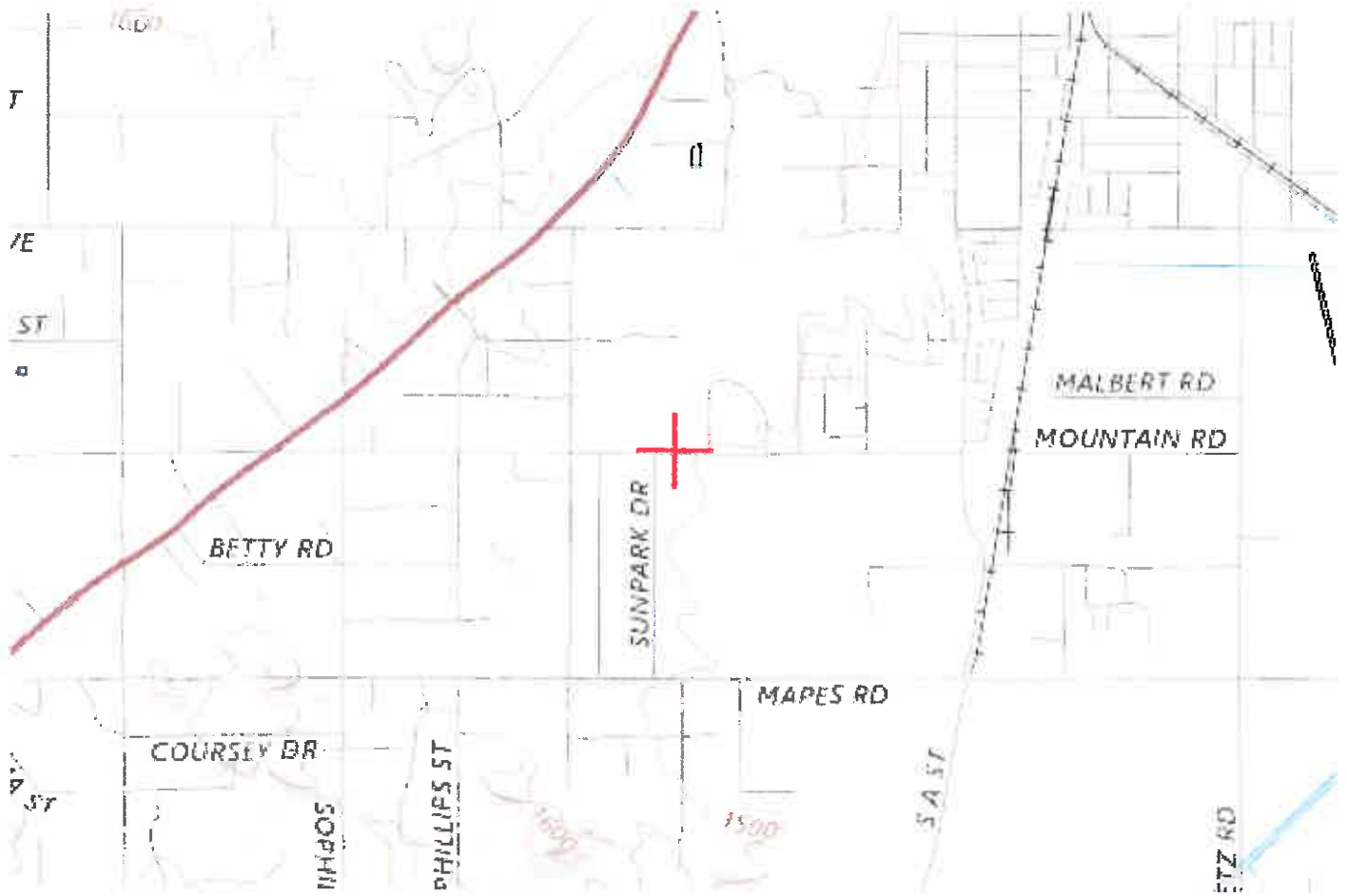
Vivian Vilaro
Specialist

(DNE)

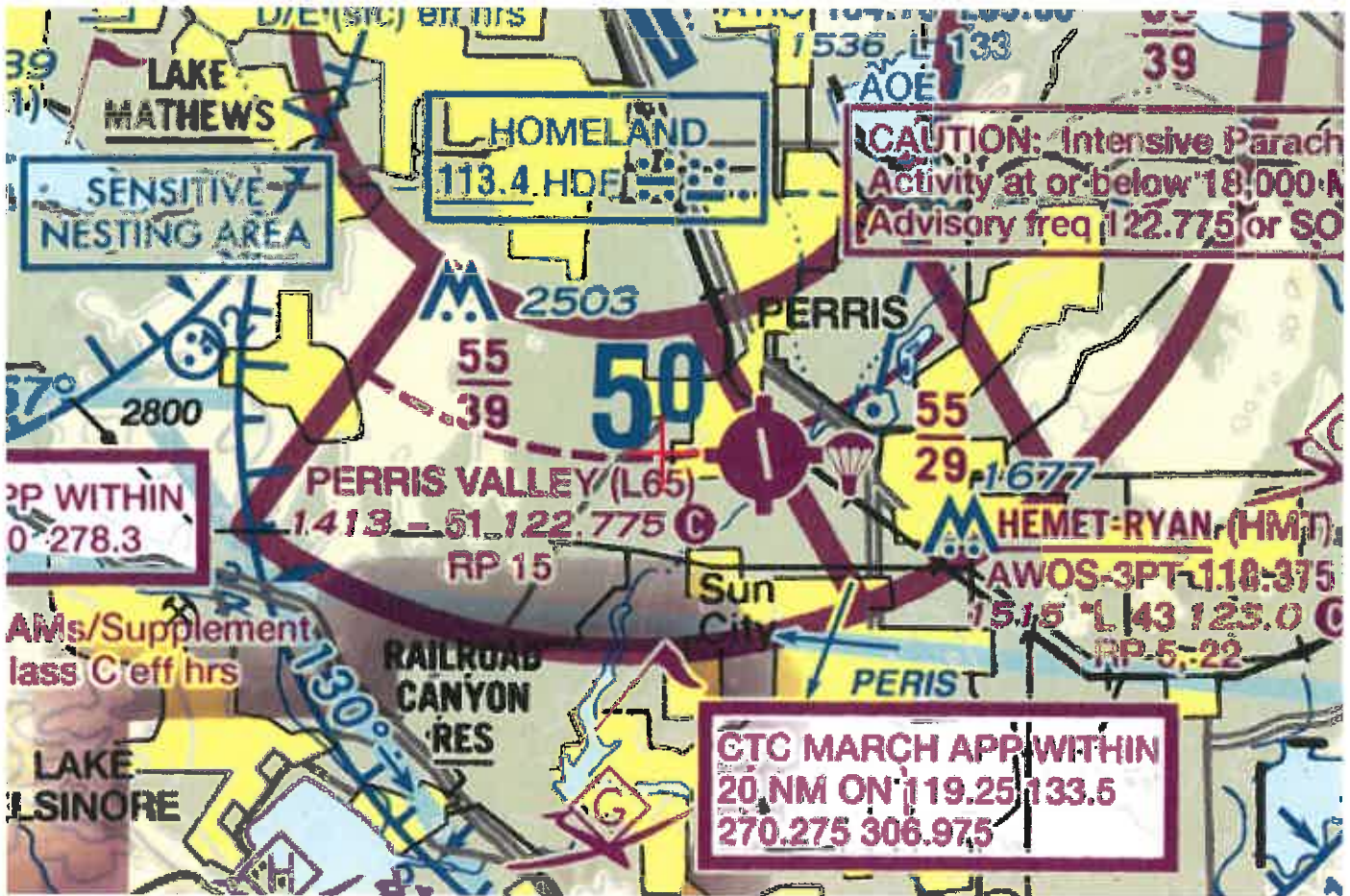
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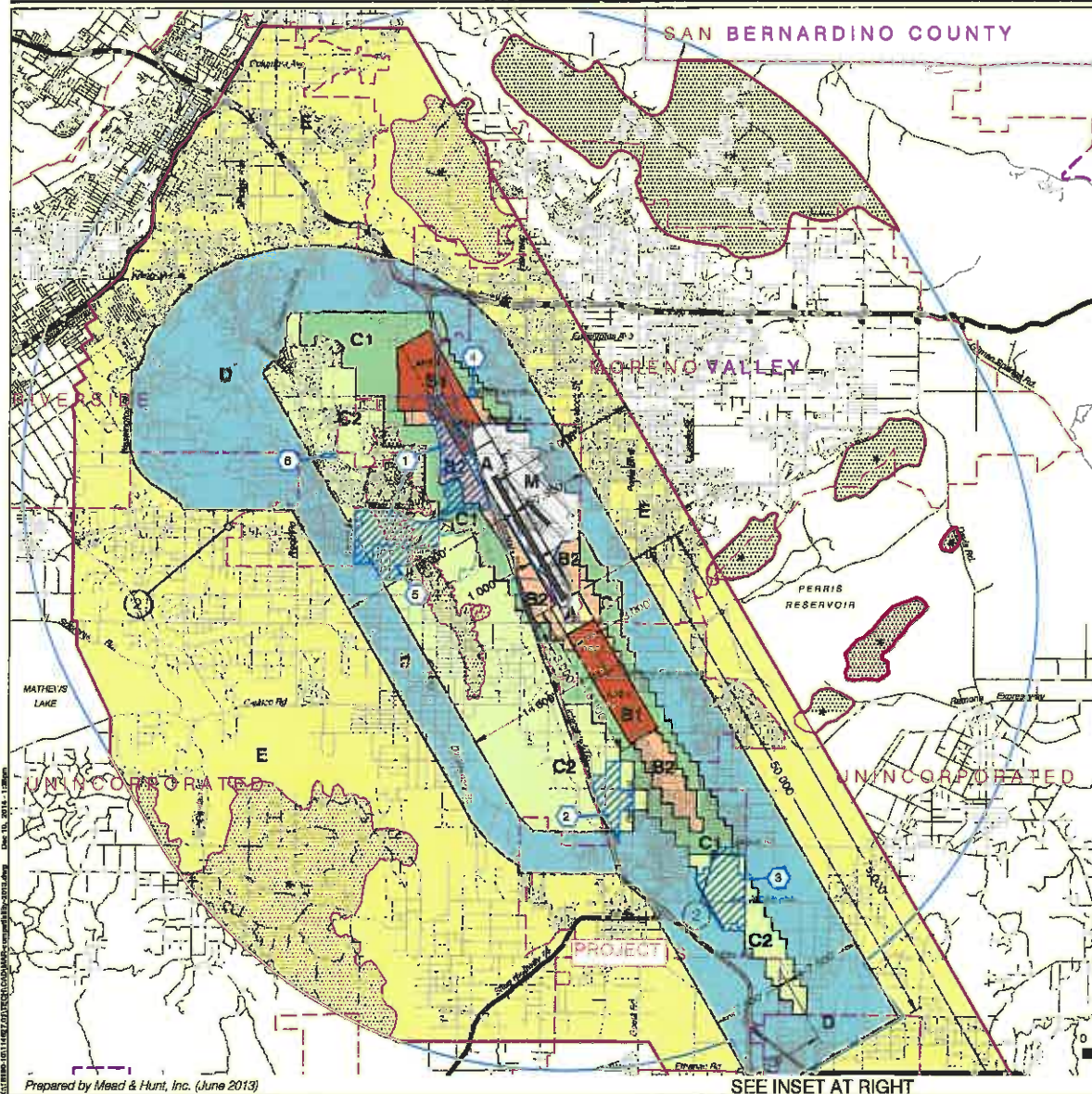
Map(s)

TOPO Map for ASN 2021-AWP-2923-OE



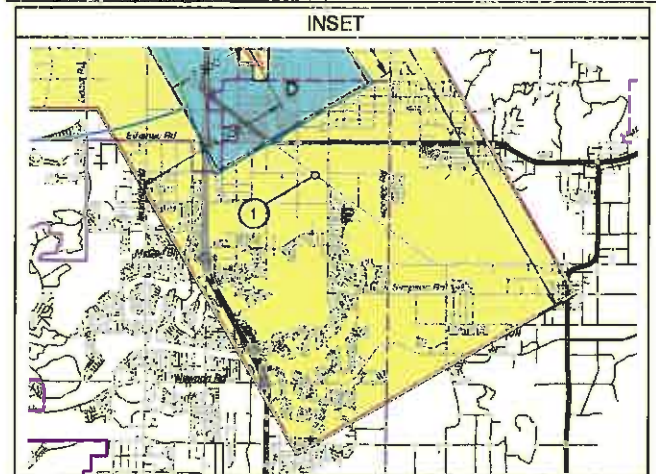
Sectional Map for ASN 2021-AWP-2923-OE





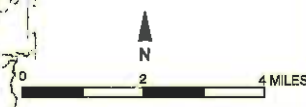
LEGEND

- Compatibility Zones**
- Airport Influence Area Boundary
 - Zone A
 - Zone B1
 - Zone B2
 - Zone C1
 - Zone C2
 - Zone D
 - Zone E
 - Zone M
 - High Terrain Zone
 - FAR Part 77 Military Outer Horizontal Surface Limits
 - FAR Part 77 Notification Area
- Boundary Lines**
- March Air Reserve Base / Air Force Property
 - March Joint Powers Authority Property Line
 - County Boundary
 - City Limits
 - Site-Specific Exemptions (existing local agency commitments to development projects)
- 1** Point at which aircraft on Runway 32 ILS approach descend below 3,000 feet above runway end. Airport Elevation is 1,535 feet MSL.
- 2** Point at which departing aircraft typically reach 3,000 feet above runway end.
- 1** March JPA: March Business Center/Meridian
- 2** Perris: Harvest Landing
- 3** Perris: Park West
- 4** Moreno Valley: Affordable Housing
- 5** March JPA: Ben Clark Training Center
- 6** Riverside: Ridge Crest Subdivision



**Riverside County
Airport Land Use Commission
March Air Reserve Base / Inland Port Airport
Land Use Compatibility Plan
(Adopted November 13, 2014)**

Note:
All dimensions are measured from runway ends and centerlines.

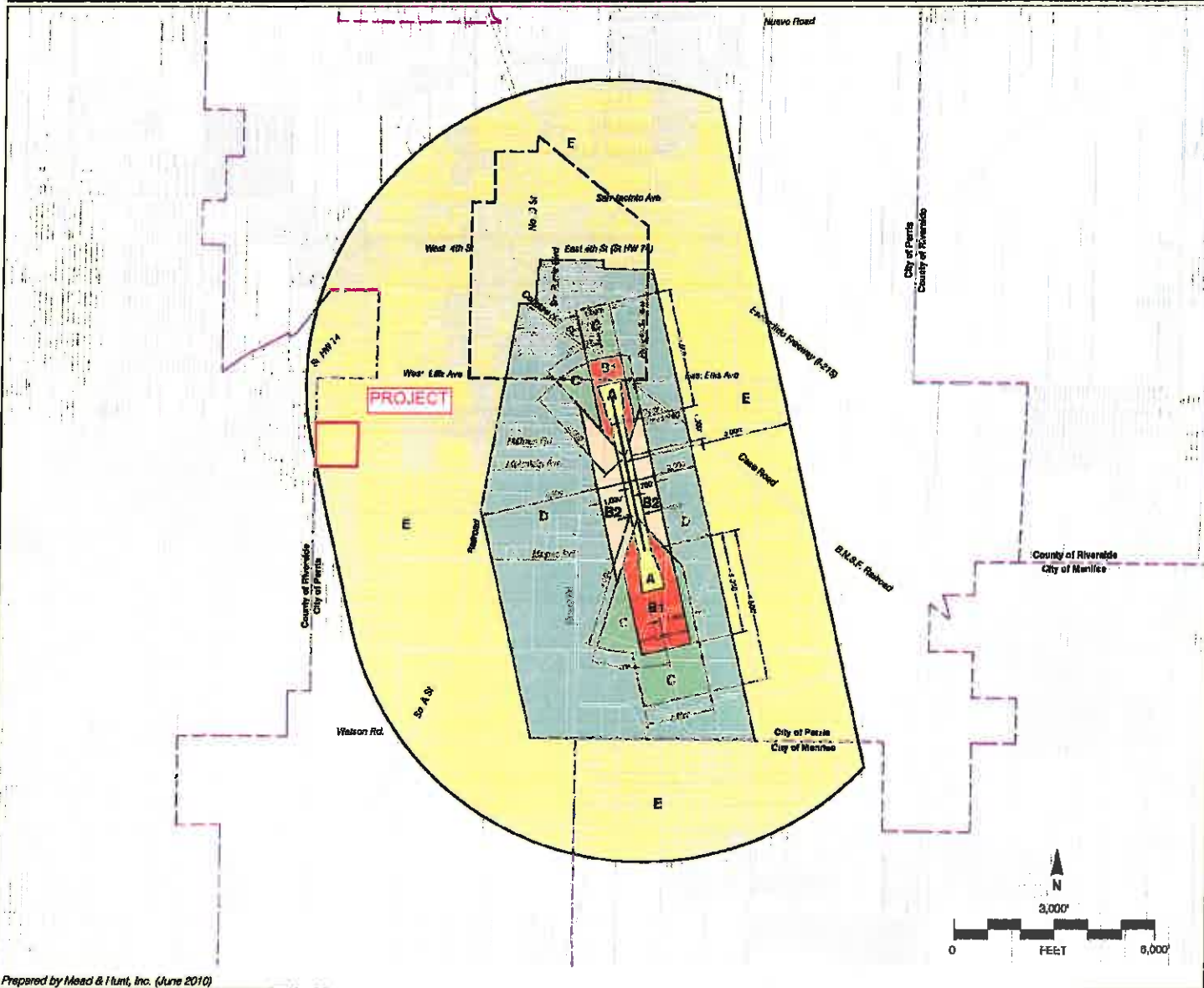


Base map source: County of Riverside 2013

Prepared by Mead & Hunt, Inc. (June 2013)

SEE INSET AT RIGHT

Map MA-1
Compatibility Map
March Air Reserve Base / Inland Port Airport



Legend

- Compatibility Zones**
- Zone A
 - Zone B1
 - Zone B2
 - Zone C
 - Zone D
 - Zone E
- Boundary Lines**
- Airport Property Line
 - City Limits
 - Downtown Specific Plan

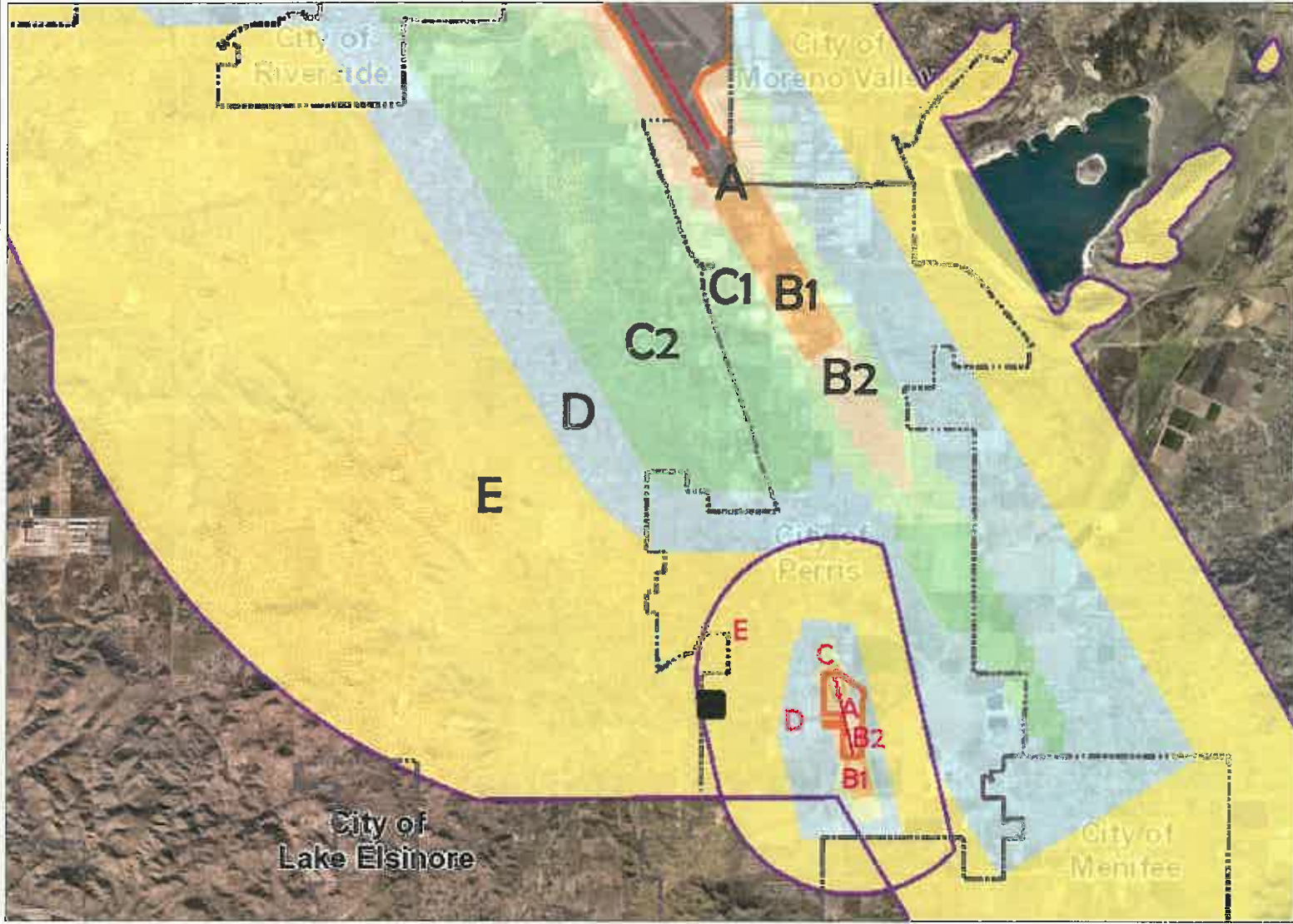
Riverside County
 Airport Land Use Commission
 Riverside County
 Airport Land Use Compatibility Plan
 Policy Document
 (July 2010 Draft)

Map PV-1

Compatibility Map
 Perris Valley Airport

Prepared by Mead & Hunt, Inc. (June 2010)

Map My County Map



Legend

- Runways
- Airports
- Airport Influence Areas
- Airport Compatibility Zones**
- OTHER COMPATIBILITY ZONE
- A
- A-EXC1
- B1
- B1-APZ I
- B1-APZ I-EXC1
- B1-APZ II
- B1-APZ II-EXC1
- B1-EXC1
- B2
- B2-EXC1
- C
- C1
- C1-EXC1
- C1-EXC3
- C1-EXC4
- C1-HIGHT
- C2
- C2-EXC1
- C2-EXC2
- C2-EXC3
- C2-EXC5
- C2-EXC6



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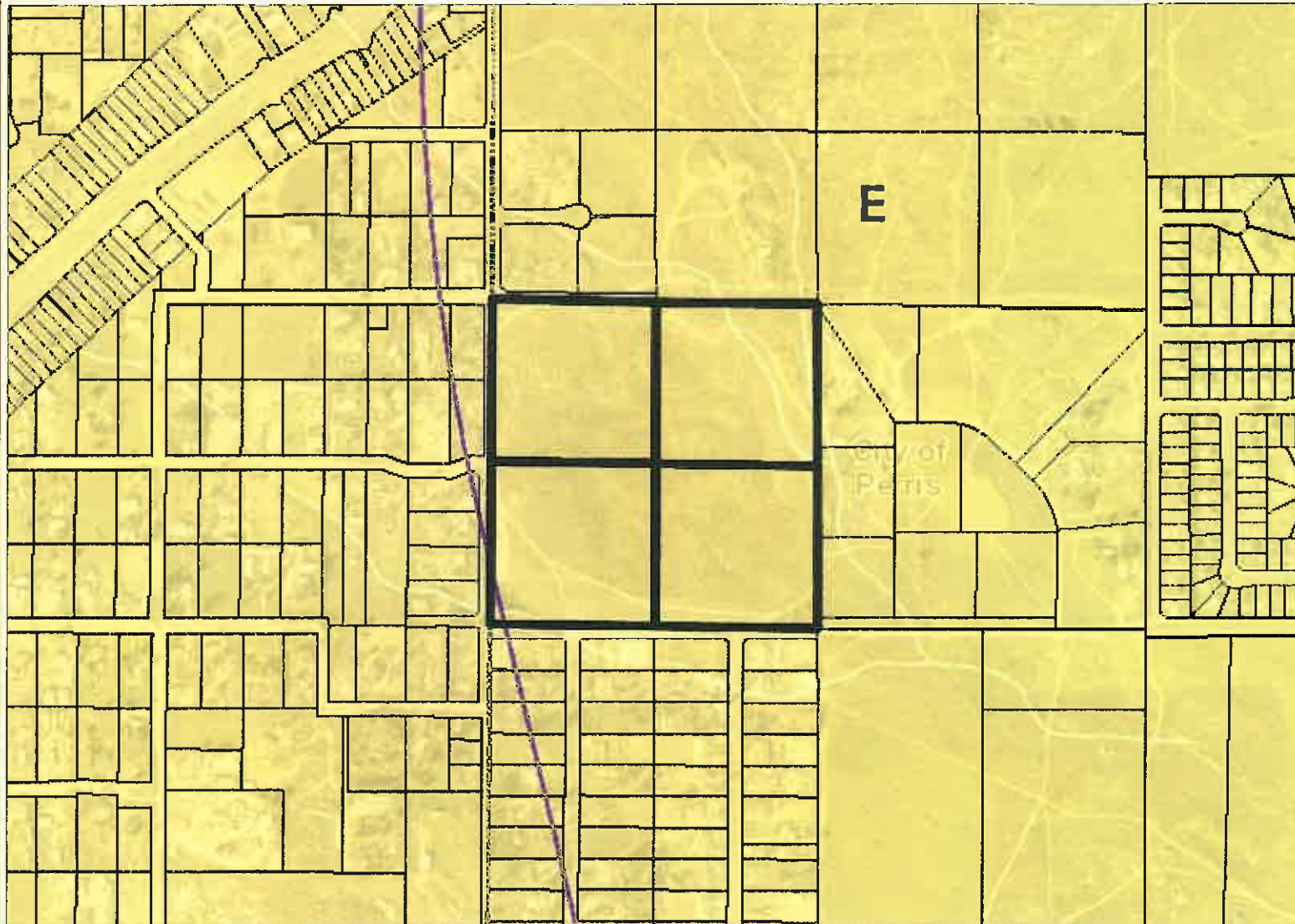


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Notes

Map My County Map



Legend

- Parcels
- Runways
- Airports
- Airport Influence Areas
- Airport Compatibility Zones**
- OTHER COMPATIBILITY ZONE
- A
- A-EXC1
- B1
- B1-APZ I
- B1-APZ I-EXC1
- B1-APZ II
- B1-APZ II-EXC1
- B1-EXC1
- B2
- B2-EXC1
- C
- C1
- C1-EXC1
- C1-EXC3
- C1-EXC4
- C1-HIGHT
- C2
- C2-EXC1
- C2-EXC2
- C2-EXC3
- C2-EXC5



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Notes

0 752 1,505 Feet

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Map My County Map



Legend

-  Parcels
-  Blueline Streams
-  City Areas
-  World Street Map



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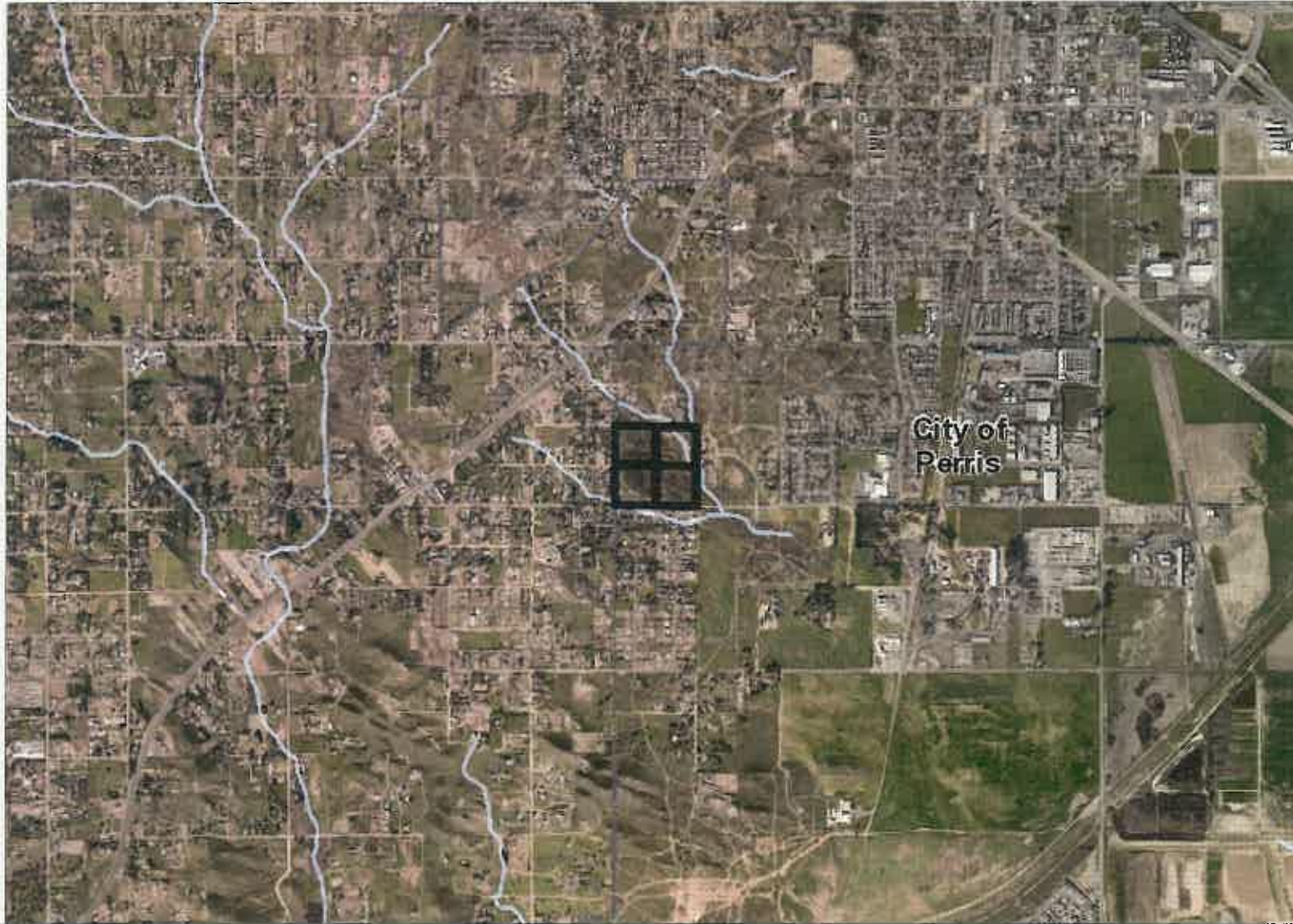
Notes

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Map My County Map



Legend

- Blueline Streams
- City Areas
- World Street Map



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Notes

0 3,000 6,019 Feet

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Map My County Map



Legend

-  Parcels
-  Blueline Streams
-  City Areas
-  World Street Map



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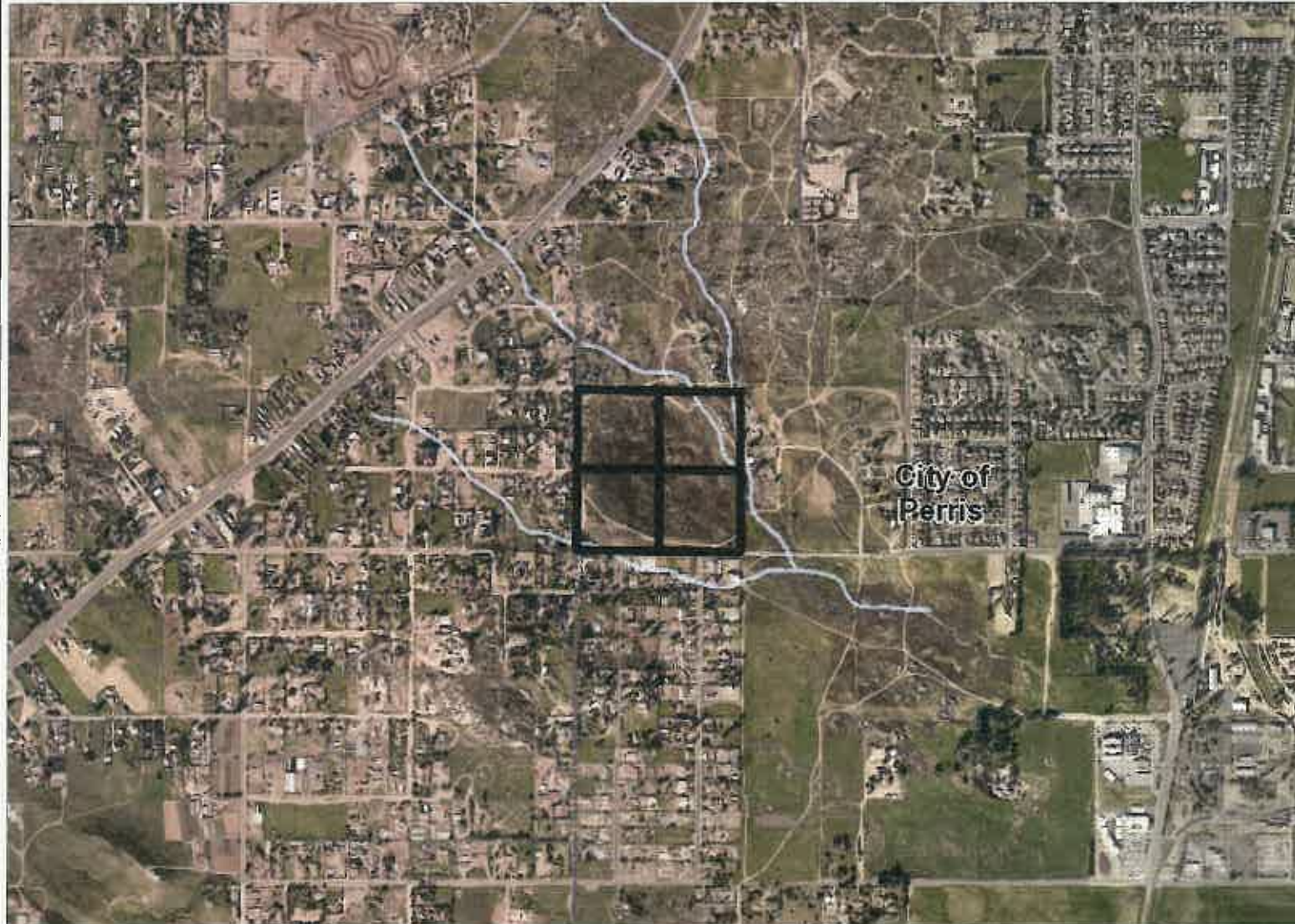
Notes

0 752 1,505 Feet

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Map My County Map



Legend

-  Blueline Streams
-  City Areas
-  World Street Map



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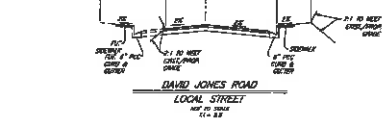
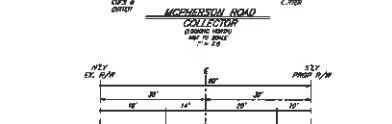
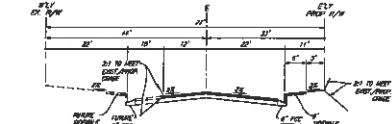
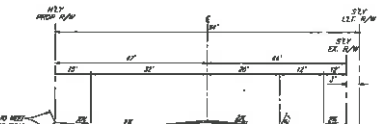
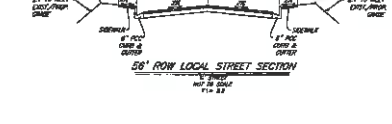
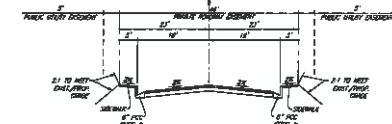
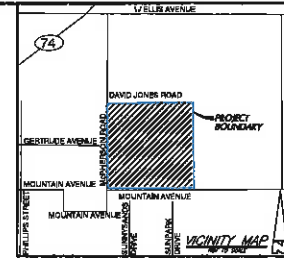
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505

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Notes

PACIFIC EMERALD TENTATIVE TRACT MAP NO. 37904 CITY OF PERRIS, CA



Station	Point	Station	Point
1+00	1	2+00	1
1+00	2	2+00	2
1+00	3	2+00	3
1+00	4	2+00	4
1+00	5	2+00	5
1+00	6	2+00	6
1+00	7	2+00	7
1+00	8	2+00	8
1+00	9	2+00	9
1+00	10	2+00	10
1+00	11	2+00	11
1+00	12	2+00	12
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1+00	47	2+00	47
1+00	48	2+00	48
1+00	49	2+00	49
1+00	50	2+00	50

Station	Point	Station	Point
2+00	1	3+00	1
2+00	2	3+00	2
2+00	3	3+00	3
2+00	4	3+00	4
2+00	5	3+00	5
2+00	6	3+00	6
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2+00	47	3+00	47
2+00	48	3+00	48
2+00	49	3+00	49
2+00	50	3+00	50

TOTAL SITE ESTIMATED CUT/FILL VOLUMES	
CUT VOLUME	14,500
FILL VOLUME	14,500
TOTAL VOLUME	29,000

EASEMENTS:	
UTILITY	10' WIDE
DRIVEWAY	10' WIDE

UTILITY LEGEND	
---	PROPOSED WATER (10" DIA)
---	PROPOSED SEWER
---	PROPOSED GASLINE
---	EXISTING WATER
---	EXISTING SEWER
---	EXISTING GASLINE

WOMP MEASURES	
1	WOMP MEASURE
2	WOMP MEASURE
3	WOMP MEASURE

LOT SUMMARY TABLE	
1	100' x 100'
2	100' x 100'
3	100' x 100'
4	100' x 100'
5	100' x 100'
6	100' x 100'
7	100' x 100'
8	100' x 100'
9	100' x 100'
10	100' x 100'
11	100' x 100'
12	100' x 100'
13	100' x 100'
14	100' x 100'
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44	100' x 100'
45	100' x 100'
46	100' x 100'
47	100' x 100'
48	100' x 100'
49	100' x 100'
50	100' x 100'

- ### NOTES
1. PERMITTED THROUGH SIGN...
 2. PAVEMENT SHALL BE 4" THICK...
 3. GRASSY AREAS SHALL BE MAINTAINED...
 4. EXISTING SIGNAGE SHALL BE REMOVED...
 5. EXISTING CURB AND GUTTER SHALL BE REPAIRED...
 6. EXISTING SIDEWALK SHALL BE REPAIRED...
 7. EXISTING LIGHT FIXTURES SHALL BE REPAIRED...
 8. EXISTING TRAFFIC SIGNAL SHALL BE REPAIRED...
 9. EXISTING TRAFFIC SIGNAL SHALL BE REPAIRED...
 10. EXISTING TRAFFIC SIGNAL SHALL BE REPAIRED...
 11. EXISTING TRAFFIC SIGNAL SHALL BE REPAIRED...
 12. EXISTING TRAFFIC SIGNAL SHALL BE REPAIRED...
 13. EXISTING TRAFFIC SIGNAL SHALL BE REPAIRED...
 14. EXISTING TRAFFIC SIGNAL SHALL BE REPAIRED...
 15. EXISTING TRAFFIC SIGNAL SHALL BE REPAIRED...
 16. EXISTING TRAFFIC SIGNAL SHALL BE REPAIRED...
 17. EXISTING TRAFFIC SIGNAL SHALL BE REPAIRED...
 18. EXISTING TRAFFIC SIGNAL SHALL BE REPAIRED...
 19. EXISTING TRAFFIC SIGNAL SHALL BE REPAIRED...
 20. EXISTING TRAFFIC SIGNAL SHALL BE REPAIRED...
 21. EXISTING TRAFFIC SIGNAL SHALL BE REPAIRED...
 22. EXISTING TRAFFIC SIGNAL SHALL BE REPAIRED...
 23. EXISTING TRAFFIC SIGNAL SHALL BE REPAIRED...
 24. EXISTING TRAFFIC SIGNAL SHALL BE REPAIRED...
 25. EXISTING TRAFFIC SIGNAL SHALL BE REPAIRED...
 26. EXISTING TRAFFIC SIGNAL SHALL BE REPAIRED...
 27. EXISTING TRAFFIC SIGNAL SHALL BE REPAIRED...
 28. EXISTING TRAFFIC SIGNAL SHALL BE REPAIRED...
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- ### UTILITY NOTES
- 1. EXISTING WATER MAINS SHALL BE PROTECTED...
 - 2. EXISTING SEWERS SHALL BE PROTECTED...
 - 3. EXISTING GAS LINES SHALL BE PROTECTED...
 - 4. EXISTING POWER LINES SHALL BE PROTECTED...
 - 5. EXISTING TELEPHONE LINES SHALL BE PROTECTED...
 - 6. EXISTING CABLE LINES SHALL BE PROTECTED...
 - 7. EXISTING FIBER OPTIC LINES SHALL BE PROTECTED...
 - 8. EXISTING RAILROADS SHALL BE PROTECTED...
 - 9. EXISTING HIGHWAYS SHALL BE PROTECTED...
 - 10. EXISTING AIRPORTS SHALL BE PROTECTED...
 - 11. EXISTING PORTS SHALL BE PROTECTED...
 - 12. EXISTING CANALS SHALL BE PROTECTED...
 - 13. EXISTING DAMS SHALL BE PROTECTED...
 - 14. EXISTING LEAKS SHALL BE REPAIRED...
 - 15. EXISTING HOLES SHALL BE REPAIRED...
 - 16. EXISTING CRACKS SHALL BE REPAIRED...
 - 17. EXISTING SETTLEMENTS SHALL BE REPAIRED...
 - 18. EXISTING EROSION SHALL BE REPAIRED...
 - 19. EXISTING FLOODING SHALL BE REPAIRED...
 - 20. EXISTING SLIDES SHALL BE REPAIRED...
 - 21. EXISTING COLLAPSES SHALL BE REPAIRED...
 - 22. EXISTING OTHER DAMAGE SHALL BE REPAIRED...

- ### INDEX
- SHEET NO. 1
2
- ### LEGAL DESCRIPTION
- SECTION 2, 1/4 & 1/2, 4th & 5th, 6th, 7th, 8th, 9th & 10th OF RANGE 12S, TOWNSHIP 14N, RANGE 12E, COUNTY OF RIVERSIDE, CALIFORNIA. AS SHOWED BY MAP IN FILE IN BOOK 25 OF PUBLIC MAPS OF RIVERSIDE, CALIFORNIA, COUNTY, CALIFORNIA.
- ### SOILS ENGINEER
- GLENN S. BROWN
1000 E. MAIN ST.
PERRIS, CA 92377
(951) 715-1100
- ### LANDSCAPE ARCHITECT
- DAVE BROWN
1000 E. MAIN ST.
PERRIS, CA 92377
(951) 715-1100

TENTATIVE TRACT MAP NO. 37904
PACIFIC EMERALD
CITY OF PERRIS

PREPARED FOR: **PACIFIC COMMUNITIES**
1000 DONE STREET, SUITE 300
NORTHBEACH, CA 92950
949-680-8900

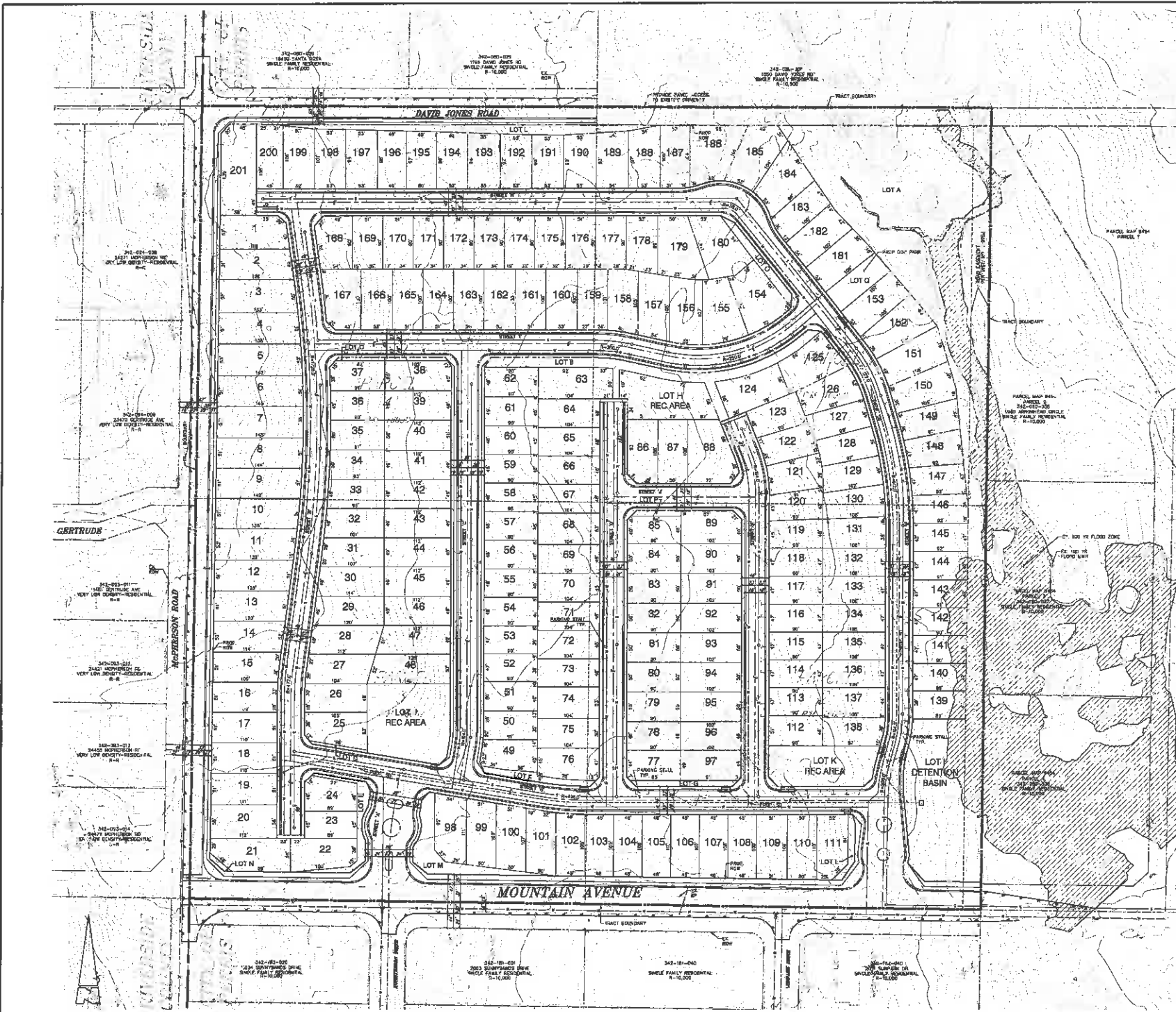
KUC ENGINEERS

STATEMENT OF PREPARER

I HEREBY STATE THAT THIS MAP HAS BEEN PREPARED, DRAWN, REVISIONED, CHECKED, REVISIONED, AND THAT THE PREPARER HAS RECEIVED AND ACCEPTED THE RESPONSIBILITY OF THE PREPARER OF THIS MAP.

DATE: _____ BY: _____

DATE: 05/20/2014 11:41 AM; PLOT: PACIFIC EMERALD TENTATIVE TRACT MAP NO. 37904

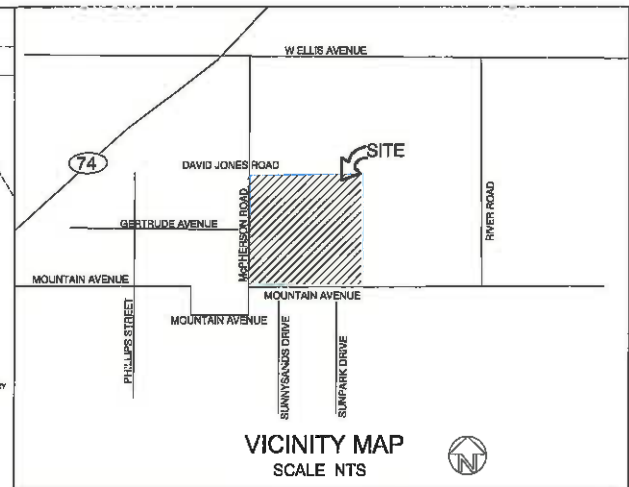
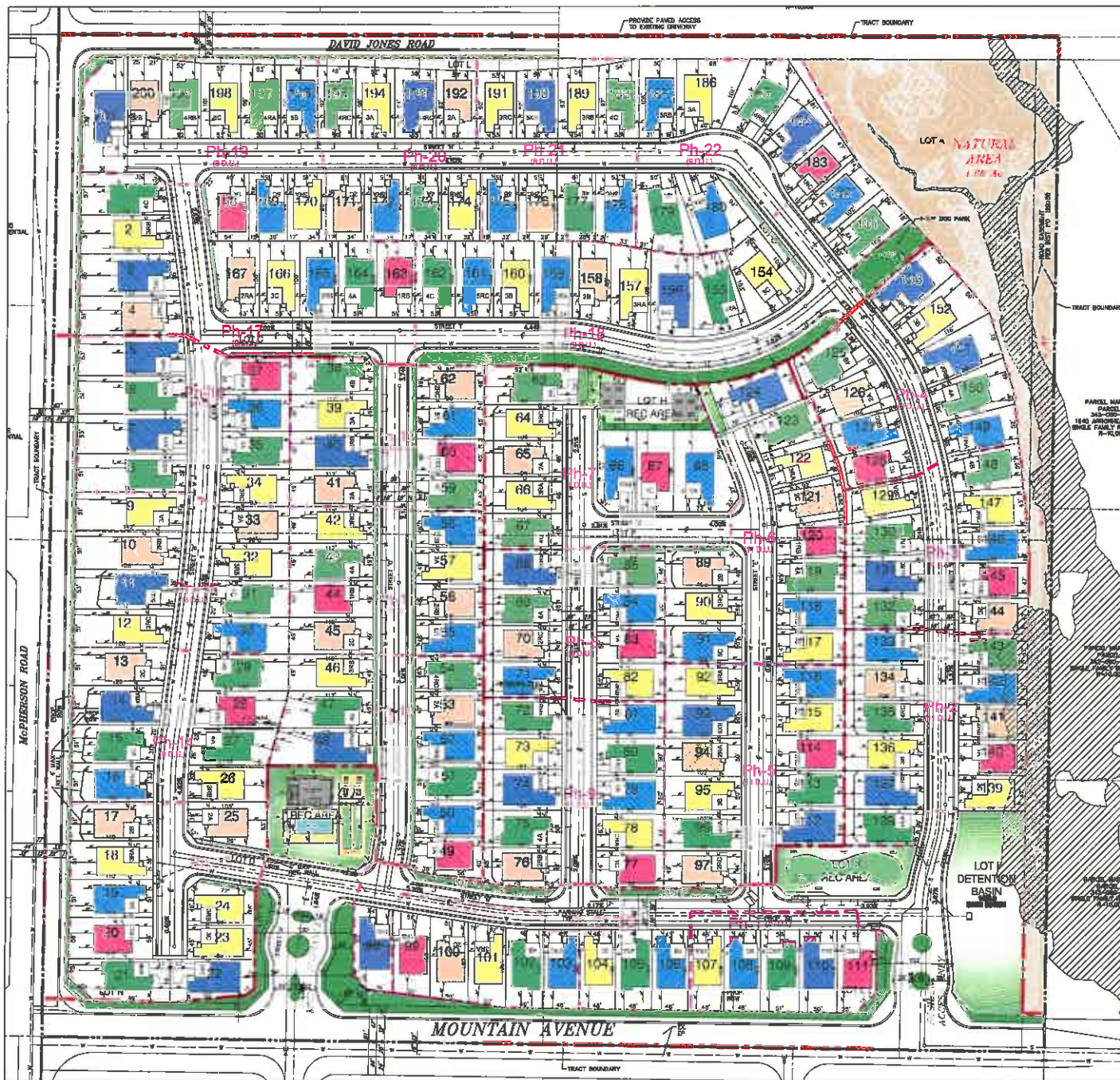


TENTATIVE TRACT MAP NO. 37904
PACIFIC BUNALD
CITY OF FERRIS

PREPARED FOR: **PACIFIC COMMUNITIES**
 1000 DOME STREET, SUITE 300
 NEWPORT BEACH, CA 92660
 949-880-8888

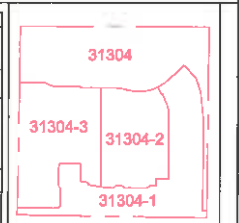
HUC ENGINEERS

SHEET
 2 OF 2
 SHEETS



PARCEL MAP 5
PARCEL 3
360-000-01
1640 AIRBORNE ROAD
WHOLE FAMILY NEW
P-10-000

Plan	T-378K Pacific Emerald In Plans						Tract D.U.
	Plan 1	Plan 2	Plan 3	Plan 4	Plan 5	Plan 6K	
Living Area	1524 sf	1703 sf	1776 sf	1855 sf	1827 sf	2115 sf	
Use Area	A/B/C	A/B/C	A/B/C	A/B/C	A/B/C	A/B/C	
Percent Area	10%	11%	12%	13%	14%	15%	
Model	1	1	1	1	1	1	2
Ph-1	1	1	1	1	1	1	5 (39 D.U.)
Ph-2	1	2	2	3	2	1	11 (84 D.U.)
Ph-3	1	1	2	3	1	1	9 (68 D.U.)
Ph-4	1	1	1	3	2	2	9 (68 D.U.)
Ph-5	1	2	3	2	1	2	11 (84 D.U.)
Ph-6	1	2	3	2	2	1	11 (84 D.U.)
Ph-7	1	1	2	2	2	1	8 (61 D.U.)
Ph-8	1	1	1	2	2	1	8 (61 D.U.)
Ph-9	1	1	2	3	2	1	10 (75 D.U.)
Ph-10	1	1	1	3	2	1	9 (68 D.U.)
Ph-11	1	2	2	1	2	1	9 (68 D.U.)
Ph-12	1	2	1	2	1	1	8 (61 D.U.)
Ph-13	1	1	3	1	1	1	8 (61 D.U.)
Ph-14	1	2	1	3	1	1	8 (61 D.U.)
Ph-15	1	2	3	1	1	1	8 (61 D.U.)
Ph-16	1	1	1	3	1	2	9 (68 D.U.)
Ph-17	1	2	2	2	1	1	9 (68 D.U.)
Ph-18	1	1	3	2	2	1	9 (68 D.U.)
Ph-19	1	1	2	3	2	1	9 (68 D.U.)
Ph-20	1	2	2	3	1	1	9 (68 D.U.)
Ph-21	1	1	2	2	3	1	8 (61 D.U.)
Ph-22	1	1	1	3	3	1	9 (68 D.U.)
Ph-23/OC			1	1	1	1	4 (30 D.U.)
TOTAL	18	26	43	50	36	25	201
%	9%	14%	21%	25%	18%	12%	100%



KEY MAP TRACT PHASING

GENERAL INFO

Total Acreage: 40.40 Acre
 Total Residential Unit: 201 D.U.
 Rac Building: 1
 Street Parking: 187(0.85/D.U.)
 Building Coverage: 10.60 Acre
 Density: 4.98 D.U./Acre
 Open Space: 6.47 Acre
 Green Belt: 1.30 Acre
 Lot A (Natural Space): 1.88 Acre
 Easement (Natural Space): 0.65 Acre
 Detention Basin: 0.59 Acre
 Rec Area 1: 0.42 Acre
 Rec Area 2: 0.27 Acre
 Rec Area 3: 0.27 Acre
 Dog Park: 0.10 Acre
 6.47 Acre

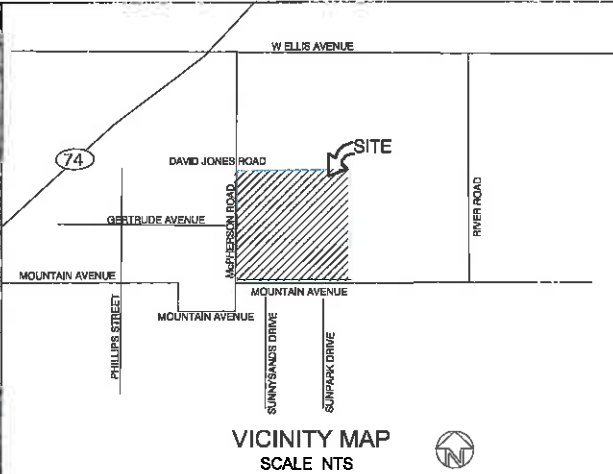
PLAN TYPES CONSTRUCTION PHASING

* NOTE: SITE PLAN ARE CONCEPTUAL AND ROADS ARE INDICATIVE. ENGINEER SHALL DESIGN THE FINAL ROAD LAYOUT BASED ON CITY'S STANDARD.

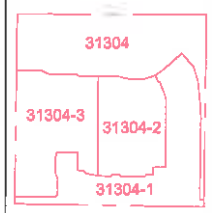
DEVELOPER:
Pacific Communities Builder, Inc.
 ADDRESS: 1000 Dove Street, Suite 300, Newport Beach, CA 92660
 TEL: (949) 860-8988

CITY OF PERRIS
PACIFIC EMERALD TR 37904
 Conceptual Site Plan - Scheme A

SCALE: 1" = 60'
 DESIGNED: JNC
 DRAWN: FVG, RC
 SHEET NO.
 2021/02/02



T.37904 Pacific Emerald to Perris							20220420
Plan	Plan 1	Plan 2	Plan 3	Plan 4	Plan 5	Plan 6	
Living Area	163k sf	1703 sf	1776 sf	1655 sf	1897 sf	2115 sf	
Elevation	A/B/C	A/B/C	A/B/C	A/B-C	A/B/C	A/B/C	
Model	1	1	1	1	1	1	D.U.
Ph-1	1	1	1	1	1	1	9
Ph-2	1	2	2	2	2	1	11
Ph-3	1	1	2	2	1	1	9
Ph-4	1	1	1	3	2	2	8
Ph-5	1	2	3	2	1	2	11
Ph-6	1	2	3	2	2	1	11
Ph-7	1	1	2	2	2	1	8
Ph-8	1	1	1	2	2	1	8
Ph-9	1	1	2	3	2	1	10
Ph-10	1	1	1	3	2	1	9
Ph-11	1	2	2	1	2	1	8
Ph-12	1	2	1	2	1	1	8
Ph-13	1	1	3	1	1	1	8
Ph-14	1	2	1	3	1	1	9
Ph-15	1	2	3	1	1	1	6
Ph-16	1	1	1	3	1	2	8
Ph-17	1	2	2	2	1	1	9
Ph-18	1	1	3	2	2	1	9
Ph-19	1	1	2	2	2	1	9
Ph-20	1	2	2	2	1	1	8
Ph-21	1	1	2	2	3	1	8
Ph-22	1	1	1	3	3	1	9
Ph-23RD			1	1	1	1	4
TOTAL	16	29	43	50	36	25	201
%	8%	14%	21%	25%	18%	12%	100%



GENERAL INFO

Total Acreage: 40.40 Acre
 Total Residential Unit: 201 D.U.
 Rec Building: 1
 Street Parking: 187(0.83/D.U.)
 Building Coverage: 10.80 Acre
 Density: 4.88 D.U./Acre
 Open Space: 5.47 Acre

Green Belt: 1.30 Acre
 Lot A (Natural Space): 1.85 Acre
 Easement (Natural Space): 0.86 Acre
 Detention Basin: 0.69 Acre
 Rec Area 1: 0.42 Acre
 Rec Area 2: 0.27 Acre
 Rec Area 3: 0.27 Acre
 Dog Park: 0.10 Acre
 5.47 Acre

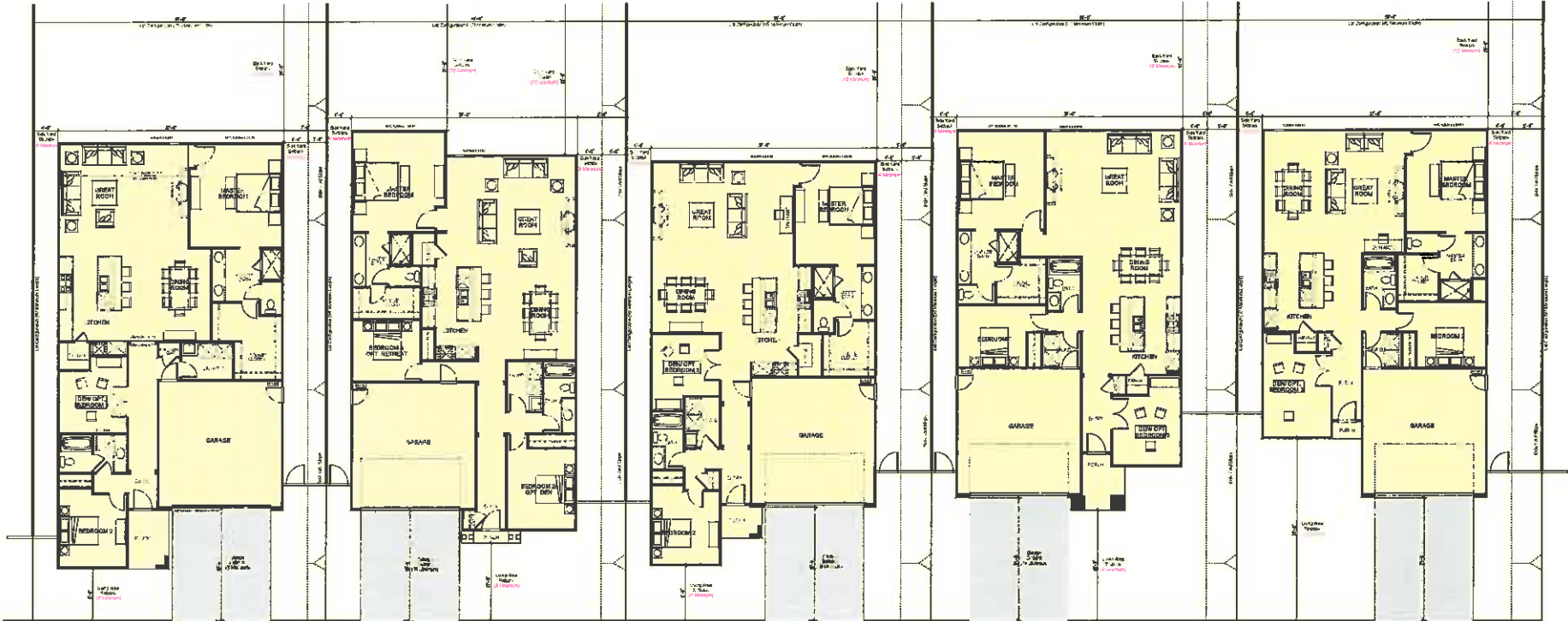
PLAN TYPES
CONSTRUCTION PHASING

NOTE: SITE PLAN AND CONCEPTUAL AND ROADS ARE PROPOSING. ENGINEER SHALL DESIGN THE FINAL ROAD LAYOUT BASED ON CTR'S SIGNMENTS.

DEVELOPER:
Pacific Communities Builder, Inc.
 ADDRESS: 1000 Dove Street, Suite 300, Newport Beach, CA 92660
 TEL: (949) 660-8988

CITY OF PERRIS
PACIFIC EMERALD
 TR 37904
Conceptual Site Plan - Scheme A

SCALE: 1" = 60'
 DESIGNED: NC
 DRAWN: FVG, RC
 SHEET NO.
 2021/02/02



TR 37904 - Street Scene & Site Plan Design Concept

Pacific Emerald

Single-Family Detached
 Perris, California
 Pacific Communities Builder, Inc.

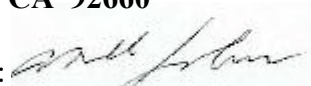


**Conceptual Fuel Modification Plan
Pacific Emerald - Tract 37904
APN's 342-080-039, 040, 041, 042
Perris, California**



**February 9, 2021
Revised September 20, 2021**

**Owner: Pacific Communities
1000 Dove Street, Suite 300
Newport Beach, CA 92660**

Prepared & Certified by: 
**Melvin A. Johnson, Owner
Certified CEQA Wildland Fire Consultant
FIREWISE 2000, LLC
PO Box 39
Valley Center, CA 92082
(760) 745-3947**

TRACT 37904
Conceptual Fuel Modification Plan

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Non-combustible & Fire-Resistant Building Materials

Ignition Resistant Construction Requirements

Non-Combustible Wall Example

Perris Fire Department Access & Water Plan Notes, Attachment 1

APPENDIX 'A'

APPENDIX 'B'

APPENDIX 'C'

APPENDIX 'D'

APPENDIX 'E'

APPENDIX 'F'

Conceptual Fuel Modification Plan
Pacific Emerald - Tract 37904, Perris, California
APN's 342-080-039, 040, 041, 042
February 9, 2021
Revised September 20, 2021

1.0 General Description

The proposed project is located at the northeast corner of the intersection of Mountain Avenue and McPherson Road in the City of Perris, California (see Photo #1). The area designated for development is Tract 37904 which is located within a high fire hazard area. The project consists of the building of 201 single-family homes on individual lots, 3 recreation areas, a catch basin, and open space preservation on 40.4 acres of undeveloped land. The lead fire protection agency is the Riverside County Fire Department (RCFD).



Photo #1: Aerial Photo of the Project Area

This Fuel Modification Plan (CFMP) assesses the overall (on-site and off-site) wildland fire hazards and risks that may threaten life and property associated with the proposed residential development. In addition, the CFMP establishes both short and long-term fuel modification actions to minimize any projected fire hazard and risk and assigns annual maintenance responsibilities for each of the recommended fuel modification actions.

The purpose of this CFMP is to provide hazardous fuel treatment and construction feature direction for developers, architects, builders, the RCFD, Perris City officials, and the individual lot owners to use in making the structures in the proposed project relatively safe from future wildfires. Appendices attached to this CFMP that provide additional information shall be considered part of this CFMP.

This CFMP is based upon current requirements of the RCFD; California Code of Regulations Title 24, Part 9 and Title 14, Section 1280; the 2019 California Fire Code and Local Amendments including Appendices to Chapters 1 & 4 and Appendices B, F & H; Chapter 7A-California Building Code; 2019 California Residential Code (CRC) R327; California Government Code, sections 51175 through 51189; California Public Resources Code Sections 4201 through 4204; the California State and Local Responsibility Area Fire Hazard Severity Zone Map; the National Fire Protection Association (NFPA) Standard 13-D; County of Riverside Ordinance No. 460; County of Riverside Ordinance No. 787 (as amended through 787.7), and the City of Perris Guideline for Fire Department Access and Water Requirement for Commercial & Residential Developments.

1.1 General Information

Owner: Pacific Communities Builder, Inc.
1000 Dove Street, Suite 300
Newport Beach, CA 92660

Approving Departments:
Fire Authority: Riverside County Fire Department
City of Perris

2.0 Wildland Fire Hazard and Risk Assessment

The following assessment is made based upon historical weather data and existing and forecasted vegetation growth.

2.1 Weather Review and Assessment

Weather has a dramatic influence on wildland fire behavior. The most critical weather pattern to the project area is a hot, dry offshore wind, typically called a Santa Ana. Such wind conditions are usually associated with strong (>50 MPH), hot, dry winds with very low (<15%) relative humidity. Santa Ana winds originate over the dry desert land and can occur anytime of the year; however, they generally occur in the late fall (September through November). This is also when non-irrigated vegetation is at its lowest moisture content. The Riverside County area is considered one of the areas in southern California that is strongly influenced by powerful Santa Ana winds.

Fire Agencies throughout the western United States rely on a sophisticated system of Remote Automated Weather Stations (RAWS) to monitor weather conditions and aid in the forecasting of fire danger. The closest RAWS to the Tract 37904 project is the Clark RAWS located at Latitude 33 ° 52 ' 36 " N and Longitude 117 ° 18 ' 32" W at an elevation of 1720 feet. Data for all RAWS is archived in the Western Region Climate Center in Reno, Nevada. The typical prevailing summer time wind

pattern is out of the west/southwest and normally is of a much lower velocity (5-10 MPH with occasional gusts to 20 MPH) and is associated with relative humidity readings ranging between 20% and occasionally more than 50% due to the sites proximity to onshore winds from the ocean.

In addition to Santa Ana winds, there is a historic pattern of wildland fires burning from the southwest to northeast. Every 5-10 years, a “rare event” hot dry, southwest to west wind of 30 MPH will occur. This moderately strong, dry wind condition usually occurs in the late afternoon or early evenings on very hot days, especially during the normal summer-time (June through September) months.

All other (northwest, southeast and south) wind directions may be occasionally strong and gusty; however, they are generally associated with cooler moist air and have higher relative humidity (>40%). They are considered a serious wildland fire weather condition when wind speeds reach >20-MPH.

2.2 Off-Site Fire Hazard and Risk Assessment

The majority of the Tract 37904 project is located on lightly vegetated nearly level terrain. Undeveloped or sparse development borders the project on the north and east, with developed land to the south and west (see Photo #1).

Northern Boundary Fuels – The entire length of the project northern boundary abuts David Jones Road an existing dirt road, the western portion of which is planned to be improved. The vegetation in



Photo 2 – Looking Northeast at the Project. Note the many rock outcroppings that break up the light vegetation.

this area consists of native and non-native grasses and weeds, buckwheat, and a few four-wing saltbush.

Rock outcroppings are scattered throughout that breakup the vegetation (see Photo #2. The vegetated area to the north is likely to continue to support a grass and weed vegetation as shown in Photos #3. Over time without any human activity, it is possible that some scattered coastal sage scrub could reclaim the area. Therefore, the typical mature fuel model for northern boundary is a gs2 – Moderate Load Dry Climate Grass/Shrub with 1 and 10 hour fuels of .5 tons/acre respectively.

Eastern Boundary Fuels –The southern portion of the eastern boundary of the project abut a drainage with the remaining northern portion of the eastern boundary abutting future open space. Slopes in this area average 6 percent. The vegetation in this area consists of native and non-native grasses, weeds with some scattered buckwheat, mule fat, willow, and tree of heaven. Without human intervention the vegetated area to the east is likely to continue to support a grass and scattered Coastal Sage Scrub vegetation as shown in Photos #3. The typical fuel model for this eastern boundary is a gs2 – Moderate Load Dry Climate Grass/Shrub with 1 and 10 hour fuels of .5 tons/acre respectively. A fire approaching



Photo # 3 - Looking East from the Project. The site and the adjacent undeveloped land is sparsely vegetated and highly impacted by roads, trails, and other disturbances.

the subdivision from the east may encounter some fuels with higher moisture content in the drainage which may reduce the fire intensity. The area is also relatively flat and broken up by boulders, dirt trails and scattered rocks also reducing the intensity of an approaching fire.

Southern and Western Boundary Fuels – The southern and western boundaries of the project abut roads and existing development and therefore there are no significant wildland fire issues present (see Photos #4 &5).



Photos #4 & 5 – Mountain Avenue and McPherson Road

2.3 On-Site Fire Hazard and Risk Assessment

All of the native and exotic vegetation within the Tract will be cleared during the grading process and replaced with houses, infrastructure and irrigated landscaping.

The greatest fire concern will be a north or northeast wind condition which would tend to push a fire that begins outside of the tract through the undeveloped land on the north and east sides of the tract. Embers from a fire burning outside the tract could land within the subdivision or the adjacent open space and spread rapidly to the south and west, especially during high winds and periods of low humidity.

3.0 Predicting Wildland Fire Behavior

The BEHAVE Plus 5.0.5 Fire Behavior Prediction and Fuel Modeling System developed by USDA–Forest Service research scientists Patricia L. Andrews and Collin D. Bevens at the Intermountain Forest Fire Laboratory, Missoula, Montana, is one of the best systematic methods for predicting wildland fire behavior. The BEHAVE Plus fire behavior computer modeling system is utilized by wildland fire experts nationwide.

Wildland fire managers use the BEHAVE Plus modeling system to project expected fire intensity, rate-of-spread and flame lengths with a reasonable degree of certainty for use in Fire Protection Planning purposes. **FIREWISE 2000, LLC**. used the BEHAVE Plus 5.0.5 Fire Behavior Prediction Model to make the fire behavior assessments for the Tract 37904 project discussed below.

3.1 Wildland Fire Behavior Calculations for the Off-site and On-site Hazardous Vegetative Fuels

Wildland fire behavior calculations have been projected for the hazardous vegetative fuels located adjacent to and bordering the proposed Tract 37904 project. These projections were based on “worst case” Riverside County fire weather assumptions in the vicinity of the project area and from project site observations and fuel moisture levels typically observed during the local fire season. Weather data was obtained from the RAWS (Remote Automatic Weather Station) network stations closest to the project area.

Two (2) scenarios are depicted below in Tables 3.1.1 and 3.1.2 for four (4) separate BEHAVE PLUS Fire Modeling System computer calculations of the wildland and treated fuels. All tables display the expected Rate of Fire Spread (expressed in feet/minute), Flame Length (expressed in feet), and Fireline Intensity (expressed in British Thermal Units/foot/second and include the calculation inputs used in the BEHAVE Plus program. The tables also show the change in Rate of Fire Spread, Flame Length, and Fireline Intensity following the completion of the required fuel treatments.

Table 3.1.1 <i>Fire Scenario #1 (Northern Boundary)</i> <i>Fire Approaching from the North</i> <i>(Late Fire Season With 60 MPH North and Northeast Wind Conditions)</i>	
Fire Behavior Calculation Input Data	Anticipated Fuel Moistures
<ul style="list-style-type: none"> • 6 percent slope • 60 mph 20-foot wind speed • 135° aspect from north • 45° wind direction from north 	<ul style="list-style-type: none"> * 1-Hour Fine Fuel Moisture of.....2% * 10-Hour Fuel Moisture of.....3% * 100-Hour Fuel Moisture of.....5% * Live Herbaceous Fuel Moisture of.....30% * Live Woody Fuel Moisture of.....50%
Expected Fire Behavior Fuel Model gs2 – Moderate Load Dry Climate Grass /Shrub	
Rate of Spread - 492.4 ft/min	
Fireline Intensity - 5,038 BTU/ft/s	
Flame Length - 22.7 feet	
Expected Fire Behavior in Treated Fuels Fuel Model gs1 – Low Load Dry Climate Grass/Shrub	
Rate of Spread - 236.9 ft/min	
Fireline Intensity - 1,488 BTU/ft/s	
Flame Length - 13.0 feet	

Table 3.1.2 <i>Fire Scenario #2 (East Boundary)</i> <i>Fire Approaching from the East</i> <i>(Late Fire Season With 60 MPH Northeast and East Wind Conditions)</i>	
Fire Behavior Calculation Input Data <ul style="list-style-type: none"> • 6 percent slope • 60 mph 20-foot wind speed • 135° aspect from north • 45° wind direction from north 	Anticipated Fuel Moistures <ul style="list-style-type: none"> * 1-Hour Fine Fuel Moisture of.....2% * 10-Hour Fuel Moisture of.....3% * 100-Hour Fuel Moisture of.....5% * Live Herbaceous Fuel Moisture of.....30% * Live Woody Fuel Moisture of.....50%
Expected Fire Behavior Fuel Model gs2 – Moderate Load Dry Climate Grass /Shrub	
Rate of Spread - 492.4 ft/min	
Fireline Intensity - 5,038 BTU/ft/s	
Flame Length - 22.7 feet	
Expected Fire Behavior in Treated Fuels Fuel Model gs1 – Low Load Dry Climate Grass/Shrub	
Rate of Spread - 236.9 ft/min	
Fireline Intensity - 1,488 BTU/ft/s	
Flame Length - 13.0 feet	

4.0 Assessing Structure Ignitions in the Wildland/Urban Interface

Structure ignitions from wildland wildfires come from three sources of heat: convective firebrands (flying embers), direct flame impingement, and radiant heat. The Behave Plus Fire Behavior Computer Modeling Program does not address wind blown embers or firebrands from a structure ignition perspective. However, even though ignition resistant exterior building materials will be used in the construction of the Tract 37904 development (see APPENDIX ‘D’ for the description of ignition resistive construction), wind driven embers and radiant heat issues are addressed in this CFMP.

4.1 Firebrands

Firebrands are pieces of burning materials that detach from a burning fuel due to the strong convection drafts in the flaming zone. Firebrands may also be referred to as embers. Firebrands can be carried a long distance (one mile or more) by fire drafts and strong winds. Severe wildland/urban interface fires can produce heavy showers of firebrands. The chance of these firebrands igniting a structure will depend on the number and size of the firebrand, how long it burns after contact, and the type of building materials, building design, and construction features of the structure. Firebrands landing on combustible roofing and decks are common sources for structure ignition. They can also enter a structure through unscreened vents, decks and chimneys, unprotected skylights, and overhangs.

Even with non-combustible roofing, firebrands landing on leaves, needles, and other combustibles located on a roof (due to lack of maintenance) can cause structure ignition. Any open windows, doors or other types of unscreened openings are sources for embers to enter a structure during a wildland fire.

If these maintenance issues are addressed on a regular basis, firebrands should not be a concern for the Tract 37904 residences as the buildings will be constructed with ignition resistant building materials.

4.2 Radiant Heat/Direct Flame Impingement

Radiation and convection involve the transfer of heat directly from the flame. Unlike radiation heat transfer, convection requires that the flames or heat column contact the structure. An ignition from radiation (given an exposed flammable surface) heat transfer depends on two aspects of the flame: 1) the radiant heat flux to a combustible surface, and 2) the duration (length of time) of the radiant flux. The radiant heat flux depends on the flame zone size, flame-structure distance, and how much the combustible material of the structure is exposed to the flame. While the flame from a wildfire may approach 1,800 degrees Fahrenheit, it is the duration of heat that is more critical. For an example, a blow torch flame typically approaches 2,100 degrees Fahrenheit yet a person can easily pass their hand through the flame. Heat duration only becomes critical to a home with a wood exterior surface if the heat is allowed to remain for 30-90 seconds.

Research scientist Jack Cohen of the United States Forest Service has found that a home's characteristics--its exterior materials and design--in relation to the immediate area around a home within 100 feet principally determine the home ignition potential. He calls the home and its immediate surroundings the home ignition zone. In a study of ignition of wood wallboard, tests by a USDA Forest Service research team described in the Proceedings of the 1st International Fire and Materials Conference showed that flame impingement for sufficient length of time (approximately 1 min.) ignites a typical hardboard siding material. Since the requirement in this CFMP is for a non-combustible wall or 1-hour rated fire resistive construction for the exterior portion of a structure, the likelihood of the homes' exteriors reaching ignition temperature is very unlikely due to either radiant or convective heat.

Fire agencies consider fuel treatment as a principal approach to wildland fire hazard reduction. Whenever the flame length, 1-2 minutes in duration or more, is equal to or more than the separation of combustible vegetation from a combustible structure, there is a high probability of structure ignition. Contact with a fire's convection heat column also may cause ignition but the temperature of the column's gases is generally not hot enough or long enough in duration to sustain the ignition of the structure.

Comparing the expected wildland fire behavior projections in each of the scenarios in Section 3.1 against the required fuel modification zones outlined in Section 6.0, demonstrate substantial reductions in the expected flame length and fireline intensity.

By requiring the structures exposed to the threat of wildfire to incorporate the following guidelines, those structures will be provided with the most effective treatment for minimizing losses from flame impingement and associated radiant heat intensities.

- Each structure is constructed of ignition resistant building materials.
- The area surrounding each structure contains an irrigated Zone (defensible space) and a Thinning Zone (low fuel volume buffer strip) between the irrigated zone and the untreated fuels.

The homeowners shall be required to maintain their properties to Zone A1 Fuel Treatment standards (see Section 6.1) and shall keep the roof and any rain gutters free of leaves, needles and other combustible debris. All firewood and other combustible materials must be properly stored away from

the structure so that burning embers falling on or near the structure have no suitable host. The Tract 37904 homeowners are responsible for maintaining their homes and for keeping all doors and windows tightly closed whenever a wildland fire is reported in the vicinity.

4.3 Fire Resistant Plant Palette

Wildland fire research has shown that some types of plants, including many natives, are more fire resistant than others. These low fuel volume, non-oily, non-resinous plants are commonly referred to as “fire resistant”. This term comes with the proviso that each year these plants are pruned, all dead wood is removed and all grasses or other plant material are removed from beneath the circumference of their canopies. Some native species are not considered “undesirable” from a wildfire risk management perspective provided they are properly maintained year round. Refer to APPENDIX ‘A’ for a list of prohibited plant species.

5.0 Fire Department Response Times

The proposed project is within the City of Perris which contracts with the Riverside County Fire Department for fire protection. RCFD Fire Station #9 located at 21565 Steele Peak Dr in Perris is approximately 2.7 miles and six (6) minutes driving time to the furthest point in the development. RCFD Fire Station #59, located at 21510 Pinewood Street in Perris is approximately 6.7 miles and twelve (12) minutes driving time to the furthest point in the development. Fire Station #9 would typically be the first engine to respond to the proposed development. Additional agencies such as nearby cities would also respond equipment under mutual aid agreements but would likely arrive after RCFD engines were on-scene.

Although RCFD Fire Station #9 and #59 engines may be 7 – 12 minutes away, there is no assurance that either engine company will be in their station on the day a wildfire threatens the Tract 37904 development. Engines may respond from other stations located further away or from other incidents. On high/extreme fire danger days there often may be multiple fire starts and engine companies may be already deployed on other incidents. Therefore, planned projects use “*defensible space*”, ignition resistant building features, and key fuel treatment strategies that enable residents to substantially increase their ability to survive a wildfire on their own and without the loss of their structure. The goal of this CFMP, therefore, is to make the Tract 37904 project and its occupants as safe as possible and be able to survive on their own until such time as firefighting equipment arrives and/or residents can be safely evacuated.

6.0 Fuel Treatment Zone Descriptions and Required Treatments

Below are the descriptions and required treatments for the Fuel Treatment Zones. All distances in this report are measured horizontally. These distances are depicted on the enclosed Fuel Modification Map. With the exception of a portion of the eastern boundary, Zones A1, A2, and Zone B together provide a minimum of 100 feet of treated area which should nullify any direct flame impingement and mitigate the radiant heat effects of a wildland fire. 100 feet of the required fuel modification cannot be achieved along the eastern boundary of Lots 127-137, Lot 36, and the southern boundary of Lot 127. However, there is between 46 and 58 feet of required irrigated landscaping, a no build zone, and a solid non-combustible wall along the eastern lot boundaries of Lots 127-137 and 30 feet of required irrigated

landscaping, a no build zone, and a solid non-combustible wall along the eastern lot boundary of Lot 36 and the southern boundary of Lot 127. In addition these lots shall be required to have single story structures. Therefore these features along with the alternative methods and means as additional construction features outlined in Section 7.1 should be more than sufficient to provide protection from the projected 22.7 foot flame lengths in the untreated areas before reaching the treated areas under a worst case scenario Santa Ana driven fire.

The homeowners shall be responsible for maintaining Fuel Modification Zones on their lots. The HOA is responsible for maintaining Fuel Modification Zones outside the lot boundaries and the detention basin. In the event a home is repossessed, the unit/agency holding title to the lot will be responsible for the maintenance on the lot.

6.1 Fuel Treatment Zone A1 - Lot Owner Maintained (*Shown as No Color on the Fuel Modification Map*)

Defined

Fuel Treatment Zone A1 is an irrigated zone, commonly called the defensible space zone, and shall be free of all combustible construction and materials. It is measured from the exterior walls of the structure or from the most distal point of a combustible projection, an attached accessory structure, or an accessory structure within 10 feet of a habitable structure. It provides the best protection against the high radiant heat produced by a wildfire and a generally open area in which fire suppression forces can operate during wildfire events. This zone includes a level or level-graded area around the structure.

Required Landscaping

- Plants in this zone need to be fire resistant and shall not include any pyrophytes that are high in oils and resins such as pines, eucalyptus, cedar, cypress or juniper species. Plants used in fuel modification zones should exhibit the following qualities to be the most “fire resistant: thick, succulent or leathery leaf species with high moisture content; tendency to produce limited litter; the presence of high salt levels or similar compounds which may contribute to fire resistance; ability to withstand drought; and the ability to withstand severe pruning. Refer to APPENDIX ‘A’ for the RCFD Prohibited Plant list.
- Zone A1 will be cleared of all fire prone and undesirable plant species (see APPENDIX ‘A’).
- Landscape designs using hardscape features such as driveways, swimming pools, concrete, rock, pavers, and similar non-combustible features to break up fuel continuity within Zone A are encouraged.
- Landscaping shall be irrigated and primarily consist of fire-resistant, maintained native or ornamental plantings.
- Plants shall be low-growing and approved by the RCFD. Mature height of plants shall not exceed 18 inches.
- Trees shall be single specimens or groupings of not more than three trees selected from the approved plant list. Trees are to be planted such that the mature canopies will be at least 10 feet from the exterior walls of the structure or from the most distal point of a combustible projection, an attached accessory structure, or an accessory structure within 10 feet of a habitable building.
- Trees must have a minimum of six feet of vertical separation from low growing, irrigated vegetation beneath the canopy of each tree.

Required Maintenance

- Lots shall be maintained year round by the individual property owners within their property boundary (lot lines) and the HOA outside the lot as required by this CFMP or the RCFD.
- Remove and replace any dead or dying plant material monthly.
- Trees must be maintained to have a minimum of six feet of vertical separation from low growing, irrigated vegetation beneath the canopy of each tree.
- All trees must be maintained to the current ANSI A300 standards [*Tree, Shrub, and Other Woody Plant Maintenance —Standard Practices (Pruning)*] (see http://www.tcia.org/TCIA/TCIA/BUSINESS/A300_Standards/A300_Standards.aspx).

6.2 Fuel Treatment Zone A2 - HOA Maintained (Shown as **Pink on the Fuel Modification Map) Defined**

Zone A2 is an irrigated zone that includes manufactured slopes, parks, detention basins, and roadways.

Required Landscaping

Same as Zone A1

Required Maintenance

Same as Zone A1

6.3 Fuel Treatment Zone B - HOA Maintained (Shown as **Green on the Fuel Modification Map) Defined**

Fuel Treatment Zone B is a transition area between the strict requirements of irrigated Zones A1 and A2 and the undisturbed native vegetation. Zone B is a non-irrigated thinning zone that varies in width, depending on location and that includes the bottom of the debris basin. Thinning zones are utilized to reduce the fuel load of a wildland area adjacent to urban projects thereby reducing the radiant and convective heat of wildland fires. The intent is to achieve and maintain an overall 50 percent reduction of the canopy cover spacing and a 50 percent reduction of the original fuel loading by reducing the fuel in each remaining shrub or tree without substantially decreasing the canopy cover or the removal of tree holding root systems.

Required Landscaping

- Thinning the native vegetation to a point where 50% open space is created.
- Removal of all dead woody debris and exotic or native flammable vegetation (see APPENDIX 'A').
- Allowances for the needs of protected species and habitats will be considered in this zone.
- No combustible construction or materials are allowed in Zone B.

Required Maintenance

- Annually maintain all tree crowns to keep a separation of six feet between the ground fuels (shrubs and ground covers) and the lower limbs.
- All trees must be maintained to the current ANSI A300 standards [*Tree, Shrub, and Other Woody Plant Maintenance —Standard Practices (Pruning)*] (see http://www.tcia.org/TCIA/TCIA/BUSINESS/A300_Standards/A300_Standards.aspx)
- Annually prune vegetation to maintain a 50% thinning from the original vegetation cover.
- Native annual and perennial grasses will be allowed to grow and produce seed during the winter and spring. As grasses begin to cure (dry out), they will be cut to 4 inches or less in height.

- Annually remove all dead and dying vegetation and highly flammable exotic species.
- As needed, remove all flammable trash in the debris basin (see APPENDIX ‘A’).

6.4 No Build Zone – Homeowner Maintained (Shown as **Red on the Fuel Modification Map) Defined**

The ‘No Build Zone’ has the same landscaping and maintenance requirements as Zone A1. However, no combustible structures, which include the house, can be built within this zone. Combustible decks, patio covers and gazebos shall be prohibited in this zone. Heavy timber, non-combustible structures, patios, pools, etc are allowed in this zone (see Appendix ‘C’ for examples of approved materials).

7.0 Construction Standards

All structures within the Tract 37904 project shall meet all wildland/interface standards to the satisfaction of the RCFD and City of Perris and be designed and constructed with ignition resistant construction requirements. All construction and ignition resistant requirements shall meet the 2019 California Fire and Building Code, and Chapter 7A-California Building Code. For a summary of the current construction requirements as of the date of this report, see APPENDIX ‘E’. The fire protection features described herein shall be maintained to equivalent or greater ignition resistance.

All non-habitable accessory structures such as decks, balconies, patio, covers, gazebos and fences shall be built from non-combustible materials. The owner is not restricted from having concrete patios, concrete walkways or a swimming pool within the Fuel Treatment Zones in compliance with other codes. Refer to APPENDIX ‘C’ for photos and descriptions of non-combustible decks, patio covers, and railings for these non-habitable accessory structures.

Construction or building permits shall not be issued until the fire code official inspects and approves required fire apparatus access and water supply for the construction site. Prior to the delivery of combustible building construction materials to the project site the following conditions shall be completed to the satisfaction of the RCFD:

- Water and power utilities shall be approved and installed by the appropriate inspecting department or agency.
- Zones A1 and A2 shall be cleared of all vegetation prior to combustible material arriving on the site and subsequently planted to the requirements stated in Sections 6.1, 6.2, and 6.2 after construction is completed.

7.1 Alternative Methods and Means - Additional Required Construction Features

Due to the inability to provide 100 feet of fuel modification on the Eastern Boundary of Lots 127-137, and Lot 36, and the southern boundary of Lot 127, the following additional required construction features shall be implemented as Alternative Methods and Means (AM&M) to mitigate for the reduced fuel modification zones. These measures should be more than sufficient to protection the structures from radiant heat and direct flame impingement for the projected flame lengths of 22.7 in the untreated areas in a worst case fire weather scenario as determined by Behave calculations outlined in Sections 3.0 and 3.1.

1. All vents in the structures shall be “Brandguard”, “O’Hagin Fire & Ice® Line – Flame and Ember Resistant” or equivalent type vents.

2. All operable windows shall be provided with metal mesh bug screens over the operable opening to replace traditional vinyl bug screens to prevent embers from entering the structure during high wind conditions when windows may be inadvertently left open.
3. All swinging exterior doors shall be self closing (e.g., pneumatic or spring loaded hinges) and self-latching.
4. A six (6) foot solid, non-combustible radiant heat wall shall be installed on or near the lot lines as shown on the Fuel Modification Plan Map Exhibit to aid in radiant heat deflection and mitigate any reduced fuel treatment widths. The upper half of said wall may be a view wall where tempered fire-rated glass is utilized as long as the wall remains solid and noncombustible (See Appendix 'F' for example). Post and glass frame assemblies shall be composed of metal such as steel, and 6063-T5 aluminum alloys or equivalent, respectively, which will not melt and allow the glass to fall out. Access gates to the open space must be non-combustible. If non-solid gates are used metal screens such as security screens with maximum 1/8" inch mesh must be installed over any grillwork or openings. The maximum gap between gate components shall be 1 inch and the threshold of the opening must be a poured concrete curb not less than 4" x 4" and shall not obstruct vehicle access.
5. All structures shall be one-story.

8.0 Infrastructure

8.1 Water Supply

The Tract 37904 project water supply will be provided by City of Perris Public Works (PPW), which purchases water from the Eastern Municipal Water District. Hydrants, mains and water pressures shall be designed to comply with the City of Perris and the County of Riverside Code requirements. An approved permanent water supply, including fire hydrants, capable of supplying the required fire flow for fire protection shall be provided by the developer prior to any combustible material placed on the site or the commencement of construction. The water supply system shall be a looped system served from two points.

Water supplies for fire protection and hydrants shall be in accordance with APPENDIX 'B' and APPENDIX 'C' of the 2019 California Fire Code, Riverside County Ordinance 787.6 and RCFD Standards #06-06, #06-11, Riverside County Ordinance 460, and the City of Perris Guideline for Fire Department Access and Water Requirement for Commercial & Residential Developments.

8.2 Access Roads/Driveways and Gates

Main ingress and egress for the Tract 37904 development will be from Mountain Avenue. Access roads within the property shall be termed "Fire Access Roads" within this document and shall meet the requirements of the City of Perris as outlined in the Guideline for Fire Department Access & Water Requirements for Commercial and Residential Development. Access Roads shall be all weather surface capable of supporting loads of a minimum of 68,000 lbs gross vehicle weight. Access to all portions of the buildings must be within 150 feet of the available fire department access. All roads, sidewalks and similar public improvements will become the responsibility of the HOA to maintain once the project is completed.

The Tract 37904 project will be a gated community. All gates to be installed shall meet the City of Perris and RCFD Standards and shall be approved by the fire authority official prior to fabrication and installation. A Knox override key switch or similar device must be installed outside the gate in an approved, readily visible, and unobstructed location at or near the gate to provide emergency access.

In addition, access gates to the open space must be non-combustible. If non-solid gates are used metal screens such as security screens with maximum 1/8" inch mesh must be installed over any grillwork or openings. The maximum gap between gate components shall be 1 inch and the threshold of the opening must be a poured concrete curb not less than 4" x 4" and shall not obstruct vehicle access

9.0 Homeowner Education

A copy of this report shall be available in the Tract 37904 Sales Office for review by any potential homebuyer. The Sales Office shall provide a copy of this Fuel Modification Plan to the first buyer at the close of escrow of the initial sale. In all subsequent sales of the property, the new property owner(s) shall be provided with a copy of this CFMP by the HOA to insure continued compliance with all Fuel Modification maintenance and construction requirements. The HOA shall yearly provide the lot owners with information regarding the wildfire mitigation efforts necessary for community fire safety that are contained within this CFMP.

Each homeowner shall be aware of the herein described fire protection measures, the types of non-combustible construction, and the plant materials that are allowed within their lot's boundaries. Of particular importance are APPENDICES 'A', 'C', and 'D' of this plan which provides guidance in the types of plants that are allowed to be established in landscaped areas and appropriate construction within Fuel Treatment Zones. Plant selection is critical as embers often travel over a mile during Santa Ana wind events. In addition, firewood and similar combustible materials shall not be stored within 30-feet of any structure.

Ready, Set, Go is the evacuation strategy proposed for this project. Should a wildfire exist that threatens the property or safety of people at the site, the following actions shall be implemented:

1. Ready – Preparing for the Fire Threat: *Take personal responsibility and prepare long before the threat of a wildfire so the home is ready in case of a fire. Maintain a defensible space by clearing brush away from all structures and range facilities. Use fire-resistant landscaping and harden structures with fire-safe construction measures. Assemble emergency supplies and belongings in a safe spot. Make sure all individuals within the area are 'on the same page' in commitment to advance preparation. Plan escape routes.*

2. Set – Situational Awareness When a Fire Starts: *Pack vehicle(s) with emergency items. Stay aware of the latest news from local media and the local fire department for updated information on the fire and perform the following:*

- ✓ *Close all windows and doors that lead outside to prevent sparks from entering the house.*
- ✓ *Close all doors within the house in case the house does catch on fire; this will slow down the spread of the fire from room to room.*

- ✓ *Move all combustible materials in the home away from windows to prevent the possibility of heat from a fire radiating through windows and glass doors and catching flammable materials inside the home on fire. This includes drapes, curtains and furniture.*
- ✓ *Close windows and all Venetian blinds or noncombustible window coverings.*
- ✓ *Turn on the lights in each room, porch, and yard. This aids in visibility when the smoke gets thick and darkens the sky.*
- ✓ *Fill all sinks, bathtubs and buckets with water in case the power goes out.*
- ✓ *Shut off any gas valves within the house or outside.*
- ✓ *Open the damper on fireplaces to stabilize inside/outside pressure, but close fireplace screens to keep sparks from igniting the house.*

3. Go – Leave early! *Following an Action Plan makes one prepared and firefighters are now able to best maneuver the wildfire and ensuring everyone’s safety. Follow instructions given by the Fire Department official on site.*

10.0 Mandated Inclusions in the CC&R’s

The HOA CC & R’s shall include the following statements:

- 1) The HOA shall be responsible for all required fuel treatment and fire protection measures mentioned in this Fire Protection Plan and shall have authority for enforcing required fuel treatment measures around all structures and restrictions on placing combustible structures within the fuel treatment zones.
- 2) Homeowners shall be responsible for all required fuel treatment and fire protection measures on their respective lots.
- 3) Each lot owner shall annually financially contribute their fair share of HOA required fuel treatment costs.
- 4) The Riverside County Fire Department will hold the HOA of the Tract 37904 project accountable for enforcement of all wildland fire protection issues discussed in this plan.
- 5) The HOA shall have the authority for enforcing a ban on trash dumping or disposal of green waste in the fuel treatment zones or open space areas.
- 6) All landscaping plans, including additional structures, must be approved by the HOA
- 7) The HOA is responsible to the Riverside County Fire Department for the completion of all required Fuel Treatments in the common areas. Required on-going maintenance will be accomplished on an as needed basis. Should maintenance not be performed in a manner consistent with this Plan, the Riverside County Fire Department shall have the right to abate any treatment zone they deem a threat to the Tract 37904 development or adjoining properties. In doing so, all cost incurred will be billed to the owner(s). At the discretion of the Riverside County Fire Department Fire Marshal, yearly inspection of treatment areas may be required.

- 8) The irrigation system for all Fuel Modification Zones shall be kept in good condition and proper working order at all times. The irrigation system shall not be turned off except for necessary repairs, maintenance or during extended rainfall.
- 9) Any disputes related to individual lot landscaping or fuel treatment, with respect to interpretation of the Fuel Modification Plan, shall be decided by the Riverside County Fire Department or its designated representative and whose decision shall be final and binding on the lot owner.

11.0 Conceptual Fuel Modification Map

Attached to this CFMP is the Tract 37904 Conceptual Fuel Modification Map depicting the location of all proposed fuel treatments, as well as fire access roads, lot lines and development boundaries. This map also depicts the adjacent developed lots as a reference for interlinking fuel treatments.

APPENDIX 'A'

Prohibited Plant List

APPENDIX 'A'

Prohibited (& Fire Prone) Plant Species List For Fuel Modification Zones in High & Very High Hazard Areas

	Botanical Name	Common Name	Plant Form
1.	Acacia species •	Acacia	Shrub/Tree
2.	Adenostema fasciculatum	Chamise	Shrub
3.	Adenostema sparsifolium	Red Shank	Shrub/Tree
4.	Artemisia californica	California Sagebrush	Shrub
5.	Anthemis cotula	Mayweed	Weed
6.	Arundo donax	Giant reed	Grass/weed
7.	Brassica nigra	Black Mustard	Weed
8.	Brassica ropa	Yellow Mustard	Weed
9.	Cedrus species	Cedar	Tree
10.	Cirsim vugare	Wild Artichoke	Weed
11.	Conyza canadensis	Horseweed	Weed
12.	Cortaderia selloana	Pampas Grass	Tall Grass
13.	Cupressus species	Cypress	Tree
14.	Cytisus species	Broom	Shrub
15.	Eriogonum fasciculatum	Common Buckwheat	Shrub
16.	Eucalyptus species	Eucalyptus	Shrub/Tree
17.	Heterotheca grandiflora	Telegraph plant	Weed/shrub
18.	Juniperus species	Junipers	Succulent
19.	Lactuca serriola	Prickly lettuce	Weed
20.	Nicotiana bigelevelil	Indian tobacco	Shrub
21.	Nicotiana glauca	Tree tobacco	Shrub
22.	Pennisetum species	Fountain Grass	Ground cover
23.	Pinus species	Pines	Tree
24.	Rosmarinus species	Rosemary	Shrub
25.	Retama monosperma	Broom	Shrub
26.	Salvia species • •	Sage	Shrub
27.	Silybum marianum	Milk thistle	Weed
28.	Spartium junceum	Spanish Broom	Shrub
29.	Urtica urens	Burning nettle	Weed
30.	Washingtonia species	Palms	Tree
<ul style="list-style-type: none"> • Except: Acacia redolens desert carpet (Desert Carpet ground cover) • • Except: Salvia columbariae (chia) Salvia sonomensis (Creeping Sage) 			

APPENDIX 'B'

Literature References

Literature References

1. *Standard Fire Behavior Fuel Models: A Comprehensive Set for Use with Rothermel's Surface Fire Spread Model*, General Technical Report RMRS-GTR-153. June 2005. Joe H. Scott, Robert E. Burgan, United States Department of Agriculture - Forest Service, Rocky Mountain Research Station, Missoula, Montana.
2. *BehavePlus: Fire Modeling System, version 5.0: Variables*. General Technical Report RMRS-GTR-213WWW Revised. September 2009. Patricia L. Andrews, United States Department of Agriculture - Forest Service, Rocky Mountain Research Station, Missoula, Montana.
3. *Behave Plus Fire Modeling System, Version 5.0.4*, General Technical Report RMRS-GRT-106WWW Revised. July 2008. Patricia L. Andrews, Collin D. Bevins, Robert Seli. United States Department of Agriculture - Forest Service, Rocky Mountain Research Station, Missoula, Montana.
4. California Code of Regulations Title 14 section 1280 and Title 24 Part 9
5. California Public Resources Code Sections 4201 through 4204
6. California Government Code, sections 51175 through 51189
7. 2019 California Fire Code portion of the CBSC, including appendices to Chapters 1 & 4 and Appendices B, F & H
8. National Fire Protection Association - NFPA 13 Standard for the Installation of Sprinkler Systems in One and Two-Family Dwellings and Manufactured Homes, 13-R & 13-D, 2016 Editions
9. National Fire Protection Association - NFPA 1142 *Standard on Water Supplies for Suburban and Rural Fire Fighting*.
10. National Fire Protection Association - NFPA 1144 *Standard for Reducing Structure Ignition Hazards from Wildfire*.
11. 2019 California Fire Code and Local Amendments
12. 2019 California Building Code- Chapter 7A- *Materials and Construction Methods for Exterior Fire Exposure*.
13. 2019 California Residential Code (CRC) R327
14. *The California State and Local Responsibility Area Fire Hazard Severity Zone Map – Fire and Resource Assessment Program of CAL FIRE*
15. County of Riverside Ordinance No. 787 (as amended through 787.7)
16. County of Riverside Ordinance No. 460
17. Western Region Climate Center. *Historic Climate Data from Remote Automated Weather Stations*. RAWs USA Climate Archive. Reno, NV. Data for all Remote Automated Weather Stations is available at: <http://www.raws.dri.edu/index.html>
18. City of Perris Guideline for Fire Department Access and Water Requirement for Commercial & Residential Developments

APPENDIX 'C'

Non-combustible & Fire Resistant Building Materials

Appendix 'C'

Non-Combustible & Fire-Resistant Building Materials For Balconies, Carports, Decks, Patio Covers and Floors

Note: The Office of the State Fire Marshal (SFM) Fire Engineering Division administers licensing programs and performs engineering functions affecting consumer services and product evaluation, approval and listing. The following link is to the State Fire Marshal's office for more information on the Building Material List for non-combustible and fire resistant building materials: <https://osfm.fire.ca.gov/divisions/fire-engineering-and-investigations/building-materials-listing/bml-search-building-materials-listing>.

Examples of non-combustible & fire-resistant building materials for balconies, carports, decks, patio covers, and floors are listed below. These are only examples, and materials listed here must meet local fire and building codes and are not an endorsement of any particular brand or manufacturer.

I. NON-COMBUSTIBLE HEAVY GAGE ALUMINUM MATERIALS - *Metals USA Building Products Group - Ultra-Lattice*



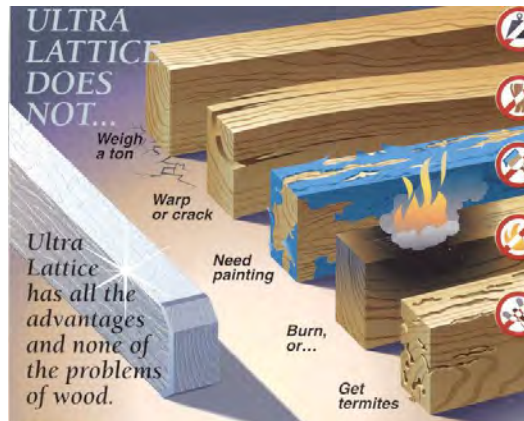
Ultra-Lattice Stand Alone Patio Cover



Ultra-Lattice Attached Patio Cover



Ultra-Lattice Solid Patio Cover



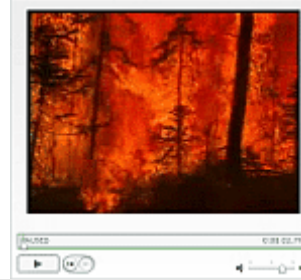
Ultra-Lattice Vs. Wood

II. FRX EXTERIOR FIRE-RETARDANT TREATED WOOD

FRX® fire retardant treated wood may be used in exterior applications permitted by the codes where: public safety is critical, other materials would transfer heat or allow fires to spread, sprinkler systems cannot easily be installed, corrosive atmospheres necessitate excessive maintenance of other materials, or fire protection is inadequate or not readily available. The International Building, Residential and Urban-Wildland Interface Codes and regulations, permit the use of fire-retardant treated wood in specific instances. See below for typical exterior uses and typical residential uses.

Typical Exterior Uses

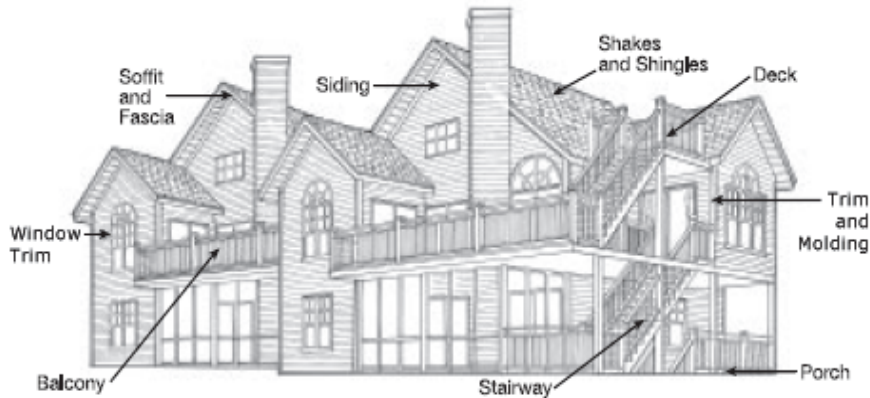
- Wall coverings
- Balconies
- Decks
- Stairways
- Fences
- Sheds
- Gazebos
- Roof coverings
- Open-air roof systems
- Canopies and awnings
- Storefronts and facades
- Eaves, soffits and fascia
- Agricultural buildings and horse stalls
- Scaffolding and scaffold planks
- Construction staging
- Various other residential and commercial uses



Property owners and Architects: See this [2-minute video](#) and the illustration below.



Typical Residential Uses



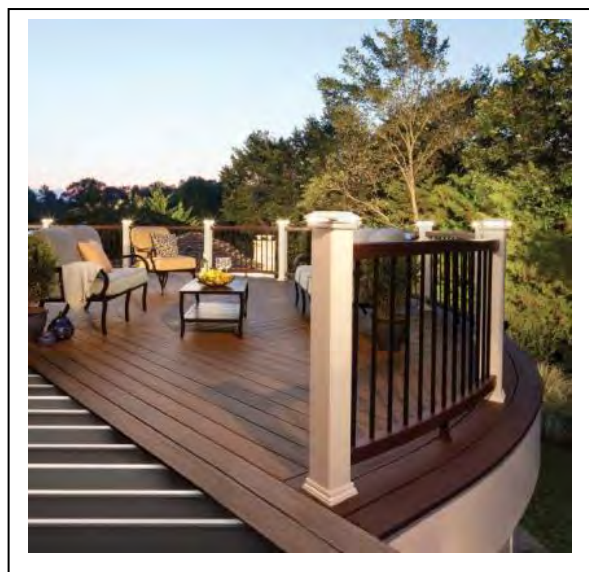
Rising concerns over fire damage and the adoption of urban-wildland interface codes have increased the use of FRT wood in residential structures.

For information on fire retardant treated wood for exterior uses, visit www.frxwood.com.

III. DECKING MATERIALS

Trex Company, Inc. – “Trex Transcend®, Trex Select® and Trex Enhance® wood and polyethylene composite deck board, nominal ranging in size from 1” x 5-1/2” to 1-3/8” x 5-1/2” installed per manufacturer maximum edge-to-edge gap of 3/16”. All Trex decking products meet or exceed the SFM 12-7A-4A testing protocol.

Trex combines both beauty and fire defense. A few examples of installations are shown below:





IV. SOLID “WOOD” DECKING

Company Name: Various Manufacturers

Product Description: Solid “Wood” decking, when installed over minimum 2” x 6” solid “Douglas Fire” or better joists, space 24” or less on center, and decking and joints comply with American Softwood Lumber Standard PS2o as follows:

Minimum nominal 5/4”thick and nominal 6” wide decking boards with a maximum 3/8” radius edges made of solid wood species “Redwood”, “Western Red Cedar”, “Incense Cedar”, “Port Orford Cedar”, or “Alaska Yellow Cedar” having a Class B Flame Spread rating when tested in accordance with ASTM E84. Lumber grades; construction common, commercial or better grade for Redwood; 3 common, commercial or better grades for Cedars.

V. Vents

Examples of Ember Resistant Approved Vents

Brandguard



O'Hagin Fire & Ice® Line – Flame and Ember Resistant

An available option for all O'Hagin attic ventilation products, this attic vent not only features all the same design, construction elements and color choices as the O'Hagin Standard Line, but also features an interior stainless-steel matrix that resists the intrusion of flames and embers. This patent-pending attic vent is accepted for use by many local fire officials for installation in Wildland Urban Interface (WUI) zones.





Vulcan Vents

The founders of Gunter Manufacturing have been working closely over the last two years, with the scientists and inventors of Vulcan Technologies to bring to market this incredible product.

Combining our quality vent products with the fire-stopping honeycomb matrix core designed by Vulcan has produced unique and remarkable results.

At Gunter manufacturing has over 50 years of combined sheet metal manufacturing experience. Special orders are not a problem. Their vent frames are industry standard frames so there is little or no learning curve for installers and contractors. Their stated goal is to provide people with the vents they need to secure their homes with additional safety against wildfires and give them piece of mind from knowing that their home or structure is protected by a product that works!

The core of their fire and ember safe vents are manufactured out of hi-grade aluminum honeycomb and coated with an intumescent coating made by [FireFree Coatings](#). The intumescent coating is designed to quickly swell up and close off when exposed to high heat. The expanded material acts as an insulator to heat, fire, and embers



Before

After

After the cells close off, they are extremely well insulated, and fire or embers cannot penetrate.

Even before the cells close off, the vent is designed to protect against flying embers. In many cases embers will attack a structure before fire ever comes near, so this feature is very important.



Close-up of the coated honeycomb matrix.



Fire easily passes through a standard vent, on the left, but stops cold when it comes up against a Vulcan Vent shown on right.

APPENDIX 'D'

Ignition Resistant Construction

Appendix ‘D’

Ignition Resistant Construction

The following is a summary of the current requirements for ignition resistant construction for high fire hazard areas under Chapter 7A of the California Building Code (CBC) 2019 edition. However the requirements listed below are not all inclusive and all exterior building construction including roofs, eaves, exterior walls, doors, windows, decks, and other attachments must meet the current CBC Chapter 7A ignition resistance requirements, the California Fire Code, and any additional County and/or City codes in effect at the time of building permit application. See the current applicable codes for a detailed description of these requirements and any exceptions.

1. All structures will be built with a Class A Roof Assembly and shall comply with the requirements of Chapter 7A and Chapter 15 of the California Fire Code. Roofs shall have a roofing assembly installed in accordance with its listing and the manufacturer’s installation instructions.
2. Roof valley flashings shall be not less than 0.019-inch (0.48 mm) No. 26 gage galvanized sheet corrosion-resistant metal installed over not less than one layer of minimum 72 pound (32.4 kg) mineral-surfaced non-perforated cap sheet complying with ASTM D3909, at least 36-inch-wide (914 mm) running the full length of the valley.
3. Attic or foundation ventilation louvers or ventilation openings in vertical walls shall be covered with a minimum of 1/16-inch and shall not exceed 1/8-inch mesh corrosion-resistant metal screening or other approved material that offers equivalent protection.
4. Where the roof profile allows a space between the roof covering and roof decking, the spaces shall be constructed to resist the intrusion of flames and embers, be fire stopped with approved materials or have one layer of a minimum 72 pound (32.4 kg) mineral-surfaced non-perforated cap sheet complying with ASTM D3909 installed over the combustible decking.
5. Enclosed roof eaves and roof eave soffits with a horizontal underside, sloping rafter tails with an exterior covering applied to the under-side of the rafter tails, shall be protected by one of the following:
 - noncombustible material
 - Ignition-resistant material
 - One layer of ⁵/₈-inch Type X gypsum sheathing applied behind an exterior covering on the underside of the rafter tails or soffit
 - The exterior portion of a 1-hour fire resistive exterior wall assembly applied to the underside of the rafter tails or soffit including assemblies using the gypsum panel and sheathing products listed in the Gypsum Association Fire Resistance Design Manual
 - Boxed-in roof eave soffit assemblies with a horizontal underside that meet the performance criteria in Section 707A.10 when tested in accordance with the test procedures set forth in ASTM E2957.

- Boxed-in roof eave soffit assemblies with a horizontal underside that meet the performance criteria in accordance with the test procedures set forth in SFM Standard 12-7A-3.
Exceptions: The following materials do not require protection:
 1. Gable end overhangs and roof assembly projections beyond an exterior wall other than at the lower end of the rafter tails.
 2. Fascia and other architectural trim boards.
6. The exposed roof deck on the underside of unenclosed roof eaves shall consist of one of the following:
- Noncombustible material, or
 - Ignition-resistant material, or
 - One layer of 5/8-inch Type X gypsum sheathing applied behind an exterior covering on the underside exterior of the roof deck, or
 - The exterior portion of a 1-hour fire resistive exterior wall assembly applied to the underside of the roof deck designed for exterior fire exposure including assemblies using the gypsum panel and sheathing products listed in the Gypsum Association fire Resistance Design Manual.
Exceptions: The following materials do not require protection:
 1. Solid wood rafter tails on the exposed underside of open roof eaves having a minimum nominal dimension of 2 inch (50.8 mm).
 2. Solid wood blocking installed between rafter tails on the exposed underside of open roof eaves having a minimum nominal dimension of 2 inch (50.8 mm).
 3. Gable end overhangs and roof assembly projections beyond an exterior wall other than at the lower end of the rafter tails.
 4. Fascia and other architectural trim boards.
7. Vents - ventilation openings for enclosed attics, enclosed eave soffit spaces, enclosed rafter spaces formed where ceilings are applied directly to the underside of roof rafters, and underfloor ventilation openings shall be fully covered with metal wire mesh, vents, other materials or other devices that meet one of the following requirements:
- A. Vents listed to ASTM E2886 and complying with all the following:
 - i. There shall be no flaming ignition of the cotton material during the Ember Intrusion Test.
 - ii. There shall be no flaming ignition during the Integrity Test portion of the Flame Intrusion Test.
 - iii. The maximum temperature of the unexposed side of the vent shall not exceed 662°F (350°C).
 - B. Vents shall comply with all of the following:
 - i. The dimensions of the openings therein shall be a minimum of 1/16-inch (1.6 mm) and shall not exceed 1/8-inch (3.2 mm).
 - ii. The materials used shall be noncombustible.
Exception: Vents located under the roof covering, along the ridge of roofs, with the exposed surface of the vent covered by noncombustible wire mesh, may be of combustible materials.
 - iii. The materials used shall be corrosion resistant.

8. Vents shall not be installed on the underside of eaves and cornices.
- Exceptions:**
1. Vents listed to ASTM E2886 and complying with all the following:
 - There shall be no flaming ignition of the cotton material during the Ember Intrusion Test.
 - There shall be no flaming ignition during the Integrity Test portion of the Flame Intrusion Test.
 - The maximum temperature of the unexposed side of the vent shall not exceed 662°F (350°C).
 2. The enforcing agency shall be permitted to accept or approve special eave and cornice vents that resist the intrusion of flame and burning embers.
 3. Vents complying with the requirements of Section 706A.2 shall be permitted to be installed on the underside of eaves and cornices in accordance with either one of the following conditions:
 - 3.1. The attic space being ventilated is fully protected by an automatic sprinkler system installed in accordance with Section 903.3.1.1 or,
 - 3.2. The exterior wall covering and exposed underside of the eave are of noncombustible materials, or ignition-resistant materials, as determined in accordance with SFM Standard 12-7A-5 Ignition-Resistant Material and the requirements
9. All chimney, flue or stovepipe openings that will burn solid wood will have an approved spark arrester. An approved spark arrester is defined as a device constructed of nonflammable materials, having a heat and corrosion resistance equivalent to 12-gauge wire, 19-gauge galvanized steel or 24-gauge stainless steel or other material found satisfactory by the Fire Protection District, having ½-inch perforations for arresting burning carbon or sparks nor block spheres having a diameter less than 3/8 inch (9.55 mm). It shall be installed to be visible for the purposes of inspection and maintenance and removable to allow for cleaning of the chimney flue.
10. All residential structures will have automatic interior fire sprinklers installed according to the National Fire Protection Association (NFPA) 13D 2019 edition - *Standard for the Installation of Sprinkler Systems in One and Two-family Dwellings and Manufactured Homes*. Fire sprinklers are not required in unattached non-habitable structures greater than 50 feet from the residence.
11. The exterior wall covering or wall assembly shall comply with one of the following requirements:
- Noncombustible material, or
 - Ignition resistant material, or
 - Heavy timber exterior wall assembly, or
 - Log wall construction assembly, or
 - Wall assemblies that have been tested in accordance with the test procedures for a 10-minute direct flame contact exposure test set forth in ASTM E2707 with the conditions of acceptance shown in Section 707A.3.1 of the California Building Code, or
 - Wall assemblies that meet the performance criteria in accordance with the test procedures for a 10-minute direct flame contact exposure test set forth in SFM Standard 12-7A-1.

Exception: Any of the following shall be deemed to meet the assembly performance criteria and intent of this section including;

- One layer of 5/8-inch Type X gypsum sheathing applied behind the exterior covering or cladding on the exterior side of the framing, or
- The exterior portion of a 1-hour fire resistive exterior wall assembly designed for exterior fire exposure including assemblies using the gypsum panel and sheathing products listed in the Gypsum Associate Fire Resistance Design Manual.

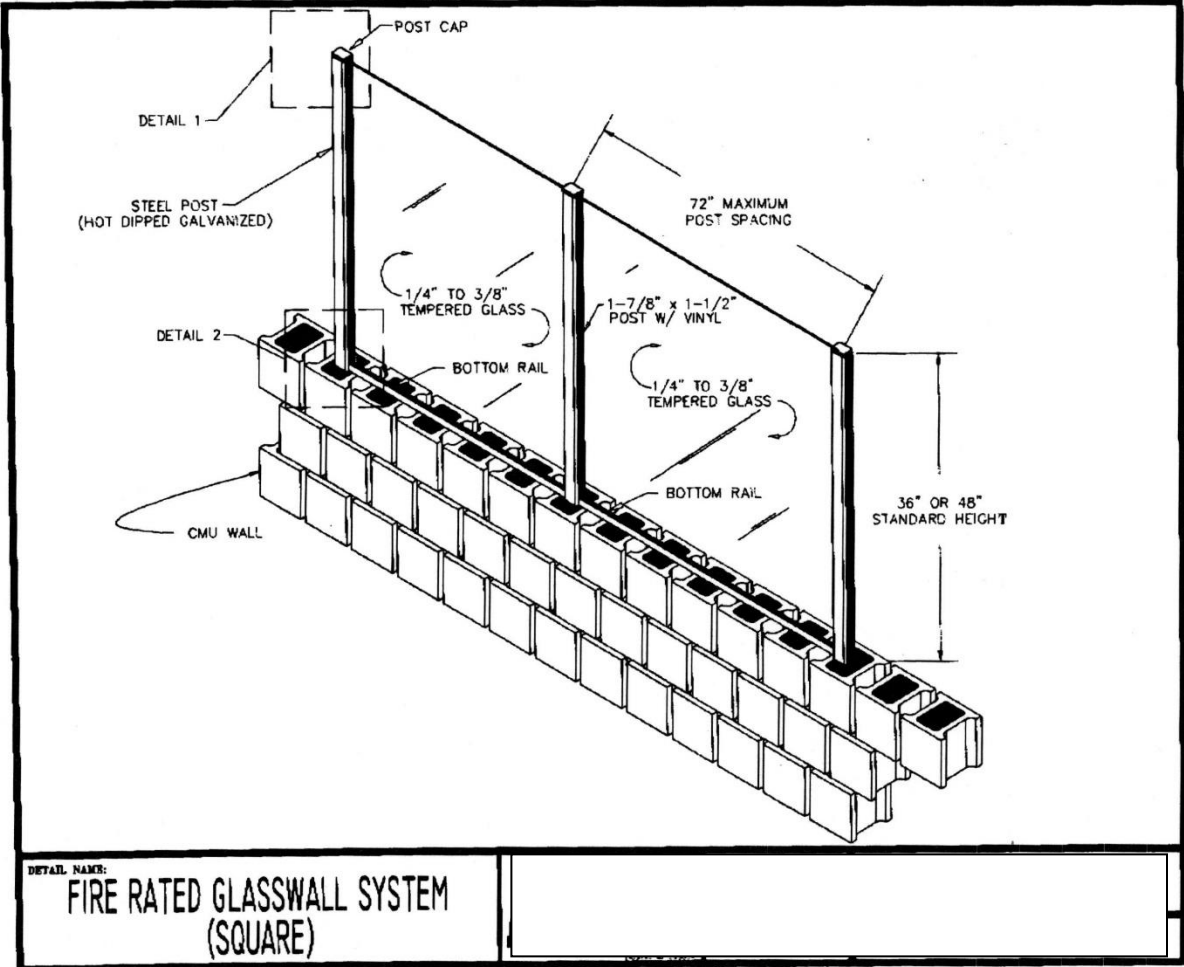
12. Exterior walls shall extend from the top of the foundation to the roof and terminate at 2-inch nominal solid blocking between rafters at all roof overhangs, or in the case of enclosed eaves, terminate at the enclosure.
13. Gutters shall be provided with the means to prevent the accumulation of leaf litter and debris within the gutter that contribute to roof edge ignition.
14. No attic ventilation openings or ventilation louvers shall be permitted in soffits, in eave overhangs, between rafters at eaves, or in other overhanging areas.
15. All projections (exterior balconies, decks, patio covers, unenclosed roofs and floors, and similar architectural appendages and projections) or structures less than five feet from a building shall be of non-combustible material, one-hour fire resistive construction on the underside, heavy timber construction or pressure-treated exterior fire-retardant wood. When such appendages and projections are attached to exterior fire-resistive walls, they shall be constructed to maintain same fire-resistant standards as the exterior walls of the structure.
16. Deck Surfaces shall be constructed with one of the following materials:
 - Material that complies with the performance requirements of Section 709A.4 when tested in accordance with both ASTM E2632 and ASTM E2726, or
 - Ignition-resistant material that complies with the performance requirements of 704A.3 when tested in accordance with ASTM E84 or UL 723, or
 - Material that complies with the performance requirements of both SFM Standard 12-7A-4 and SFM Standard 12-7A-5, or
 - Exterior fire retardant treated wood, or
 - Noncombustible material, or
 - Any material that complies with the performance requirements of SFM Standard 12-7A-4A when the attached exterior wall covering is also composed of noncombustible or ignition-resistant material.
17. Accessory structures attached to buildings with habitable spaces and projections shall be in accordance with the Building Code. When the attached structure is located and constructed so that the structure or any portion thereof projects over a descending slope surface greater than 10 percent, the area below the structure shall have all underfloor areas and exterior wall construction in accordance with Chapter 7A of the Building Code.
18. Exterior windows, skylights and exterior glazed door assemblies shall comply with one of the following requirements:

- Be constructed of multiplane glazing with a minimum of one tempered pane meeting the requirements of Section 2406 Safety Glazing, or
 - Be constructed of glass block units, or
 - Have a fire-resistance rating of not less than 20 minutes when tested according to NFPA 257, or
 - Be tested to meet the performance requirements of SFM Standard 12-7A-2.
19. All eaves, fascia and soffits will be enclosed (boxed) with non-combustible materials. This shall apply to the entire perimeter of each structure. Eaves of heavy timber construction are not required to be enclosed as long as attic venting is not installed in the eaves. For the purposes of this section, heavy timber construction shall consist of a minimum of 4x6 rafter ties and 2x decking.
20. Detached accessory buildings that are less than 120 square feet in floor area and are located more than 30 feet but less than 50 feet from an applicable building shall be constructed of noncombustible materials or of ignition-resistant materials as described in Section 704A.2 of the California Building Code.
Exception: Accessory structures less than 120 square feet in floor area located at least 30 feet from a building containing a habitable space.
21. All rain gutters, down spouts and gutter hardware shall be constructed from metal or other noncombustible material to prevent wildfire ignition along eave assemblies.
22. All side yard fence and gate assemblies (fences, gate and gate posts) when attached to the home shall be of non-combustible material. The first five feet of fences and other items attached to a structure shall be of non-combustible material.
23. Exterior garage doors shall resist the intrusion of embers from entering by preventing gaps between doors and door openings, at the bottom, sides and tops of doors, from exceeding 1/8 inch. Gaps between doors and door openings shall be controlled by one of the methods listed in this section.
- Weather-stripping products made of materials that:
 - (a) have been tested for tensile strength in accordance with ASTM D638 (Standard Test Method for Tensile Properties of Plastics) after exposure to ASTM G155 (Standard Practice for Operating Xenon Arc Light Apparatus for Exposure of Non-Metallic Materials) for a period of 2,000 hours, where the maximum allowable difference in tensile strength values between exposed and non-exposed samples does not exceed 10%; and (b) exhibit a V-2 or better flammability rating when tested to UL 94, Standard for Tests for Flammability of Plastic Materials for Parts in Devices and Appliances.
 - Door overlaps onto jambs and headers.
 - Garage door jambs and headers covered with metal flashing.
24. Exterior doors shall comply with one of the following:
1. The exterior surface or cladding shall be of noncombustible material or,
 2. The exterior surface or cladding shall be of ignition-resistant material or,
 3. The exterior door shall be constructed of solid core wood that complies with the following requirements:

- 3.1. Stiles and rails shall not be less than 1-3/8 inches thick.
- 3.2. Panels shall not be less than 1-1/4 inches thick, except for the exterior perimeter of the panel that shall be permitted to taper to a tongue not less than 3/8 inch thick.
4. The exterior door assembly shall have a fire-resistance rating of not less than 20 minutes when tested according to NFPA 252 or,
5. The exterior surface or cladding shall be tested to meet the performance requirements of Section 707A.3.1 when tested in accordance with ASTM E2707 or,
6. The exterior surface or cladding shall be tested to meet the performance requirements of SFM Standard 12-7A-1.

APPENDIX 'E'

Non-Combustible Wall Example



APPENDIX 'F'

Perris Fire Department Access & Water Plan Notes Attachment 1

ATTACHMENT 1

Perris Fire Department Access & Water Plan Notes

All of the notes listed in the INSPECTION REQUIREMENTS and GENERAL REQUIREMENTS sections shall be placed, verbatim, on the plan under the heading "FIRE DEPARTMENT ACCESS & WATER NOTES."

INSPECTION REQUIREMENTS

1. Perris site inspections are required for this project. Please schedule all field inspections at least 48 hours in advance. Inspections canceled after 1 p.m. on the day before the scheduled date will be subject to a re-inspection fee. Call (951) 443-1029 to schedule an inspection.
2. A lumber drop inspection shall be performed prior to bringing combustible materials (or combustible fixtures and finishes for structures of non-combustible construction). All-weather access roads capable of supporting 68,000 lbs., topped with asphalt, concrete, or equivalent shall be in place and hydrants operational at time of lumber drop inspection.
3. For projects with fuel modification, a vegetation clearance inspection is required prior to a lumber drop inspection. Use the fuel modification plan service request number to schedule the vegetation clearance inspection.
4. Phased installation of fire access roads requires additional inspections not covered by the fees paid at plan submittal. Contact (951) 443-1029 to arrange for additional inspections that may be needed and any fees that may be due.
5. An original approved, signed, wet-stamped Perris fire access & water plan shall be available on-site at time of inspection.
6. Access roads and hydrants shall be maintained and remain clear of obstructions at all times during and after construction. Areas where parking is not permitted shall be clearly identified at all times. Obstruction of fire lanes and hydrants may result in cancellation or suspension of inspections.
7. Temporary fuel tanks of 60 or more gallons shall be reviewed, inspected, and permitted by the Office of the Fire Marshal, City of Perris prior to use.
8. The project address shall be clearly posted and visible from the public road during construction.
9. All gates in construction fencing shall be equipped with either a Knox or breakaway padlock.
10. Buildings of four or more stories shall be provided with stairs and a standpipe before reaching 40 feet in height.

GENERAL REQUIREMENTS

11. Fire lane widths shall be measured from top face of the curb to top face of the curb for fire lanes with standard curbs and gutters and from flow-line to flow-line for fire lanes with modified curb designs (e.g., rolled, ramped, etc). The developer is responsible to verify that all approved public works or grading department street improvement plans or precise grading plans conform to the minimum street width measurements per the approved Perris fire department access & water plan and standards identified in Perris Fire Department Access & Water Guideline for all portions of the fire access roads.
12. Permanent, temporary, and phased emergency access roads shall be designed and maintained to support an imposed load of 68,000 lbs. and surfaced to provide all-weather driving capabilities.
13. Fire lane signs and red curbs shall meet the specifications shown in Perris Fire Department Access & Water Guideline and shall be installed as described therein. Additional fire lane markings may be required at the time of inspection depending on field conditions.
14. All fire hydrants shall have a "Blue Reflective Pavement Marker" indicating their location per the Perris standard. On private property markers are to be maintained in good condition by the property owner.
15. Address numbers shall be located and be of a color and size so as to be plainly visible and legible from the roadway from which the building is addressed in accordance with Perris Fire Department Access & Water Guideline.
16. Access gates shall be approved prior to installation and shall be in compliance with Chapter 5 of the CFC and Perris Fire Department Access & Water Guideline.
17. Approved access walkways shall be provided to all required openings and all rescue windows.
18. Vegetation shall be selected and maintained in such a manner as to allow immediate access to all hydrants, valves, fire department connections, pull stations, extinguishers, sprinkler risers, alarm

- control panels, rescue windows, and other devices or areas used for firefighting purposes. Vegetation or building features shall not obstruct address numbers or inhibit the functioning of alarm bells, horns, or strobes.
19. Dumpsters and trash containers larger than 1.5 cubic yards shall not be stored in buildings or placed within 5 feet of combustible walls, openings or combustible roof eave lines unless protected by an approved sprinkler system.
 20. Any future modification to the approved Fire Department Access & Water Plan or approved site plan, including but not limited to road width, grade, speed humps, turning radii, gates or other obstructions, shall require review, inspection, and approval by the Office of the Fire Marshal, City of Perris.
 21. Approval of this plan shall not be construed as approval of any information or project conditions other than those items and requirements identified in Perris Fire Department Access & Water Guide[ine] and related portions of the CFC and CBC. This project may be subject to additional requirements not stated herein upon examination of actual site and project conditions or disclosure of additional information.

PACIFIC EMERALD - TTM 37904

CONCEPTUAL FUEL MODIFICATION

PLAN EXHIBIT

ENGINEER:

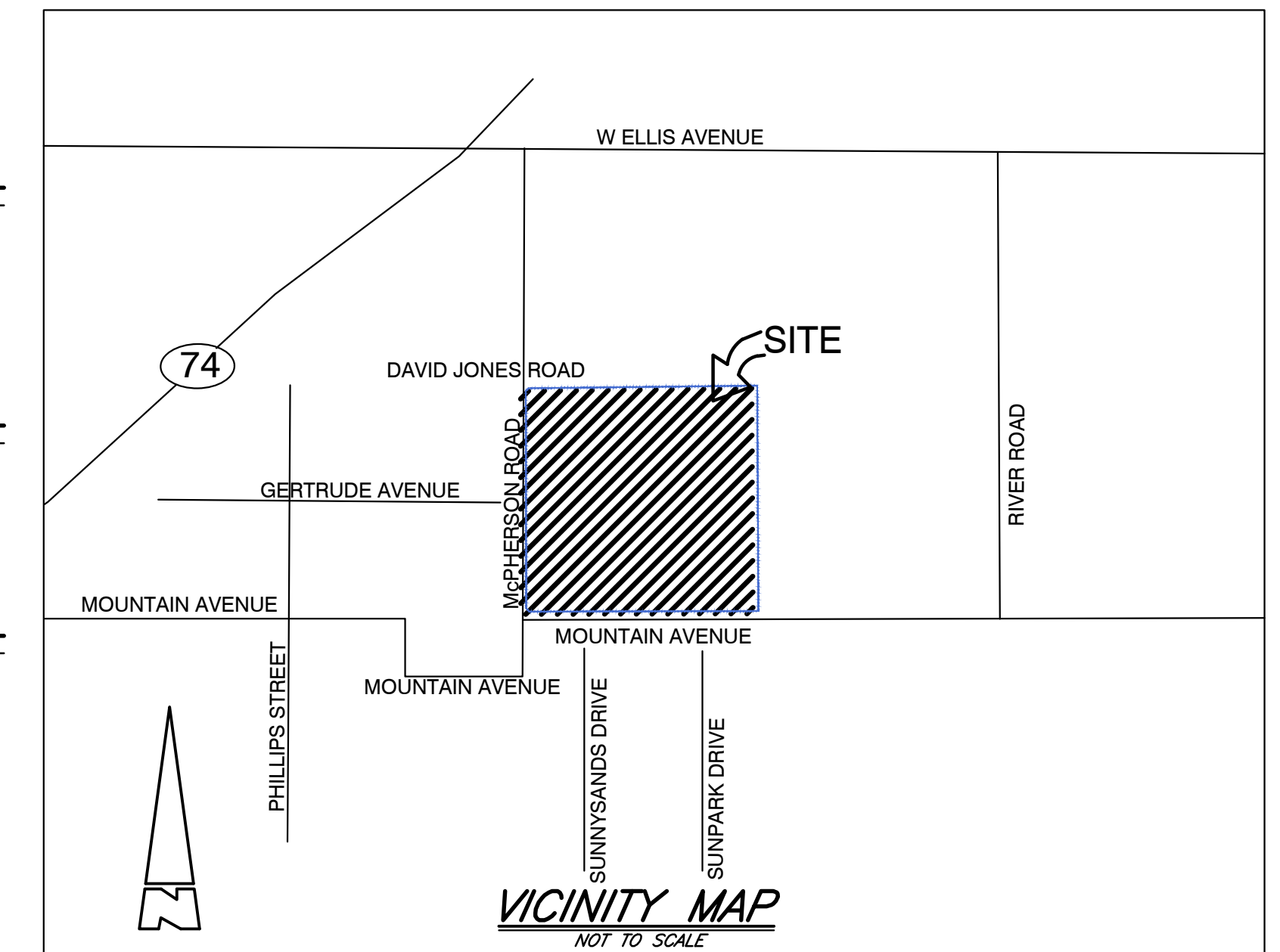
KWC ENGINEERS
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PH: (951) 734-2130
ATTN: VICTOR ELIA, P.E.

PREPARED FOR:

PACIFIC COMMUNITIES
1000 DOVE STREET, SUITE 300
NEWPORT BEACH, CA 92660
(949) 660-8988

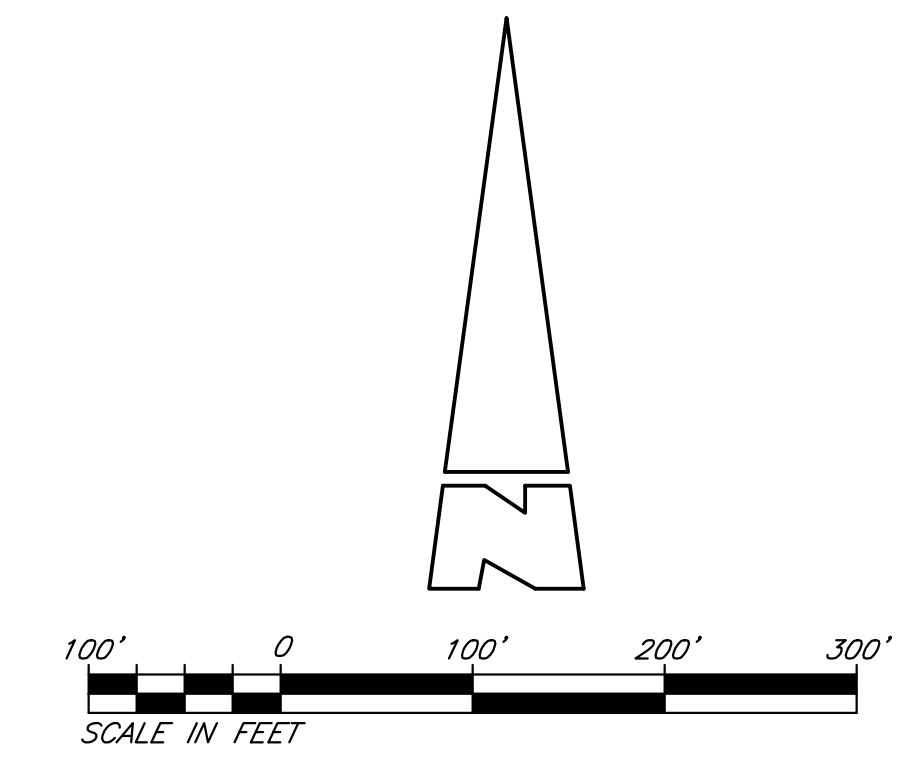
PREPARED BY:

FIREWISE 2000, LLC.
PO BOX 39
VALLEY CENTER, CA 92082
PH: 760-745-3947
CONTACT: MEL JOHNSON



LEGEND-RESIDENTIAL:

- NO COLOR
IRRIGATED ZONE A1 (LOT OWNER MAINTAINED) - ZONE A1 IS AN IRRIGATED ZONE BEGINNING AT THE EDGE OF EACH STRUCTURE AND INCLUDES THE ENTIRE LOT (FRONT, BACK AND SIDEYARDS) AND IS MAINTAINED TO ZONE A1 CRITERIA. ZONE A1 WILL BE CLEARED OF ALL EXISTING NATIVE VEGETATION AND REPLANTED WITH DROUGHT TOLERANT, FIRE RESISTANT AND IRRIGATED FIRE RESISTANT LAWNS, GROUND COVERS AND LOW GRADING SHRUBS (SEE WRITTEN FIRE PROTECTION PLAN FOR FURTHER INFORMATION).
- IRRIGATED ZONE A2 (HOA MAINTAINED) - ZONE A2 IS AN IRRIGATED ZONE THAT INCLUDES MANUFACTURED SLOPES, PARKS, ROADSIDES, DEBRIS BASINS, AND COMMON AREAS MAINTAINED TO ZONE A1 CRITERIA (SEE WRITTEN FIRE PROTECTION PLAN FOR FURTHER INFORMATION).
- FUEL TREATMENT ZONE B (HOA MAINTAINED) - ZONE B IS A NON-IRRIGATED THINNING ZONE AND INCLUDES THE BOTTOM OF THE DETENTION BASIN. THE INTENT IS TO REMOVE 100 PERCENT OF ALL DEAD, DYING, AND PROHIBITED AND INVASIVE SPECIES (SEE WRITTEN FIRE PROTECTION PLAN FOR FURTHER INFORMATION).
- NO BUILD ZONE (LOT OWNER MAINTAINED) - THE NO BUILD ZONE HAS THE SAME LANDSCAPING AND MAINTENANCE REQUIREMENTS AS ZONE A1. NO COMBUSTIBLE STRUCTURES, WHICH INCLUDE THE HOUSE, CAN BE BUILT WITHIN THIS ZONE. COMBUSTIBLE DECKS, PATIO COVERS AND GAZEBOS WILL BE PROHIBITED IN THIS ZONE. (SEE WRITTEN FIRE PROTECTION PLAN FOR FURTHER NOTICE).
- NON-COMBUSTIBLE RADIANT HEAT WALL - MINIMUM 6' HIGH BLOCK OR COMBINATION BLOCK AND TEMPERED GLASS WALL (SEE WRITTEN FIRE PROTECTION PLAN FOR FURTHER INFORMATION).
- MAINTENANCE AND FIRE ACCESS GATE
SEE WRITTEN FIRE PROTECTION FOR DETAILS
- MAINTENANCE ACCESS ROAD (PAVED)



Certified By
Melvin A. Johnson
Melvin A. Johnson, Owner Date: 09/20/2021
Certified CEQA Wildland Fire Consultant
FIREWISE 2000, LLC
PO Box 39
Valley Center, CA 92082
Telephone: 760-745-3947
info@firewise2000.com

This Exhibit Replaces the Exhibit Dated 02/9/2021 and is consistent with the Revised CFMP dated 09/20/2021

KWC ENGINEERS
CIVIL ENGINEERS • PLANNERS • SURVEYORS
1880 COMPTON AVENUE, SUITE 100 • CORONA, CA 92881-3370 • 951-734-2130



M:\19\1885\PRELIM\EXH\Fuel Modification\1885 FUEL MODIFICATION EXHIBIT.dwg 10/15/2021 16:29

PRELIMINARY DRAINAGE REPORT

TRACT MAP NO. 37904

Pacific Emerald
City of Perris, California



PREPARED FOR:

PACIFIC COMMUNITIES BUILDERS, INC.
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January, 2021
Revised October 2021

PREPARED BY:



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Victor Elia

Victor Elia, PE

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- Appendix B: Unit Hydrograph Calculations
- Appendix C: Mountain Avenue Floodplain Analysis

LIST OF EXHIBITS

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- Exhibit B: Onsite Proposed Condition Unit Hydrograph Map
- Exhibit C: Offsite Unit Hydrograph Map
- Exhibit D: Mountain Avenue Wash 100-Year Floodplain Map

INTRODUCTION

1.1 PURPOSE OF STUDY

Tentative Tract Map No. 31304, known as “Pacific Emerald” is a proposed subdivision of approximately 40 acres, consisting of 199 single family residential lots, two (2) recreation areas, a large open space area and detention/catch basin. The project is located in the City of Perris at the northeast corner of McPherson Road and Mountain Avenue (see Figure 1).

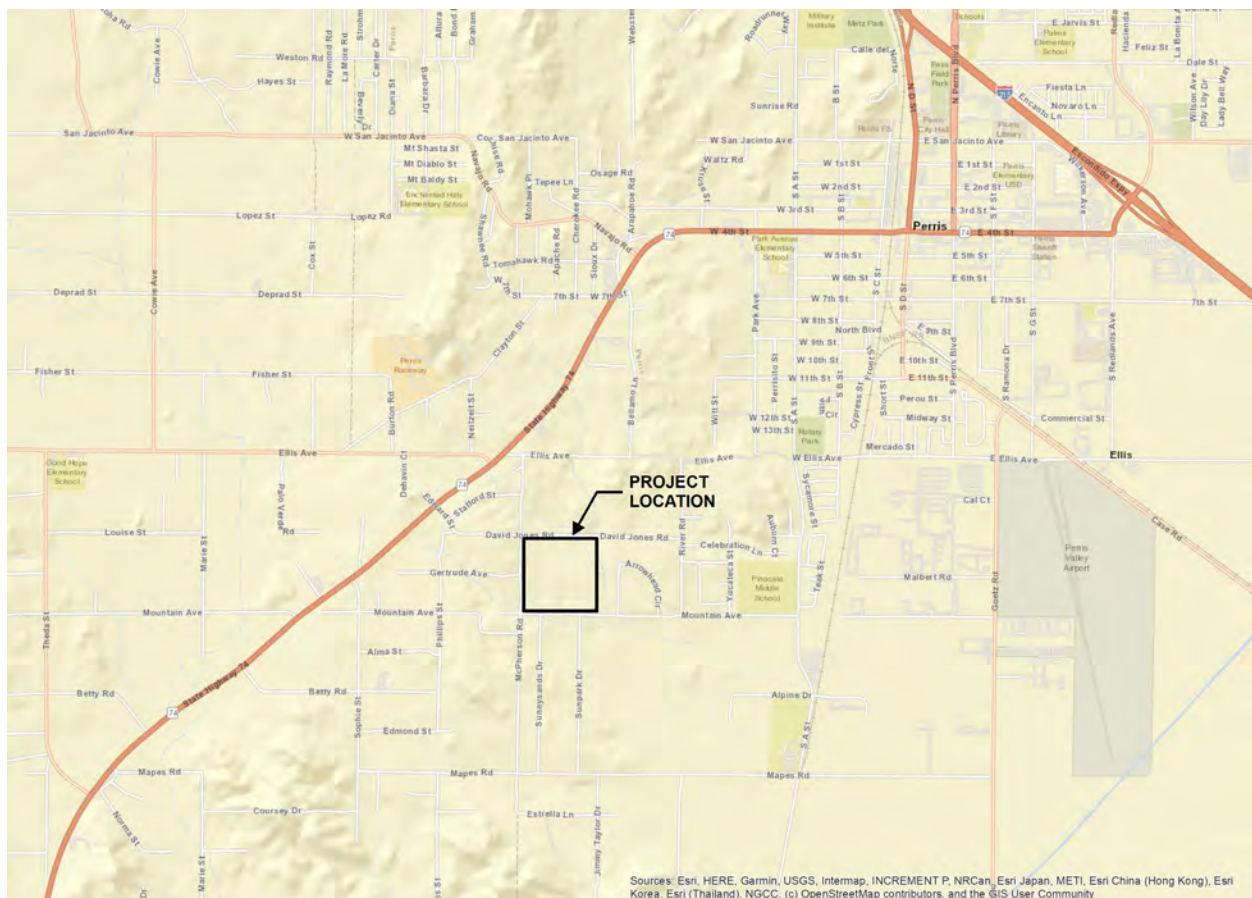


Figure 1: Project Vicinity Map

The purpose of this study is to hydrologically model the project site’s onsite and offsite tributary watersheds to determine the existing and proposed peak runoffs and volumes in order to analyze stormwater mitigation. The hydrologic analysis was prepared using the Unit Hydrograph Method as specified in the Riverside County Flood Control & Water Conservation District Hydrology

Manual (RCHM). The flows were used to estimate the above and below ground drainage facilities to support the Pacific Emerald project. In addition, due to the close proximity of the Mountain Avenue Wash along the eastern property boundary, a 100-year floodplain analysis will be performed to determine the flooding extents and impacts to the proposed development.

1.2 EXISTING CONDITIONS

The site consists of undeveloped vacant land with light to moderate growth of weeds and brush, scattered trees and bushes (see front cover). Numerous boulders were scattered across the site. The site has a gently sloping terrain from the northwest to the southeast. Surface drainage is to the east-southeast. A drainage course (Mountain Ave Wash) is located within the northeastern portion of the site.

1.3 FEMA FLOODPLAIN MAPPING

Review of FEMA Flood Insurance Rate Map (FIRM) Panel No. 06065C1440H, effective date August 18, 2014, indicated that the northeasterly portions of Tract Map 31304 are within the Mountain Ave Wash Zone X (shaded) Floodplain as shown in Figure 2.

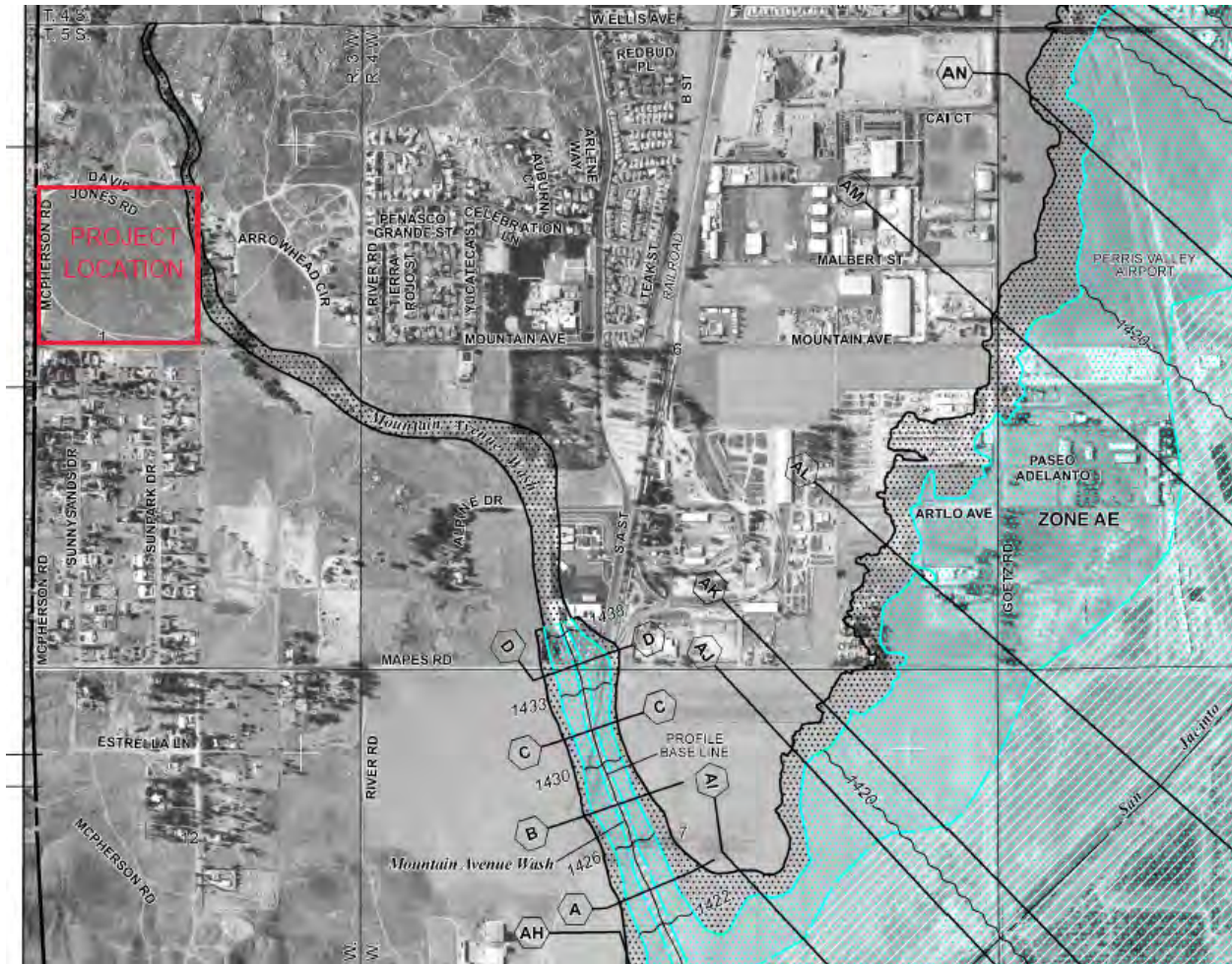


Figure 2: Project Location shown on FIRM Map No. 06065C1440H

The Zone X (shaded) designation for this floodplain refers to areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile. There are no Base Flood Elevations (BFEs) and/or velocities provided for Zone X floodplains. Review of the Conceptual Site Plan indicates that Lots 138 to 151 and an open space lot are close/within the Zone X boundary. In order to quantify the impacts of the Zone X floodplain, a hydraulic analysis using HEC-RAS was performed to determine the stream velocities and depths where it comes in contact with the proposed grading. Section 4 of this report covers the HEC-RAS analysis of the Mountain Avenue Wash Zone X Floodplain analysis.

1.4 PROJECT DESCRIPTION

Tentative Tract Map No. 31304, known as “Pacific Emerald” is a proposed subdivision of approximately 40 acres of vacant/undeveloped land consisting of 199 single family lots, two (2) recreation areas, a park site, large open space area and detention Basin. An undeveloped, open space is planned to remain at the northeastern edge of the property to preserve the Mountain Avenue Wash Floodplain.

The onsite drainage system will consist of multiple catch basins, an underground storm drain system, and a combined water quality/stormwater detention basin. The detention basin will be located at the southeast corner of the site and discharges directly into the Mountain Avenue Wash. Offsite flows from the west will be intercepted by McPherson Road and conveyed northerly to David Jones Road. The flows are then conveyed easterly along David Jones Road then discharges into the Mountain Avenue Wash open space area. Majority of the flows from the west are conveyed southerly along McPherson Road to Mountain Avenue where flows concentrate. The flows then travel easterly along Mountain Avenue (approximately 1,500 feet) to where the wash crosses the street as shown on Figure 2.

HYDROLOGIC DATA AND MODEL DEVELOPMENT

2.1 INTRODUCTION

Drainage for the site is based on the Tract 37904 Conceptual Grading Plans (Appendix B). A proposed detention basin is located at the southeast corner of the site.

2.2 UNIT HYDROGRAPH CALCULATIONS

Unit Hydrograph calculations to determine the 2-year and 100-year for storm durations of 1 and 24 hours were performed following the procedures in the Riverside County Flood Control and Water Conservation District Hydrology Manual (RCHM), April 1978.

Hydrologic soil mapping was obtained from RCHM Plate C-1.41 and is included in Appendix A. As shown on Plate C-1.30, the site is located mostly in soil type B and lesser amounts of soil type C.

Rainfall data was obtained from the RCHM Isohyetal Maps using Plates D-4.2, D-4.3, and D-4.4. The 2-year 1-hour precipitation = 0.50 inches and the 100-year 1-hour precipitation = 1.28 inches. Isohyetal Maps are included in Appendix A.

The onsite runoff index (RI) and percent pervious (Ap) were based on the recommended values from the RCHM Plate D-5.5 and D-5.6 (see Appendix A) for Land Use “Single Family ¼ ac Lots” and Soil Type B and C. The offsite RI number and Ap were based on the RCHM recommended values for single family 1 acre lots and soil types B and C.

The CivilDesign Unit Hydrograph Program version 7.1 by Joseph E. Bonadiman & Associates was used to perform the unit hydrograph method calculations. The existing condition and proposed condition hydrology maps are included in Appendix B along with the unit hydrograph method calculations.

2.3 HYDROLOGY RESULTS

To access the increase runoff due to the proposed development, Table 1.0 compares the existing condition runoff and the proposed condition runoff at the project outlet point. The increase in runoff will be mitigated with the proposed detention basin. As shown in Table 1.0, the project causes an increase runoff condition which will need to be mitigated.

Table1: Unit Hydrograph Results at Project Outlet

			Existing Condition		Proposed Condition	
Drainage Area (ac)	Storm Frequency	Duration (hrs)	Peak Flow (cfs)	Storm Volume (ac-ft)	Peak Flow (cfs)	Storm Volume (ac-ft)
34.32	2-Year	24	0.93	0.57	4.71	2.86
	100-Year	1	86.45	3.30	91.08	3.20
		24	22.26	9.28	21.54	9.68

2.4 DETENTION ANALYSIS

A single detention basin will be provided to mitigate the increase runoff due to the proposed development. Table 2 shows the stage storage outflow relationship for the proposed detention basin. In addition to the outlet structure, the detention basin will need to include an emergency spillway outlet that can pass the 100-year peak flows in the event that the outlets become clogged. See Appendix B for detention basin routing analysis calculations.

Table 2.0: Proposed Detention Basin Stage -Storage

Elevation (ft)	Stage (ft)	Storage (ac-ft)	Discharge (cfs)
1497	0	-	-
1498	1	0.109	0.12
1499	2	0.345	0.17
1500	3	0.685	0.21
1501	4	1.088	0.51
1502	5	1.558	0.72
1503	6	2.096	0.87
1504	7	2.706	83.26
1505	8	3.390	324.83

The detention basin stage storage was estimated using the rough grading plans and determining the area at each contour interval and multiplying by the difference in elevation. The basin outlet consists of two 1.45-inch diameter orifices at an elevation of 1497, and two 2.50-inch diameter orifices at an elevation of 1500.33. The stage discharges for the orifices were determined using the Orifice Equation with a coefficient of discharge = 0.66. See Appendix B for calculations.

Table 3.0: Detention Basin Routing Results

Storm Frequency/ Duration	Existing Condition Peak Discharge (cfs)	Developed Condition Basin Inflow (cfs)	Basin Outflow (cfs)	Max. Basin Depth (ft)	Max. Water Surface Elevation (ft)
2-year 24-hour	0.93	4.71	0.88	6.07	1503.07
100-year 1-hour	86.45	91.08	54.68	6.77	1503.77
100-year 24-hour	22.26	21.54	21.46	6.50	1503.50

As indicated in Table 3, the proposed detention basin has attenuated the proposed condition peak discharges to not exceed the existing condition discharges for all storm events.

HYDRAULIC ANALYSIS

3.1 STREET HYDRAULICS

Street flow hydraulics will be performed during the final engineering phase. The 10-year flow depths will need to be contained within the top of curb elevations and the 100-year discharges will need to be contained within the street right of ways.

3.2 CATCH BASIN ANALYSIS

Catch basin sizing will be performed during the final engineering phase. Calculations and sizing shall be in accordance with the Riverside County Hydrology Manual.

3.3 Offsite Street Hydraulics

Offsite flows from the west concentrate at Mountain Avenue and McPherson Road and then flows westerly for a distance of approximately 1500 feet along Mountain Avenue towards the project southerly boundary. The 100-year 1-hour discharge of 128.4 cfs was estimated for the tributary area of approximately 69.7 acres as shown on the Offsite Drainage Map (Exhibit C). This discharge will be used in the street capacity analysis.

HYDRAULIC ANALYSIS OF MOUNTAIN AVENUE WASH

4.1 INTRODUCTION

This section documents the preliminary floodplain investigation of Mountain Avenue Wash for the portion located adjacent to the eastern boundary of Tract 31304. Mountain Avenue Wash is a natural water course with a tributary drainage area of approximately 0.5 square miles at the northeastern project boundary of Tract 31304. This study was performed to evaluate the extent of flooding and to ensure the site is adequately elevated and protected against scour and erosion.

The floodplain study described in this section consists of a unit hydrograph analysis of the tributary watershed to estimate the 100-year flood peak flow rates and a hydraulic analysis (HEC-RAS Model) to determine flow parameters including water surface elevations, flow velocities and delineation of the 100-year floodplain boundary.

4.2 Watershed and Stream Characteristics

Mountain Avenue Wash is a small tributary to the San Jacinto River, located in the City of Perris. The watershed encompasses an area of approximately 0.5 square miles, consisting mostly of low-density residential developments and small commercial developments. The wash originates in the hills above Clayton Street and 7TH Street at an elevation of approximately 1700 feet above mean sea level (msl) and flows about 1.3 miles from its headwaters to the project northeast boundary. The watershed has an average slope of 2.7 %, soil types consist of hydrologic soil types B and C. There are no drainage improvements within the watershed. Near David Jones Road, the wash is contained within a defined watercourse and flows in a southerly direction. Before crossing Mountain Avenue, the wash becomes wide and shallow due to the lack of a defined channel.

The hydraulic study reach begins just downstream of David Jones Road and ends just upstream of Mountain Avenue, a distance of approximately 1,600 feet, see Exhibit C in Appendix F.

4.3 Hydrology Information

A hydrologic analysis of the Mountain Avenue Wash watershed was prepared using the procedures provided in the RCHM. The Synthetic Unit Hydrograph method was used to estimate the runoff resulting from the 100-year storm. The drainage boundary of the Mountain Avenue Wash is shown in Exhibit X (Appendix F). Results of the hydrologic study for Mountain Avenue Wash are summarized in Table 4. Two different 100-year storm durations were studied in order to determine the critical duration for this watershed. An examination of the results in Table 3 shows

that the 1-hour duration storm yields the largest discharge, therefore the 1-hour storm is the critical duration for this watershed.

Table 4: Mountain Avenue Wash Watershed Discharge Summary Table

Location	Drainage Area (mi ²)	100-Year 1-Hour (cfs)	100-Year 3-Hour (cfs)
David Jones Road	0.48	396.2	303.7

4.4 Hydraulic Analysis and Floodplain Mapping

The U.S. Army Corps of Engineers HEC-RAS (River Analysis System) computer program was used to perform the hydraulic computations. The results of the analysis were used to identify the 100-year flood water surface profile, velocities, and floodplain boundary. The hydraulic model was developed with the following data and assumptions. Cross sectional data of the Mountain Avenue Wash study reach were prepared based upon a December 2019 aerial topographic map of the project site and surrounding area. The cross sections were spaced at maximum of 250 feet apart along the wash. The most downstream cross section is located at Mountain Avenue and the upstream cross section is located just downstream of David Jones Road. The Manning’s roughness coefficient was estimated based upon aerial map review and using the guidelines from Open Channel Flow by V.T. Chow. The study reach consisted of light to moderate amounts of vegetation. The manning’s roughness value of 0.030 to 0.040 was estimated for the wash. The HEC-RAS Model was developed assuming subcritical flow conditions using a downstream control elevation based on normal depth and a slope of 0.015.

Using the parameters and assumptions as explained, the 100-year base flood elevations and floodplain boundaries were developed using the HEC-RAS computer program and the 100-Year floodplain mapping is presented in Appendix X.

4.5 100-Year Floodplain Impacts

As shown in Exhibit X, there are several locations where the 100-year floodplain impacts the proposed Tract No. 31304. At the northeast corner of the property, the project proposes an open space area to allow the wash to remain in its original flow path. About half way down the study reach, near the southeast corner of the project, the floodplain becomes wide and shallow before crossing Mountain Avenue (downstream limit of study). Several lots are very close and/or within the 100-year floodplain boundary estimated in this study.

At this point it should be made clear that this is an approximately floodplain study of a FEMA Zone X Floodplain. There are no Federal Flood Insurance requirements and or CLOMR/LOMR studies for Zone X floodplain developments. However, in order to evaluate that the site is elevated properly in relation to the 100-year water surface elevations, Table 5 provides finished pad elevations as a comparison.

Table 5: Pad Elevation and 100-Year Water Surface (WS) Elevation Comparison

Lot No.	Pad Elevation (ft)	100-Year WS Elevation (ft)	Elevation Difference (ft)
138	1506.0	1497.0	9.0
139	1506.0	1498.0	8.0
140	1506.5	1499.0	7.5
141	1507.0	1499.5	7.5
142	1507.5	1500.0	7.0
143	1507.5	1500.5	7.0
144	1508.0	1501.0	7.5
145	1509.0	1501.5	8.0
146	1510.0	1502.0	8.0
147	1511.0	1503.0	7.0
148	1511.0	1504.0	7.5
149	1512.0	1504.5	7.5
150	1513.0	1505.0	8.0
151	1514.0	1506.0	8.0

Review of Table 5.0 shows that the proposed pad elevations are elevated at a minimum of 7 feet above the 100-year water surface elevations of the Mountain Avenue Wash floodplain. The fill slopes of the pads will most likely come into contact with the 100-year floodplain. Review of the HEC-RAS summary output table (Appendix F), indicate stream velocities are in the range of 4 to 5 fps (channel sections 1 thru 5). Slope revetment will most likely not be necessary due to the non-scouring velocities.

The proposed detention basin is located at the southeast corner of the site. Review of the Conceptual Site Plan show that the top of the basin is at an elevation of approximately 1503. The 100-year water surface elevation at this location is approximately 1496, resulting in 7 feet of freeboard. As shown on the Conceptual Site Plan, the lowest street elevation of approximately 1502 is located adjacent to the proposed detention basin. As it appears, the site will still be able to drain during the 100-year storm event of the Mountain Avenue Wash. The bottom elevation of the detention basin is at an elevation of 1495 (approximately 1-foot below the 100-year floodplain elevation) should not be an issue. It appears that a riser and storm drain outlet pipe to the wash will be the most likely place to drain the basin. The elevation of the wash where the outlet pipe would be location is approximately one foot lower (1494) than the detention basin bottom appears to be adequate. An emergency spillway with an invert elevation of 1501 can be located along the east side of the detention basin which overflows directly into the wash.

4.6 Conclusion

This approximate floodplain study of the Mountain Avenue Wash indicated that the site is elevated sufficiently above the 100-year water surface elevations. Based on the Conceptual Site Plan, the interior streets will be able to drain during the 100-year storm without backup from the wash. The wash 100-year flow velocities range between 4 to 5 fps where it may come into contact with the fill slopes should not be of concern to due to the non-scouring velocities.

REFERENCES

KWC Engineers Pacific Emerald TR 31304 Conceptual Site Plan, February 2020

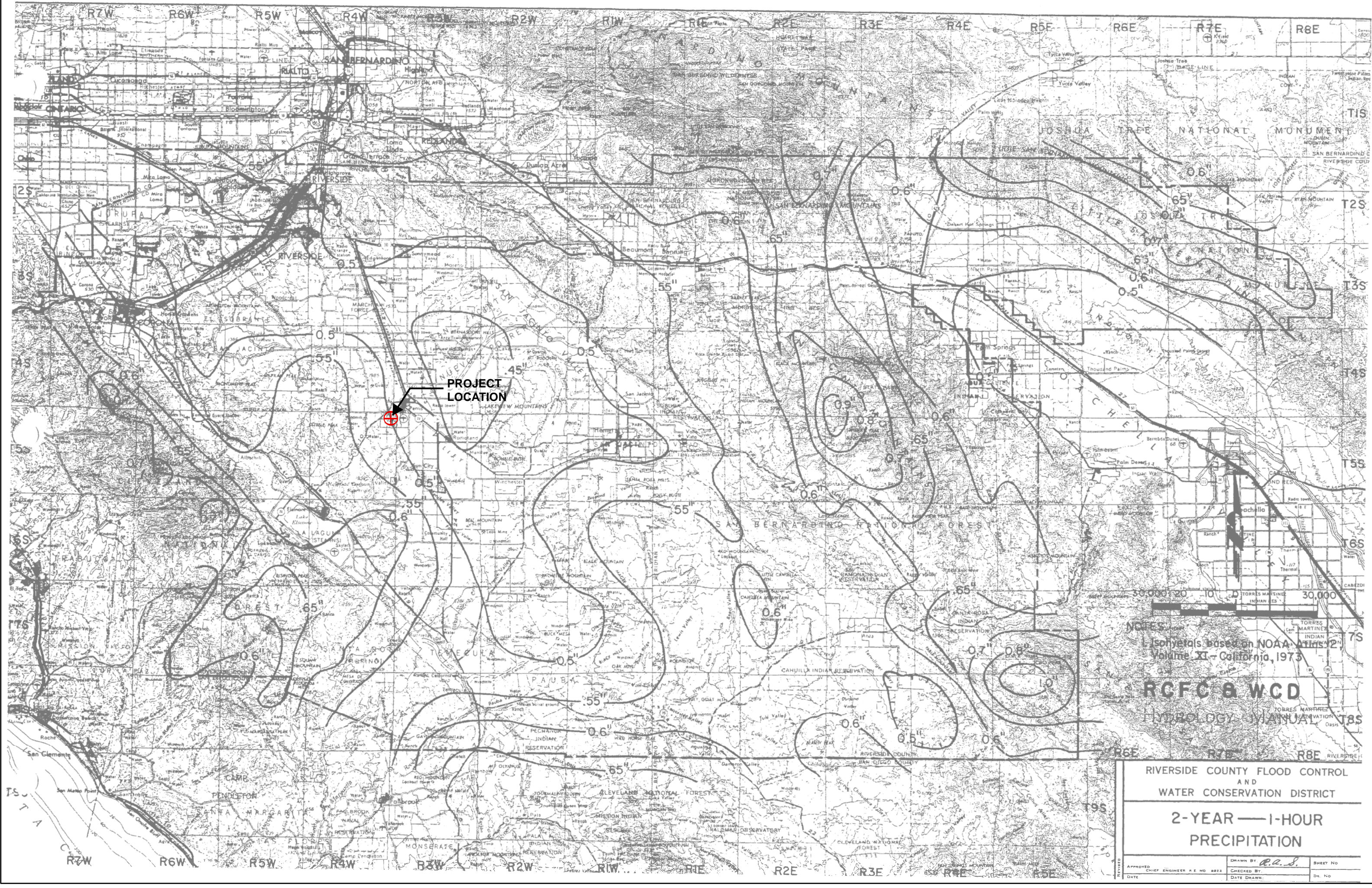
*Riverside County Flood Control and Water Conservation District. Hydrology Manual.
April 1978*

*Hydrologic Engineer Center, HEC-RAS River Analysis System User's Manual Version
5.0, February 2016*

Appendix

A

RCFC&WCD HYDROLOGIC DATA



**PROJECT
LOCATION**



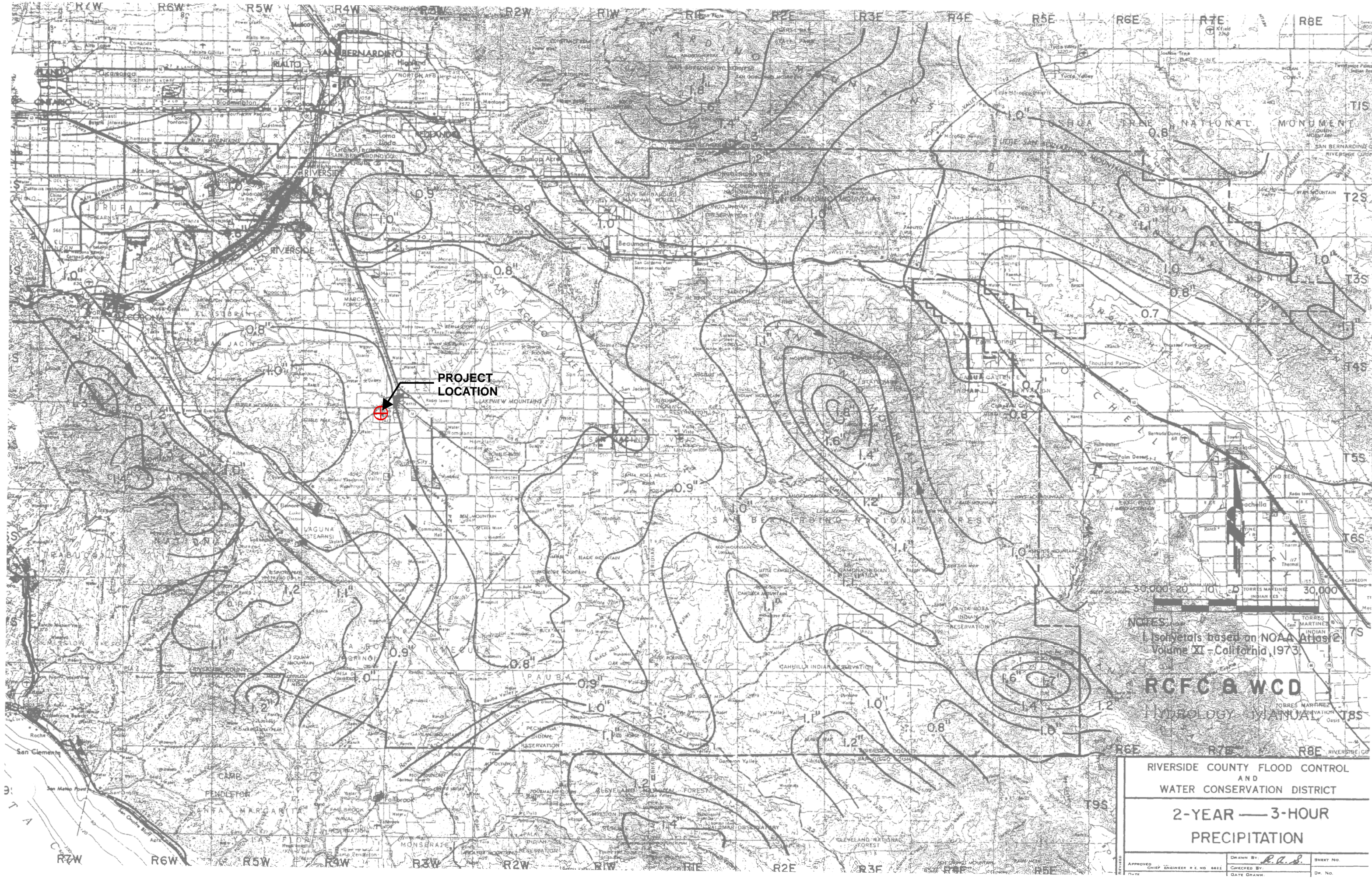
Isohyets based on NOAA Atlas 12
Volume XI - California, 1973

RCFC & WCD
HYDROLOGY MANUAL

RIVERSIDE COUNTY FLOOD CONTROL
AND
WATER CONSERVATION DISTRICT

**2-YEAR — 1-HOUR
PRECIPITATION**

APPROVED: CHIEF ENGINEER A E NO 882	DRAWN BY: <i>R.C.S.</i>	SHEET NO:
DATE:	CHECKED BY:	DATE DRAWN:
		DR. NO:



PROJECT LOCATION



NOTES:
 1. Contours based on NOAA Atlas 2,
 Volume XI - California, 1973.

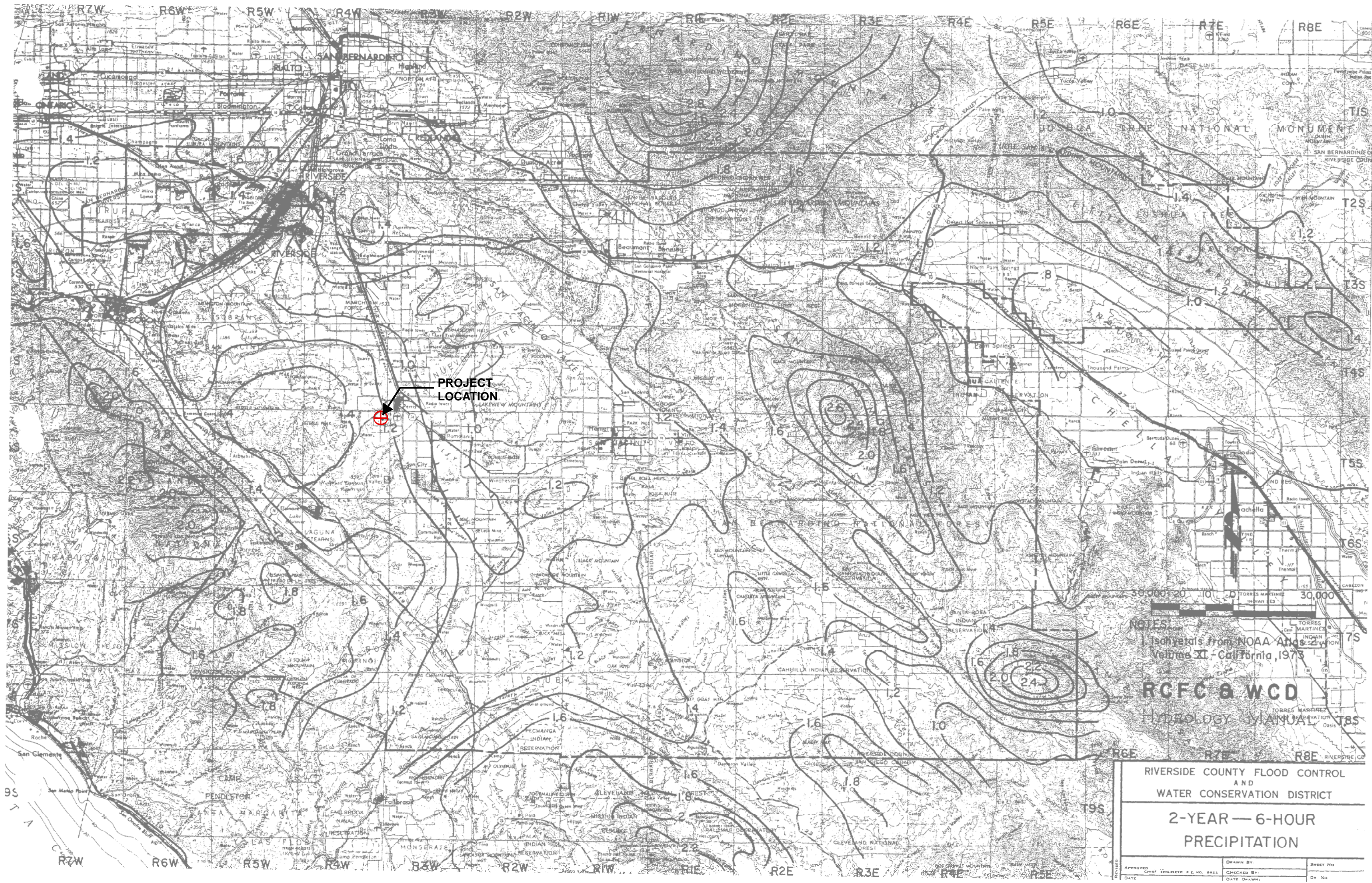
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**2-YEAR — 3-HOUR
 PRECIPITATION**

APPROVED	DATE	CHIEF ENGINEER # E. NO. 6832	DRAWN BY: <i>R. A. S.</i>	CHECKED BY:	DATE DRAWN:	SHEET NO.	DR. NO.
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**PROJECT
LOCATION**

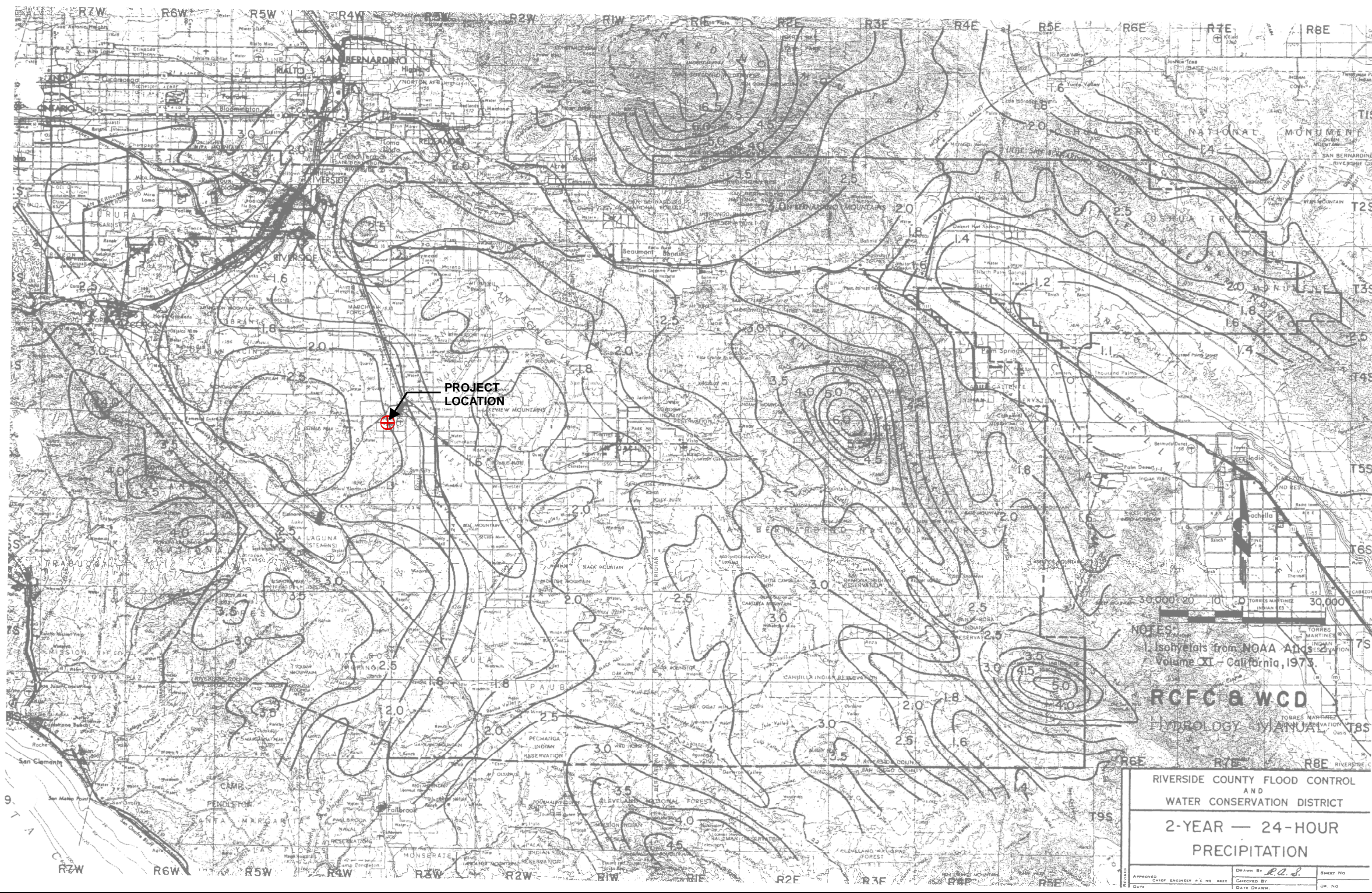


NOTES:
 1. Isohyets from NOAA Atlas 14
 Volume XI - California, 1973

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 Hydrology Manual

**RIVERSIDE COUNTY FLOOD CONTROL
 AND
 WATER CONSERVATION DISTRICT**
**2-YEAR — 6-HOUR
 PRECIPITATION**

APPROVED:	DRAWN BY:	SHEET NO:
DATE:	CHECKED BY:	DR. NO.:



**PROJECT
LOCATION**

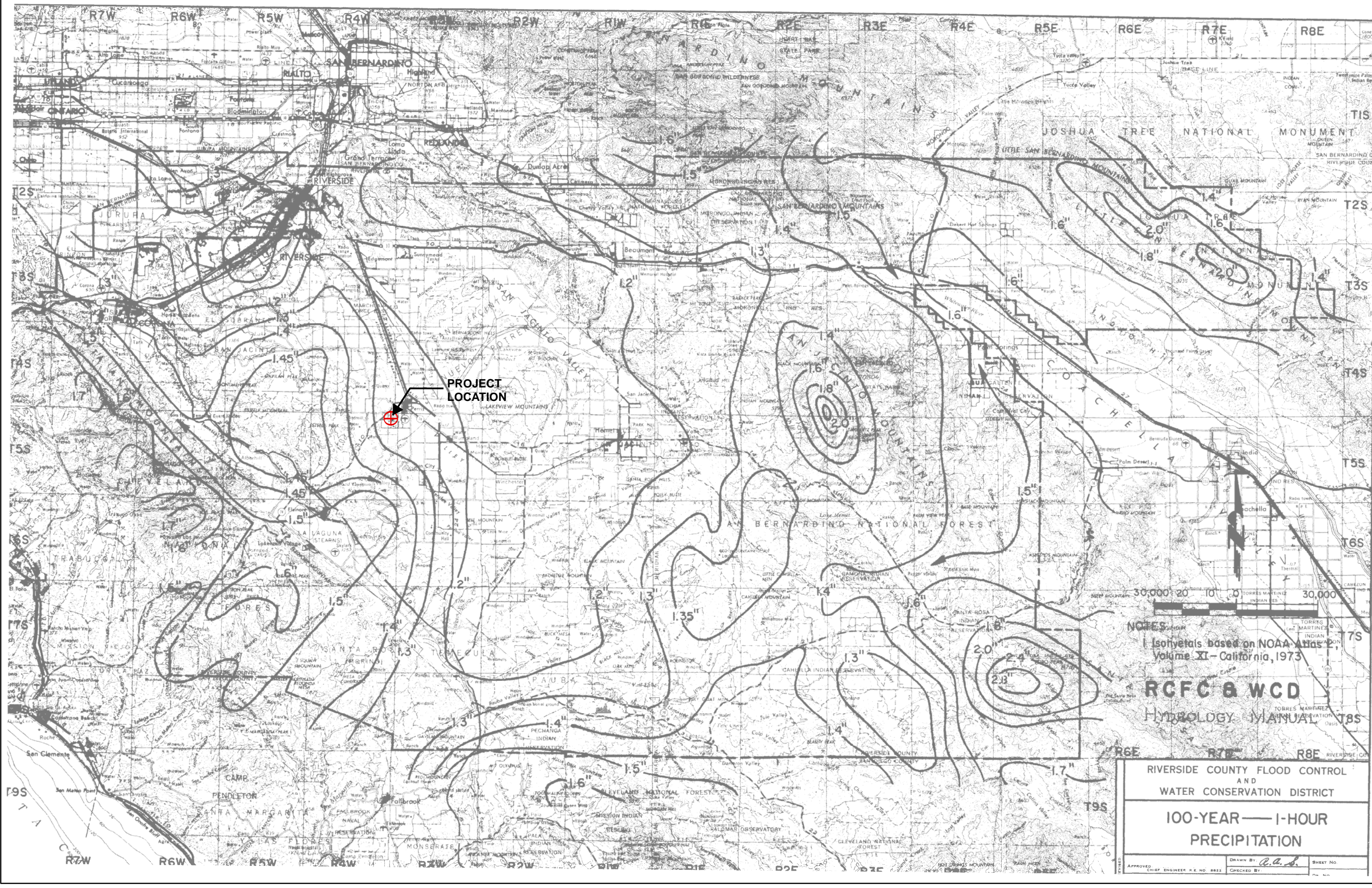


NOTES:
 1. Isohyets from NOAA Atlas
 Volume XI - California, 1973.

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RIVERSIDE COUNTY FLOOD CONTROL
 AND
 WATER CONSERVATION DISTRICT
**2-YEAR — 24-HOUR
 PRECIPITATION**

APPROVED	CHIEF ENGINEER # E NO 8822	DRAWN BY	R.S.S.	SHEET NO
REVISED	DATE	CHECKED BY		DR NO



**PROJECT
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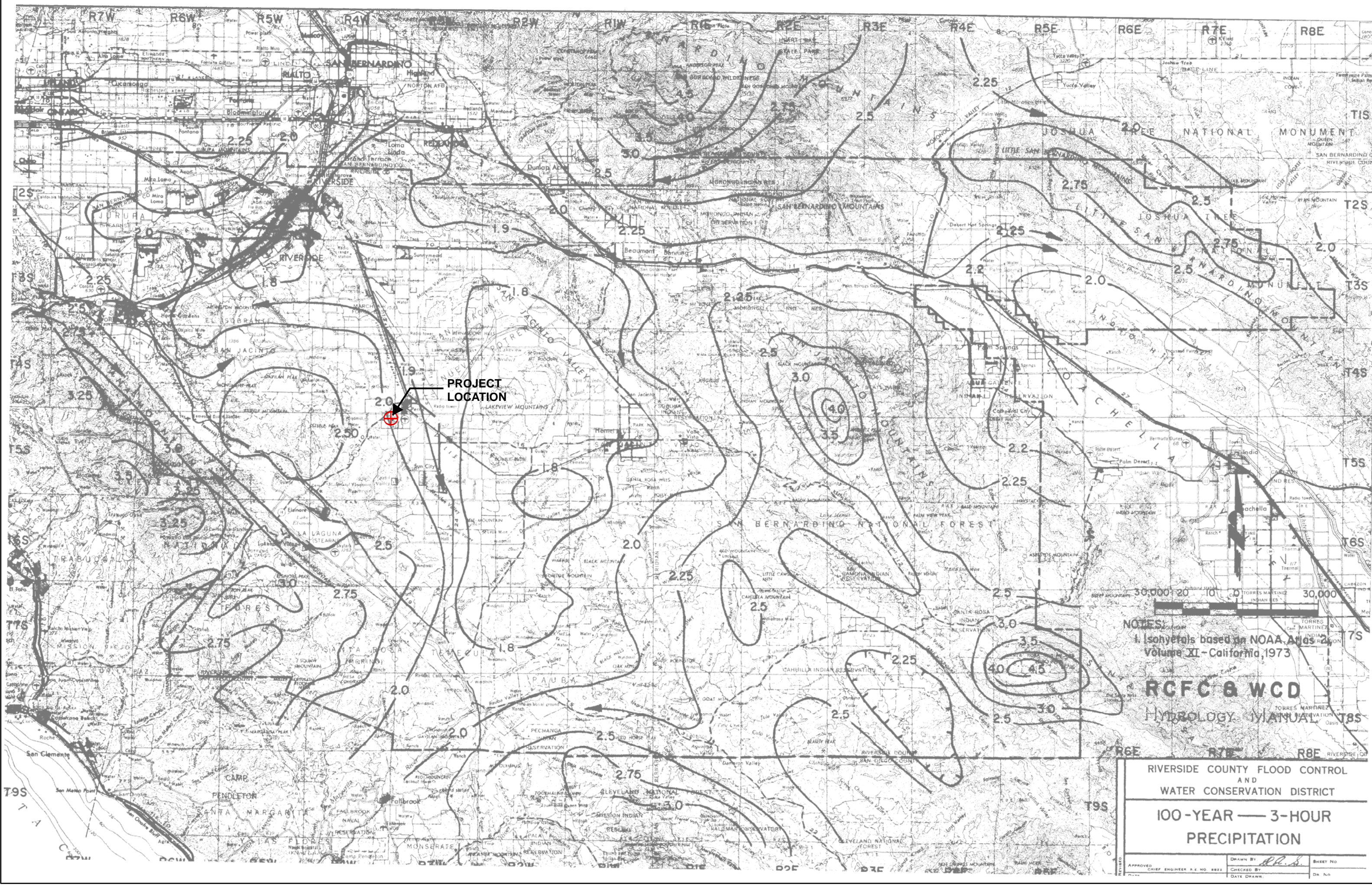


NOTES
 1 Isohyets based on NOAA Atlas 2,
 Volume XI - California, 1973

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 HYDROLOGY MANUAL

RIVERSIDE COUNTY FLOOD CONTROL
 AND
 WATER CONSERVATION DISTRICT
**100-YEAR — 1-HOUR
 PRECIPITATION**

APPROVED: _____ CHIEF ENGINEER R.E. NO. 882
 DRAWN BY: *R.C.L.*
 CHECKED BY: _____ SHEET NO. _____



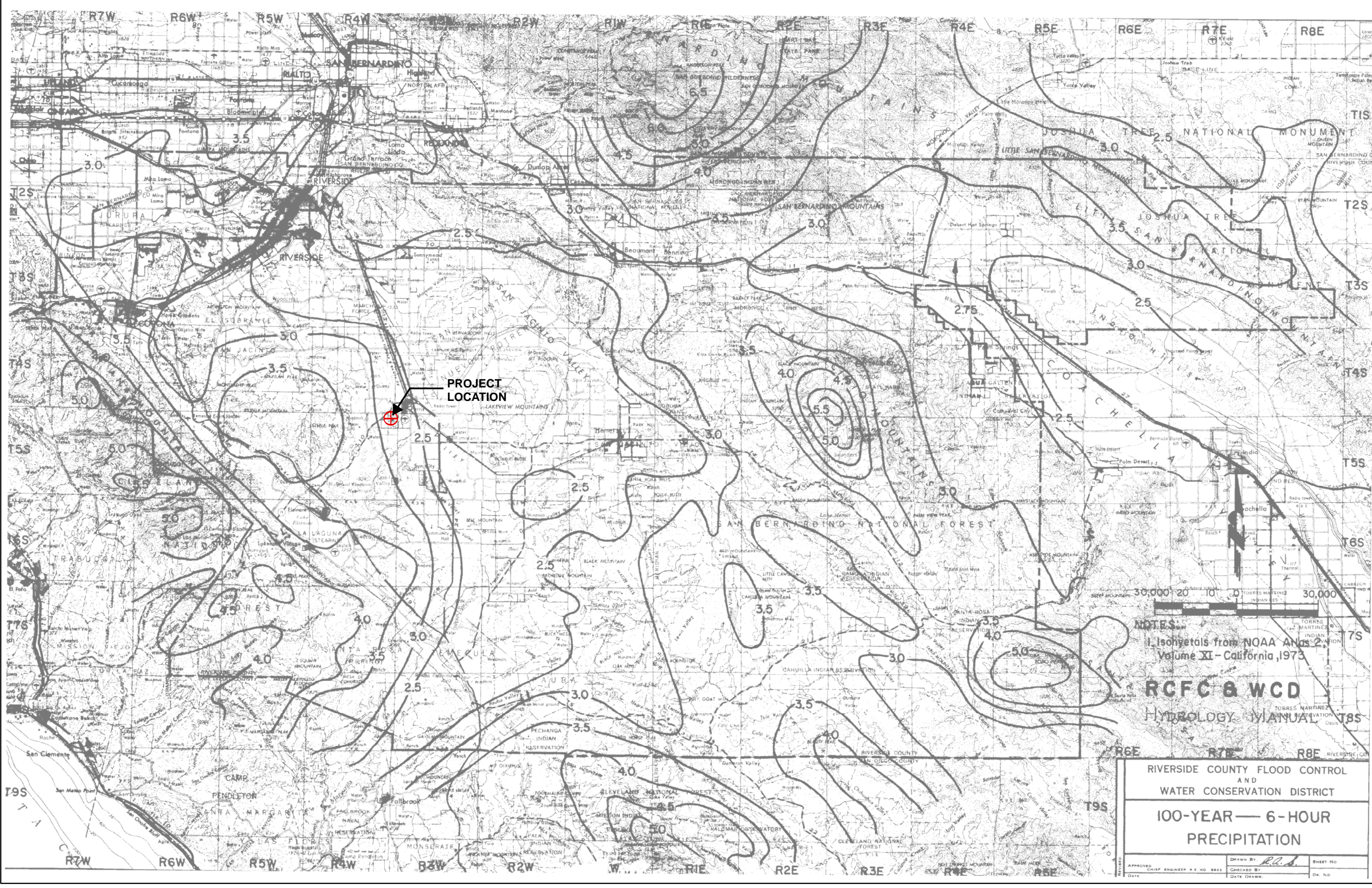
PROJECT LOCATION

NOTES:
 1 Isohyets based on NOAA Atlas 2
 Volume XI - California, 1973

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RIVERSIDE COUNTY FLOOD CONTROL
 AND
 WATER CONSERVATION DISTRICT
**100-YEAR — 3-HOUR
 PRECIPITATION**

APPROVED	CHIEF ENGINEER R.E. NO. 8822	DRAWN BY	AL.S.	SHEET NO.
CHECKED BY		DATE DRAWN		DR. NO.



PROJECT LOCATION

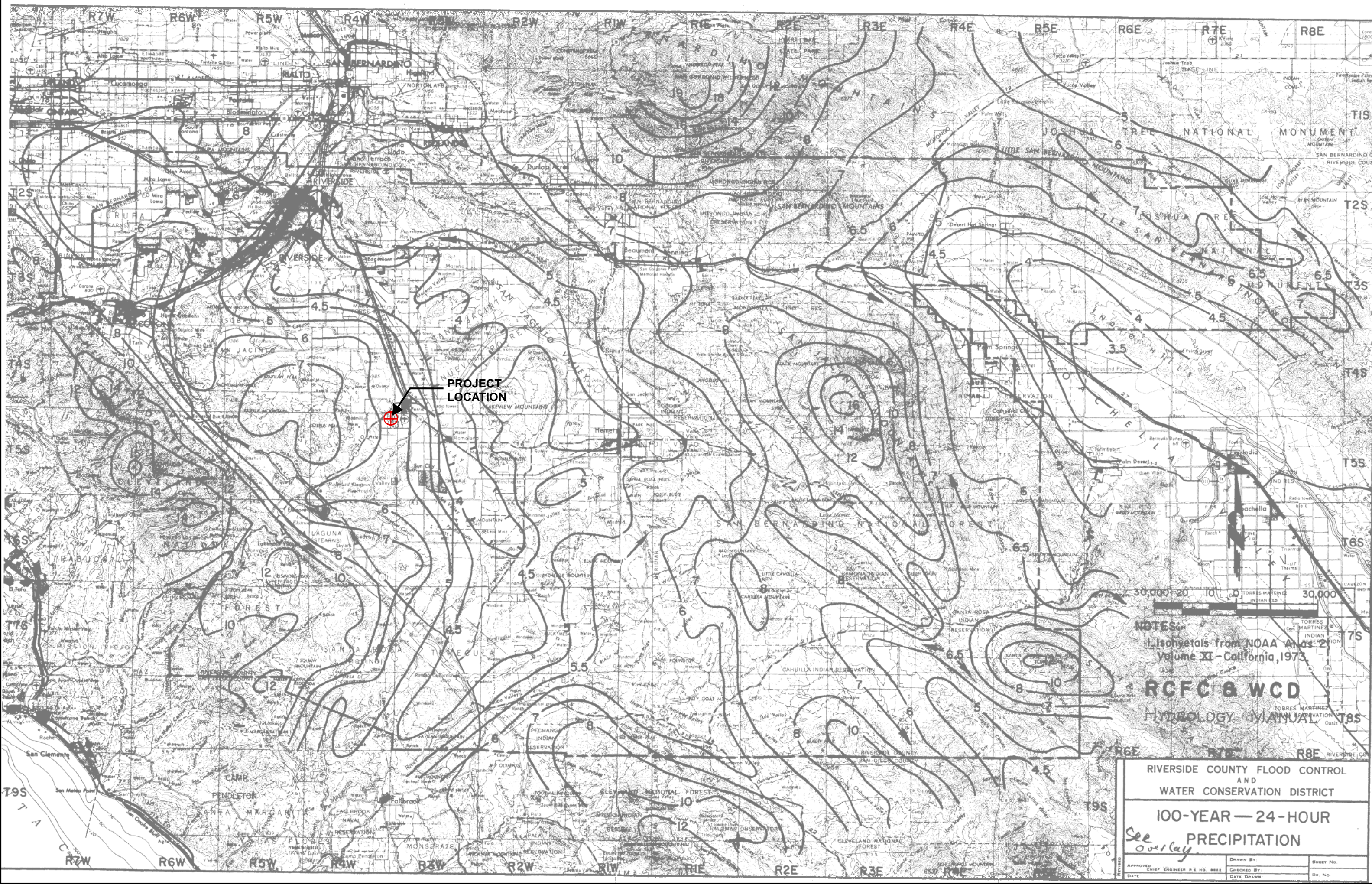


NOTES:
 1. Isohyets from NOAA Atlas 2
 Volume XI - California, 1973

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RIVERSIDE COUNTY FLOOD CONTROL
 AND
 WATER CONSERVATION DISTRICT
**100-YEAR — 6-HOUR
 PRECIPITATION**

APPROVED DATE	CHIEF ENGINEER R.E. NO. 882	DRAWN BY R.L.S.	CHECKED BY DATE DRAWN	SHEET NO. OF NO.
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PROJECT
LOCATION

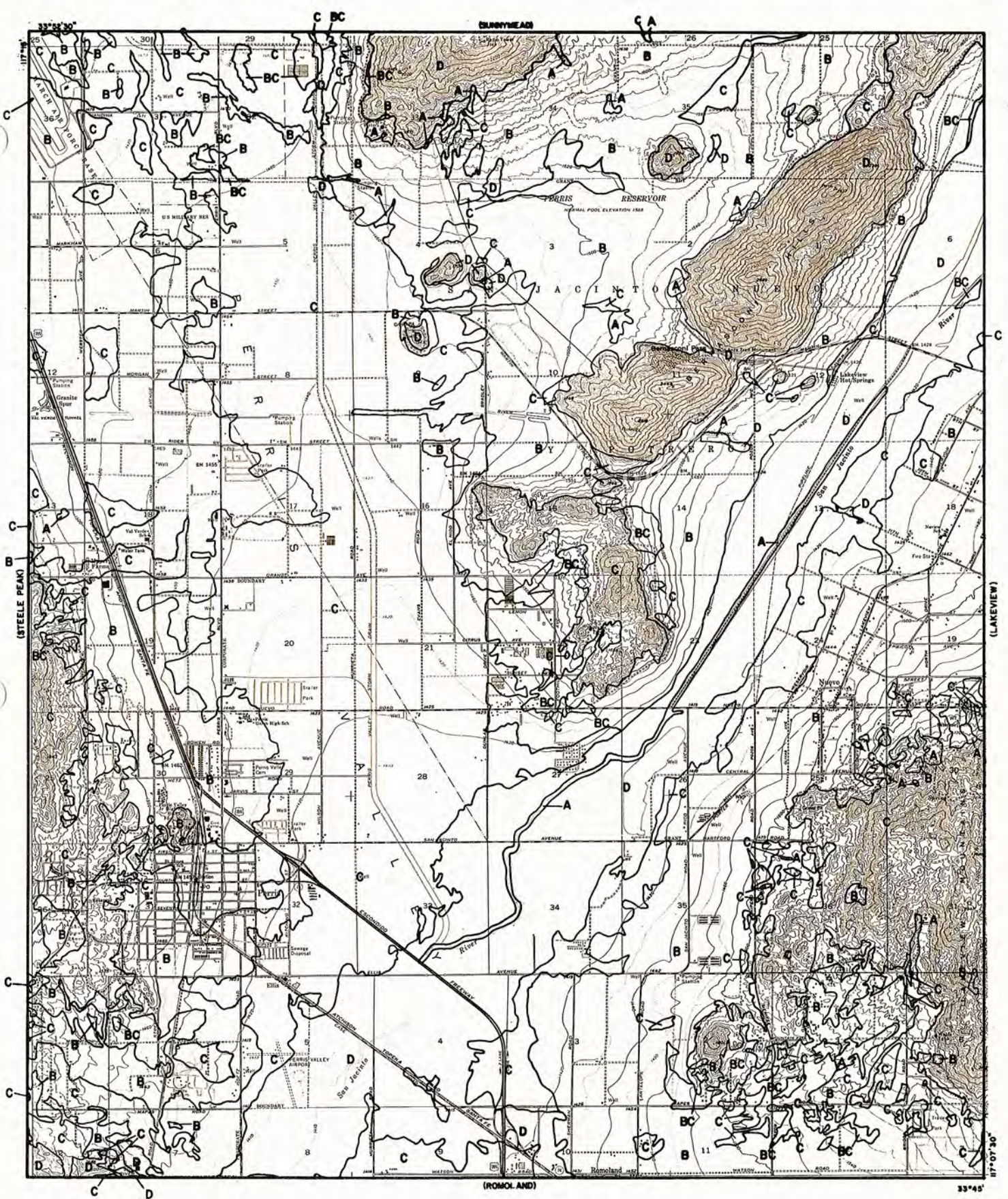
NOTES:
1. Isohyets from NOAA Atlas 2
Volume XI - California, 1973.

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RIVERSIDE COUNTY FLOOD CONTROL
AND
WATER CONSERVATION DISTRICT
**100-YEAR — 24-HOUR
PRECIPITATION**

See
overlay



APPROVED	CHIEF ENGINEER P.E. NO. 882	DRAWN BY	SHEET NO.
DATE		CHECKED BY	DR. NO.
		DATE DRAWN	



LEGEND

— SOILS GROUP BOUNDARY
 A SOILS GROUP DESIGNATION

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 HYDROLOGY MANUAL



 0 FEET 5000

**HYDROLOGIC SOILS GROUP MAP
 FOR
 PERRIS**

RUNOFF INDEX NUMBERS OF HYDROLOGIC SOIL-COVER COMPLEXES FOR PERVIOUS AREAS-AMC II

Cover Type (3)	Quality of Cover (2)	Soil Group			
		A	B	C	D
<u>NATURAL COVERS -</u>					
Barren (Rockland, eroded and graded land)		78	86	91	93
Chaparrel, Broadleaf (Manzonita, ceanothus and scrub oak)	Poor	53	70	80	85
	Fair	40	63	75	81
	Good	31	57	71	78
Chaparrel, Narrowleaf (Chamise and redshank)	Poor	71	82	88	91
	Fair	55	72	81	86
Grass, Annual or Perennial	Poor	67	78	86	89
	Fair	50	69	79	84
	Good	38	61	74	80
Meadows or Cienegas (Areas with seasonally high water table, principal vegetation is sod forming grass)	Poor	63	77	85	88
	Fair	51	70	80	84
	Good	30	58	72	78
Open Brush (Soft wood shrubs - buckwheat, sage, etc.)	Poor	62	76	84	88
	Fair	46	66	77	83
	Good	41	63	75	81
Woodland (Coniferous or broadleaf trees predominate. Canopy density is at least 50 percent)	Poor	45	66	77	83
	Fair	36	60	73	79
	Good	28	55	70	77
Woodland, Grass (Coniferous or broadleaf trees with canopy density from 20 to 50 percent)	Poor	57	73	82	86
	Fair	44	65	77	82
	Good	33	58	72	79
<u>URBAN COVERS -</u>					
Residential or Commercial Landscaping (Lawn, shrubs, etc.)	Good	32	56	69	75
Turf (Irrigated and mowed grass)	Poor	58	74	83	87
	Fair	44	65	77	82
	Good	33	58	72	79
<u>AGRICULTURAL COVERS -</u>					
Fallow (Land plowed but not tilled or seeded)		76	85	90	92

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RUNOFF INDEX NUMBERS
FOR
PERVIOUS AREA

RUNOFF INDEX NUMBERS OF HYDROLOGIC SOIL-COVER COMPLEXES FOR PERVIOUS AREAS-AMC II

Cover Type (3)	Quality of Cover (2)	Soil Group			
		A	B	C	D
<u>AGRICULTURAL COVERS</u> (cont.) -					
Legumes, Close Seeded (Alfalfa, sweetclover, timothy, etc.)	Poor	66	77	85	89
	Good	58	72	81	85
Orchards, Deciduous (Apples, apricots, pears, walnuts, etc.)	See Note 4				
Orchards, Evergreen (Citrus, avocados, etc.)	Poor	57	73	82	86
	Fair	44	65	77	82
	Good	33	58	72	79
Pasture, Dryland (Annual grasses)	Poor	67	78	86	89
	Fair	50	69	79	84
	Good	38	61	74	80
Pasture, Irrigated (Legumes and perennial grass)	Poor	58	74	83	87
	Fair	44	65	77	82
	Good	33	58	72	79
Row Crops (Field crops - tomatoes, sugar beets, etc.)	Poor	72	81	88	91
	Good	67	78	85	89
Small Grain (Wheat, oats, barley, etc.)	Poor	65	76	84	88
	Good	63	75	83	87
Vineyard	See Note 4				

Notes:

1. All runoff index (RI) numbers are for Antecedent Moisture Condition (AMC) II.
2. Quality of cover definitions:
 Poor-Heavily grazed or regularly burned areas. Less than 50 percent of the ground surface is protected by plant cover or brush and tree canopy.
 Fair-Moderate cover with 50 percent to 75 percent of the ground surface protected.
 Good-Heavy or dense cover with more than 75 percent of the ground surface protected.
3. See Plate C-2 for a detailed description of cover types.
4. Use runoff index numbers based on ground cover type. See discussion under "Cover Type Descriptions" on Plate C-2.
5. Reference Bibliography item 17.

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HYDROLOGY MANUAL

**RUNOFF INDEX NUMBERS
FOR
PERVIOUS AREA**

ACTUAL IMPERVIOUS COVER

Land Use (1)	Range-Percent	Recommended Value For Average Conditions-Percent (2)
Natural or Agriculture	0 - 10	0
Single Family Residential: (3)		
40,000 S. F. (1 Acre) Lots	10 - 25	20
20,000 S. F. (½ Acre) Lots	30 - 45	40
7,200 - 10,000 S. F. Lots	45 - 55	50
Multiple Family Residential:		
Condominiums	45 - 70	65
Apartments	65 - 90	80
Mobile Home Park	60 - 85	75
Commercial, Downtown Business or Industrial	80 -100	90

Notes:

1. Land use should be based on ultimate development of the watershed. Long range master plans for the County and incorporated cities should be reviewed to insure reasonable land use assumptions.
2. Recommended values are based on average conditions which may not apply to a particular study area. The percentage impervious may vary greatly even on comparable sized lots due to differences in dwelling size, improvements, etc. Landscape practices should also be considered as it is common in some areas to use ornamental gravels underlain by impervious plastic materials in place of lawns and shrubs. A field investigation of a study area should always be made, and a review of aerial photos, where available may assist in estimating the percentage of impervious cover in developed areas.
3. For typical horse ranch subdivisions increase impervious area 5 percent over the values recommended in the table above.

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HYDROLOGY MANUAL

**IMPERVIOUS COVER
FOR
DEVELOPED AREAS**

PACIFIC EMERALD CONCEPTUAL GRADING PLAN TTM 37904

TOTAL SITE ESTIMATED CUT/FILL VOLUMES

CUT VOLUME	107,000 CY
FILL VOLUME	87,000 CY
RAW TOTAL	20,000 CY CUT
ADJUSTED TOTAL	9,300 CY CUT

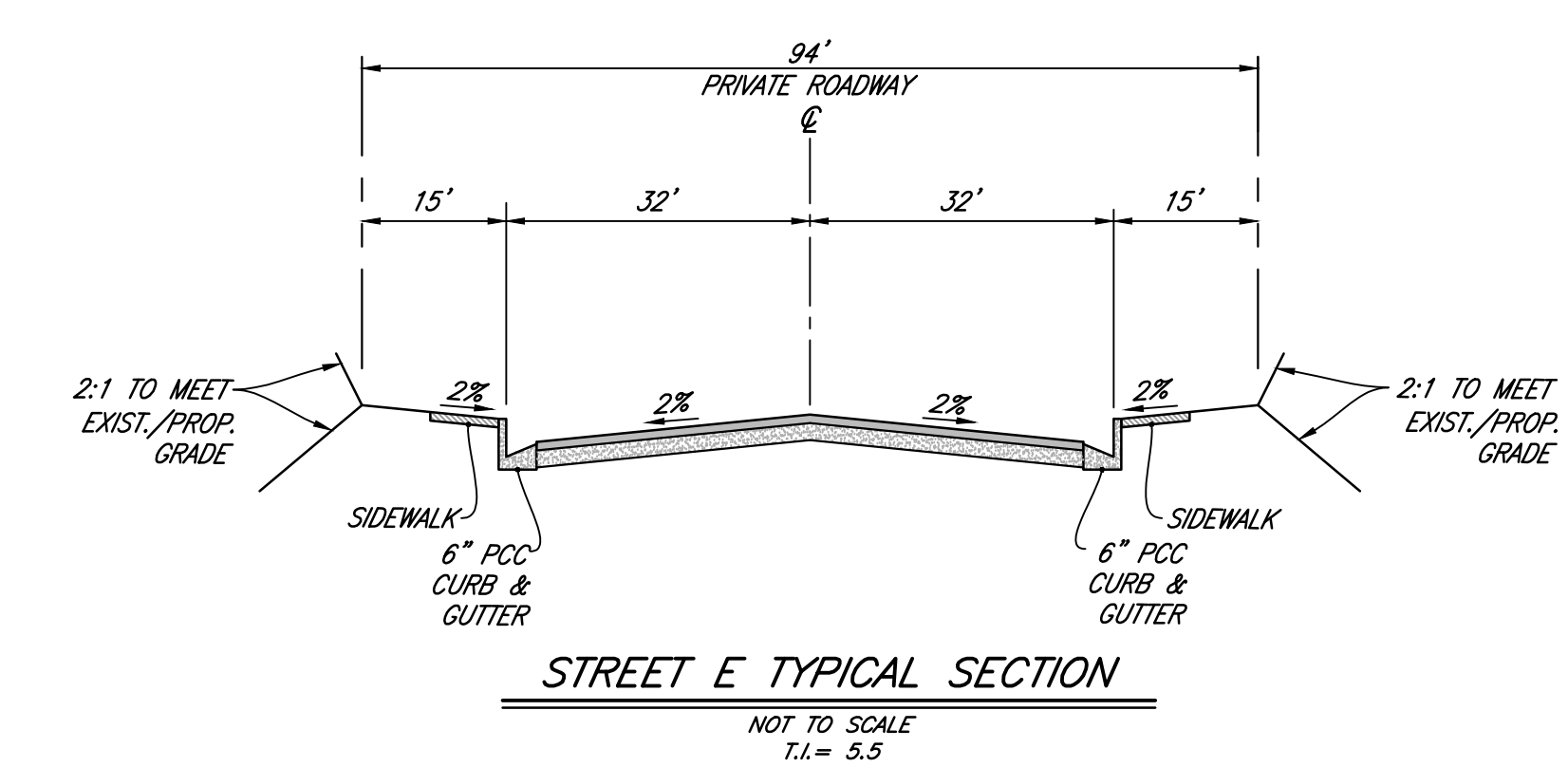
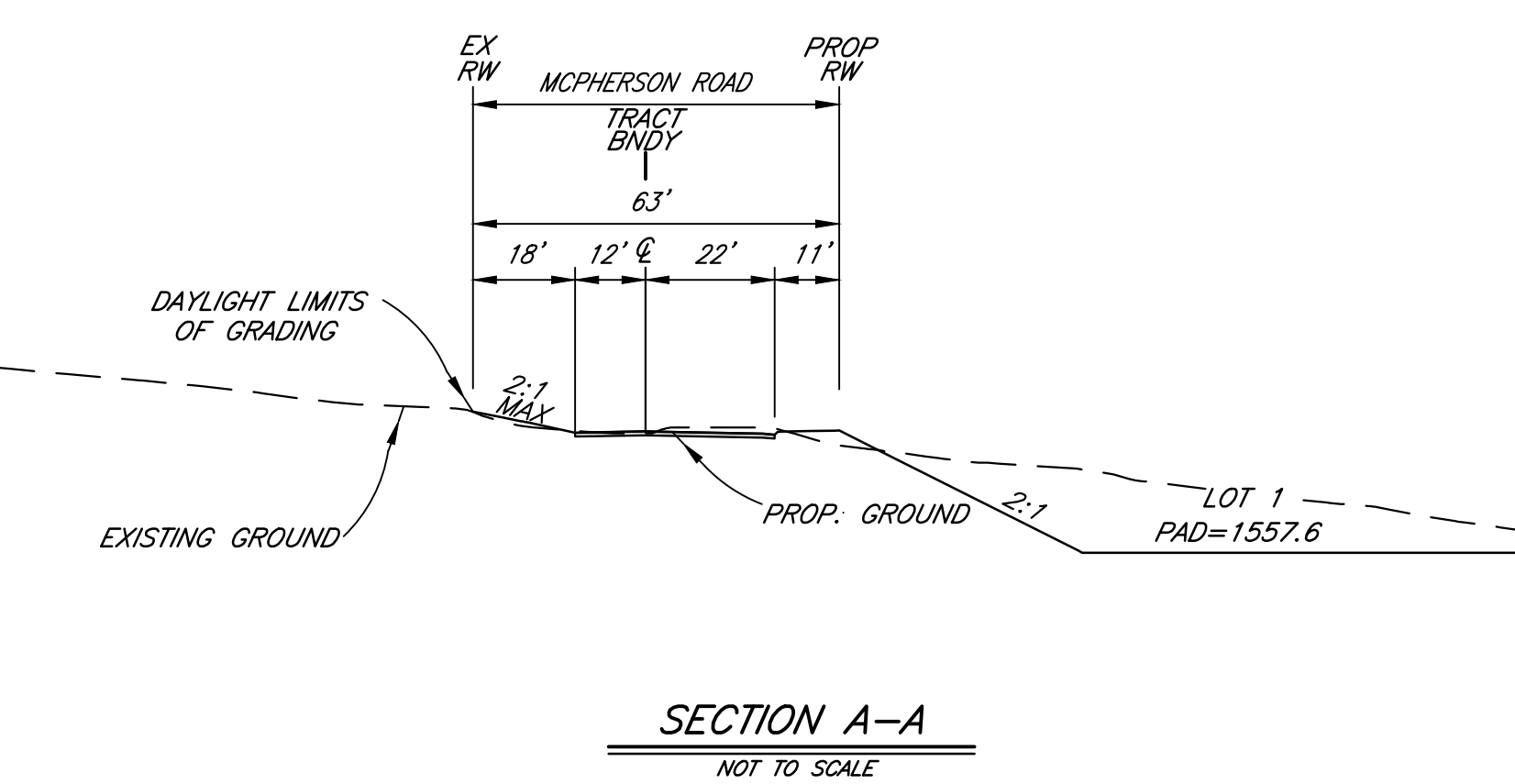
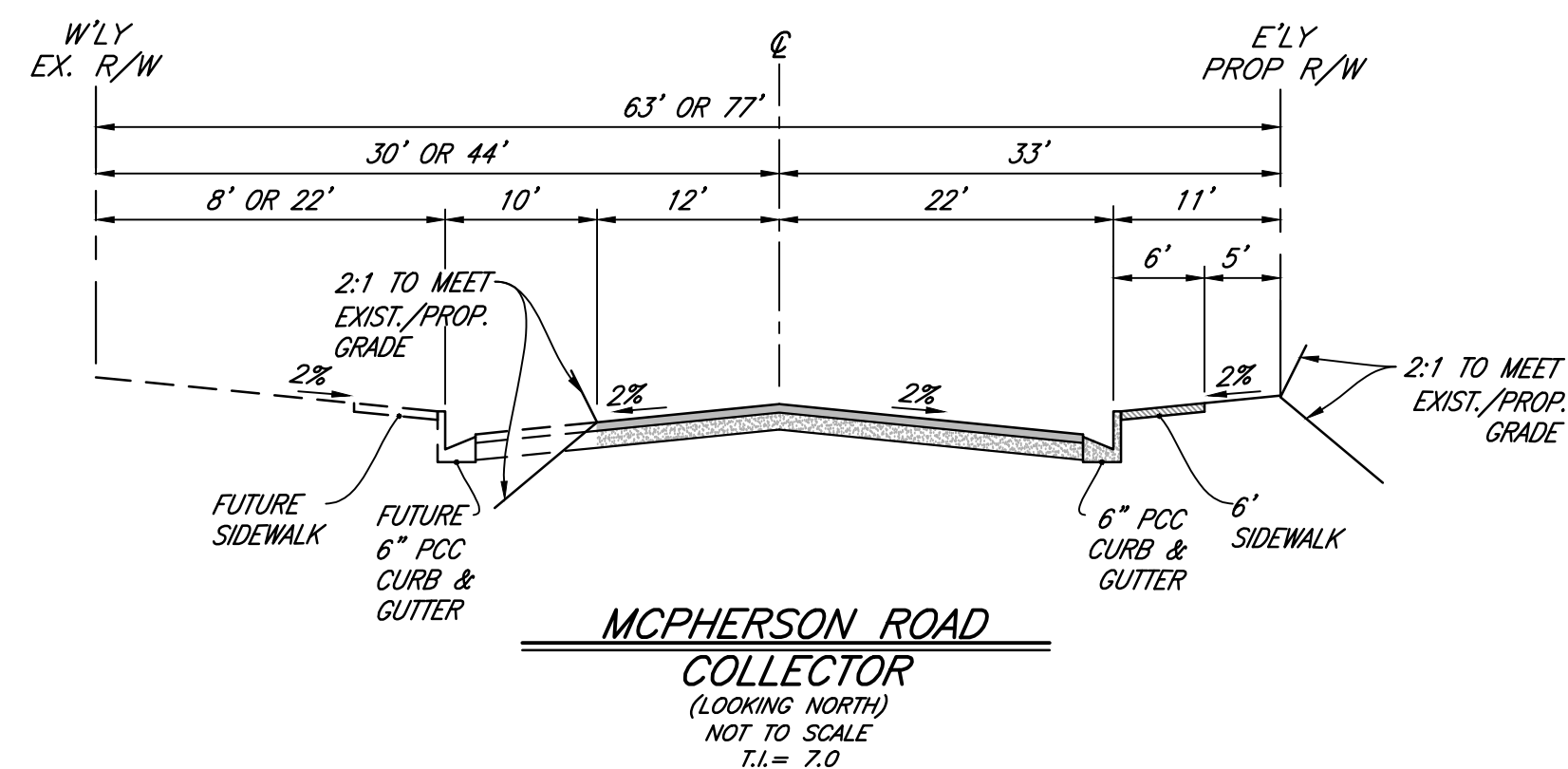
- NOTES:
 1) EARTHWORK VOLUMES ARE ESTIMATED BASED ON VERTICAL CUT LINES AT PROPERTY BOUNDARIES.
 2) EARTHWORK VOLUMES ASSUMES 10% ADJUSTMENT FOR SHRINKAGE AND SUBSIDENCE.
 3) ADJUSTED EARTHWORK TOTAL INCLUDES REMEDIAL GRADING.
 4) EARTHWORK VOLUMES BASED ON COMPARISON TO EXISTING TOPO DATED 2018

EASEMENTS:

AN EASEMENT FOR ROAD PURPOSES AND INCIDENTAL PURPOSES, RECORDED OCTOBER 27, 1964 AS INSTRUMENT NO. 129758 OF OFFICIAL RECORDS

UTILITY LEGEND

W	PROPOSED WATER (1801 ZONE)
S	PROPOSED SEWER
W	PROPOSED STORM DRAIN
W	EXISTING WATER
S	EXISTING SEWER
W	EXISTING STORM DRAIN



WQMP MEASURES

SEE WQMP CONCEPTUAL SITE PLAN FOR TREATMENT FACILITIES.

UTILITY NOTES

WATER: EASTERN MUNICIPAL WATER DISTRICT

2270 TRUMBLE ROAD
PERRIS, CA 92572
(951) 928-3777

SEWER: EASTERN MUNICIPAL WATER DISTRICT

2270 TRUMBLE ROAD
PERRIS, CA 92572
(951) 928-3777

GAS: SOUTHERN CALIFORNIA GAS CO.

1981 W. LUGONIA AVE.
REDLANDS, CA. 92374
(909) 335-7828

PHONE: SBC/PACIFIC BELL

1265 N. VAN BUREN
SUITE 180
ANAHAIM, CA. 92807
(714) 666-5423

GTE (VERIZON)

150 S. JUANITA ST.
HEMET, CA. 92543
(951) 672-6518

ELECTRIC: SO. CAL. EDISON CO.

26100 MENIFEE ROAD
ROMOLAND, CA. 92585
(951) 928-8207
(951) 820-5498

FIRE: RIVERSIDE COUNTY FIRE DEPARTMENT

4080 LEMON STREET 2ND FLOOR
RIVERSIDE, CA. 92502
(951) 955-4777

FIBER OPTIC: LEVEL 3 COMMUNICATIONS NETWORK RELOCATIONS DEPARTMENT

1025 ELDORADO BLVD BLDG 33A-522
BROOMFIELD, CO 80021
(720) 888-5688

NOTES

- PREPARED: NOVEMBER 2020
- TOTAL PROJECT GROSS ACREAGE: 40.62 AC.
- MINIMUM RESIDENTIAL LOT SIZE: 4,000 S.F.
- EXISTING GENERAL PLAN DESIGNATION: SINGLE FAMILY RESIDENTIAL
- PROPOSED GENERAL PLAN DESIGNATION: SINGLE FAMILY RESIDENTIAL
- EXISTING LAND USE: VACANT
- PROPOSED LAND USE: SINGLE FAMILY RESIDENTIAL
- EXISTING ZONING: R-6000
- PROPOSED ZONING: R-6000-PD
- PROPOSED DENSITY: 4.6 DU/AC
- ADJACENT LAND USE
- NORTH, SOUTH, & EAST:
GENERAL PLAN - SINGLE FAMILY RESIDENTIAL
ZONING - R-10,000
EXISTING USE - SINGLE FAMILY RESIDENTIAL
- WEST:
GENERAL PLAN - VERY LOW DENSITY RESIDENTIAL
ZONING - R-R (RIVERSIDE COUNTY)
EXISTING USE - RESIDENTIAL
- THOMAS BROTHERS GUIDE: RIVERSIDE COUNTY, PAGE 835, GRID G7
- ALL EXISTING EASEMENTS AND IRREVOCABLE OFFERS OF DEDICATION THAT AFFECT THE PROPERTY BEING SUBDIVIDED ARE SHOWN ON THIS TENTATIVE TRACT MAP.
- ALL PARTIES HAVING A BENEFICIARY INTEREST IN THE PROPERTY BEING SUBDIVIDED ARE AWARE OF AND CONSENT TO THE FILING OF THIS TENTATIVE TRACT MAP.
- "A"- "J" STREETS ARE TO BE PRIVATE AND WILL BE MAINTAINED BY AN HOA. ALL OTHER STREETS SHOWN SHALL BE CITY PUBLIC STREETS.
- SCHOOL DISTRICT: PERRIS UNION HIGH SCHOOL DISTRICT
- ALL MAJOR SLOPES, OPEN SPACE, PRIVATE DRAINAGE FACILITIES, FIRE BREAKS, HABITAT AREAS, ROAD ACCESS EASEMENTS, AND ANY OTHER COMMON AGREEMENTS SHALL BE MAINTAINED BY THE CITY'S LMD OR OPD OR A HOMEOWNERS ASSOCIATION, RESPECTIVELY AS SHOWN ON SHEET 2.
- THE HOME OWNERS ASSOCIATION SHALL BE ESTABLISHED SUBJECT TO CURRENT STATE LAWS AND BE SUBJECT TO THE APPROVAL OF THE CITY ATTORNEY AND COMMUNITY DIRECTOR WHO SHALL REVIEW ALL CC&R'S AND RULES FOR THEIR ADEQUACY AND COMPLETENESS. THE CITY ATTORNEY SHALL REVIEW CC&R'S, HOMEOWNERS ASSOCIATION DOCUMENTS AND ALL DOCUMENTS TO CONVEY TITLE TO THE HOMEOWNERS ASSOCIATION.
- ALL SLOPES ARE PRIVATE UNLESS THEY ARE WITHIN A LETTERED H.O.A. OR LMD/OPD LOT.
- THIS IS AN APPLICATION FOR A DEVELOPMENT PERMIT.
- AERIAL TOPOGRAPHY PREPARED BY KWC ENGINEERS, 1/24/2020, 1988 DATUM

INDEX

GENERAL NOTES, CROSS SECTIONS, AND INDEX MAP	1
TENTATIVE TRACT MAP	2

A.P.N.

342-080-039, 342-080-040, 342-080-041, 342-080-042

LEGAL DESCRIPTION

APN(S): 342-080-039 THROUGH 342-080-042

PARCELS 1, 2, 3, 4, AND LETTERED LOTS "A", "B", "C", "D", "E", AND "F" OF PARCEL MAP 18059 IN THE CITY OF PERRIS, COUNTY OF RIVERSIDE, STATE OF CALIFORNIA, AS SHOWN BY MAP ON FILE IN BOOK 86, PAGE 30 OF PARCEL MAPS OF OFFICIAL RECORDS OF RIVERSIDE COUNTY, CALIFORNIA.

SOILS ENGINEER

GEOTEK, INC.
1548 N. MAPLE STREET
CORONA, CA 92880
(951) 710-1160

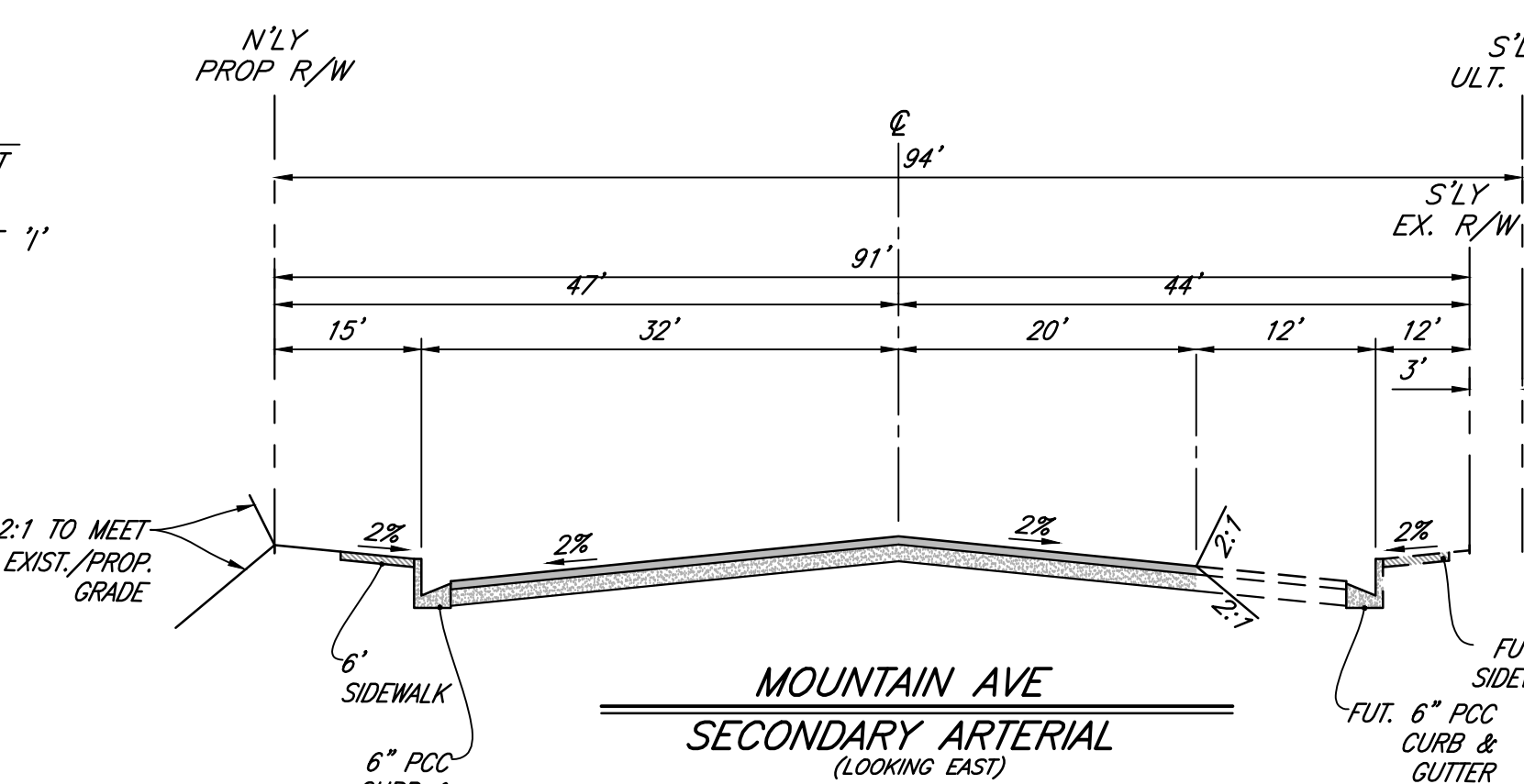
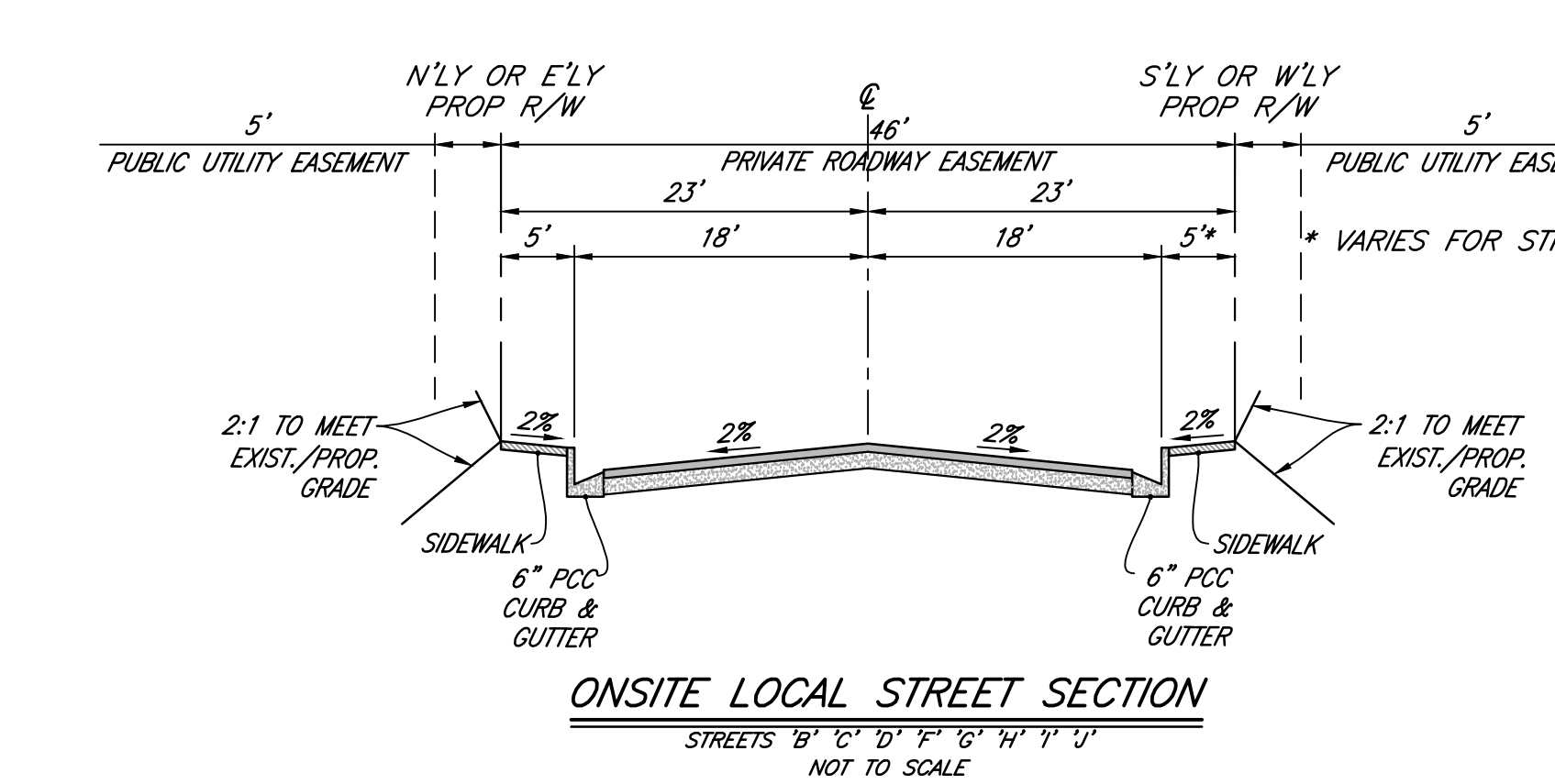
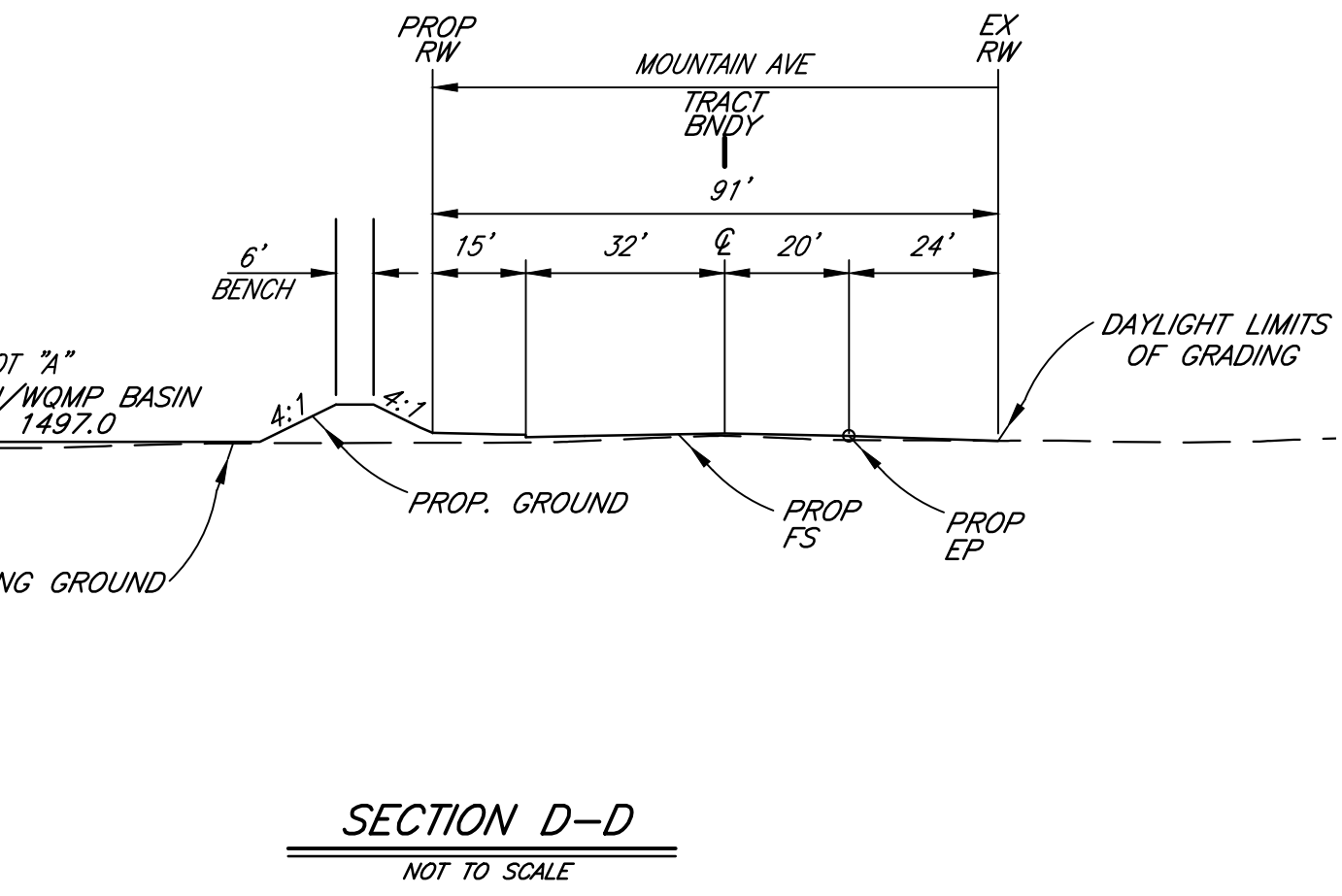
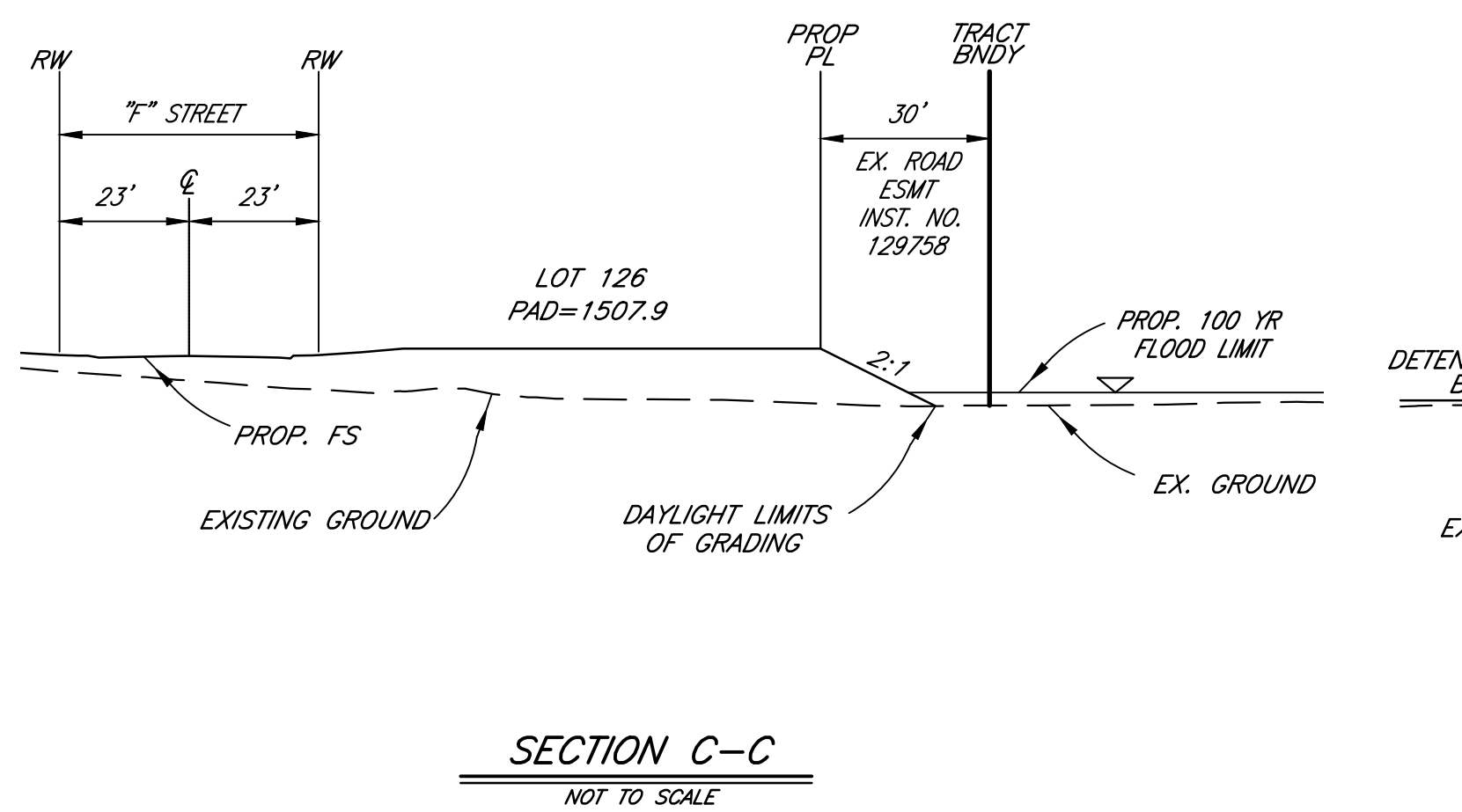
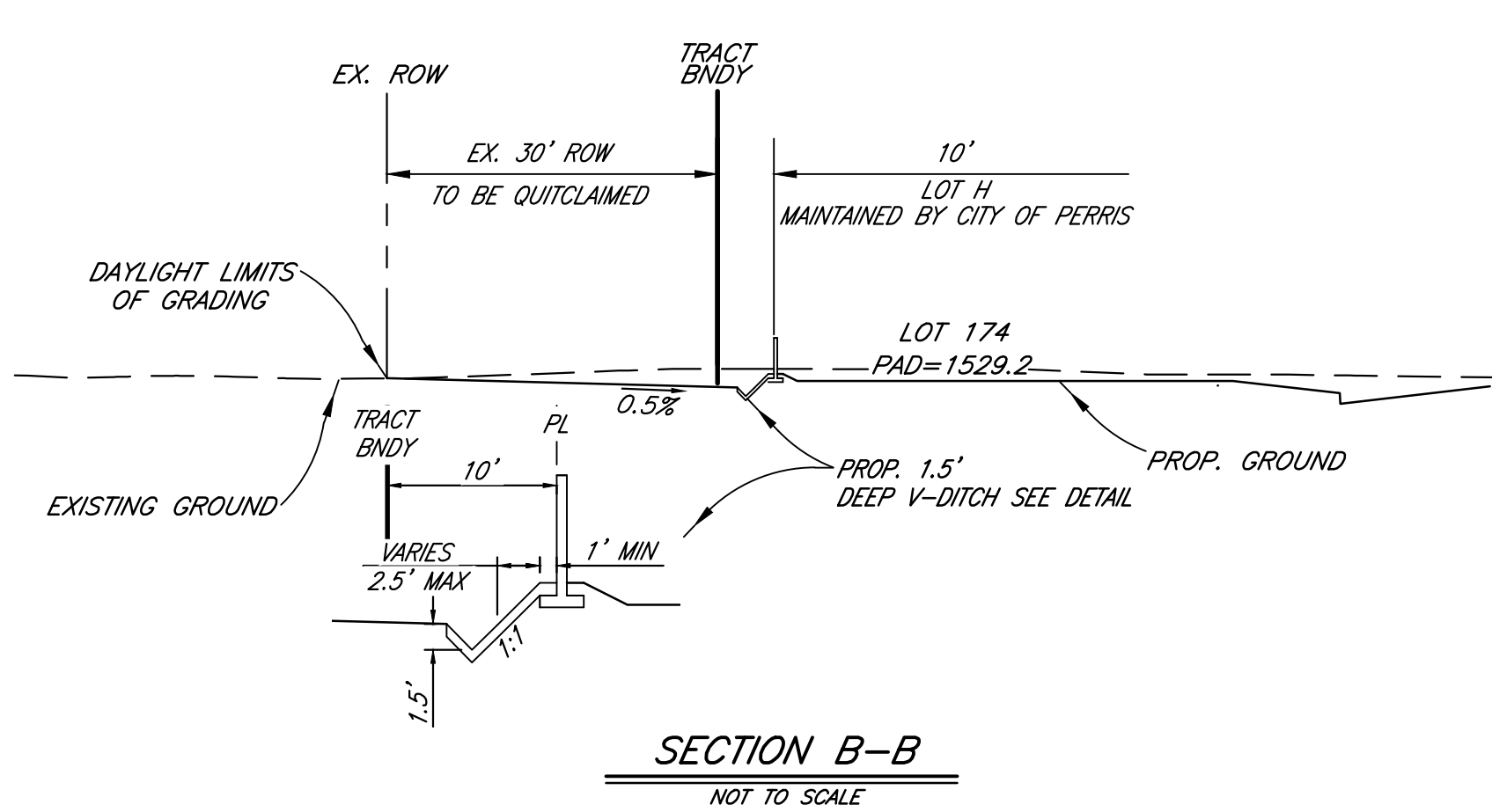
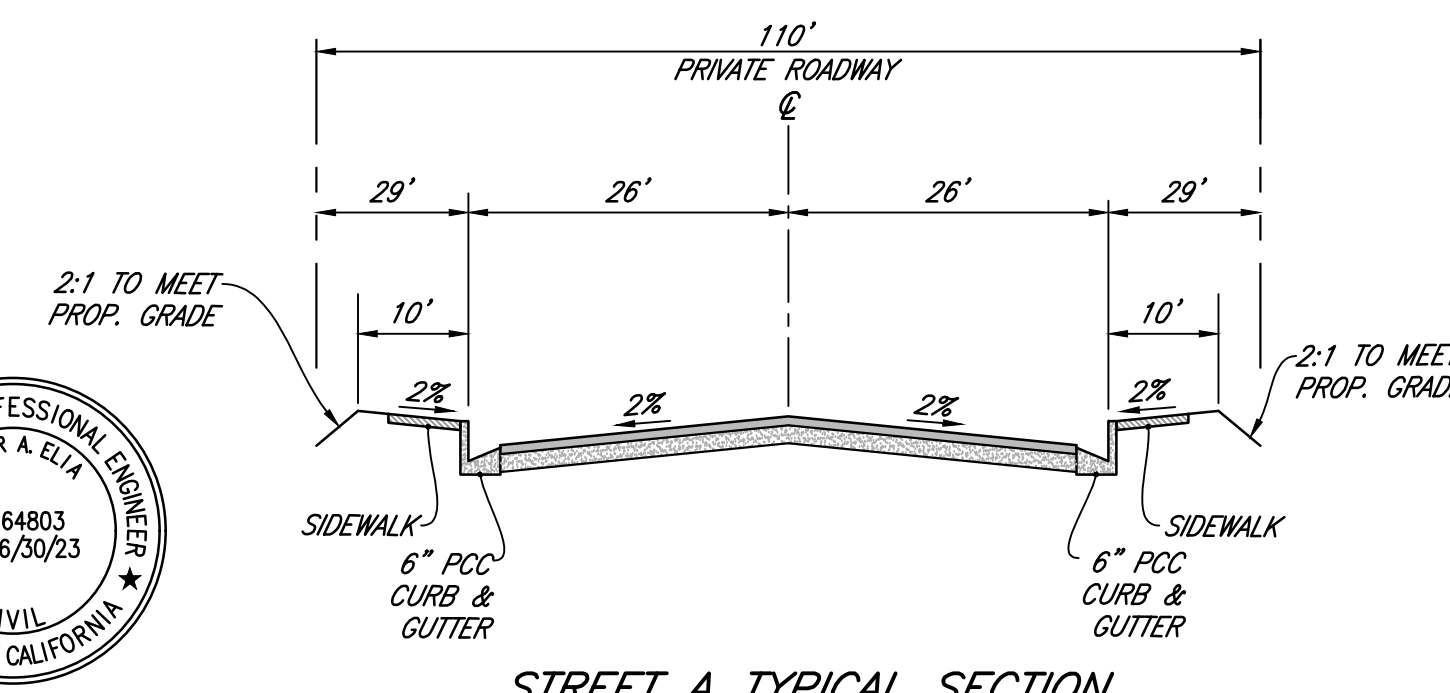
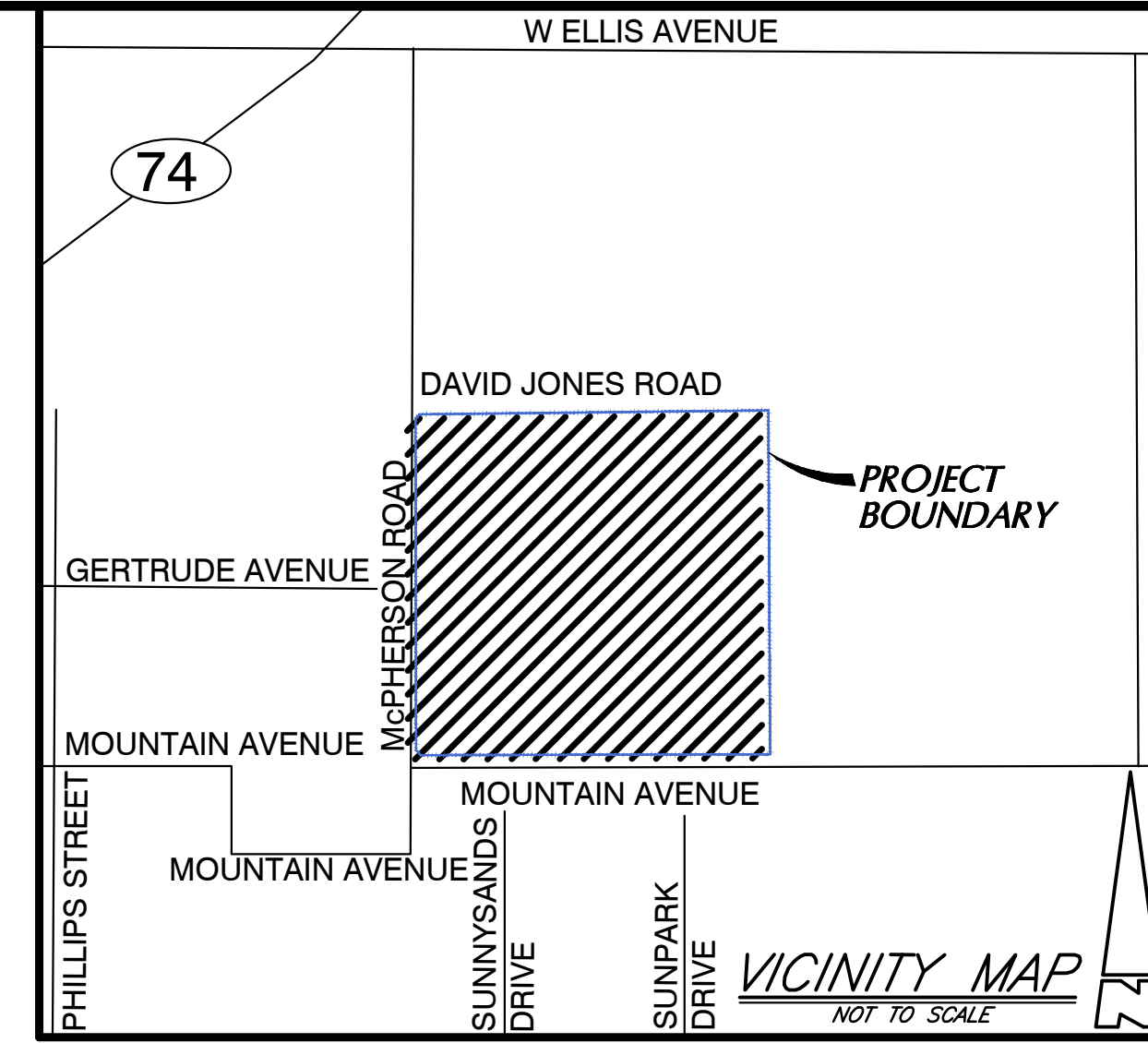
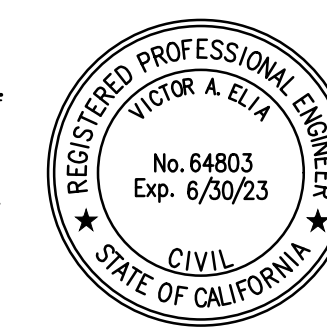
LANDSCAPE ARCHITECT

SMP ENVIRONMENTAL DESIGN
34197 PACIFIC COAST HWY, SUITE 200
DANA POINT, CA 92629
(949) 443-1446

STATEMENT OF PREPARER

I HEREBY STATE THAT THIS MAP WAS PREPARED UNDER MY SUPERVISION AND THAT THE OWNER OF RECORD HAS KNOWLEDGE OF AND CONSENTS TO THE FILING OF THIS MAP.

Victor A. Elia
VICTOR A. ELIA, P.E. DATE: 10/15/21



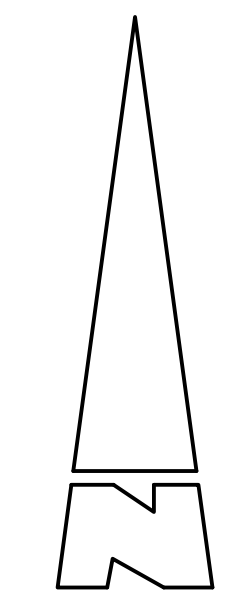
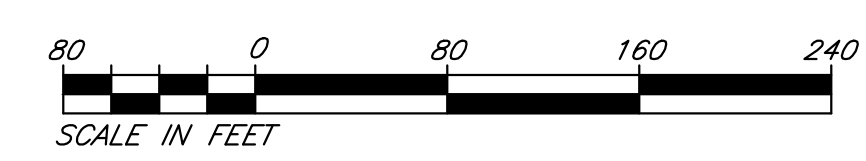
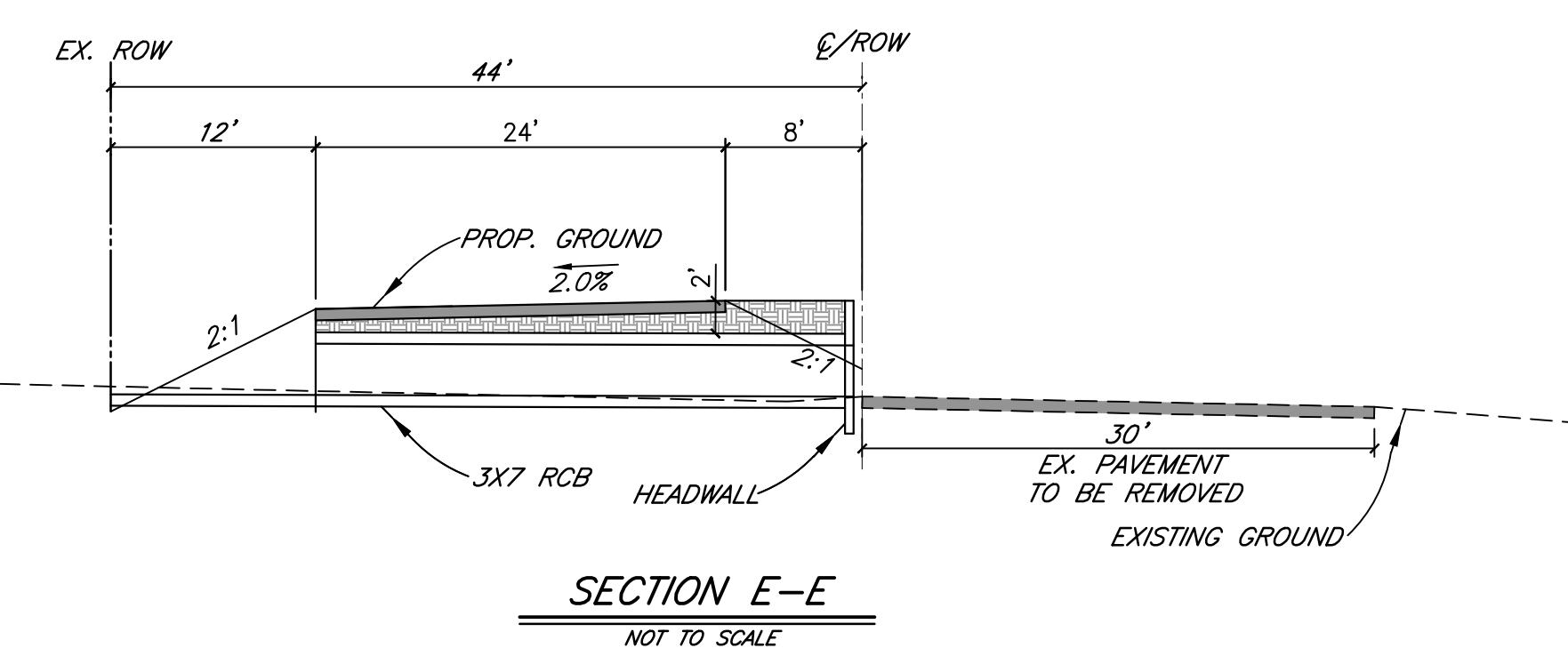
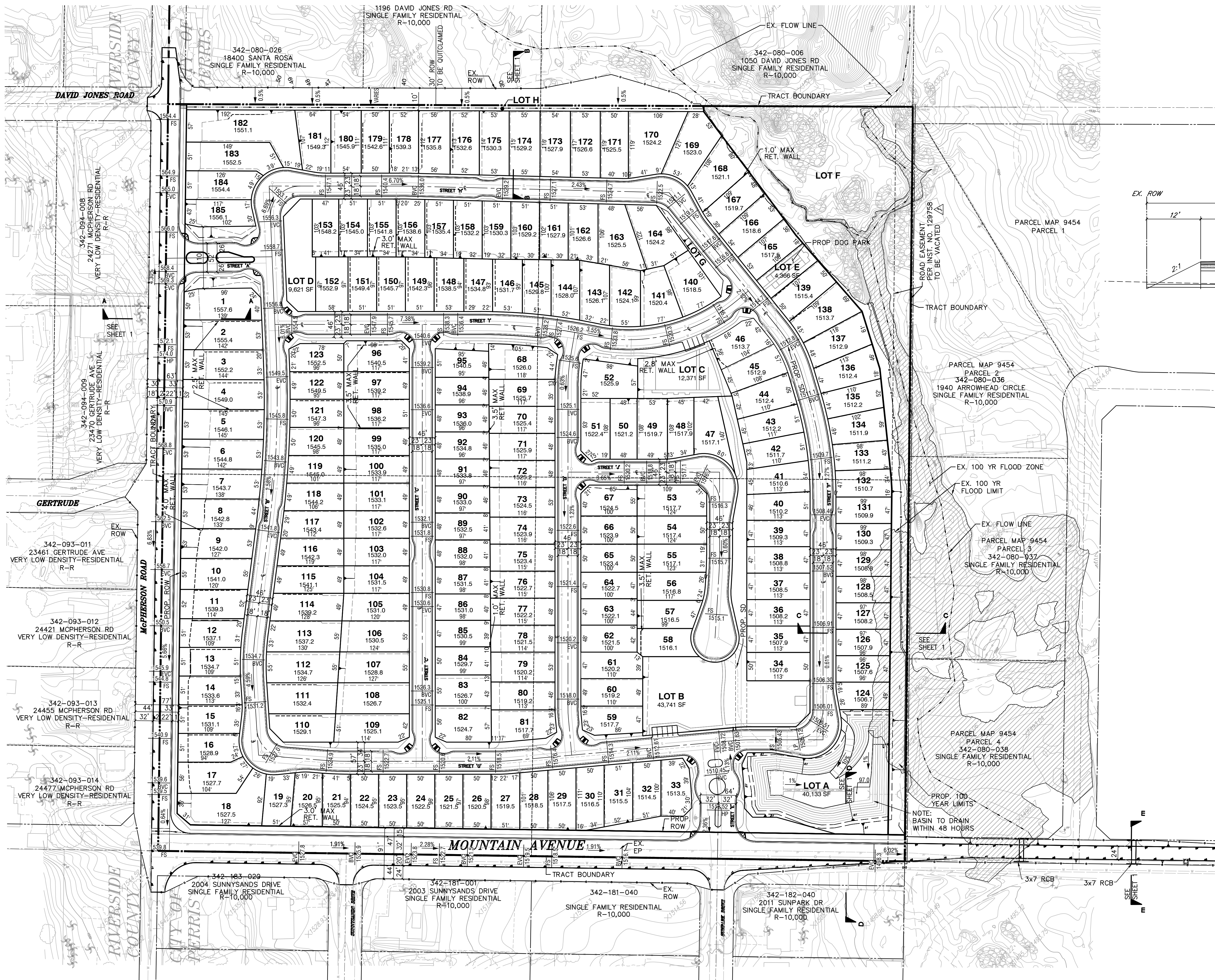
TENTATIVE TRACT MAP NO. 37904
PACIFIC EMERALD
CITY OF PERRIS

PREPARED FOR: PACIFIC COMMUNITIES
 1000 DOVE STREET, SUITE 300
 NEWPORT BEACH, CA 92660
 949-660-8988

KWC ENGINEERS
 CIVIL ENGINEERS • PLANNERS • SURVEYORS
 1880 COMPTON AVENUE, SUITE 100 • CORONA, CA 92881-3370 • 951-734-2130

SHEET
 1 OF 2
 SHEETS

JAN. 19. 1885 14:19:11885 (PRELIM) EXHIBIT GRADING EXHIBIT 01.dwg 10/15/2021



TENTATIVE TRACT MAP NO. 37904
PACIFIC EMERALD
CITY OF PERRIS

PREPARED FOR
PACIFIC COMMUNITIES
 1000 DOVE STREET, SUITE 300
 NEWPORT BEACH, CA 92660
 949-660-8988

KWC ENGINEERS
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 1880 COMPTON AVENUE, SUITE 100 • CORONA, CA 92881-3370 • 951-734-2130

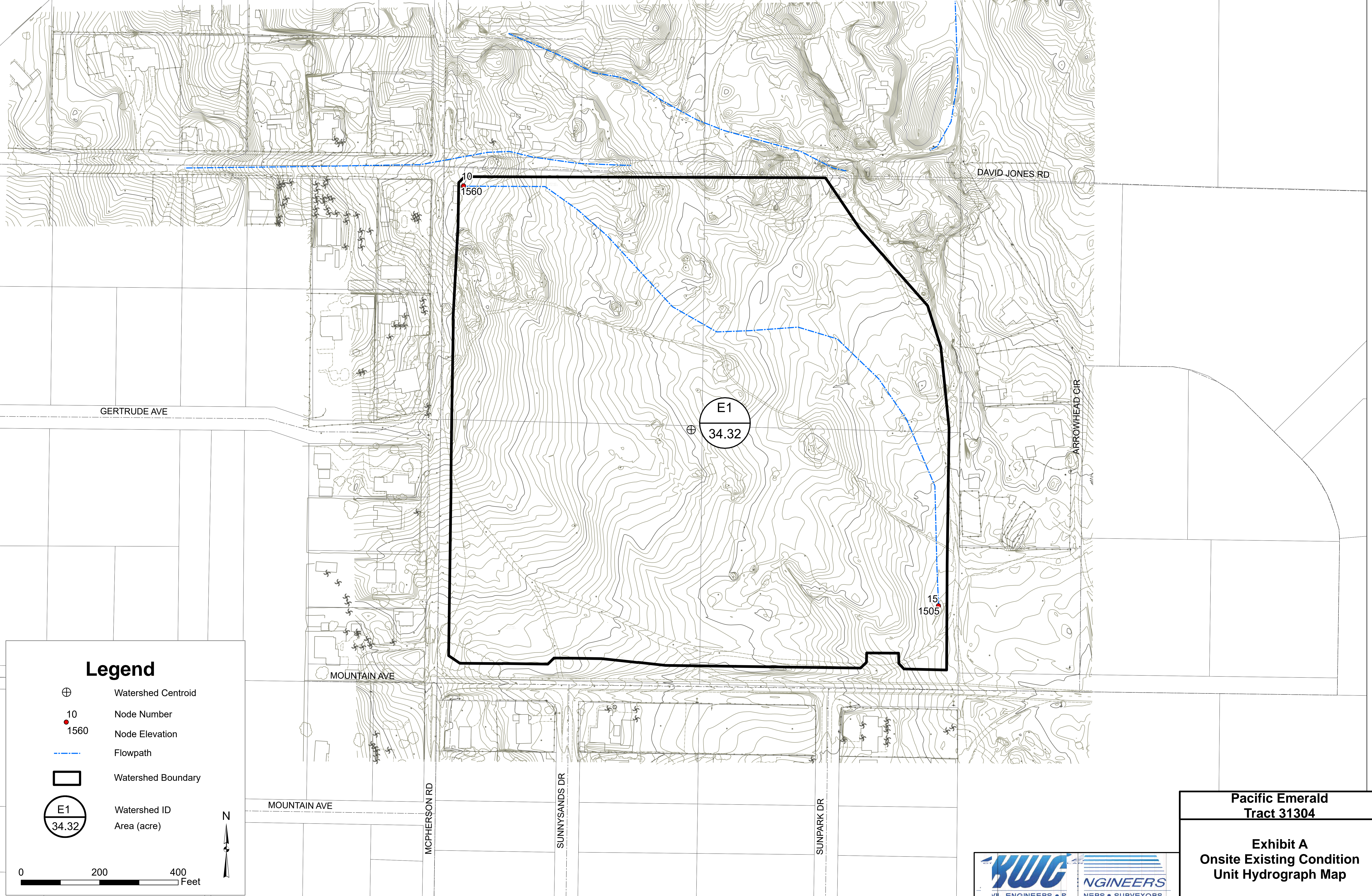
SHEET 2 OF 2 SHEETS

J:\18-1885-M\1918851\PRELIM\EXHIBIT\GRAVING EXHIBIT\1885 grading exhibit 02.dwg 10/15/2021

Appendix

B

UNIT HYDROGRAPH CALCULATIONS EXISTING CONDITIONS



Legend

- ⊕ Watershed Centroid
- 10 Node Number
- 1560 Node Elevation
- Flowpath
- ▭ Watershed Boundary
- ⊕
E1
34.32 Watershed ID
Area (acre)



Pacific Emerald
Tract 31304

Exhibit A
Onsite Existing Condition
Unit Hydrograph Map



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Unit Hydrograph Analysis

Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2004, Version 7.0
Study date 10/12/21 File: 2yr24hre242.out

+++++

Riverside County Synthetic Unit Hydrology Method
RCFC & WCD Manual date - April 1978

Program License Serial Number 6062

English (in-lb) Input Units Used
English Rainfall Data (Inches) Input Values Used

English Units used in output format

Pacific Emerald
Existing Condition
2-Year 24-Hour Storm

Drainage Area = 34.32(Ac.) = 0.054 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 34.32(Ac.) = 0.054 Sq. Mi.
Length along longest watercourse = 1861.00(Ft.)
Length along longest watercourse measured to centroid = 1073.00(Ft.)
Length along longest watercourse = 0.352 Mi.
Length along longest watercourse measured to centroid = 0.203 Mi.
Difference in elevation = 55.00(Ft.)
Slope along watercourse = 156.0451 Ft./Mi.
Average Manning's 'N' = 0.035
Lag time = 0.118 Hr.
Lag time = 7.09 Min.
25% of lag time = 1.77 Min.
40% of lag time = 2.84 Min.
Unit time = 5.00 Min.
Duration of storm = 24 Hour(s)
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
34.32	2.00	68.64

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
34.32	5.60	192.19

STORM EVENT (YEAR) = 2.00
Area Averaged 2-Year Rainfall = 2.000(In)
Area Averaged 100-Year Rainfall = 5.600(In)

Point rain (area averaged) = 2.000(In)
Areal adjustment factor = 99.99 %
Adjusted average point rain = 2.000(In)

Sub-Area Data:

Area(Ac.) Runoff Index Impervious %
 30.700 78.00 0.000
 3.620 86.00 0.000
 Total Area Entered = 34.32(Ac.)

RI	RI	Infil. Rate	Impervious	Adj. Infil. Rate	Area%	F
AMC2	AMC-1	(In/Hr)	(Dec.%)	(In/Hr)	(Dec.)	(In/Hr)
78.0	60.6	0.464	0.000	0.464	0.895	0.415
86.0	71.6	0.343	0.000	0.343	0.105	0.036
						Sum (F) = 0.451

Area averaged mean soil loss (F) (In/Hr) = 0.451
 Minimum soil loss rate ((In/Hr)) = 0.225
 (for 24 hour storm duration)
 Soil loss rate (decimal) = 0.900

 U n i t H y d r o g r a p h
 VALLEY S-Curve

Unit Hydrograph Data

Unit time period (hrs)	Time % of lag	Distribution Graph %	Unit Hydrograph (CFS)
1	0.083	70.522	10.759
2	0.167	141.045	40.373
3	0.250	211.567	22.970
4	0.333	282.090	8.962
5	0.417	352.612	5.449
6	0.500	423.135	3.608
7	0.583	493.657	2.421
8	0.667	564.179	1.887
9	0.750	634.702	1.328
10	0.833	705.224	0.937
11	0.917	775.747	0.712
12	1.000	846.269	0.595
Sum = 100.000			Sum= 34.588

Unit Time (Hr.)	Pattern Percent	Storm Rain (In/Hr)	Loss rate(In./Hr)		Effective (In/Hr)	
			Max	Low		
1	0.08	0.07	0.016	0.799	0.014	0.00
2	0.17	0.07	0.016	0.796	0.014	0.00
3	0.25	0.07	0.016	0.793	0.014	0.00
4	0.33	0.10	0.024	0.790	0.022	0.00
5	0.42	0.10	0.024	0.787	0.022	0.00
6	0.50	0.10	0.024	0.784	0.022	0.00
7	0.58	0.10	0.024	0.781	0.022	0.00
8	0.67	0.10	0.024	0.778	0.022	0.00
9	0.75	0.10	0.024	0.775	0.022	0.00
10	0.83	0.13	0.032	0.772	0.029	0.00
11	0.92	0.13	0.032	0.769	0.029	0.00
12	1.00	0.13	0.032	0.766	0.029	0.00
13	1.08	0.10	0.024	0.762	0.022	0.00
14	1.17	0.10	0.024	0.759	0.022	0.00
15	1.25	0.10	0.024	0.756	0.022	0.00
16	1.33	0.10	0.024	0.753	0.022	0.00
17	1.42	0.10	0.024	0.750	0.022	0.00
18	1.50	0.10	0.024	0.747	0.022	0.00
19	1.58	0.10	0.024	0.744	0.022	0.00
20	1.67	0.10	0.024	0.741	0.022	0.00
21	1.75	0.10	0.024	0.739	0.022	0.00
22	1.83	0.13	0.032	0.736	0.029	0.00
23	1.92	0.13	0.032	0.733	0.029	0.00
24	2.00	0.13	0.032	0.730	0.029	0.00
25	2.08	0.13	0.032	0.727	0.029	0.00

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26	2.17	0.13	0.032	0.724	0.029	0.00
27	2.25	0.13	0.032	0.721	0.029	0.00
28	2.33	0.13	0.032	0.718	0.029	0.00
29	2.42	0.13	0.032	0.715	0.029	0.00
30	2.50	0.13	0.032	0.712	0.029	0.00
31	2.58	0.17	0.040	0.709	0.036	0.00
32	2.67	0.17	0.040	0.706	0.036	0.00
33	2.75	0.17	0.040	0.703	0.036	0.00
34	2.83	0.17	0.040	0.700	0.036	0.00
35	2.92	0.17	0.040	0.697	0.036	0.00
36	3.00	0.17	0.040	0.695	0.036	0.00
37	3.08	0.17	0.040	0.692	0.036	0.00
38	3.17	0.17	0.040	0.689	0.036	0.00
39	3.25	0.17	0.040	0.686	0.036	0.00
40	3.33	0.17	0.040	0.683	0.036	0.00
41	3.42	0.17	0.040	0.680	0.036	0.00
42	3.50	0.17	0.040	0.677	0.036	0.00
43	3.58	0.17	0.040	0.675	0.036	0.00
44	3.67	0.17	0.040	0.672	0.036	0.00
45	3.75	0.17	0.040	0.669	0.036	0.00
46	3.83	0.20	0.048	0.666	0.043	0.00
47	3.92	0.20	0.048	0.663	0.043	0.00
48	4.00	0.20	0.048	0.660	0.043	0.00
49	4.08	0.20	0.048	0.658	0.043	0.00
50	4.17	0.20	0.048	0.655	0.043	0.00
51	4.25	0.20	0.048	0.652	0.043	0.00
52	4.33	0.23	0.056	0.649	0.050	0.01
53	4.42	0.23	0.056	0.647	0.050	0.01
54	4.50	0.23	0.056	0.644	0.050	0.01
55	4.58	0.23	0.056	0.641	0.050	0.01
56	4.67	0.23	0.056	0.638	0.050	0.01
57	4.75	0.23	0.056	0.636	0.050	0.01
58	4.83	0.27	0.064	0.633	0.058	0.01
59	4.92	0.27	0.064	0.630	0.058	0.01
60	5.00	0.27	0.064	0.627	0.058	0.01
61	5.08	0.20	0.048	0.625	0.043	0.00
62	5.17	0.20	0.048	0.622	0.043	0.00
63	5.25	0.20	0.048	0.619	0.043	0.00
64	5.33	0.23	0.056	0.616	0.050	0.01
65	5.42	0.23	0.056	0.614	0.050	0.01
66	5.50	0.23	0.056	0.611	0.050	0.01
67	5.58	0.27	0.064	0.608	0.058	0.01
68	5.67	0.27	0.064	0.606	0.058	0.01
69	5.75	0.27	0.064	0.603	0.058	0.01
70	5.83	0.27	0.064	0.600	0.058	0.01
71	5.92	0.27	0.064	0.598	0.058	0.01
72	6.00	0.27	0.064	0.595	0.058	0.01
73	6.08	0.30	0.072	0.592	0.065	0.01
74	6.17	0.30	0.072	0.590	0.065	0.01
75	6.25	0.30	0.072	0.587	0.065	0.01
76	6.33	0.30	0.072	0.585	0.065	0.01
77	6.42	0.30	0.072	0.582	0.065	0.01
78	6.50	0.30	0.072	0.579	0.065	0.01
79	6.58	0.33	0.080	0.577	0.072	0.01
80	6.67	0.33	0.080	0.574	0.072	0.01
81	6.75	0.33	0.080	0.572	0.072	0.01
82	6.83	0.33	0.080	0.569	0.072	0.01
83	6.92	0.33	0.080	0.566	0.072	0.01
84	7.00	0.33	0.080	0.564	0.072	0.01
85	7.08	0.33	0.080	0.561	0.072	0.01
86	7.17	0.33	0.080	0.559	0.072	0.01
87	7.25	0.33	0.080	0.556	0.072	0.01
88	7.33	0.37	0.088	0.554	0.079	0.01
89	7.42	0.37	0.088	0.551	0.079	0.01
90	7.50	0.37	0.088	0.549	0.079	0.01
91	7.58	0.40	0.096	0.546	0.086	0.01
92	7.67	0.40	0.096	0.544	0.086	0.01
93	7.75	0.40	0.096	0.541	0.086	0.01

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94	7.83	0.43	0.104	0.539	0.094	0.01
95	7.92	0.43	0.104	0.536	0.094	0.01
96	8.00	0.43	0.104	0.534	0.094	0.01
97	8.08	0.50	0.120	0.531	0.108	0.01
98	8.17	0.50	0.120	0.529	0.108	0.01
99	8.25	0.50	0.120	0.526	0.108	0.01
100	8.33	0.50	0.120	0.524	0.108	0.01
101	8.42	0.50	0.120	0.521	0.108	0.01
102	8.50	0.50	0.120	0.519	0.108	0.01
103	8.58	0.53	0.128	0.516	0.115	0.01
104	8.67	0.53	0.128	0.514	0.115	0.01
105	8.75	0.53	0.128	0.511	0.115	0.01
106	8.83	0.57	0.136	0.509	0.122	0.01
107	8.92	0.57	0.136	0.507	0.122	0.01
108	9.00	0.57	0.136	0.504	0.122	0.01
109	9.08	0.63	0.152	0.502	0.137	0.02
110	9.17	0.63	0.152	0.499	0.137	0.02
111	9.25	0.63	0.152	0.497	0.137	0.02
112	9.33	0.67	0.160	0.495	0.144	0.02
113	9.42	0.67	0.160	0.492	0.144	0.02
114	9.50	0.67	0.160	0.490	0.144	0.02
115	9.58	0.70	0.168	0.488	0.151	0.02
116	9.67	0.70	0.168	0.485	0.151	0.02
117	9.75	0.70	0.168	0.483	0.151	0.02
118	9.83	0.73	0.176	0.481	0.158	0.02
119	9.92	0.73	0.176	0.478	0.158	0.02
120	10.00	0.73	0.176	0.476	0.158	0.02
121	10.08	0.50	0.120	0.474	0.108	0.01
122	10.17	0.50	0.120	0.471	0.108	0.01
123	10.25	0.50	0.120	0.469	0.108	0.01
124	10.33	0.50	0.120	0.467	0.108	0.01
125	10.42	0.50	0.120	0.465	0.108	0.01
126	10.50	0.50	0.120	0.462	0.108	0.01
127	10.58	0.67	0.160	0.460	0.144	0.02
128	10.67	0.67	0.160	0.458	0.144	0.02
129	10.75	0.67	0.160	0.456	0.144	0.02
130	10.83	0.67	0.160	0.453	0.144	0.02
131	10.92	0.67	0.160	0.451	0.144	0.02
132	11.00	0.67	0.160	0.449	0.144	0.02
133	11.08	0.63	0.152	0.447	0.137	0.02
134	11.17	0.63	0.152	0.445	0.137	0.02
135	11.25	0.63	0.152	0.442	0.137	0.02
136	11.33	0.63	0.152	0.440	0.137	0.02
137	11.42	0.63	0.152	0.438	0.137	0.02
138	11.50	0.63	0.152	0.436	0.137	0.02
139	11.58	0.57	0.136	0.434	0.122	0.01
140	11.67	0.57	0.136	0.431	0.122	0.01
141	11.75	0.57	0.136	0.429	0.122	0.01
142	11.83	0.60	0.144	0.427	0.130	0.01
143	11.92	0.60	0.144	0.425	0.130	0.01
144	12.00	0.60	0.144	0.423	0.130	0.01
145	12.08	0.83	0.200	0.421	0.180	0.02
146	12.17	0.83	0.200	0.419	0.180	0.02
147	12.25	0.83	0.200	0.417	0.180	0.02
148	12.33	0.87	0.208	0.415	0.187	0.02
149	12.42	0.87	0.208	0.412	0.187	0.02
150	12.50	0.87	0.208	0.410	0.187	0.02
151	12.58	0.93	0.224	0.408	0.202	0.02
152	12.67	0.93	0.224	0.406	0.202	0.02
153	12.75	0.93	0.224	0.404	0.202	0.02
154	12.83	0.97	0.232	0.402	0.209	0.02
155	12.92	0.97	0.232	0.400	0.209	0.02
156	13.00	0.97	0.232	0.398	0.209	0.02
157	13.08	1.13	0.272	0.396	0.245	0.03
158	13.17	1.13	0.272	0.394	0.245	0.03
159	13.25	1.13	0.272	0.392	0.245	0.03
160	13.33	1.13	0.272	0.390	0.245	0.03
161	13.42	1.13	0.272	0.388	0.245	0.03

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162	13.50	1.13	0.272	0.386	0.245	0.03
163	13.58	0.77	0.184	0.384	0.166	0.02
164	13.67	0.77	0.184	0.382	0.166	0.02
165	13.75	0.77	0.184	0.380	0.166	0.02
166	13.83	0.77	0.184	0.378	0.166	0.02
167	13.92	0.77	0.184	0.376	0.166	0.02
168	14.00	0.77	0.184	0.374	0.166	0.02
169	14.08	0.90	0.216	0.373	0.194	0.02
170	14.17	0.90	0.216	0.371	0.194	0.02
171	14.25	0.90	0.216	0.369	0.194	0.02
172	14.33	0.87	0.208	0.367	0.187	0.02
173	14.42	0.87	0.208	0.365	0.187	0.02
174	14.50	0.87	0.208	0.363	0.187	0.02
175	14.58	0.87	0.208	0.361	0.187	0.02
176	14.67	0.87	0.208	0.359	0.187	0.02
177	14.75	0.87	0.208	0.358	0.187	0.02
178	14.83	0.83	0.200	0.356	0.180	0.02
179	14.92	0.83	0.200	0.354	0.180	0.02
180	15.00	0.83	0.200	0.352	0.180	0.02
181	15.08	0.80	0.192	0.350	0.173	0.02
182	15.17	0.80	0.192	0.349	0.173	0.02
183	15.25	0.80	0.192	0.347	0.173	0.02
184	15.33	0.77	0.184	0.345	0.166	0.02
185	15.42	0.77	0.184	0.343	0.166	0.02
186	15.50	0.77	0.184	0.341	0.166	0.02
187	15.58	0.63	0.152	0.340	0.137	0.02
188	15.67	0.63	0.152	0.338	0.137	0.02
189	15.75	0.63	0.152	0.336	0.137	0.02
190	15.83	0.63	0.152	0.334	0.137	0.02
191	15.92	0.63	0.152	0.333	0.137	0.02
192	16.00	0.63	0.152	0.331	0.137	0.02
193	16.08	0.13	0.032	0.329	0.029	0.00
194	16.17	0.13	0.032	0.328	0.029	0.00
195	16.25	0.13	0.032	0.326	0.029	0.00
196	16.33	0.13	0.032	0.324	0.029	0.00
197	16.42	0.13	0.032	0.323	0.029	0.00
198	16.50	0.13	0.032	0.321	0.029	0.00
199	16.58	0.10	0.024	0.319	0.022	0.00
200	16.67	0.10	0.024	0.318	0.022	0.00
201	16.75	0.10	0.024	0.316	0.022	0.00
202	16.83	0.10	0.024	0.315	0.022	0.00
203	16.92	0.10	0.024	0.313	0.022	0.00
204	17.00	0.10	0.024	0.311	0.022	0.00
205	17.08	0.17	0.040	0.310	0.036	0.00
206	17.17	0.17	0.040	0.308	0.036	0.00
207	17.25	0.17	0.040	0.307	0.036	0.00
208	17.33	0.17	0.040	0.305	0.036	0.00
209	17.42	0.17	0.040	0.304	0.036	0.00
210	17.50	0.17	0.040	0.302	0.036	0.00
211	17.58	0.17	0.040	0.301	0.036	0.00
212	17.67	0.17	0.040	0.299	0.036	0.00
213	17.75	0.17	0.040	0.298	0.036	0.00
214	17.83	0.13	0.032	0.296	0.029	0.00
215	17.92	0.13	0.032	0.295	0.029	0.00
216	18.00	0.13	0.032	0.293	0.029	0.00
217	18.08	0.13	0.032	0.292	0.029	0.00
218	18.17	0.13	0.032	0.290	0.029	0.00
219	18.25	0.13	0.032	0.289	0.029	0.00
220	18.33	0.13	0.032	0.288	0.029	0.00
221	18.42	0.13	0.032	0.286	0.029	0.00
222	18.50	0.13	0.032	0.285	0.029	0.00
223	18.58	0.10	0.024	0.283	0.022	0.00
224	18.67	0.10	0.024	0.282	0.022	0.00
225	18.75	0.10	0.024	0.281	0.022	0.00
226	18.83	0.07	0.016	0.279	0.014	0.00
227	18.92	0.07	0.016	0.278	0.014	0.00
228	19.00	0.07	0.016	0.277	0.014	0.00
229	19.08	0.10	0.024	0.275	0.022	0.00

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230	19.17	0.10	0.024	0.274	0.022	0.00
231	19.25	0.10	0.024	0.273	0.022	0.00
232	19.33	0.13	0.032	0.271	0.029	0.00
233	19.42	0.13	0.032	0.270	0.029	0.00
234	19.50	0.13	0.032	0.269	0.029	0.00
235	19.58	0.10	0.024	0.268	0.022	0.00
236	19.67	0.10	0.024	0.267	0.022	0.00
237	19.75	0.10	0.024	0.265	0.022	0.00
238	19.83	0.07	0.016	0.264	0.014	0.00
239	19.92	0.07	0.016	0.263	0.014	0.00
240	20.00	0.07	0.016	0.262	0.014	0.00
241	20.08	0.10	0.024	0.261	0.022	0.00
242	20.17	0.10	0.024	0.259	0.022	0.00
243	20.25	0.10	0.024	0.258	0.022	0.00
244	20.33	0.10	0.024	0.257	0.022	0.00
245	20.42	0.10	0.024	0.256	0.022	0.00
246	20.50	0.10	0.024	0.255	0.022	0.00
247	20.58	0.10	0.024	0.254	0.022	0.00
248	20.67	0.10	0.024	0.253	0.022	0.00
249	20.75	0.10	0.024	0.252	0.022	0.00
250	20.83	0.07	0.016	0.251	0.014	0.00
251	20.92	0.07	0.016	0.250	0.014	0.00
252	21.00	0.07	0.016	0.249	0.014	0.00
253	21.08	0.10	0.024	0.248	0.022	0.00
254	21.17	0.10	0.024	0.247	0.022	0.00
255	21.25	0.10	0.024	0.246	0.022	0.00
256	21.33	0.07	0.016	0.245	0.014	0.00
257	21.42	0.07	0.016	0.244	0.014	0.00
258	21.50	0.07	0.016	0.243	0.014	0.00
259	21.58	0.10	0.024	0.242	0.022	0.00
260	21.67	0.10	0.024	0.241	0.022	0.00
261	21.75	0.10	0.024	0.241	0.022	0.00
262	21.83	0.07	0.016	0.240	0.014	0.00
263	21.92	0.07	0.016	0.239	0.014	0.00
264	22.00	0.07	0.016	0.238	0.014	0.00
265	22.08	0.10	0.024	0.237	0.022	0.00
266	22.17	0.10	0.024	0.236	0.022	0.00
267	22.25	0.10	0.024	0.236	0.022	0.00
268	22.33	0.07	0.016	0.235	0.014	0.00
269	22.42	0.07	0.016	0.234	0.014	0.00
270	22.50	0.07	0.016	0.234	0.014	0.00
271	22.58	0.07	0.016	0.233	0.014	0.00
272	22.67	0.07	0.016	0.232	0.014	0.00
273	22.75	0.07	0.016	0.232	0.014	0.00
274	22.83	0.07	0.016	0.231	0.014	0.00
275	22.92	0.07	0.016	0.230	0.014	0.00
276	23.00	0.07	0.016	0.230	0.014	0.00
277	23.08	0.07	0.016	0.229	0.014	0.00
278	23.17	0.07	0.016	0.229	0.014	0.00
279	23.25	0.07	0.016	0.228	0.014	0.00
280	23.33	0.07	0.016	0.228	0.014	0.00
281	23.42	0.07	0.016	0.227	0.014	0.00
282	23.50	0.07	0.016	0.227	0.014	0.00
283	23.58	0.07	0.016	0.227	0.014	0.00
284	23.67	0.07	0.016	0.226	0.014	0.00
285	23.75	0.07	0.016	0.226	0.014	0.00
286	23.83	0.07	0.016	0.226	0.014	0.00
287	23.92	0.07	0.016	0.226	0.014	0.00
288	24.00	0.07	0.016	0.225	0.014	0.00
Sum =	100.0				Sum =	2.4

Flood volume = Effective rainfall 0.20(In)
times area 34.3(Ac.)/[(In)/(Ft.)] = 0.6(Ac.Ft)
Total soil loss = 1.80(In)
Total soil loss = 5.148(Ac.Ft)
Total rainfall = 2.00(In)
Flood volume = 24914.6 Cubic Feet
Total soil loss = 224231.8 Cubic Feet

Peak flow rate of this hydrograph = 2yr24hre242.out
0.930(CFS)

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24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

Hydrograph in 5 Minute intervals ((CFS))

Time(h+m)	Volume Ac.Ft	Q(CFS)	0	2.5	5.0	7.5	10.0
0+ 5	0.0000	0.01	Q				
0+10	0.0002	0.03	Q				
0+15	0.0005	0.04	Q				
0+20	0.0009	0.05	Q				
0+25	0.0013	0.06	Q				
0+30	0.0018	0.07	Q				
0+35	0.0023	0.08	Q				
0+40	0.0028	0.08	Q				
0+45	0.0034	0.08	Q				
0+50	0.0040	0.08	Q				
0+55	0.0046	0.10	Q				
1+ 0	0.0053	0.10	Q				
1+ 5	0.0060	0.10	Q				
1+10	0.0067	0.09	Q				
1+15	0.0073	0.09	Q				
1+20	0.0079	0.09	Q				
1+25	0.0085	0.09	Q				
1+30	0.0091	0.08	Q				
1+35	0.0096	0.08	Q				
1+40	0.0102	0.08	Q				
1+45	0.0108	0.08	Q				
1+50	0.0114	0.09	Q				
1+55	0.0121	0.10	Q				
2+ 0	0.0128	0.10	Q				
2+ 5	0.0135	0.11	Q				
2+10	0.0142	0.11	Q				
2+15	0.0150	0.11	QV				
2+20	0.0157	0.11	QV				
2+25	0.0165	0.11	QV				
2+30	0.0173	0.11	QV				
2+35	0.0180	0.11	QV				
2+40	0.0189	0.12	QV				
2+45	0.0198	0.13	QV				
2+50	0.0207	0.13	QV				
2+55	0.0216	0.14	QV				
3+ 0	0.0226	0.14	QV				
3+ 5	0.0235	0.14	QV				
3+10	0.0245	0.14	QV				
3+15	0.0254	0.14	QV				
3+20	0.0264	0.14	QV				
3+25	0.0273	0.14	QV				
3+30	0.0283	0.14	QV				
3+35	0.0292	0.14	Q V				
3+40	0.0302	0.14	Q V				
3+45	0.0311	0.14	Q V				
3+50	0.0321	0.14	Q V				
3+55	0.0332	0.15	Q V				
4+ 0	0.0343	0.16	Q V				
4+ 5	0.0354	0.16	Q V				
4+10	0.0365	0.16	Q V				
4+15	0.0376	0.16	Q V				
4+20	0.0388	0.17	Q V				
4+25	0.0400	0.18	Q V				
4+30	0.0413	0.19	Q V				
4+35	0.0426	0.19	Q V				
4+40	0.0439	0.19	Q V				
4+45	0.0452	0.19	Q V				

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4+50	0.0466	0.20	Q	V				
4+55	0.0480	0.21	Q	V				
5+ 0	0.0495	0.21	Q	V				
5+ 5	0.0509	0.21	Q	V				
5+10	0.0522	0.19	Q	V				
5+15	0.0534	0.18	Q	V				
5+20	0.0547	0.18	Q	V				
5+25	0.0559	0.19	Q	V				
5+30	0.0573	0.19	Q	V				
5+35	0.0586	0.19	Q	V				
5+40	0.0600	0.21	Q	V				
5+45	0.0615	0.21	Q	V				
5+50	0.0630	0.22	Q	V				
5+55	0.0645	0.22	Q	V				
6+ 0	0.0660	0.22	Q	V				
6+ 5	0.0675	0.22	Q	V				
6+10	0.0691	0.23	Q	V				
6+15	0.0708	0.24	Q	V				
6+20	0.0725	0.24	Q	V				
6+25	0.0742	0.25	Q	V				
6+30	0.0759	0.25	Q	V				
6+35	0.0776	0.25	Q	V				
6+40	0.0794	0.26	Q	V				
6+45	0.0813	0.27	Q	V				
6+50	0.0831	0.27	Q	V				
6+55	0.0850	0.27	Q	V				
7+ 0	0.0869	0.27	Q	V				
7+ 5	0.0888	0.28	Q	V				
7+10	0.0907	0.28	Q	V				
7+15	0.0926	0.28	Q	V				
7+20	0.0945	0.28	Q	V				
7+25	0.0965	0.29	Q	V				
7+30	0.0986	0.30	Q	V				
7+35	0.1007	0.30	Q	V				
7+40	0.1028	0.32	Q	V				
7+45	0.1051	0.32	Q	V				
7+50	0.1073	0.33	Q	V				
7+55	0.1097	0.34	Q	V				
8+ 0	0.1121	0.35	Q	V				
8+ 5	0.1146	0.36	Q	V				
8+10	0.1172	0.38	Q	V				
8+15	0.1199	0.40	Q	V				
8+20	0.1227	0.40	Q	V				
8+25	0.1255	0.41	Q	V				
8+30	0.1284	0.41	Q	V				
8+35	0.1312	0.41	Q	V				
8+40	0.1342	0.43	Q	V				
8+45	0.1372	0.43	Q	V				
8+50	0.1402	0.44	Q	V				
8+55	0.1433	0.45	Q	V				
9+ 0	0.1465	0.46	Q	V				
9+ 5	0.1497	0.47	Q	V				
9+10	0.1531	0.49	Q	V				
9+15	0.1566	0.51	Q	V				
9+20	0.1602	0.52	Q	V				
9+25	0.1639	0.53	Q	V				
9+30	0.1676	0.54	Q	V				
9+35	0.1714	0.55	Q	V				
9+40	0.1753	0.56	Q	V				
9+45	0.1792	0.57	Q	V				
9+50	0.1832	0.58	Q	V				
9+55	0.1872	0.59	Q	V				
10+ 0	0.1914	0.60	Q	V				
10+ 5	0.1954	0.58	Q	V				
10+10	0.1988	0.51	Q	V				
10+15	0.2020	0.46	Q	V				
10+20	0.2051	0.45	Q	V				
10+25	0.2081	0.44	Q	V				

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10+30	0.2111	0.43	Q	V				
10+35	0.2141	0.44	Q	V				
10+40	0.2175	0.49	Q	V				
10+45	0.2211	0.52	Q	V				
10+50	0.2248	0.53	Q	V				
10+55	0.2285	0.54	Q	V				
11+ 0	0.2322	0.54	Q	V				
11+ 5	0.2359	0.54	Q	V				
11+10	0.2396	0.53	Q	V				
11+15	0.2433	0.53	Q	V				
11+20	0.2469	0.53	Q	V				
11+25	0.2506	0.53	Q	V				
11+30	0.2542	0.53	Q	V				
11+35	0.2578	0.52	Q	V				
11+40	0.2612	0.50	Q	V				
11+45	0.2646	0.49	Q	V				
11+50	0.2679	0.48	Q	V				
11+55	0.2713	0.49	Q	V				
12+ 0	0.2747	0.50	Q	V				
12+ 5	0.2783	0.52	Q	V				
12+10	0.2824	0.60	Q	V				
12+15	0.2868	0.64	Q	V				
12+20	0.2913	0.66	Q	V				
12+25	0.2960	0.68	Q	V				
12+30	0.3008	0.70	Q	V				
12+35	0.3057	0.71	Q	V				
12+40	0.3108	0.74	Q	V				
12+45	0.3160	0.75	Q	V				
12+50	0.3213	0.76	Q	V				
12+55	0.3266	0.78	Q	V				
13+ 0	0.3321	0.79	Q	V				
13+ 5	0.3377	0.81	Q	V				
13+10	0.3436	0.87	Q	V				
13+15	0.3499	0.90	Q	V				
13+20	0.3562	0.92	Q	V				
13+25	0.3625	0.92	Q	V				
13+30	0.3689	0.93	Q	V				
13+35	0.3751	0.90	Q	V				
13+40	0.3805	0.78	Q	V				
13+45	0.3854	0.71	Q	V				
13+50	0.3901	0.69	Q	V				
13+55	0.3948	0.67	Q	V				
14+ 0	0.3993	0.66	Q	V				
14+ 5	0.4039	0.67	Q	V				
14+10	0.4087	0.70	Q	V				
14+15	0.4137	0.73	Q	V				
14+20	0.4188	0.73	Q	V				
14+25	0.4237	0.72	Q	V				
14+30	0.4287	0.72	Q	V				
14+35	0.4336	0.72	Q	V				
14+40	0.4386	0.72	Q	V				
14+45	0.4435	0.72	Q	V				
14+50	0.4485	0.72	Q	V				
14+55	0.4533	0.71	Q	V				
15+ 0	0.4582	0.70	Q	V				
15+ 5	0.4629	0.69	Q	V				
15+10	0.4676	0.68	Q	V				
15+15	0.4723	0.67	Q	V				
15+20	0.4769	0.67	Q	V				
15+25	0.4814	0.65	Q	V				
15+30	0.4858	0.65	Q	V				
15+35	0.4902	0.63	Q	V				
15+40	0.4942	0.58	Q	V				
15+45	0.4980	0.56	Q	V				
15+50	0.5018	0.55	Q	V				
15+55	0.5055	0.54	Q	V				
16+ 0	0.5092	0.54	Q	V				
16+ 5	0.5126	0.49	Q	V				

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16+10	0.5148	0.32	Q			V
16+15	0.5163	0.22	Q			V
16+20	0.5175	0.18	Q			V
16+25	0.5186	0.16	Q			V
16+30	0.5196	0.14	Q			V
16+35	0.5205	0.13	Q			V
16+40	0.5213	0.11	Q			V
16+45	0.5220	0.10	Q			V
16+50	0.5226	0.09	Q			V
16+55	0.5232	0.09	Q			V
17+ 0	0.5238	0.09	Q			V
17+ 5	0.5244	0.09	Q			V
17+10	0.5252	0.11	Q			V
17+15	0.5261	0.12	Q			V
17+20	0.5270	0.13	Q			V
17+25	0.5279	0.13	Q			V
17+30	0.5288	0.13	Q			V
17+35	0.5297	0.14	Q			V
17+40	0.5307	0.14	Q			V
17+45	0.5316	0.14	Q			V
17+50	0.5325	0.13	Q			V
17+55	0.5334	0.12	Q			V
18+ 0	0.5342	0.12	Q			V
18+ 5	0.5350	0.12	Q			V
18+10	0.5358	0.11	Q			V
18+15	0.5366	0.11	Q			V
18+20	0.5373	0.11	Q			V
18+25	0.5381	0.11	Q			V
18+30	0.5389	0.11	Q			V
18+35	0.5396	0.11	Q			V
18+40	0.5403	0.10	Q			V
18+45	0.5409	0.09	Q			V
18+50	0.5415	0.08	Q			V
18+55	0.5420	0.07	Q			V
19+ 0	0.5424	0.06	Q			V
19+ 5	0.5429	0.06	Q			V
19+10	0.5434	0.07	Q			V
19+15	0.5439	0.08	Q			V
19+20	0.5445	0.08	Q			V
19+25	0.5452	0.10	Q			V
19+30	0.5459	0.10	Q			V
19+35	0.5466	0.10	Q			V
19+40	0.5472	0.09	Q			V
19+45	0.5478	0.09	Q			V
19+50	0.5484	0.08	Q			V
19+55	0.5489	0.07	Q			V
20+ 0	0.5493	0.06	Q			V
20+ 5	0.5497	0.06	Q			V
20+10	0.5502	0.07	Q			V
20+15	0.5508	0.08	Q			V
20+20	0.5513	0.08	Q			V
20+25	0.5519	0.08	Q			V
20+30	0.5525	0.08	Q			V
20+35	0.5530	0.08	Q			V
20+40	0.5536	0.08	Q			V
20+45	0.5542	0.08	Q			V
20+50	0.5547	0.08	Q			V
20+55	0.5552	0.07	Q			V
21+ 0	0.5556	0.06	Q			V
21+ 5	0.5560	0.06	Q			V
21+10	0.5565	0.07	Q			V
21+15	0.5571	0.08	Q			V
21+20	0.5576	0.08	Q			V
21+25	0.5581	0.07	Q			V
21+30	0.5585	0.06	Q			V
21+35	0.5589	0.06	Q			V
21+40	0.5594	0.07	Q			V
21+45	0.5599	0.08	Q			V

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21+50	0.5605	0.08	Q			V
21+55	0.5609	0.07	Q			V
22+ 0	0.5614	0.06	Q			V
22+ 5	0.5618	0.06	Q			V
22+10	0.5623	0.07	Q			V
22+15	0.5628	0.08	Q			V
22+20	0.5633	0.08	Q			V
22+25	0.5638	0.07	Q			V
22+30	0.5642	0.06	Q			V
22+35	0.5646	0.06	Q			V
22+40	0.5650	0.06	Q			V
22+45	0.5654	0.06	Q			V
22+50	0.5658	0.06	Q			V
22+55	0.5662	0.06	Q			V
23+ 0	0.5666	0.06	Q			V
23+ 5	0.5670	0.06	Q			V
23+10	0.5673	0.06	Q			V
23+15	0.5677	0.06	Q			V
23+20	0.5681	0.06	Q			V
23+25	0.5685	0.06	Q			V
23+30	0.5689	0.06	Q			V
23+35	0.5692	0.06	Q			V
23+40	0.5696	0.06	Q			V
23+45	0.5700	0.06	Q			V
23+50	0.5704	0.06	Q			V
23+55	0.5708	0.06	Q			V
24+ 0	0.5711	0.06	Q			V
24+ 5	0.5715	0.05	Q			V
24+10	0.5717	0.03	Q			V
24+15	0.5718	0.01	Q			V
24+20	0.5718	0.01	Q			V
24+25	0.5719	0.01	Q			V
24+30	0.5719	0.00	Q			V
24+35	0.5719	0.00	Q			V
24+40	0.5719	0.00	Q			V
24+45	0.5720	0.00	Q			V
24+50	0.5720	0.00	Q			V
24+55	0.5720	0.00	Q			V

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Unit Hydrograph Analysis

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Study date 10/12/21 File: 100yr1hre1100.out

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Riverside County Synthetic Unit Hydrology Method
RCFC & WCD Manual date - April 1978

Program License Serial Number 6062

English (in-lb) Input Units Used
English Rainfall Data (Inches) Input Values Used

English Units used in output format

Pacific Emerald
Existing Condition
100-Year 1-Hour Storm

Drainage Area = 34.32(Ac.) = 0.054 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 34.32(Ac.) = 0.054 Sq. Mi.
Length along longest watercourse = 1861.00(Ft.)
Length along longest watercourse measured to centroid = 1073.00(Ft.)
Length along longest watercourse = 0.352 Mi.
Length along longest watercourse measured to centroid = 0.203 Mi.
Difference in elevation = 55.00(Ft.)
Slope along watercourse = 156.0451 Ft./Mi.
Average Manning's 'N' = 0.035
Lag time = 0.118 Hr.
Lag time = 7.09 Min.
25% of lag time = 1.77 Min.
40% of lag time = 2.84 Min.
Unit time = 5.00 Min.
Duration of storm = 1 Hour(s)
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
34.32	0.50	17.16

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
34.32	1.28	43.93

STORM EVENT (YEAR) = 100.00
Area Averaged 2-Year Rainfall = 0.500(In)
Area Averaged 100-Year Rainfall = 1.280(In)

Point rain (area averaged) = 1.280(In)
Areal adjustment factor = 99.97 %
Adjusted average point rain = 1.280(In)

Sub-Area Data:

Area(Ac.) Runoff Index Impervious %
 30.700 78.00 0.000
 3.620 86.00 0.000
 Total Area Entered = 34.32(Ac.)

RI	RI	Infil. Rate	Impervious	Adj. Infil. Rate	Area%	F
AMC2	AMC-3	(In/Hr)	(Dec.%)	(In/Hr)	(Dec.)	(In/Hr)
78.0	89.8	0.132	0.000	0.132	0.895	0.118
86.0	94.4	0.073	0.000	0.073	0.105	0.008
						Sum (F) = 0.126

Area averaged mean soil loss (F) (In/Hr) = 0.126
 Minimum soil loss rate ((In/Hr)) = 0.063
 (for 24 hour storm duration)
 Soil low loss rate (decimal) = 0.900

 Slope of intensity-duration curve for a 1 hour storm =0.5000

Unit Hydrograph
 VALLEY S-Curve

 Unit Hydrograph Data

Unit time period (hrs)	Time % of lag	Distribution Graph %	Unit Hydrograph (CFS)
1	0.083	70.522	10.759
2	0.167	141.045	40.373
3	0.250	211.567	22.970
4	0.333	282.090	8.962
5	0.417	352.612	5.449
6	0.500	423.135	3.608
7	0.583	493.657	2.421
8	0.667	564.179	1.887
9	0.750	634.702	1.328
10	0.833	705.224	0.937
11	0.917	775.747	0.712
12	1.000	846.269	0.595
		Sum = 100.000	Sum= 34.588

Unit Time (Hr.)	Pattern Percent	Storm Rain (In/Hr)	Loss rate(In./Hr) Max Low	Effective (In/Hr)	
1	0.08	4.20	0.645	0.126	0.52
2	0.17	4.30	0.660	0.126	0.53
3	0.25	5.00	0.768	0.126	0.64
4	0.33	5.00	0.768	0.126	0.64
5	0.42	5.80	0.891	0.126	0.76
6	0.50	6.50	0.998	0.126	0.87
7	0.58	7.40	1.136	0.126	1.01
8	0.67	8.60	1.321	0.126	1.19
9	0.75	12.30	1.889	0.126	1.76
10	0.83	29.10	4.468	0.126	4.34
11	0.92	6.80	1.044	0.126	0.92
12	1.00	5.00	0.768	0.126	0.64
Sum =	100.0			Sum =	13.8

Flood volume = Effective rainfall 1.15(In)
 times area 34.3(Ac.)/[(In)/(Ft.)] = 3.3(Ac.Ft)
 Total soil loss = 0.13(In)
 Total soil loss = 0.360(Ac.Ft)
 Total rainfall = 1.28(In)
 Flood volume = 143716.8 Cubic Feet
 Total soil loss = 15698.1 Cubic Feet

 Peak flow rate of this hydrograph = 86.454(CFS)

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 1 - H O U R S T O R M
 R u n o f f H y d r o g r a p h

 Hydrograph in 5 Minute intervals ((CFS))

Time(h+m)	Volume	Ac.Ft	Q(CFS)	0	22.5	45.0	67.5	90.0
0+ 5	0.0133		1.93	Q				
0+10	0.0769		9.24	V	Q			
0+15	0.1732		13.98	V	Q			
0+20	0.2917		17.21	V	Q			
0+25	0.4264		19.55	V	Q			
0+30	0.5826		22.68	V	Q			
0+35	0.7639		26.33	V	Q			
0+40	0.9751		30.66	V	Q			
0+45	1.2323		37.36		V	Q		
0+50	1.6276		57.39		V		Q	
0+55	2.2230		86.45			V	Q	
1+ 0	2.6410		60.69			Q	V	Q
1+ 5	2.8943		36.79		Q		V	
1+10	3.0385		20.94		Q		V	
1+15	3.1244		12.47	Q			V	
1+20	3.1822		8.39	Q			V	
1+25	3.2237		6.03	Q			V	
1+30	3.2527		4.21	Q			V	
1+35	3.2729		2.93	Q			V	
1+40	3.2868		2.03	Q			V	
1+45	3.2960		1.33	Q			V	
1+50	3.2984		0.35	Q			V	
1+55	3.2993		0.13	Q			V	

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Unit Hydrograph Analysis

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Study date 10/12/21 File: 100yr24hre24100.out

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Riverside County Synthetic Unit Hydrology Method
RCFC & WCD Manual date - April 1978

Program License Serial Number 6062

English (in-lb) Input Units Used
English Rainfall Data (Inches) Input Values Used

English Units used in output format

Pacific Emerald
Existing Condition
100-Year 24-Hour Storm

Drainage Area = 34.32(Ac.) = 0.054 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 34.32(Ac.) = 0.054 Sq. Mi.
Length along longest watercourse = 1861.00(Ft.)
Length along longest watercourse measured to centroid = 1073.00(Ft.)
Length along longest watercourse = 0.352 Mi.
Length along longest watercourse measured to centroid = 0.203 Mi.
Difference in elevation = 55.00(Ft.)
Slope along watercourse = 156.0451 Ft./Mi.
Average Manning's 'N' = 0.035
Lag time = 0.118 Hr.
Lag time = 7.09 Min.
25% of lag time = 1.77 Min.
40% of lag time = 2.84 Min.
Unit time = 5.00 Min.
Duration of storm = 24 Hour(s)
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
34.32	2.00	68.64

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
34.32	5.60	192.19

STORM EVENT (YEAR) = 100.00
Area Averaged 2-Year Rainfall = 2.000(In)
Area Averaged 100-Year Rainfall = 5.600(In)

Point rain (area averaged) = 5.600(In)
Areal adjustment factor = 99.99 %
Adjusted average point rain = 5.600(In)

Sub-Area Data:

100yr24hre24100.out

Area(Ac.)	Runoff Index	Impervious %
30.700	78.00	0.000
3.620	86.00	0.000
Total Area Entered = 34.32(Ac.)		

RI	RI	Infil. Rate	Impervious	Adj. Infil. Rate	Area%	F
AMC2	AMC-3	(In/Hr)	(Dec.%)	(In/Hr)	(Dec.)	(In/Hr)
78.0	89.8	0.132	0.000	0.132	0.895	0.118
86.0	94.4	0.073	0.000	0.073	0.105	0.008
						Sum (F) = 0.126

Area averaged mean soil loss (F) (In/Hr) = 0.126
 Minimum soil loss rate ((In/Hr)) = 0.063
 (for 24 hour storm duration)
 Soil low loss rate (decimal) = 0.900

 U n i t H y d r o g r a p h
 VALLEY S-Curve

Unit Hydrograph Data

Unit time period (hrs)	Time % of lag	Distribution Graph %	Unit Hydrograph (CFS)
1	0.083	70.522	10.759
2	0.167	141.045	40.373
3	0.250	211.567	22.970
4	0.333	282.090	8.962
5	0.417	352.612	5.449
6	0.500	423.135	3.608
7	0.583	493.657	2.421
8	0.667	564.179	1.887
9	0.750	634.702	1.328
10	0.833	705.224	0.937
11	0.917	775.747	0.712
12	1.000	846.269	0.595
Sum = 100.000			Sum= 34.588

Unit Time (Hr.)	Pattern Percent	Storm Rain (In/Hr)	Loss rate(In./Hr)		Effective (In/Hr)	
			Max	Low		
1	0.08	0.07	0.045	0.223	0.040	0.00
2	0.17	0.07	0.045	0.223	0.040	0.00
3	0.25	0.07	0.045	0.222	0.040	0.00
4	0.33	0.10	0.067	0.221	0.060	0.01
5	0.42	0.10	0.067	0.220	0.060	0.01
6	0.50	0.10	0.067	0.219	0.060	0.01
7	0.58	0.10	0.067	0.218	0.060	0.01
8	0.67	0.10	0.067	0.217	0.060	0.01
9	0.75	0.10	0.067	0.217	0.060	0.01
10	0.83	0.13	0.090	0.216	0.081	0.01
11	0.92	0.13	0.090	0.215	0.081	0.01
12	1.00	0.13	0.090	0.214	0.081	0.01
13	1.08	0.10	0.067	0.213	0.060	0.01
14	1.17	0.10	0.067	0.212	0.060	0.01
15	1.25	0.10	0.067	0.211	0.060	0.01
16	1.33	0.10	0.067	0.211	0.060	0.01
17	1.42	0.10	0.067	0.210	0.060	0.01
18	1.50	0.10	0.067	0.209	0.060	0.01
19	1.58	0.10	0.067	0.208	0.060	0.01
20	1.67	0.10	0.067	0.207	0.060	0.01
21	1.75	0.10	0.067	0.206	0.060	0.01
22	1.83	0.13	0.090	0.206	0.081	0.01
23	1.92	0.13	0.090	0.205	0.081	0.01
24	2.00	0.13	0.090	0.204	0.081	0.01
25	2.08	0.13	0.090	0.203	0.081	0.01

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26	2.17	0.13	0.090	0.202	0.081	0.01
27	2.25	0.13	0.090	0.201	0.081	0.01
28	2.33	0.13	0.090	0.201	0.081	0.01
29	2.42	0.13	0.090	0.200	0.081	0.01
30	2.50	0.13	0.090	0.199	0.081	0.01
31	2.58	0.17	0.112	0.198	0.101	0.01
32	2.67	0.17	0.112	0.197	0.101	0.01
33	2.75	0.17	0.112	0.197	0.101	0.01
34	2.83	0.17	0.112	0.196	0.101	0.01
35	2.92	0.17	0.112	0.195	0.101	0.01
36	3.00	0.17	0.112	0.194	0.101	0.01
37	3.08	0.17	0.112	0.193	0.101	0.01
38	3.17	0.17	0.112	0.193	0.101	0.01
39	3.25	0.17	0.112	0.192	0.101	0.01
40	3.33	0.17	0.112	0.191	0.101	0.01
41	3.42	0.17	0.112	0.190	0.101	0.01
42	3.50	0.17	0.112	0.189	0.101	0.01
43	3.58	0.17	0.112	0.189	0.101	0.01
44	3.67	0.17	0.112	0.188	0.101	0.01
45	3.75	0.17	0.112	0.187	0.101	0.01
46	3.83	0.20	0.134	0.186	0.121	0.01
47	3.92	0.20	0.134	0.185	0.121	0.01
48	4.00	0.20	0.134	0.185	0.121	0.01
49	4.08	0.20	0.134	0.184	0.121	0.01
50	4.17	0.20	0.134	0.183	0.121	0.01
51	4.25	0.20	0.134	0.182	0.121	0.01
52	4.33	0.23	0.157	0.181	0.141	0.02
53	4.42	0.23	0.157	0.181	0.141	0.02
54	4.50	0.23	0.157	0.180	0.141	0.02
55	4.58	0.23	0.157	0.179	0.141	0.02
56	4.67	0.23	0.157	0.178	0.141	0.02
57	4.75	0.23	0.157	0.178	0.141	0.02
58	4.83	0.27	0.179	0.177	---	0.00
59	4.92	0.27	0.179	0.176	---	0.00
60	5.00	0.27	0.179	0.175	---	0.00
61	5.08	0.20	0.134	0.175	0.121	0.01
62	5.17	0.20	0.134	0.174	0.121	0.01
63	5.25	0.20	0.134	0.173	0.121	0.01
64	5.33	0.23	0.157	0.172	0.141	0.02
65	5.42	0.23	0.157	0.172	0.141	0.02
66	5.50	0.23	0.157	0.171	0.141	0.02
67	5.58	0.27	0.179	0.170	---	0.01
68	5.67	0.27	0.179	0.169	---	0.01
69	5.75	0.27	0.179	0.169	---	0.01
70	5.83	0.27	0.179	0.168	---	0.01
71	5.92	0.27	0.179	0.167	---	0.01
72	6.00	0.27	0.179	0.166	---	0.01
73	6.08	0.30	0.202	0.166	---	0.04
74	6.17	0.30	0.202	0.165	---	0.04
75	6.25	0.30	0.202	0.164	---	0.04
76	6.33	0.30	0.202	0.163	---	0.04
77	6.42	0.30	0.202	0.163	---	0.04
78	6.50	0.30	0.202	0.162	---	0.04
79	6.58	0.33	0.224	0.161	---	0.06
80	6.67	0.33	0.224	0.160	---	0.06
81	6.75	0.33	0.224	0.160	---	0.06
82	6.83	0.33	0.224	0.159	---	0.06
83	6.92	0.33	0.224	0.158	---	0.07
84	7.00	0.33	0.224	0.158	---	0.07
85	7.08	0.33	0.224	0.157	---	0.07
86	7.17	0.33	0.224	0.156	---	0.07
87	7.25	0.33	0.224	0.155	---	0.07
88	7.33	0.37	0.246	0.155	---	0.09
89	7.42	0.37	0.246	0.154	---	0.09
90	7.50	0.37	0.246	0.153	---	0.09
91	7.58	0.40	0.269	0.153	---	0.12
92	7.67	0.40	0.269	0.152	---	0.12
93	7.75	0.40	0.269	0.151	---	0.12

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94	7.83	0.43	0.291	0.151	---	0.14
95	7.92	0.43	0.291	0.150	---	0.14
96	8.00	0.43	0.291	0.149	---	0.14
97	8.08	0.50	0.336	0.148	---	0.19
98	8.17	0.50	0.336	0.148	---	0.19
99	8.25	0.50	0.336	0.147	---	0.19
100	8.33	0.50	0.336	0.146	---	0.19
101	8.42	0.50	0.336	0.146	---	0.19
102	8.50	0.50	0.336	0.145	---	0.19
103	8.58	0.53	0.358	0.144	---	0.21
104	8.67	0.53	0.358	0.144	---	0.21
105	8.75	0.53	0.358	0.143	---	0.22
106	8.83	0.57	0.381	0.142	---	0.24
107	8.92	0.57	0.381	0.142	---	0.24
108	9.00	0.57	0.381	0.141	---	0.24
109	9.08	0.63	0.426	0.140	---	0.29
110	9.17	0.63	0.426	0.140	---	0.29
111	9.25	0.63	0.426	0.139	---	0.29
112	9.33	0.67	0.448	0.138	---	0.31
113	9.42	0.67	0.448	0.138	---	0.31
114	9.50	0.67	0.448	0.137	---	0.31
115	9.58	0.70	0.470	0.136	---	0.33
116	9.67	0.70	0.470	0.136	---	0.33
117	9.75	0.70	0.470	0.135	---	0.34
118	9.83	0.73	0.493	0.134	---	0.36
119	9.92	0.73	0.493	0.134	---	0.36
120	10.00	0.73	0.493	0.133	---	0.36
121	10.08	0.50	0.336	0.132	---	0.20
122	10.17	0.50	0.336	0.132	---	0.20
123	10.25	0.50	0.336	0.131	---	0.20
124	10.33	0.50	0.336	0.131	---	0.21
125	10.42	0.50	0.336	0.130	---	0.21
126	10.50	0.50	0.336	0.129	---	0.21
127	10.58	0.67	0.448	0.129	---	0.32
128	10.67	0.67	0.448	0.128	---	0.32
129	10.75	0.67	0.448	0.127	---	0.32
130	10.83	0.67	0.448	0.127	---	0.32
131	10.92	0.67	0.448	0.126	---	0.32
132	11.00	0.67	0.448	0.125	---	0.32
133	11.08	0.63	0.426	0.125	---	0.30
134	11.17	0.63	0.426	0.124	---	0.30
135	11.25	0.63	0.426	0.124	---	0.30
136	11.33	0.63	0.426	0.123	---	0.30
137	11.42	0.63	0.426	0.122	---	0.30
138	11.50	0.63	0.426	0.122	---	0.30
139	11.58	0.57	0.381	0.121	---	0.26
140	11.67	0.57	0.381	0.121	---	0.26
141	11.75	0.57	0.381	0.120	---	0.26
142	11.83	0.60	0.403	0.119	---	0.28
143	11.92	0.60	0.403	0.119	---	0.28
144	12.00	0.60	0.403	0.118	---	0.28
145	12.08	0.83	0.560	0.118	---	0.44
146	12.17	0.83	0.560	0.117	---	0.44
147	12.25	0.83	0.560	0.116	---	0.44
148	12.33	0.87	0.582	0.116	---	0.47
149	12.42	0.87	0.582	0.115	---	0.47
150	12.50	0.87	0.582	0.115	---	0.47
151	12.58	0.93	0.627	0.114	---	0.51
152	12.67	0.93	0.627	0.114	---	0.51
153	12.75	0.93	0.627	0.113	---	0.51
154	12.83	0.97	0.650	0.112	---	0.54
155	12.92	0.97	0.650	0.112	---	0.54
156	13.00	0.97	0.650	0.111	---	0.54
157	13.08	1.13	0.762	0.111	---	0.65
158	13.17	1.13	0.762	0.110	---	0.65
159	13.25	1.13	0.762	0.110	---	0.65
160	13.33	1.13	0.762	0.109	---	0.65
161	13.42	1.13	0.762	0.108	---	0.65

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162	13.50	1.13	0.762	0.108	---	0.65
163	13.58	0.77	0.515	0.107	---	0.41
164	13.67	0.77	0.515	0.107	---	0.41
165	13.75	0.77	0.515	0.106	---	0.41
166	13.83	0.77	0.515	0.106	---	0.41
167	13.92	0.77	0.515	0.105	---	0.41
168	14.00	0.77	0.515	0.105	---	0.41
169	14.08	0.90	0.605	0.104	---	0.50
170	14.17	0.90	0.605	0.104	---	0.50
171	14.25	0.90	0.605	0.103	---	0.50
172	14.33	0.87	0.582	0.103	---	0.48
173	14.42	0.87	0.582	0.102	---	0.48
174	14.50	0.87	0.582	0.101	---	0.48
175	14.58	0.87	0.582	0.101	---	0.48
176	14.67	0.87	0.582	0.100	---	0.48
177	14.75	0.87	0.582	0.100	---	0.48
178	14.83	0.83	0.560	0.099	---	0.46
179	14.92	0.83	0.560	0.099	---	0.46
180	15.00	0.83	0.560	0.098	---	0.46
181	15.08	0.80	0.538	0.098	---	0.44
182	15.17	0.80	0.538	0.097	---	0.44
183	15.25	0.80	0.538	0.097	---	0.44
184	15.33	0.77	0.515	0.096	---	0.42
185	15.42	0.77	0.515	0.096	---	0.42
186	15.50	0.77	0.515	0.095	---	0.42
187	15.58	0.63	0.426	0.095	---	0.33
188	15.67	0.63	0.426	0.094	---	0.33
189	15.75	0.63	0.426	0.094	---	0.33
190	15.83	0.63	0.426	0.093	---	0.33
191	15.92	0.63	0.426	0.093	---	0.33
192	16.00	0.63	0.426	0.093	---	0.33
193	16.08	0.13	0.090	0.092	0.081	0.01
194	16.17	0.13	0.090	0.092	0.081	0.01
195	16.25	0.13	0.090	0.091	0.081	0.01
196	16.33	0.13	0.090	0.091	0.081	0.01
197	16.42	0.13	0.090	0.090	0.081	0.01
198	16.50	0.13	0.090	0.090	0.081	0.01
199	16.58	0.10	0.067	0.089	0.060	0.01
200	16.67	0.10	0.067	0.089	0.060	0.01
201	16.75	0.10	0.067	0.088	0.060	0.01
202	16.83	0.10	0.067	0.088	0.060	0.01
203	16.92	0.10	0.067	0.087	0.060	0.01
204	17.00	0.10	0.067	0.087	0.060	0.01
205	17.08	0.17	0.112	0.087	---	0.03
206	17.17	0.17	0.112	0.086	---	0.03
207	17.25	0.17	0.112	0.086	---	0.03
208	17.33	0.17	0.112	0.085	---	0.03
209	17.42	0.17	0.112	0.085	---	0.03
210	17.50	0.17	0.112	0.084	---	0.03
211	17.58	0.17	0.112	0.084	---	0.03
212	17.67	0.17	0.112	0.084	---	0.03
213	17.75	0.17	0.112	0.083	---	0.03
214	17.83	0.13	0.090	0.083	---	0.01
215	17.92	0.13	0.090	0.082	---	0.01
216	18.00	0.13	0.090	0.082	---	0.01
217	18.08	0.13	0.090	0.082	---	0.01
218	18.17	0.13	0.090	0.081	---	0.01
219	18.25	0.13	0.090	0.081	---	0.01
220	18.33	0.13	0.090	0.080	---	0.01
221	18.42	0.13	0.090	0.080	---	0.01
222	18.50	0.13	0.090	0.080	---	0.01
223	18.58	0.10	0.067	0.079	0.060	0.01
224	18.67	0.10	0.067	0.079	0.060	0.01
225	18.75	0.10	0.067	0.078	0.060	0.01
226	18.83	0.07	0.045	0.078	0.040	0.00
227	18.92	0.07	0.045	0.078	0.040	0.00
228	19.00	0.07	0.045	0.077	0.040	0.00
229	19.08	0.10	0.067	0.077	0.060	0.01

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230	19.17	0.10	0.067	0.077	0.060	0.01
231	19.25	0.10	0.067	0.076	0.060	0.01
232	19.33	0.13	0.090	0.076	---	0.01
233	19.42	0.13	0.090	0.076	---	0.01
234	19.50	0.13	0.090	0.075	---	0.01
235	19.58	0.10	0.067	0.075	0.060	0.01
236	19.67	0.10	0.067	0.074	0.060	0.01
237	19.75	0.10	0.067	0.074	0.060	0.01
238	19.83	0.07	0.045	0.074	0.040	0.00
239	19.92	0.07	0.045	0.073	0.040	0.00
240	20.00	0.07	0.045	0.073	0.040	0.00
241	20.08	0.10	0.067	0.073	0.060	0.01
242	20.17	0.10	0.067	0.073	0.060	0.01
243	20.25	0.10	0.067	0.072	0.060	0.01
244	20.33	0.10	0.067	0.072	0.060	0.01
245	20.42	0.10	0.067	0.072	0.060	0.01
246	20.50	0.10	0.067	0.071	0.060	0.01
247	20.58	0.10	0.067	0.071	0.060	0.01
248	20.67	0.10	0.067	0.071	0.060	0.01
249	20.75	0.10	0.067	0.070	0.060	0.01
250	20.83	0.07	0.045	0.070	0.040	0.00
251	20.92	0.07	0.045	0.070	0.040	0.00
252	21.00	0.07	0.045	0.070	0.040	0.00
253	21.08	0.10	0.067	0.069	0.060	0.01
254	21.17	0.10	0.067	0.069	0.060	0.01
255	21.25	0.10	0.067	0.069	0.060	0.01
256	21.33	0.07	0.045	0.068	0.040	0.00
257	21.42	0.07	0.045	0.068	0.040	0.00
258	21.50	0.07	0.045	0.068	0.040	0.00
259	21.58	0.10	0.067	0.068	0.060	0.01
260	21.67	0.10	0.067	0.067	0.060	0.01
261	21.75	0.10	0.067	0.067	0.060	0.01
262	21.83	0.07	0.045	0.067	0.040	0.00
263	21.92	0.07	0.045	0.067	0.040	0.00
264	22.00	0.07	0.045	0.067	0.040	0.00
265	22.08	0.10	0.067	0.066	---	0.00
266	22.17	0.10	0.067	0.066	---	0.00
267	22.25	0.10	0.067	0.066	---	0.00
268	22.33	0.07	0.045	0.066	0.040	0.00
269	22.42	0.07	0.045	0.065	0.040	0.00
270	22.50	0.07	0.045	0.065	0.040	0.00
271	22.58	0.07	0.045	0.065	0.040	0.00
272	22.67	0.07	0.045	0.065	0.040	0.00
273	22.75	0.07	0.045	0.065	0.040	0.00
274	22.83	0.07	0.045	0.065	0.040	0.00
275	22.92	0.07	0.045	0.064	0.040	0.00
276	23.00	0.07	0.045	0.064	0.040	0.00
277	23.08	0.07	0.045	0.064	0.040	0.00
278	23.17	0.07	0.045	0.064	0.040	0.00
279	23.25	0.07	0.045	0.064	0.040	0.00
280	23.33	0.07	0.045	0.064	0.040	0.00
281	23.42	0.07	0.045	0.064	0.040	0.00
282	23.50	0.07	0.045	0.063	0.040	0.00
283	23.58	0.07	0.045	0.063	0.040	0.00
284	23.67	0.07	0.045	0.063	0.040	0.00
285	23.75	0.07	0.045	0.063	0.040	0.00
286	23.83	0.07	0.045	0.063	0.040	0.00
287	23.92	0.07	0.045	0.063	0.040	0.00
288	24.00	0.07	0.045	0.063	0.040	0.00

Sum = 100.0 Sum = 38.9

Flood volume = Effective rainfall 3.25(In)
times area 34.3(Ac.)/[(In)/(Ft.)] = 9.3(Ac.Ft)
Total soil loss = 2.35(In)
Total soil loss = 6.733(Ac.Ft)
Total rainfall = 5.60(In)
Flood volume = 404316.9 Cubic Feet
Total soil loss = 293293.3 Cubic Feet

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 Peak flow rate of this hydrograph = 22.255(CFS)

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24 - H O U R S T O R M
 R u n o f f H y d r o g r a p h

 Hydrograph in 5 Minute intervals ((CFS))

Time(h+m)	Volume Ac.Ft	Q(CFS)	0	7.5	15.0	22.5	30.0
0+ 5	0.0001	0.02	Q				
0+10	0.0007	0.08	Q				
0+15	0.0015	0.11	Q				
0+20	0.0024	0.14	Q				
0+25	0.0036	0.18	Q				
0+30	0.0050	0.20	Q				
0+35	0.0064	0.21	Q				
0+40	0.0079	0.22	Q				
0+45	0.0095	0.22	Q				
0+50	0.0111	0.23	Q				
0+55	0.0129	0.27	Q				
1+ 0	0.0149	0.29	Q				
1+ 5	0.0169	0.29	Q				
1+10	0.0187	0.26	Q				
1+15	0.0204	0.25	Q				
1+20	0.0221	0.24	Q				
1+25	0.0237	0.24	Q				
1+30	0.0253	0.24	Q				
1+35	0.0270	0.24	Q				
1+40	0.0286	0.23	Q				
1+45	0.0302	0.23	Q				
1+50	0.0319	0.24	Q				
1+55	0.0337	0.27	Q				
2+ 0	0.0357	0.29	Q				
2+ 5	0.0378	0.30	Q				
2+10	0.0399	0.30	Q				
2+15	0.0420	0.30	Q				
2+20	0.0441	0.31	Q				
2+25	0.0462	0.31	Q				
2+30	0.0483	0.31	Q				
2+35	0.0505	0.32	Q				
2+40	0.0529	0.35	Q				
2+45	0.0554	0.37	Q				
2+50	0.0580	0.37	Q				
2+55	0.0606	0.38	Q				
3+ 0	0.0632	0.38	Q				
3+ 5	0.0659	0.38	Q				
3+10	0.0685	0.38	Q				
3+15	0.0712	0.39	Q				
3+20	0.0738	0.39	Q				
3+25	0.0765	0.39	Q				
3+30	0.0792	0.39	Q				
3+35	0.0818	0.39	Q				
3+40	0.0845	0.39	Q				
3+45	0.0872	0.39	Q				
3+50	0.0899	0.40	Q				
3+55	0.0929	0.43	Q				
4+ 0	0.0959	0.44	Q				
4+ 5	0.0990	0.45	Q				
4+10	0.1022	0.46	Q				
4+15	0.1053	0.46	Q				
4+20	0.1086	0.47	Q				
4+25	0.1120	0.50	Q				
4+30	0.1156	0.52	Q				
4+35	0.1193	0.53	Q				
4+40	0.1229	0.53	Q				
4+45	0.1266	0.54	Q				

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4+50	0.1300	0.49	Q						
4+55	0.1321	0.31	Q						
5+ 0	0.1336	0.21	Q						
5+ 5	0.1351	0.23	Q						
5+10	0.1375	0.34	Q						
5+15	0.1403	0.41	Q						
5+20	0.1433	0.44	Q						
5+25	0.1466	0.48	Q						
5+30	0.1501	0.50	Q						
5+35	0.1535	0.49	Q						
5+40	0.1563	0.41	Q						
5+45	0.1589	0.38	Q						
5+50	0.1615	0.38	Q						
5+55	0.1642	0.39	Q						
6+ 0	0.1671	0.41	Q						
6+ 5	0.1706	0.51	Q						
6+10	0.1765	0.85	VQ						
6+15	0.1837	1.05	VQ						
6+20	0.1915	1.14	VQ						
6+25	0.1998	1.21	VQ						
6+30	0.2085	1.26	VQ						
6+35	0.2180	1.38	VQ						
6+40	0.2300	1.74	V Q						
6+45	0.2434	1.95	VQ						
6+50	0.2576	2.05	VQ						
6+55	0.2722	2.13	VQ						
7+ 0	0.2873	2.18	VQ						
7+ 5	0.3026	2.23	VQ						
7+10	0.3182	2.27	V Q						
7+15	0.3341	2.30	V Q						
7+20	0.3507	2.42	V Q						
7+25	0.3697	2.76	V Q						
7+30	0.3901	2.97	V Q						
7+35	0.4118	3.14	V Q						
7+40	0.4361	3.52	V Q						
7+45	0.4619	3.75	V Q						
7+50	0.4891	3.95	V Q						
7+55	0.5191	4.34	V Q						
8+ 0	0.5507	4.59	V Q						
8+ 5	0.5842	4.87	V Q						
8+10	0.6227	5.58	V Q						
8+15	0.6640	6.01	V Q						
8+20	0.7067	6.20	V Q						
8+25	0.7503	6.32	V Q						
8+30	0.7945	6.42	V Q						
8+35	0.8397	6.57	V Q						
8+40	0.8875	6.94	V Q						
8+45	0.9369	7.17	V Q						
8+50	0.9876	7.36	V Q						
8+55	1.0410	7.75	V Q						
9+ 0	1.0960	7.99	V Q						
9+ 5	1.1529	8.27	V Q						
9+10	1.2147	8.97	V Q						
9+15	1.2794	9.39	V Q						
9+20	1.3459	9.66	V Q						
9+25	1.4155	10.10	V Q						
9+30	1.4869	10.37	V Q						
9+35	1.5599	10.59	V Q						
9+40	1.6357	11.01	V Q						
9+45	1.7132	11.26	V Q						
9+50	1.7922	11.47	V Q						
9+55	1.8740	11.87	V Q						
10+ 0	1.9575	12.12	V Q						
10+ 5	2.0377	11.65	V Q						
10+10	2.1035	9.55	V Q						
10+15	2.1611	8.37	V Q						
10+20	2.2157	7.93	VQ						
10+25	2.2686	7.68	VQ						

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10+30	2.3204	7.52	VQ		
10+35	2.3743	7.83	Q		
10+40	2.4385	9.32	V Q		
10+45	2.5085	10.17	V Q		
10+50	2.5808	10.49	V Q		
10+55	2.6543	10.68	V Q		
11+ 0	2.7287	10.81	V Q		
11+ 5	2.8034	10.84	V Q		
11+10	2.8766	10.62	V Q		
11+15	2.9490	10.52	V Q		
11+20	3.0213	10.51	VQ		
11+25	3.0937	10.51	VQ		
11+30	3.1662	10.53	VQ		
11+35	3.2376	10.36	Q		
11+40	3.3047	9.74	Q V		
11+45	3.3695	9.40	Q V		
11+50	3.4339	9.36	Q V		
11+55	3.5000	9.60	Q V		
12+ 0	3.5671	9.74	Q V		
12+ 5	3.6385	10.37	Q V		
12+10	3.7253	12.60	Q		
12+15	3.8209	13.87	V Q		
12+20	3.9205	14.47	V Q		
12+25	4.0245	15.10	V Q		
12+30	4.1312	15.50	V Q		
12+35	4.2406	15.89	V Q		
12+40	4.3556	16.69	V Q		
12+45	4.4738	17.17	V Q		
12+50	4.5942	17.48	V Q		
12+55	4.7178	17.95	V Q		
13+ 0	4.8434	18.25	V Q		
13+ 5	4.9729	18.80	V Q		
13+10	5.1138	20.46	V Q		
13+15	5.2613	21.42	V Q		
13+20	5.4116	21.82	V Q		
13+25	5.5636	22.08	V Q		
13+30	5.7169	22.26	V Q		
13+35	5.8647	21.46	V Q		
13+40	5.9894	18.11	QV		
13+45	6.1012	16.23	Q V		
13+50	6.2081	15.52	Q V		
13+55	6.3121	15.10	Q V		
14+ 0	6.4143	14.84	Q V		
14+ 5	6.5175	14.98	Q V		
14+10	6.6283	16.09	Q V		
14+15	6.7434	16.71	Q V		
14+20	6.8594	16.84	Q V		
14+25	6.9741	16.66	Q V		
14+30	7.0882	16.56	Q V		
14+35	7.2024	16.58	Q V		
14+40	7.3168	16.62	Q V		
14+45	7.4315	16.65	Q V		
14+50	7.5458	16.59	Q V		
14+55	7.6580	16.30	Q V		
15+ 0	7.7693	16.15	Q V		
15+ 5	7.8796	16.01	Q V		
15+10	7.9875	15.67	Q V		
15+15	8.0940	15.47	Q V		
15+20	8.1995	15.32	Q V		
15+25	8.3026	14.97	Q V		
15+30	8.4043	14.77	Q V		
15+35	8.5032	14.36	Q V		
15+40	8.5931	13.06	Q V		
15+45	8.6780	12.32	Q V		
15+50	8.7609	12.03	Q V		
15+55	8.8425	11.86	Q V		
16+ 0	8.9235	11.75	Q V		
16+ 5	8.9956	10.48	Q V		

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16+10	9.0362	5.89			V
16+15	9.0588	3.28			V
16+20	9.0742	2.24	Q		V
16+25	9.0854	1.61	Q		V
16+30	9.0936	1.19	Q		V
16+35	9.0998	0.91	Q		V
16+40	9.1045	0.67	Q		V
16+45	9.1079	0.50	Q		V
16+50	9.1106	0.39	Q		V
16+55	9.1128	0.31	Q		V
17+ 0	9.1144	0.24	Q		V
17+ 5	9.1165	0.31	Q		V
17+10	9.1204	0.57	Q		V
17+15	9.1254	0.72	Q		V
17+20	9.1308	0.79	Q		V
17+25	9.1366	0.84	Q		V
17+30	9.1426	0.87	Q		V
17+35	9.1489	0.90	Q		V
17+40	9.1553	0.93	Q		V
17+45	9.1618	0.95	Q		V
17+50	9.1679	0.89	Q		V
17+55	9.1720	0.59	Q		V
18+ 0	9.1750	0.43	Q		V
18+ 5	9.1776	0.38	Q		V
18+10	9.1800	0.35	Q		V
18+15	9.1824	0.34	Q		V
18+20	9.1847	0.33	Q		V
18+25	9.1869	0.33	Q		V
18+30	9.1892	0.33	Q		V
18+35	9.1915	0.33	Q		V
18+40	9.1934	0.28	Q		V
18+45	9.1952	0.26	Q		V
18+50	9.1968	0.24	Q		V
18+55	9.1982	0.20	Q		V
19+ 0	9.1995	0.18	Q		V
19+ 5	9.2008	0.18	Q		V
19+10	9.2022	0.21	Q		V
19+15	9.2037	0.22	Q		V
19+20	9.2054	0.25	Q		V
19+25	9.2079	0.35	Q		V
19+30	9.2107	0.41	Q		V
19+35	9.2136	0.42	Q		V
19+40	9.2158	0.33	Q		V
19+45	9.2177	0.28	Q		V
19+50	9.2195	0.25	Q		V
19+55	9.2210	0.21	Q		V
20+ 0	9.2223	0.19	Q		V
20+ 5	9.2235	0.19	Q		V
20+10	9.2250	0.21	Q		V
20+15	9.2265	0.22	Q		V
20+20	9.2281	0.23	Q		V
20+25	9.2297	0.23	Q		V
20+30	9.2313	0.23	Q		V
20+35	9.2328	0.23	Q		V
20+40	9.2344	0.23	Q		V
20+45	9.2360	0.23	Q		V
20+50	9.2375	0.22	Q		V
20+55	9.2389	0.19	Q		V
21+ 0	9.2401	0.18	Q		V
21+ 5	9.2413	0.18	Q		V
21+10	9.2427	0.20	Q		V
21+15	9.2442	0.22	Q		V
21+20	9.2457	0.22	Q		V
21+25	9.2470	0.19	Q		V
21+30	9.2481	0.17	Q		V
21+35	9.2493	0.17	Q		V
21+40	9.2507	0.20	Q		V
21+45	9.2522	0.22	Q		V

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21+50	9.2537	0.21	Q			V
21+55	9.2550	0.19	Q			V
22+ 0	9.2561	0.17	Q			V
22+ 5	9.2572	0.15	Q			V
22+10	9.2579	0.10	Q			V
22+15	9.2584	0.07	Q			V
22+20	9.2589	0.08	Q			V
22+25	9.2597	0.11	Q			V
22+30	9.2606	0.14	Q			V
22+35	9.2616	0.14	Q			V
22+40	9.2626	0.15	Q			V
22+45	9.2636	0.15	Q			V
22+50	9.2647	0.15	Q			V
22+55	9.2657	0.15	Q			V
23+ 0	9.2668	0.15	Q			V
23+ 5	9.2678	0.15	Q			V
23+10	9.2689	0.15	Q			V
23+15	9.2700	0.16	Q			V
23+20	9.2710	0.16	Q			V
23+25	9.2721	0.16	Q			V
23+30	9.2732	0.16	Q			V
23+35	9.2742	0.16	Q			V
23+40	9.2753	0.16	Q			V
23+45	9.2764	0.16	Q			V
23+50	9.2774	0.16	Q			V
23+55	9.2785	0.16	Q			V
24+ 0	9.2796	0.16	Q			V
24+ 5	9.2805	0.14	Q			V
24+10	9.2810	0.08	Q			V
24+15	9.2813	0.04	Q			V
24+20	9.2815	0.03	Q			V
24+25	9.2816	0.02	Q			V
24+30	9.2817	0.01	Q			V
24+35	9.2818	0.01	Q			V
24+40	9.2818	0.01	Q			V
24+45	9.2818	0.00	Q			V
24+50	9.2818	0.00	Q			V
24+55	9.2818	0.00	Q			V

Appendix

B

UNIT HYDROGRAPH CALCULATIONS PROPOSED CONDITIONS

David Jones Rd

10
1560

E1
34.32

15
1505

McPherson Rd


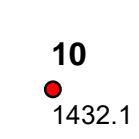


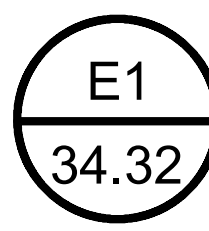
Arrowhead Cir

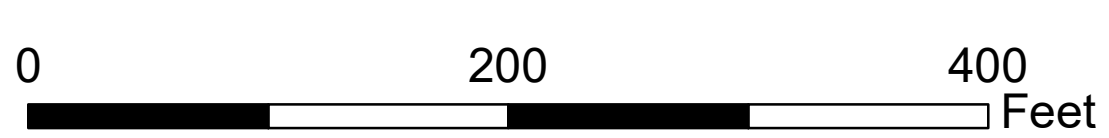
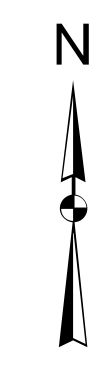
Mountain Ave

Sunpark Dr

SUNNYSANDS DR

Legend

-  Watershed Centroid
-  Node Number
Node Elevation
-  Flowpath
-  Watershed Boundary
-  Watershed ID
Area (acre)



Pacific Emerald
Tract 31304

Exhibit B
Onsite Proposed Condition
Unit Hydrograph Map



2yr24hrp242.out

Unit Hydrograph Analysis

Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2004, Version 7.0
Study date 10/12/21 File: 2yr24hrp242.out

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Riverside County Synthetic Unit Hydrology Method
RCFC & WCD Manual date - April 1978

Program License Serial Number 6062

English (in-lb) Input Units Used
English Rainfall Data (Inches) Input Values Used

English Units used in output format

Pacific Emerald
Proposed Condition
2-Year 24-Hour Storm

Drainage Area = 34.32(Ac.) = 0.054 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 34.32(Ac.) = 0.054 Sq. Mi.
Length along longest watercourse = 2071.00(Ft.)
Length along longest watercourse measured to centroid = 1397.00(Ft.)
Length along longest watercourse = 0.392 Mi.
Length along longest watercourse measured to centroid = 0.265 Mi.
Difference in elevation = 55.00(Ft.)
Slope along watercourse = 140.2221 Ft./Mi.
Average Manning's 'N' = 0.015
Lag time = 0.060 Hr.
Lag time = 3.57 Min.
25% of lag time = 0.89 Min.
40% of lag time = 1.43 Min.
Unit time = 5.00 Min.
Duration of storm = 24 Hour(s)
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
34.32	2.00	68.64

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
34.32	5.60	192.19

STORM EVENT (YEAR) = 2.00
Area Averaged 2-Year Rainfall = 2.000(In)
Area Averaged 100-Year Rainfall = 5.600(In)

Point rain (area averaged) = 2.000(In)
Areal adjustment factor = 99.99 %
Adjusted average point rain = 2.000(In)

Sub-Area Data:

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Area(Ac.)	Runoff Index	Impervious %
30.700	56.00	0.500
3.620	69.00	0.500
Total Area Entered = 34.32(Ac.)		

RI	RI	Infil. Rate	Impervious	Adj. Infil. Rate	Area%	F
AMC2	AMC-1	(In/Hr)	(Dec.%)	(In/Hr)	(Dec.)	(In/Hr)
56.0	36.0	0.706	0.500	0.388	0.895	0.347
69.0	49.8	0.574	0.500	0.316	0.105	0.033
						Sum (F) = 0.381

Area averaged mean soil loss (F) (In/Hr) = 0.381
 Minimum soil loss rate ((In/Hr)) = 0.190
 (for 24 hour storm duration)
 Soil loss rate (decimal) = 0.500

 U n i t H y d r o g r a p h
 VALLEY S-Curve

Unit Hydrograph Data

Unit time period (hrs)	Time % of lag	Distribution Graph %	Unit Hydrograph (CFS)
1	0.083	140.052	30.690
2	0.167	280.105	47.703
3	0.250	420.157	11.799
4	0.333	560.209	5.202
5	0.417	700.261	2.771
6	0.500	840.314	1.835
Sum = 100.000			Sum= 34.588

Unit Time (Hr.)	Pattern Percent	Storm Rain (In/Hr)	Loss rate(In./Hr) Max Low	Effective (In/Hr)
1	0.08	0.07	0.016 0.675	0.008
2	0.17	0.07	0.016 0.672	0.008
3	0.25	0.07	0.016 0.670	0.008
4	0.33	0.10	0.024 0.667	0.012
5	0.42	0.10	0.024 0.664	0.012
6	0.50	0.10	0.024 0.662	0.012
7	0.58	0.10	0.024 0.659	0.012
8	0.67	0.10	0.024 0.657	0.012
9	0.75	0.10	0.024 0.654	0.012
10	0.83	0.13	0.032 0.651	0.016
11	0.92	0.13	0.032 0.649	0.016
12	1.00	0.13	0.032 0.646	0.016
13	1.08	0.10	0.024 0.644	0.012
14	1.17	0.10	0.024 0.641	0.012
15	1.25	0.10	0.024 0.639	0.012
16	1.33	0.10	0.024 0.636	0.012
17	1.42	0.10	0.024 0.634	0.012
18	1.50	0.10	0.024 0.631	0.012
19	1.58	0.10	0.024 0.629	0.012
20	1.67	0.10	0.024 0.626	0.012
21	1.75	0.10	0.024 0.624	0.012
22	1.83	0.13	0.032 0.621	0.016
23	1.92	0.13	0.032 0.619	0.016
24	2.00	0.13	0.032 0.616	0.016
25	2.08	0.13	0.032 0.614	0.016
26	2.17	0.13	0.032 0.611	0.016
27	2.25	0.13	0.032 0.609	0.016
28	2.33	0.13	0.032 0.606	0.016
29	2.42	0.13	0.032 0.604	0.016
30	2.50	0.13	0.032 0.601	0.016
31	2.58	0.17	0.040 0.599	0.020

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32	2.67	0.17	0.040	0.596	0.020	0.02
33	2.75	0.17	0.040	0.594	0.020	0.02
34	2.83	0.17	0.040	0.591	0.020	0.02
35	2.92	0.17	0.040	0.589	0.020	0.02
36	3.00	0.17	0.040	0.586	0.020	0.02
37	3.08	0.17	0.040	0.584	0.020	0.02
38	3.17	0.17	0.040	0.582	0.020	0.02
39	3.25	0.17	0.040	0.579	0.020	0.02
40	3.33	0.17	0.040	0.577	0.020	0.02
41	3.42	0.17	0.040	0.574	0.020	0.02
42	3.50	0.17	0.040	0.572	0.020	0.02
43	3.58	0.17	0.040	0.570	0.020	0.02
44	3.67	0.17	0.040	0.567	0.020	0.02
45	3.75	0.17	0.040	0.565	0.020	0.02
46	3.83	0.20	0.048	0.562	0.024	0.02
47	3.92	0.20	0.048	0.560	0.024	0.02
48	4.00	0.20	0.048	0.558	0.024	0.02
49	4.08	0.20	0.048	0.555	0.024	0.02
50	4.17	0.20	0.048	0.553	0.024	0.02
51	4.25	0.20	0.048	0.551	0.024	0.02
52	4.33	0.23	0.056	0.548	0.028	0.03
53	4.42	0.23	0.056	0.546	0.028	0.03
54	4.50	0.23	0.056	0.544	0.028	0.03
55	4.58	0.23	0.056	0.541	0.028	0.03
56	4.67	0.23	0.056	0.539	0.028	0.03
57	4.75	0.23	0.056	0.537	0.028	0.03
58	4.83	0.27	0.064	0.534	0.032	0.03
59	4.92	0.27	0.064	0.532	0.032	0.03
60	5.00	0.27	0.064	0.530	0.032	0.03
61	5.08	0.20	0.048	0.527	0.024	0.02
62	5.17	0.20	0.048	0.525	0.024	0.02
63	5.25	0.20	0.048	0.523	0.024	0.02
64	5.33	0.23	0.056	0.520	0.028	0.03
65	5.42	0.23	0.056	0.518	0.028	0.03
66	5.50	0.23	0.056	0.516	0.028	0.03
67	5.58	0.27	0.064	0.514	0.032	0.03
68	5.67	0.27	0.064	0.511	0.032	0.03
69	5.75	0.27	0.064	0.509	0.032	0.03
70	5.83	0.27	0.064	0.507	0.032	0.03
71	5.92	0.27	0.064	0.505	0.032	0.03
72	6.00	0.27	0.064	0.502	0.032	0.03
73	6.08	0.30	0.072	0.500	0.036	0.04
74	6.17	0.30	0.072	0.498	0.036	0.04
75	6.25	0.30	0.072	0.496	0.036	0.04
76	6.33	0.30	0.072	0.494	0.036	0.04
77	6.42	0.30	0.072	0.491	0.036	0.04
78	6.50	0.30	0.072	0.489	0.036	0.04
79	6.58	0.33	0.080	0.487	0.040	0.04
80	6.67	0.33	0.080	0.485	0.040	0.04
81	6.75	0.33	0.080	0.483	0.040	0.04
82	6.83	0.33	0.080	0.480	0.040	0.04
83	6.92	0.33	0.080	0.478	0.040	0.04
84	7.00	0.33	0.080	0.476	0.040	0.04
85	7.08	0.33	0.080	0.474	0.040	0.04
86	7.17	0.33	0.080	0.472	0.040	0.04
87	7.25	0.33	0.080	0.470	0.040	0.04
88	7.33	0.37	0.088	0.467	0.044	0.04
89	7.42	0.37	0.088	0.465	0.044	0.04
90	7.50	0.37	0.088	0.463	0.044	0.04
91	7.58	0.40	0.096	0.461	0.048	0.05
92	7.67	0.40	0.096	0.459	0.048	0.05
93	7.75	0.40	0.096	0.457	0.048	0.05
94	7.83	0.43	0.104	0.455	0.052	0.05
95	7.92	0.43	0.104	0.453	0.052	0.05
96	8.00	0.43	0.104	0.450	0.052	0.05
97	8.08	0.50	0.120	0.448	0.060	0.06
98	8.17	0.50	0.120	0.446	0.060	0.06
99	8.25	0.50	0.120	0.444	0.060	0.06

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100	8.33	0.50	0.120	0.442	0.060	0.06
101	8.42	0.50	0.120	0.440	0.060	0.06
102	8.50	0.50	0.120	0.438	0.060	0.06
103	8.58	0.53	0.128	0.436	0.064	0.06
104	8.67	0.53	0.128	0.434	0.064	0.06
105	8.75	0.53	0.128	0.432	0.064	0.06
106	8.83	0.57	0.136	0.430	0.068	0.07
107	8.92	0.57	0.136	0.428	0.068	0.07
108	9.00	0.57	0.136	0.426	0.068	0.07
109	9.08	0.63	0.152	0.424	0.076	0.08
110	9.17	0.63	0.152	0.422	0.076	0.08
111	9.25	0.63	0.152	0.420	0.076	0.08
112	9.33	0.67	0.160	0.418	0.080	0.08
113	9.42	0.67	0.160	0.416	0.080	0.08
114	9.50	0.67	0.160	0.414	0.080	0.08
115	9.58	0.70	0.168	0.412	0.084	0.08
116	9.67	0.70	0.168	0.410	0.084	0.08
117	9.75	0.70	0.168	0.408	0.084	0.08
118	9.83	0.73	0.176	0.406	0.088	0.09
119	9.92	0.73	0.176	0.404	0.088	0.09
120	10.00	0.73	0.176	0.402	0.088	0.09
121	10.08	0.50	0.120	0.400	0.060	0.06
122	10.17	0.50	0.120	0.398	0.060	0.06
123	10.25	0.50	0.120	0.396	0.060	0.06
124	10.33	0.50	0.120	0.394	0.060	0.06
125	10.42	0.50	0.120	0.392	0.060	0.06
126	10.50	0.50	0.120	0.390	0.060	0.06
127	10.58	0.67	0.160	0.388	0.080	0.08
128	10.67	0.67	0.160	0.387	0.080	0.08
129	10.75	0.67	0.160	0.385	0.080	0.08
130	10.83	0.67	0.160	0.383	0.080	0.08
131	10.92	0.67	0.160	0.381	0.080	0.08
132	11.00	0.67	0.160	0.379	0.080	0.08
133	11.08	0.63	0.152	0.377	0.076	0.08
134	11.17	0.63	0.152	0.375	0.076	0.08
135	11.25	0.63	0.152	0.373	0.076	0.08
136	11.33	0.63	0.152	0.372	0.076	0.08
137	11.42	0.63	0.152	0.370	0.076	0.08
138	11.50	0.63	0.152	0.368	0.076	0.08
139	11.58	0.57	0.136	0.366	0.068	0.07
140	11.67	0.57	0.136	0.364	0.068	0.07
141	11.75	0.57	0.136	0.363	0.068	0.07
142	11.83	0.60	0.144	0.361	0.072	0.07
143	11.92	0.60	0.144	0.359	0.072	0.07
144	12.00	0.60	0.144	0.357	0.072	0.07
145	12.08	0.83	0.200	0.355	0.100	0.10
146	12.17	0.83	0.200	0.354	0.100	0.10
147	12.25	0.83	0.200	0.352	0.100	0.10
148	12.33	0.87	0.208	0.350	0.104	0.10
149	12.42	0.87	0.208	0.348	0.104	0.10
150	12.50	0.87	0.208	0.346	0.104	0.10
151	12.58	0.93	0.224	0.345	0.112	0.11
152	12.67	0.93	0.224	0.343	0.112	0.11
153	12.75	0.93	0.224	0.341	0.112	0.11
154	12.83	0.97	0.232	0.340	0.116	0.12
155	12.92	0.97	0.232	0.338	0.116	0.12
156	13.00	0.97	0.232	0.336	0.116	0.12
157	13.08	1.13	0.272	0.334	0.136	0.14
158	13.17	1.13	0.272	0.333	0.136	0.14
159	13.25	1.13	0.272	0.331	0.136	0.14
160	13.33	1.13	0.272	0.329	0.136	0.14
161	13.42	1.13	0.272	0.328	0.136	0.14
162	13.50	1.13	0.272	0.326	0.136	0.14
163	13.58	0.77	0.184	0.324	0.092	0.09
164	13.67	0.77	0.184	0.323	0.092	0.09
165	13.75	0.77	0.184	0.321	0.092	0.09
166	13.83	0.77	0.184	0.319	0.092	0.09
167	13.92	0.77	0.184	0.318	0.092	0.09

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168	14.00	0.77	0.184	0.316	0.092	0.09
169	14.08	0.90	0.216	0.315	0.108	0.11
170	14.17	0.90	0.216	0.313	0.108	0.11
171	14.25	0.90	0.216	0.311	0.108	0.11
172	14.33	0.87	0.208	0.310	0.104	0.10
173	14.42	0.87	0.208	0.308	0.104	0.10
174	14.50	0.87	0.208	0.307	0.104	0.10
175	14.58	0.87	0.208	0.305	0.104	0.10
176	14.67	0.87	0.208	0.303	0.104	0.10
177	14.75	0.87	0.208	0.302	0.104	0.10
178	14.83	0.83	0.200	0.300	0.100	0.10
179	14.92	0.83	0.200	0.299	0.100	0.10
180	15.00	0.83	0.200	0.297	0.100	0.10
181	15.08	0.80	0.192	0.296	0.096	0.10
182	15.17	0.80	0.192	0.294	0.096	0.10
183	15.25	0.80	0.192	0.293	0.096	0.10
184	15.33	0.77	0.184	0.291	0.092	0.09
185	15.42	0.77	0.184	0.290	0.092	0.09
186	15.50	0.77	0.184	0.288	0.092	0.09
187	15.58	0.63	0.152	0.287	0.076	0.08
188	15.67	0.63	0.152	0.285	0.076	0.08
189	15.75	0.63	0.152	0.284	0.076	0.08
190	15.83	0.63	0.152	0.282	0.076	0.08
191	15.92	0.63	0.152	0.281	0.076	0.08
192	16.00	0.63	0.152	0.280	0.076	0.08
193	16.08	0.13	0.032	0.278	0.016	0.02
194	16.17	0.13	0.032	0.277	0.016	0.02
195	16.25	0.13	0.032	0.275	0.016	0.02
196	16.33	0.13	0.032	0.274	0.016	0.02
197	16.42	0.13	0.032	0.272	0.016	0.02
198	16.50	0.13	0.032	0.271	0.016	0.02
199	16.58	0.10	0.024	0.270	0.012	0.01
200	16.67	0.10	0.024	0.268	0.012	0.01
201	16.75	0.10	0.024	0.267	0.012	0.01
202	16.83	0.10	0.024	0.266	0.012	0.01
203	16.92	0.10	0.024	0.264	0.012	0.01
204	17.00	0.10	0.024	0.263	0.012	0.01
205	17.08	0.17	0.040	0.262	0.020	0.02
206	17.17	0.17	0.040	0.260	0.020	0.02
207	17.25	0.17	0.040	0.259	0.020	0.02
208	17.33	0.17	0.040	0.258	0.020	0.02
209	17.42	0.17	0.040	0.256	0.020	0.02
210	17.50	0.17	0.040	0.255	0.020	0.02
211	17.58	0.17	0.040	0.254	0.020	0.02
212	17.67	0.17	0.040	0.253	0.020	0.02
213	17.75	0.17	0.040	0.251	0.020	0.02
214	17.83	0.13	0.032	0.250	0.016	0.02
215	17.92	0.13	0.032	0.249	0.016	0.02
216	18.00	0.13	0.032	0.248	0.016	0.02
217	18.08	0.13	0.032	0.246	0.016	0.02
218	18.17	0.13	0.032	0.245	0.016	0.02
219	18.25	0.13	0.032	0.244	0.016	0.02
220	18.33	0.13	0.032	0.243	0.016	0.02
221	18.42	0.13	0.032	0.242	0.016	0.02
222	18.50	0.13	0.032	0.240	0.016	0.02
223	18.58	0.10	0.024	0.239	0.012	0.01
224	18.67	0.10	0.024	0.238	0.012	0.01
225	18.75	0.10	0.024	0.237	0.012	0.01
226	18.83	0.07	0.016	0.236	0.008	0.01
227	18.92	0.07	0.016	0.235	0.008	0.01
228	19.00	0.07	0.016	0.234	0.008	0.01
229	19.08	0.10	0.024	0.232	0.012	0.01
230	19.17	0.10	0.024	0.231	0.012	0.01
231	19.25	0.10	0.024	0.230	0.012	0.01
232	19.33	0.13	0.032	0.229	0.016	0.02
233	19.42	0.13	0.032	0.228	0.016	0.02
234	19.50	0.13	0.032	0.227	0.016	0.02
235	19.58	0.10	0.024	0.226	0.012	0.01

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236	19.67	0.10	0.024	0.225	0.012	0.01
237	19.75	0.10	0.024	0.224	0.012	0.01
238	19.83	0.07	0.016	0.223	0.008	0.01
239	19.92	0.07	0.016	0.222	0.008	0.01
240	20.00	0.07	0.016	0.221	0.008	0.01
241	20.08	0.10	0.024	0.220	0.012	0.01
242	20.17	0.10	0.024	0.219	0.012	0.01
243	20.25	0.10	0.024	0.218	0.012	0.01
244	20.33	0.10	0.024	0.217	0.012	0.01
245	20.42	0.10	0.024	0.216	0.012	0.01
246	20.50	0.10	0.024	0.215	0.012	0.01
247	20.58	0.10	0.024	0.214	0.012	0.01
248	20.67	0.10	0.024	0.214	0.012	0.01
249	20.75	0.10	0.024	0.213	0.012	0.01
250	20.83	0.07	0.016	0.212	0.008	0.01
251	20.92	0.07	0.016	0.211	0.008	0.01
252	21.00	0.07	0.016	0.210	0.008	0.01
253	21.08	0.10	0.024	0.209	0.012	0.01
254	21.17	0.10	0.024	0.208	0.012	0.01
255	21.25	0.10	0.024	0.208	0.012	0.01
256	21.33	0.07	0.016	0.207	0.008	0.01
257	21.42	0.07	0.016	0.206	0.008	0.01
258	21.50	0.07	0.016	0.205	0.008	0.01
259	21.58	0.10	0.024	0.205	0.012	0.01
260	21.67	0.10	0.024	0.204	0.012	0.01
261	21.75	0.10	0.024	0.203	0.012	0.01
262	21.83	0.07	0.016	0.202	0.008	0.01
263	21.92	0.07	0.016	0.202	0.008	0.01
264	22.00	0.07	0.016	0.201	0.008	0.01
265	22.08	0.10	0.024	0.200	0.012	0.01
266	22.17	0.10	0.024	0.200	0.012	0.01
267	22.25	0.10	0.024	0.199	0.012	0.01
268	22.33	0.07	0.016	0.198	0.008	0.01
269	22.42	0.07	0.016	0.198	0.008	0.01
270	22.50	0.07	0.016	0.197	0.008	0.01
271	22.58	0.07	0.016	0.197	0.008	0.01
272	22.67	0.07	0.016	0.196	0.008	0.01
273	22.75	0.07	0.016	0.196	0.008	0.01
274	22.83	0.07	0.016	0.195	0.008	0.01
275	22.92	0.07	0.016	0.195	0.008	0.01
276	23.00	0.07	0.016	0.194	0.008	0.01
277	23.08	0.07	0.016	0.194	0.008	0.01
278	23.17	0.07	0.016	0.193	0.008	0.01
279	23.25	0.07	0.016	0.193	0.008	0.01
280	23.33	0.07	0.016	0.192	0.008	0.01
281	23.42	0.07	0.016	0.192	0.008	0.01
282	23.50	0.07	0.016	0.192	0.008	0.01
283	23.58	0.07	0.016	0.191	0.008	0.01
284	23.67	0.07	0.016	0.191	0.008	0.01
285	23.75	0.07	0.016	0.191	0.008	0.01
286	23.83	0.07	0.016	0.191	0.008	0.01
287	23.92	0.07	0.016	0.190	0.008	0.01
288	24.00	0.07	0.016	0.190	0.008	0.01

Sum = 100.0 Sum = 12.0

Flood volume = Effective rainfall 1.00(In)
times area 34.3(Ac.)/[(In)/(Ft.)] = 2.9(Ac.Ft)
Total soil loss = 1.00(In)
Total soil loss = 2.860(Ac.Ft)
Total rainfall = 2.00(In)
Flood volume = 124573.2 Cubic Feet
Total soil loss = 124573.2 Cubic Feet

Peak flow rate of this hydrograph = 4.706(CFS)

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24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

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Hydrograph in 5 Minute intervals ((CFS))

Time(h+m)	Volume	Ac.Ft	Q(CFS)	0	2.5	5.0	7.5	10.0
0+ 5	0.0006		0.08	Q				
0+10	0.0021		0.22	Q				
0+15	0.0038		0.25	Q				
0+20	0.0059		0.31	VQ				
0+25	0.0085		0.38	VQ				
0+30	0.0113		0.40	VQ				
0+35	0.0141		0.41	VQ				
0+40	0.0170		0.41	VQ				
0+45	0.0198		0.42	VQ				
0+50	0.0230		0.46	VQ				
0+55	0.0266		0.52	V Q				
1+ 0	0.0303		0.54	V Q				
1+ 5	0.0338		0.50	V Q				
1+10	0.0368		0.44	VQ				
1+15	0.0398		0.43	VQ				
1+20	0.0427		0.42	VQ				
1+25	0.0456		0.42	VQ				
1+30	0.0484		0.42	VQ				
1+35	0.0513		0.42	VQ				
1+40	0.0541		0.42	VQ				
1+45	0.0570		0.42	VQ				
1+50	0.0601		0.46	VQ				
1+55	0.0638		0.52	V Q				
2+ 0	0.0675		0.54	V Q				
2+ 5	0.0712		0.55	V Q				
2+10	0.0750		0.55	VQ				
2+15	0.0788		0.55	VQ				
2+20	0.0827		0.55	VQ				
2+25	0.0865		0.55	VQ				
2+30	0.0903		0.55	VQ				
2+35	0.0944		0.60	VQ				
2+40	0.0990		0.66	VQ				
2+45	0.1036		0.68	VQ				
2+50	0.1083		0.69	VQ				
2+55	0.1131		0.69	VQ				
3+ 0	0.1179		0.69	VQ				
3+ 5	0.1226		0.69	VQ				
3+10	0.1274		0.69	VQ				
3+15	0.1322		0.69	VQ				
3+20	0.1369		0.69	VQ				
3+25	0.1417		0.69	VQ				
3+30	0.1465		0.69	Q				
3+35	0.1512		0.69	Q				
3+40	0.1560		0.69	Q				
3+45	0.1608		0.69	Q				
3+50	0.1658		0.73	Q				
3+55	0.1713		0.80	VQ				
4+ 0	0.1770		0.82	VQ				
4+ 5	0.1826		0.82	VQ				
4+10	0.1883		0.83	VQ				
4+15	0.1941		0.83	VQ				
4+20	0.2001		0.87	VQ				
4+25	0.2065		0.94	VQ				
4+30	0.2131		0.96	VQ				
4+35	0.2197		0.96	Q				
4+40	0.2264		0.97	Q				
4+45	0.2331		0.97	Q				
4+50	0.2400		1.01	VQ				
4+55	0.2475		1.08	VQ				
5+ 0	0.2550		1.09	VQ				
5+ 5	0.2620		1.02	VQ				
5+10	0.2681		0.89	Q				
5+15	0.2740		0.86	Q				

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5+20	0.2801	0.89	Q		
5+25	0.2866	0.94	QV		
5+30	0.2932	0.96	QV		
5+35	0.3001	1.01	Q		
5+40	0.3075	1.07	Q		
5+45	0.3150	1.09	Q		
5+50	0.3226	1.10	Q		
5+55	0.3302	1.10	Q		
6+ 0	0.3379	1.11	Q		
6+ 5	0.3458	1.15	Q		
6+10	0.3542	1.22	Q		
6+15	0.3626	1.23	QV		
6+20	0.3712	1.24	QV		
6+25	0.3797	1.24	QV		
6+30	0.3883	1.25	QV		
6+35	0.3972	1.29	Q		
6+40	0.4065	1.35	Q		
6+45	0.4160	1.37	Q		
6+50	0.4254	1.38	Q		
6+55	0.4350	1.38	QV		
7+ 0	0.4445	1.38	QV		
7+ 5	0.4540	1.38	QV		
7+10	0.4636	1.38	QV		
7+15	0.4731	1.38	QV		
7+20	0.4829	1.43	QV		
7+25	0.4932	1.49	QV		
7+30	0.5036	1.51	QV		
7+35	0.5143	1.56	QV		
7+40	0.5255	1.63	QV		
7+45	0.5369	1.65	QV		
7+50	0.5486	1.70	QV		
7+55	0.5607	1.77	Q		
8+ 0	0.5730	1.79	QV		
8+ 5	0.5860	1.88	QV		
8+10	0.5998	2.01	Q		
8+15	0.6140	2.05	Q		
8+20	0.6282	2.06	Q		
8+25	0.6424	2.07	Q		
8+30	0.6567	2.08	QV		
8+35	0.6713	2.12	QV		
8+40	0.6864	2.18	QV		
8+45	0.7015	2.20	QV		
8+50	0.7170	2.25	QV		
8+55	0.7330	2.32	QV		
9+ 0	0.7491	2.34	QV		
9+ 5	0.7659	2.43	QV		
9+10	0.7836	2.57	Q		
9+15	0.8015	2.60	QV		
9+20	0.8198	2.66	QV		
9+25	0.8386	2.73	QV		
9+30	0.8576	2.75	Q		
9+35	0.8769	2.80	QV		
9+40	0.8967	2.87	QV		
9+45	0.9166	2.89	QV		
9+50	0.9369	2.94	Q V		
9+55	0.9576	3.01	QV		
10+ 0	0.9785	3.03	QV		
10+ 5	0.9974	2.74	Q V		
10+10	1.0131	2.28	Q	V	
10+15	1.0281	2.17	Q	V	
10+20	1.0427	2.12	Q	V	
10+25	1.0571	2.09	Q	V	
10+30	1.0714	2.08	Q	V	
10+35	1.0872	2.29	Q	V	
10+40	1.1052	2.62	Q	V	
10+45	1.1238	2.70	Q	V	
10+50	1.1426	2.74	Q	V	
10+55	1.1616	2.76	Q	V	

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11+ 0	1.1807	2.77	Q	V			
11+ 5	1.1995	2.73	Q	V			
11+10	1.2178	2.66	Q	V			
11+15	1.2360	2.64	Q	V			
11+20	1.2541	2.64	Q	V			
11+25	1.2723	2.63	Q	V			
11+30	1.2904	2.63	Q	V			
11+35	1.3079	2.54	Q	V			
11+40	1.3245	2.41	Q	V			
11+45	1.3409	2.38	Q	V			
11+50	1.3575	2.41	Q	V			
11+55	1.3745	2.47	Q	V			
12+ 0	1.3916	2.48	Q	V			
12+ 5	1.4107	2.78	Q	V			
12+10	1.4331	3.25	Q	V			
12+15	1.4563	3.37	Q	V			
12+20	1.4801	3.46	Q	V			
12+25	1.5045	3.55	Q	V			
12+30	1.5292	3.59	Q	V			
12+35	1.5546	3.68	Q	V			
12+40	1.5808	3.81	Q	V			
12+45	1.6073	3.85	Q	V			
12+50	1.6342	3.91	Q	V			
12+55	1.6616	3.98	Q	V			
13+ 0	1.6892	4.00	Q	V			
13+ 5	1.7182	4.22	Q	V			
13+10	1.7496	4.55	Q	V			
13+15	1.7816	4.64	Q	V			
13+20	1.8137	4.67	Q	V			
13+25	1.8461	4.69	Q	V			
13+30	1.8785	4.71	Q	V			
13+35	1.9077	4.24	Q	V			
13+40	1.9319	3.51	Q	V			
13+45	1.9548	3.33	Q	V			
13+50	1.9772	3.25	Q	V			
13+55	1.9993	3.21	Q	V			
14+ 0	2.0213	3.18	Q	V			
14+ 5	2.0444	3.35	Q	V			
14+10	2.0693	3.62	Q	V			
14+15	2.0946	3.68	Q	V			
14+20	2.1199	3.67	Q	V			
14+25	2.1448	3.62	Q	V			
14+30	2.1697	3.61	Q	V			
14+35	2.1945	3.61	Q	V			
14+40	2.2193	3.60	Q	V			
14+45	2.2441	3.60	Q	V			
14+50	2.2686	3.56	Q	V			
14+55	2.2927	3.49	Q	V			
15+ 0	2.3166	3.47	Q	V			
15+ 5	2.3402	3.42	Q	V			
15+10	2.3633	3.35	Q	V			
15+15	2.3862	3.34	Q	V			
15+20	2.4089	3.29	Q	V			
15+25	2.4310	3.22	Q	V			
15+30	2.4530	3.20	Q	V			
15+35	2.4738	3.02	Q	V			
15+40	2.4928	2.75	Q	V			
15+45	2.5113	2.68	Q	V			
15+50	2.5296	2.66	Q	V			
15+55	2.5477	2.64	Q	V			
16+ 0	2.5659	2.63	Q	V			
16+ 5	2.5796	1.99	Q	V			
16+10	2.5865	1.00	Q	V			
16+15	2.5917	0.76	Q	V			
16+20	2.5962	0.65	Q	V			
16+25	2.6002	0.59	Q	V			
16+30	2.6041	0.55	Q	V			
16+35	2.6076	0.51	Q	V			

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16+40	2.6106	0.45	Q		V
16+45	2.6136	0.43	Q		V
16+50	2.6165	0.42	Q		V
16+55	2.6194	0.42	Q		V
17+ 0	2.6222	0.42	Q		V
17+ 5	2.6257	0.50	Q		V
17+10	2.6300	0.63	Q		V
17+15	2.6346	0.66	Q		V
17+20	2.6393	0.68	Q		V
17+25	2.6440	0.69	Q		V
17+30	2.6488	0.69	Q		V
17+35	2.6536	0.69	Q		V
17+40	2.6583	0.69	Q		V
17+45	2.6631	0.69	Q		V
17+50	2.6676	0.65	Q		V
17+55	2.6716	0.58	Q		V
18+ 0	2.6755	0.57	Q		V
18+ 5	2.6793	0.56	Q		V
18+10	2.6832	0.56	Q		V
18+15	2.6870	0.55	Q		V
18+20	2.6908	0.55	Q		V
18+25	2.6946	0.55	Q		V
18+30	2.6984	0.55	Q		V
18+35	2.7020	0.51	Q		V
18+40	2.7050	0.45	Q		V
18+45	2.7080	0.43	Q		V
18+50	2.7106	0.38	Q		V
18+55	2.7127	0.31	Q		V
19+ 0	2.7147	0.29	Q		V
19+ 5	2.7170	0.33	Q		V
19+10	2.7196	0.39	Q		V
19+15	2.7224	0.40	Q		V
19+20	2.7255	0.45	Q		V
19+25	2.7291	0.52	Q		V
19+30	2.7328	0.54	Q		V
19+35	2.7363	0.50	Q		V
19+40	2.7393	0.44	Q		V
19+45	2.7423	0.43	Q		V
19+50	2.7449	0.38	Q		V
19+55	2.7470	0.31	Q		V
20+ 0	2.7490	0.29	Q		V
20+ 5	2.7513	0.33	Q		V
20+10	2.7539	0.39	Q		V
20+15	2.7567	0.40	Q		V
20+20	2.7595	0.41	Q		V
20+25	2.7624	0.41	Q		V
20+30	2.7652	0.42	Q		V
20+35	2.7681	0.42	Q		V
20+40	2.7709	0.42	Q		V
20+45	2.7738	0.42	Q		V
20+50	2.7764	0.37	Q		V
20+55	2.7785	0.31	Q		V
21+ 0	2.7805	0.29	Q		V
21+ 5	2.7827	0.33	Q		V
21+10	2.7854	0.39	Q		V
21+15	2.7882	0.40	Q		V
21+20	2.7907	0.37	Q		V
21+25	2.7928	0.30	Q		V
21+30	2.7948	0.29	Q		V
21+35	2.7970	0.33	Q		V
21+40	2.7997	0.39	Q		V
21+45	2.8025	0.40	Q		V
21+50	2.8050	0.37	Q		V
21+55	2.8071	0.30	Q		V
22+ 0	2.8091	0.29	Q		V
22+ 5	2.8113	0.33	Q		V
22+10	2.8140	0.39	Q		V
22+15	2.8168	0.40	Q		V

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22+20	2.8193	0.37	Q			V
22+25	2.8214	0.30	Q			V
22+30	2.8234	0.29	Q			V
22+35	2.8253	0.28	Q			V
22+40	2.8273	0.28	Q			V
22+45	2.8292	0.28	Q			V
22+50	2.8311	0.28	Q			V
22+55	2.8330	0.28	Q			V
23+ 0	2.8349	0.28	Q			V
23+ 5	2.8368	0.28	Q			V
23+10	2.8387	0.28	Q			V
23+15	2.8406	0.28	Q			V
23+20	2.8425	0.28	Q			V
23+25	2.8444	0.28	Q			V
23+30	2.8463	0.28	Q			V
23+35	2.8482	0.28	Q			V
23+40	2.8501	0.28	Q			V
23+45	2.8520	0.28	Q			V
23+50	2.8540	0.28	Q			V
23+55	2.8559	0.28	Q			V
24+ 0	2.8578	0.28	Q			V
24+ 5	2.8591	0.19	Q			V
24+10	2.8595	0.06	Q			V
24+15	2.8597	0.03	Q			V
24+20	2.8598	0.01	Q			V
24+25	2.8598	0.01	Q			V

100yr1hrp1100.out

Unit Hydrograph Analysis

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Study date 10/12/21 File: 100yr1hrp1100.out

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Riverside County Synthetic Unit Hydrology Method
RCFC & WCD Manual date - April 1978

Program License Serial Number 6062

English (in-lb) Input Units Used
English Rainfall Data (Inches) Input Values Used

English Units used in output format

Pacific Emerald
Proposed Condition
100-Year 1-Hour Storm

Drainage Area = 34.32(Ac.) = 0.054 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 34.32(Ac.) = 0.054 Sq. Mi.
Length along longest watercourse = 2071.00(Ft.)
Length along longest watercourse measured to centroid = 1397.00(Ft.)
Length along longest watercourse = 0.392 Mi.
Length along longest watercourse measured to centroid = 0.265 Mi.
Difference in elevation = 55.00(Ft.)
Slope along watercourse = 140.2221 Ft./Mi.
Average Manning's 'N' = 0.015
Lag time = 0.060 Hr.
Lag time = 3.57 Min.
25% of lag time = 0.89 Min.
40% of lag time = 1.43 Min.
Unit time = 5.00 Min.
Duration of storm = 1 Hour(s)
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
34.32	0.50	17.16

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
34.32	1.28	43.93

STORM EVENT (YEAR) = 100.00
Area Averaged 2-Year Rainfall = 0.500(In)
Area Averaged 100-Year Rainfall = 1.280(In)

Point rain (area averaged) = 1.280(In)
Areal adjustment factor = 99.97 %
Adjusted average point rain = 1.280(In)

Sub-Area Data:

Area(Ac.) Runoff Index Impervious %
 30.700 56.00 0.500
 3.620 69.00 0.500
 Total Area Entered = 34.32(Ac.)

RI	RI	Infil. Rate	Impervious	Adj. Infil. Rate	Area%	F
AMC2	AMC-3	(In/Hr)	(Dec.%)	(In/Hr)	(Dec.)	(In/Hr)
56.0	74.8	0.305	0.500	0.168	0.895	0.150
69.0	84.4	0.194	0.500	0.107	0.105	0.011
						Sum (F) = 0.161

Area averaged mean soil loss (F) (In/Hr) = 0.161
 Minimum soil loss rate ((In/Hr)) = 0.081
 (for 24 hour storm duration)
 Soil low loss rate (decimal) = 0.500

 Slope of intensity-duration curve for a 1 hour storm =0.5000

U n i t H y d r o g r a p h
 VALLEY S-Curve

 Unit Hydrograph Data

Unit time period (hrs)	Time % of lag	Distribution Graph %	Unit Hydrograph (CFS)
1	0.083	140.052	10.615
2	0.167	280.105	16.500
3	0.250	420.157	4.081
4	0.333	560.209	1.799
5	0.417	700.261	0.958
6	0.500	840.314	0.635
Sum = 100.000			Sum= 34.588

Unit Time (Hr.)	Pattern Percent	Storm Rain (In/Hr)	Loss rate(In./Hr) Max Low	Effective (In/Hr)
1	0.08	4.20	0.161 ---	0.48
2	0.17	4.30	0.161 ---	0.50
3	0.25	5.00	0.161 ---	0.61
4	0.33	5.00	0.161 ---	0.61
5	0.42	5.80	0.161 ---	0.73
6	0.50	6.50	0.161 ---	0.84
7	0.58	7.40	0.161 ---	0.97
8	0.67	8.60	0.161 ---	1.16
9	0.75	12.30	0.161 ---	1.73
10	0.83	29.10	0.161 ---	4.31
11	0.92	6.80	0.161 ---	0.88
12	1.00	5.00	0.161 ---	0.61
Sum = 100.0				Sum = 13.4

Flood volume = Effective rainfall 1.12(In)
 times area 34.3(Ac.)/[In]/(Ft.) = 3.2(Ac.Ft)
 Total soil loss = 0.16(In)
 Total soil loss = 0.462(Ac.Ft)
 Total rainfall = 1.28(In)
 Flood volume = 139297.6 Cubic Feet
 Total soil loss = 20117.2 Cubic Feet

 Peak flow rate of this hydrograph = 91.078(CFS)

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 1 - H O U R S T O R M

R u n o f f H y d r o g r a p h

 Hydrograph in 5 Minute intervals ((CFS))

100yr1hrp1100.out

Time(h+m)	Volume	Ac.Ft	Q(CFS)	0	25.0	50.0	75.0	100.0
0+ 5	0.0354	5.13	V Q					
0+10	0.1268	13.28	V Q					
0+15	0.2415	16.65	V Q					
0+20	0.3748	19.35	V Q					
0+25	0.5234	21.59	V Q					
0+30	0.6975	25.27	V Q					
0+35	0.8981	29.13	V Q					
0+40	1.1330	34.10	V Q					
0+45	1.4363	44.05	V Q					
0+50	2.0011	82.01	V Q			V	Q	
0+55	2.6284	91.08	V Q				V	Q
1+ 0	2.9275	43.44	V Q		Q			V
1+ 5	3.0911	23.76	V Q		Q			V
1+10	3.1551	9.29	V Q					V
1+15	3.1873	4.67	V Q					V
1+20	3.1952	1.14	V Q					V
1+25	3.1978	0.39	V Q					V

100yr24hrp24100.out

Unit Hydrograph Analysis

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Study date 10/12/21 File: 100yr24hrp24100.out

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Riverside County Synthetic Unit Hydrology Method
RCFC & WCD Manual date - April 1978

Program License Serial Number 6062

English (in-lb) Input Units Used
English Rainfall Data (Inches) Input Values Used

English Units used in output format

Pacific Emerald
Proposed Condition
100-Year 24-Hour Storm

Drainage Area = 34.32(Ac.) = 0.054 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 34.32(Ac.) = 0.054 Sq. Mi.
Length along longest watercourse = 2071.00(Ft.)
Length along longest watercourse measured to centroid = 1397.00(Ft.)
Length along longest watercourse = 0.392 Mi.
Length along longest watercourse measured to centroid = 0.265 Mi.
Difference in elevation = 55.00(Ft.)
Slope along watercourse = 140.2221 Ft./Mi.
Average Manning's 'N' = 0.015
Lag time = 0.060 Hr.
Lag time = 3.57 Min.
25% of lag time = 0.89 Min.
40% of lag time = 1.43 Min.
Unit time = 5.00 Min.
Duration of storm = 24 Hour(s)
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
34.32	2.00	68.64

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
34.32	5.60	192.19

STORM EVENT (YEAR) = 100.00
Area Averaged 2-Year Rainfall = 2.000(In)
Area Averaged 100-Year Rainfall = 5.600(In)

Point rain (area averaged) = 5.600(In)
Areal adjustment factor = 99.99 %
Adjusted average point rain = 5.600(In)

Sub-Area Data:

100yr24hrp24100.out

Area(Ac.) Runoff Index Impervious %
 30.700 56.00 0.500
 3.620 69.00 0.500
 Total Area Entered = 34.32(Ac.)

RI	RI	Infil. Rate	Impervious	Adj. Infil. Rate	Area%	F
AMC2	AMC-3	(In/Hr)	(Dec.%)	(In/Hr)	(Dec.)	(In/Hr)
56.0	74.8	0.305	0.500	0.168	0.895	0.150
69.0	84.4	0.194	0.500	0.107	0.105	0.011
						Sum (F) = 0.161

Area averaged mean soil loss (F) (In/Hr) = 0.161
 Minimum soil loss rate ((In/Hr)) = 0.081
 (for 24 hour storm duration)
 Soil low loss rate (decimal) = 0.500

 U n i t H y d r o g r a p h
 VALLEY S-Curve

Unit Hydrograph Data

Unit time period (hrs)	Time % of lag	Distribution Graph %	Unit Hydrograph (CFS)
1	0.083	140.052	30.690
2	0.167	280.105	47.703
3	0.250	420.157	11.799
4	0.333	560.209	5.202
5	0.417	700.261	2.771
6	0.500	840.314	1.835
Sum = 100.000			Sum= 34.588

Unit Time (Hr.)	Pattern Percent	Storm Rain (In/Hr)	Loss rate(In./Hr) Max Low	Effective (In/Hr)
1	0.08	0.07	0.045 0.286	0.022
2	0.17	0.07	0.045 0.285	0.022
3	0.25	0.07	0.045 0.284	0.022
4	0.33	0.10	0.067 0.283	0.034
5	0.42	0.10	0.067 0.282	0.034
6	0.50	0.10	0.067 0.281	0.034
7	0.58	0.10	0.067 0.280	0.034
8	0.67	0.10	0.067 0.279	0.034
9	0.75	0.10	0.067 0.277	0.034
10	0.83	0.13	0.090 0.276	0.045
11	0.92	0.13	0.090 0.275	0.045
12	1.00	0.13	0.090 0.274	0.045
13	1.08	0.10	0.067 0.273	0.034
14	1.17	0.10	0.067 0.272	0.034
15	1.25	0.10	0.067 0.271	0.034
16	1.33	0.10	0.067 0.270	0.034
17	1.42	0.10	0.067 0.269	0.034
18	1.50	0.10	0.067 0.268	0.034
19	1.58	0.10	0.067 0.267	0.034
20	1.67	0.10	0.067 0.266	0.034
21	1.75	0.10	0.067 0.265	0.034
22	1.83	0.13	0.090 0.263	0.045
23	1.92	0.13	0.090 0.262	0.045
24	2.00	0.13	0.090 0.261	0.045
25	2.08	0.13	0.090 0.260	0.045
26	2.17	0.13	0.090 0.259	0.045
27	2.25	0.13	0.090 0.258	0.045
28	2.33	0.13	0.090 0.257	0.045
29	2.42	0.13	0.090 0.256	0.045
30	2.50	0.13	0.090 0.255	0.045
31	2.58	0.17	0.112 0.254	0.056

100yr24hrp24100.out

32	2.67	0.17	0.112	0.253	0.056	0.06
33	2.75	0.17	0.112	0.252	0.056	0.06
34	2.83	0.17	0.112	0.251	0.056	0.06
35	2.92	0.17	0.112	0.250	0.056	0.06
36	3.00	0.17	0.112	0.249	0.056	0.06
37	3.08	0.17	0.112	0.248	0.056	0.06
38	3.17	0.17	0.112	0.247	0.056	0.06
39	3.25	0.17	0.112	0.246	0.056	0.06
40	3.33	0.17	0.112	0.245	0.056	0.06
41	3.42	0.17	0.112	0.244	0.056	0.06
42	3.50	0.17	0.112	0.243	0.056	0.06
43	3.58	0.17	0.112	0.242	0.056	0.06
44	3.67	0.17	0.112	0.241	0.056	0.06
45	3.75	0.17	0.112	0.240	0.056	0.06
46	3.83	0.20	0.134	0.239	0.067	0.07
47	3.92	0.20	0.134	0.238	0.067	0.07
48	4.00	0.20	0.134	0.237	0.067	0.07
49	4.08	0.20	0.134	0.236	0.067	0.07
50	4.17	0.20	0.134	0.235	0.067	0.07
51	4.25	0.20	0.134	0.234	0.067	0.07
52	4.33	0.23	0.157	0.233	0.078	0.08
53	4.42	0.23	0.157	0.232	0.078	0.08
54	4.50	0.23	0.157	0.231	0.078	0.08
55	4.58	0.23	0.157	0.230	0.078	0.08
56	4.67	0.23	0.157	0.229	0.078	0.08
57	4.75	0.23	0.157	0.228	0.078	0.08
58	4.83	0.27	0.179	0.227	0.090	0.09
59	4.92	0.27	0.179	0.226	0.090	0.09
60	5.00	0.27	0.179	0.225	0.090	0.09
61	5.08	0.20	0.134	0.224	0.067	0.07
62	5.17	0.20	0.134	0.223	0.067	0.07
63	5.25	0.20	0.134	0.222	0.067	0.07
64	5.33	0.23	0.157	0.221	0.078	0.08
65	5.42	0.23	0.157	0.220	0.078	0.08
66	5.50	0.23	0.157	0.219	0.078	0.08
67	5.58	0.27	0.179	0.218	0.090	0.09
68	5.67	0.27	0.179	0.217	0.090	0.09
69	5.75	0.27	0.179	0.216	0.090	0.09
70	5.83	0.27	0.179	0.215	0.090	0.09
71	5.92	0.27	0.179	0.214	0.090	0.09
72	6.00	0.27	0.179	0.213	0.090	0.09
73	6.08	0.30	0.202	0.212	0.101	0.10
74	6.17	0.30	0.202	0.211	0.101	0.10
75	6.25	0.30	0.202	0.210	0.101	0.10
76	6.33	0.30	0.202	0.209	0.101	0.10
77	6.42	0.30	0.202	0.208	0.101	0.10
78	6.50	0.30	0.202	0.208	0.101	0.10
79	6.58	0.33	0.224	0.207	---	0.02
80	6.67	0.33	0.224	0.206	---	0.02
81	6.75	0.33	0.224	0.205	---	0.02
82	6.83	0.33	0.224	0.204	---	0.02
83	6.92	0.33	0.224	0.203	---	0.02
84	7.00	0.33	0.224	0.202	---	0.02
85	7.08	0.33	0.224	0.201	---	0.02
86	7.17	0.33	0.224	0.200	---	0.02
87	7.25	0.33	0.224	0.199	---	0.02
88	7.33	0.37	0.246	0.198	---	0.05
89	7.42	0.37	0.246	0.197	---	0.05
90	7.50	0.37	0.246	0.196	---	0.05
91	7.58	0.40	0.269	0.196	---	0.07
92	7.67	0.40	0.269	0.195	---	0.07
93	7.75	0.40	0.269	0.194	---	0.08
94	7.83	0.43	0.291	0.193	---	0.10
95	7.92	0.43	0.291	0.192	---	0.10
96	8.00	0.43	0.291	0.191	---	0.10
97	8.08	0.50	0.336	0.190	---	0.15
98	8.17	0.50	0.336	0.189	---	0.15
99	8.25	0.50	0.336	0.188	---	0.15

100yr24hrp24100.out

100	8.33	0.50	0.336	0.188	---	0.15
101	8.42	0.50	0.336	0.187	---	0.15
102	8.50	0.50	0.336	0.186	---	0.15
103	8.58	0.53	0.358	0.185	---	0.17
104	8.67	0.53	0.358	0.184	---	0.17
105	8.75	0.53	0.358	0.183	---	0.18
106	8.83	0.57	0.381	0.182	---	0.20
107	8.92	0.57	0.381	0.181	---	0.20
108	9.00	0.57	0.381	0.181	---	0.20
109	9.08	0.63	0.426	0.180	---	0.25
110	9.17	0.63	0.426	0.179	---	0.25
111	9.25	0.63	0.426	0.178	---	0.25
112	9.33	0.67	0.448	0.177	---	0.27
113	9.42	0.67	0.448	0.176	---	0.27
114	9.50	0.67	0.448	0.176	---	0.27
115	9.58	0.70	0.470	0.175	---	0.30
116	9.67	0.70	0.470	0.174	---	0.30
117	9.75	0.70	0.470	0.173	---	0.30
118	9.83	0.73	0.493	0.172	---	0.32
119	9.92	0.73	0.493	0.171	---	0.32
120	10.00	0.73	0.493	0.171	---	0.32
121	10.08	0.50	0.336	0.170	---	0.17
122	10.17	0.50	0.336	0.169	---	0.17
123	10.25	0.50	0.336	0.168	---	0.17
124	10.33	0.50	0.336	0.167	---	0.17
125	10.42	0.50	0.336	0.166	---	0.17
126	10.50	0.50	0.336	0.166	---	0.17
127	10.58	0.67	0.448	0.165	---	0.28
128	10.67	0.67	0.448	0.164	---	0.28
129	10.75	0.67	0.448	0.163	---	0.28
130	10.83	0.67	0.448	0.162	---	0.29
131	10.92	0.67	0.448	0.162	---	0.29
132	11.00	0.67	0.448	0.161	---	0.29
133	11.08	0.63	0.426	0.160	---	0.27
134	11.17	0.63	0.426	0.159	---	0.27
135	11.25	0.63	0.426	0.158	---	0.27
136	11.33	0.63	0.426	0.158	---	0.27
137	11.42	0.63	0.426	0.157	---	0.27
138	11.50	0.63	0.426	0.156	---	0.27
139	11.58	0.57	0.381	0.155	---	0.23
140	11.67	0.57	0.381	0.155	---	0.23
141	11.75	0.57	0.381	0.154	---	0.23
142	11.83	0.60	0.403	0.153	---	0.25
143	11.92	0.60	0.403	0.152	---	0.25
144	12.00	0.60	0.403	0.151	---	0.25
145	12.08	0.83	0.560	0.151	---	0.41
146	12.17	0.83	0.560	0.150	---	0.41
147	12.25	0.83	0.560	0.149	---	0.41
148	12.33	0.87	0.582	0.148	---	0.43
149	12.42	0.87	0.582	0.148	---	0.43
150	12.50	0.87	0.582	0.147	---	0.44
151	12.58	0.93	0.627	0.146	---	0.48
152	12.67	0.93	0.627	0.146	---	0.48
153	12.75	0.93	0.627	0.145	---	0.48
154	12.83	0.97	0.650	0.144	---	0.51
155	12.92	0.97	0.650	0.143	---	0.51
156	13.00	0.97	0.650	0.143	---	0.51
157	13.08	1.13	0.762	0.142	---	0.62
158	13.17	1.13	0.762	0.141	---	0.62
159	13.25	1.13	0.762	0.140	---	0.62
160	13.33	1.13	0.762	0.140	---	0.62
161	13.42	1.13	0.762	0.139	---	0.62
162	13.50	1.13	0.762	0.138	---	0.62
163	13.58	0.77	0.515	0.138	---	0.38
164	13.67	0.77	0.515	0.137	---	0.38
165	13.75	0.77	0.515	0.136	---	0.38
166	13.83	0.77	0.515	0.136	---	0.38
167	13.92	0.77	0.515	0.135	---	0.38

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168	14.00	0.77	0.515	0.134	---	0.38
169	14.08	0.90	0.605	0.133	---	0.47
170	14.17	0.90	0.605	0.133	---	0.47
171	14.25	0.90	0.605	0.132	---	0.47
172	14.33	0.87	0.582	0.131	---	0.45
173	14.42	0.87	0.582	0.131	---	0.45
174	14.50	0.87	0.582	0.130	---	0.45
175	14.58	0.87	0.582	0.129	---	0.45
176	14.67	0.87	0.582	0.129	---	0.45
177	14.75	0.87	0.582	0.128	---	0.45
178	14.83	0.83	0.560	0.127	---	0.43
179	14.92	0.83	0.560	0.127	---	0.43
180	15.00	0.83	0.560	0.126	---	0.43
181	15.08	0.80	0.538	0.125	---	0.41
182	15.17	0.80	0.538	0.125	---	0.41
183	15.25	0.80	0.538	0.124	---	0.41
184	15.33	0.77	0.515	0.124	---	0.39
185	15.42	0.77	0.515	0.123	---	0.39
186	15.50	0.77	0.515	0.122	---	0.39
187	15.58	0.63	0.426	0.122	---	0.30
188	15.67	0.63	0.426	0.121	---	0.30
189	15.75	0.63	0.426	0.120	---	0.31
190	15.83	0.63	0.426	0.120	---	0.31
191	15.92	0.63	0.426	0.119	---	0.31
192	16.00	0.63	0.426	0.119	---	0.31
193	16.08	0.13	0.090	0.118	0.045	0.04
194	16.17	0.13	0.090	0.117	0.045	0.04
195	16.25	0.13	0.090	0.117	0.045	0.04
196	16.33	0.13	0.090	0.116	0.045	0.04
197	16.42	0.13	0.090	0.116	0.045	0.04
198	16.50	0.13	0.090	0.115	0.045	0.04
199	16.58	0.10	0.067	0.114	0.034	0.03
200	16.67	0.10	0.067	0.114	0.034	0.03
201	16.75	0.10	0.067	0.113	0.034	0.03
202	16.83	0.10	0.067	0.113	0.034	0.03
203	16.92	0.10	0.067	0.112	0.034	0.03
204	17.00	0.10	0.067	0.112	0.034	0.03
205	17.08	0.17	0.112	0.111	---	0.00
206	17.17	0.17	0.112	0.110	---	0.00
207	17.25	0.17	0.112	0.110	---	0.00
208	17.33	0.17	0.112	0.109	---	0.00
209	17.42	0.17	0.112	0.109	---	0.00
210	17.50	0.17	0.112	0.108	---	0.00
211	17.58	0.17	0.112	0.108	---	0.00
212	17.67	0.17	0.112	0.107	---	0.00
213	17.75	0.17	0.112	0.107	---	0.01
214	17.83	0.13	0.090	0.106	0.045	0.04
215	17.92	0.13	0.090	0.106	0.045	0.04
216	18.00	0.13	0.090	0.105	0.045	0.04
217	18.08	0.13	0.090	0.105	0.045	0.04
218	18.17	0.13	0.090	0.104	0.045	0.04
219	18.25	0.13	0.090	0.103	0.045	0.04
220	18.33	0.13	0.090	0.103	0.045	0.04
221	18.42	0.13	0.090	0.102	0.045	0.04
222	18.50	0.13	0.090	0.102	0.045	0.04
223	18.58	0.10	0.067	0.101	0.034	0.03
224	18.67	0.10	0.067	0.101	0.034	0.03
225	18.75	0.10	0.067	0.101	0.034	0.03
226	18.83	0.07	0.045	0.100	0.022	0.02
227	18.92	0.07	0.045	0.100	0.022	0.02
228	19.00	0.07	0.045	0.099	0.022	0.02
229	19.08	0.10	0.067	0.099	0.034	0.03
230	19.17	0.10	0.067	0.098	0.034	0.03
231	19.25	0.10	0.067	0.098	0.034	0.03
232	19.33	0.13	0.090	0.097	0.045	0.04
233	19.42	0.13	0.090	0.097	0.045	0.04
234	19.50	0.13	0.090	0.096	0.045	0.04
235	19.58	0.10	0.067	0.096	0.034	0.03

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236	19.67	0.10	0.067	0.095	0.034	0.03
237	19.75	0.10	0.067	0.095	0.034	0.03
238	19.83	0.07	0.045	0.095	0.022	0.02
239	19.92	0.07	0.045	0.094	0.022	0.02
240	20.00	0.07	0.045	0.094	0.022	0.02
241	20.08	0.10	0.067	0.093	0.034	0.03
242	20.17	0.10	0.067	0.093	0.034	0.03
243	20.25	0.10	0.067	0.093	0.034	0.03
244	20.33	0.10	0.067	0.092	0.034	0.03
245	20.42	0.10	0.067	0.092	0.034	0.03
246	20.50	0.10	0.067	0.091	0.034	0.03
247	20.58	0.10	0.067	0.091	0.034	0.03
248	20.67	0.10	0.067	0.091	0.034	0.03
249	20.75	0.10	0.067	0.090	0.034	0.03
250	20.83	0.07	0.045	0.090	0.022	0.02
251	20.92	0.07	0.045	0.089	0.022	0.02
252	21.00	0.07	0.045	0.089	0.022	0.02
253	21.08	0.10	0.067	0.089	0.034	0.03
254	21.17	0.10	0.067	0.088	0.034	0.03
255	21.25	0.10	0.067	0.088	0.034	0.03
256	21.33	0.07	0.045	0.088	0.022	0.02
257	21.42	0.07	0.045	0.087	0.022	0.02
258	21.50	0.07	0.045	0.087	0.022	0.02
259	21.58	0.10	0.067	0.087	0.034	0.03
260	21.67	0.10	0.067	0.086	0.034	0.03
261	21.75	0.10	0.067	0.086	0.034	0.03
262	21.83	0.07	0.045	0.086	0.022	0.02
263	21.92	0.07	0.045	0.086	0.022	0.02
264	22.00	0.07	0.045	0.085	0.022	0.02
265	22.08	0.10	0.067	0.085	0.034	0.03
266	22.17	0.10	0.067	0.085	0.034	0.03
267	22.25	0.10	0.067	0.084	0.034	0.03
268	22.33	0.07	0.045	0.084	0.022	0.02
269	22.42	0.07	0.045	0.084	0.022	0.02
270	22.50	0.07	0.045	0.084	0.022	0.02
271	22.58	0.07	0.045	0.083	0.022	0.02
272	22.67	0.07	0.045	0.083	0.022	0.02
273	22.75	0.07	0.045	0.083	0.022	0.02
274	22.83	0.07	0.045	0.083	0.022	0.02
275	22.92	0.07	0.045	0.083	0.022	0.02
276	23.00	0.07	0.045	0.082	0.022	0.02
277	23.08	0.07	0.045	0.082	0.022	0.02
278	23.17	0.07	0.045	0.082	0.022	0.02
279	23.25	0.07	0.045	0.082	0.022	0.02
280	23.33	0.07	0.045	0.082	0.022	0.02
281	23.42	0.07	0.045	0.081	0.022	0.02
282	23.50	0.07	0.045	0.081	0.022	0.02
283	23.58	0.07	0.045	0.081	0.022	0.02
284	23.67	0.07	0.045	0.081	0.022	0.02
285	23.75	0.07	0.045	0.081	0.022	0.02
286	23.83	0.07	0.045	0.081	0.022	0.02
287	23.92	0.07	0.045	0.081	0.022	0.02
288	24.00	0.07	0.045	0.081	0.022	0.02

Sum = 100.0 Sum = 40.6

Flood volume = Effective rainfall 3.39(In)
 times area 34.3(Ac.)/[(In)/(Ft.)] = 9.7(Ac.Ft)
 Total soil loss = 2.21(In)
 Total soil loss = 6.331(Ac.Ft)
 Total rainfall = 5.60(In)
 Flood volume = 421842.5 Cubic Feet
 Total soil loss = 275767.7 Cubic Feet

 Peak flow rate of this hydrograph = 21.542(CFS)

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24 - H O U R S T O R M
 R u n o f f H y d r o g r a p h

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Hydrograph in 5 Minute intervals ((CFS))

Time(h+m)	Volume	Ac.Ft	Q(CFS)	0	7.5	15.0	22.5	30.0
0+ 5	0.0016		0.24	Q				
0+10	0.0058		0.61	Q				
0+15	0.0106		0.70	Q				
0+20	0.0165		0.86	VQ				
0+25	0.0239		1.06	VQ				
0+30	0.0316		1.12	VQ				
0+35	0.0395		1.14	VQ				
0+40	0.0475		1.16	VQ				
0+45	0.0555		1.16	VQ				
0+50	0.0643		1.28	VQ				
0+55	0.0744		1.47	VQ				
1+ 0	0.0848		1.51	V Q				
1+ 5	0.0946		1.41	VQ				
1+10	0.1031		1.24	VQ				
1+15	0.1114		1.20	VQ				
1+20	0.1195		1.18	VQ				
1+25	0.1275		1.17	VQ				
1+30	0.1356		1.16	VQ				
1+35	0.1436		1.16	VQ				
1+40	0.1516		1.16	VQ				
1+45	0.1596		1.16	VQ				
1+50	0.1684		1.28	VQ				
1+55	0.1785		1.47	VQ				
2+ 0	0.1889		1.51	V Q				
2+ 5	0.1995		1.53	V Q				
2+10	0.2101		1.54	V Q				
2+15	0.2208		1.55	V Q				
2+20	0.2315		1.55	V Q				
2+25	0.2421		1.55	VQ				
2+30	0.2528		1.55	VQ				
2+35	0.2643		1.67	VQ				
2+40	0.2771		1.85	VQ				
2+45	0.2902		1.90	VQ				
2+50	0.3034		1.92	VQ				
2+55	0.3167		1.93	VQ				
3+ 0	0.3300		1.94	VQ				
3+ 5	0.3434		1.94	VQ				
3+10	0.3567		1.94	VQ				
3+15	0.3701		1.94	VQ				
3+20	0.3834		1.94	VQ				
3+25	0.3967		1.94	VQ				
3+30	0.4101		1.94	VQ				
3+35	0.4234		1.94	VQ				
3+40	0.4368		1.94	VQ				
3+45	0.4501		1.94	VQ				
3+50	0.4643		2.06	VQ				
3+55	0.4797		2.24	VQ				
4+ 0	0.4955		2.29	VQ				
4+ 5	0.5114		2.31	VQ				
4+10	0.5273		2.32	VQ				
4+15	0.5434		2.33	VQ				
4+20	0.5602		2.44	VQ				
4+25	0.5783		2.63	VQ				
4+30	0.5967		2.67	VQ				
4+35	0.6153		2.70	VQ				
4+40	0.6339		2.71	VQ				
4+45	0.6526		2.71	VQ				
4+50	0.6721		2.83	VQ				
4+55	0.6929		3.02	V Q				
5+ 0	0.7140		3.06	V Q				
5+ 5	0.7336		2.84	Q				
5+10	0.7507		2.49	Q				
5+15	0.7672		2.40	Q				

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5+20	0.7843	2.48	Q			
5+25	0.8025	2.64	Q			
5+30	0.8209	2.67	Q			
5+35	0.8403	2.81	Q			
5+40	0.8610	3.01	VQ			
5+45	0.8821	3.06	VQ			
5+50	0.9034	3.08	VQ			
5+55	0.9247	3.09	VQ			
6+ 0	0.9460	3.10	VQ			
6+ 5	0.9682	3.22	VQ			
6+10	0.9916	3.40	Q			
6+15	1.0154	3.45	Q			
6+20	1.0393	3.47	Q			
6+25	1.0633	3.48	Q			
6+30	1.0873	3.49	Q			
6+35	1.1052	2.60	QV			
6+40	1.1137	1.24	Q V			
6+45	1.1201	0.92	Q V			
6+50	1.1256	0.80	Q V			
6+55	1.1307	0.75	Q V			
7+ 0	1.1358	0.73	Q V			
7+ 5	1.1410	0.76	Q V			
7+10	1.1464	0.79	Q V			
7+15	1.1521	0.82	Q V			
7+20	1.1597	1.09	Q V			
7+25	1.1699	1.49	Q V			
7+30	1.1811	1.62	Q V			
7+35	1.1944	1.93	Q V			
7+40	1.2105	2.35	Q V			
7+45	1.2277	2.49	Q V			
7+50	1.2469	2.80	Q V			
7+55	1.2691	3.22	QV			
8+ 0	1.2922	3.35	QV			
8+ 5	1.3190	3.90	Q			
8+10	1.3514	4.69	VQ			
8+15	1.3852	4.92	VQ			
8+20	1.4199	5.03	VQ			
8+25	1.4551	5.11	Q			
8+30	1.4906	5.16	Q			
8+35	1.5280	5.43	VQ			
8+40	1.5682	5.83	VQ			
8+45	1.6092	5.95	VQ			
8+50	1.6523	6.26	V Q			
8+55	1.6983	6.68	VQ			
9+ 0	1.7453	6.82	V Q			
9+ 5	1.7960	7.36	V Q			
9+10	1.8522	8.15	V Q			
9+15	1.9099	8.38	V Q			
9+20	1.9700	8.73	V Q			
9+25	2.0332	9.17	V Q			
9+30	2.0974	9.32	V Q			
9+35	2.1637	9.63	V Q			
9+40	2.2329	10.05	V Q			
9+45	2.3030	10.18	V Q			
9+50	2.3753	10.49	V Q			
9+55	2.4504	10.91	V Q			
10+ 0	2.5265	11.04	V Q			
10+ 5	2.5916	9.45	V Q			
10+10	2.6392	6.91	QV			
10+15	2.6826	6.31	Q V			
10+20	2.7244	6.06	Q V			
10+25	2.7653	5.94	Q V			
10+30	2.8057	5.87	Q V			
10+35	2.8544	7.08	Q V			
10+40	2.9161	8.96	QV			
10+45	2.9812	9.44	Q			
10+50	3.0478	9.67	Q			
10+55	3.1154	9.81	VQ			

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11+ 0	3.1836	9.91			Q					
11+ 5	3.2504	9.70			QV					
11+10	3.3148	9.36			QV					
11+15	3.3788	9.29			QV					
11+20	3.4427	9.28			Q V					
11+25	3.5067	9.28			Q V					
11+30	3.5707	9.30			Q V					
11+35	3.6316	8.85			Q V					
11+40	3.6876	8.13			Q V					
11+45	3.7426	7.98			Q V					
11+50	3.7988	8.16			Q V					
11+55	3.8575	8.52			Q V					
12+ 0	3.9167	8.61			Q V					
12+ 5	3.9879	10.34			Q V					
12+10	4.0773	12.97			Q V					
12+15	4.1713	13.65			VQ					
12+20	4.2691	14.20			VQ					
12+25	4.3706	14.75			VQ					
12+30	4.4737	14.96			VQ					
12+35	4.5805	15.50			V Q					
12+40	4.6927	16.29			V Q					
12+45	4.8064	16.51			V Q					
12+50	4.9225	16.86			V Q					
12+55	5.0416	17.30			V Q					
13+ 0	5.1617	17.44			V Q					
13+ 5	5.2905	18.70			V Q					
13+10	5.4323	20.59			V Q					
13+15	5.5775	21.09			V Q					
13+20	5.7243	21.31			V Q					
13+25	5.8720	21.45			V Q					
13+30	6.0204	21.54			V Q					
13+35	6.1509	18.95			V Q					
13+40	6.2535	14.91			V Q					
13+45	6.3494	13.92			Q					
13+50	6.4425	13.51			Q					
13+55	6.5340	13.29			Q					
14+ 0	6.6246	13.16			Q					
14+ 5	6.7220	14.14			Q					
14+10	6.8297	15.64			Q					
14+15	6.9401	16.03			Q					
14+20	7.0501	15.97			Q					
14+25	7.1583	15.71			Q					
14+30	7.2665	15.70			Q					
14+35	7.3745	15.69			Q					
14+40	7.4825	15.69			Q					
14+45	7.5906	15.70			Q					
14+50	7.6973	15.48			Q					
14+55	7.8015	15.13			Q					
15+ 0	7.9053	15.07			Q					
15+ 5	8.0072	14.81			Q					
15+10	8.1067	14.44			Q					
15+15	8.2056	14.36			Q					
15+20	8.3027	14.10			Q					
15+25	8.3973	13.73			Q					
15+30	8.4913	13.65			Q					
15+35	8.5786	12.68			Q					
15+40	8.6557	11.20			Q					
15+45	8.7304	10.84			Q					
15+50	8.8041	10.70			Q					
15+55	8.8773	10.64			Q					
16+ 0	8.9503	10.60			Q					
16+ 5	9.0043	7.83			Q					
16+10	9.0284	3.51			Q					
16+15	9.0452	2.44			Q					
16+20	9.0588	1.97			Q					
16+25	9.0706	1.72			Q					
16+30	9.0813	1.55			Q					
16+35	9.0911	1.43			Q					

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16+40	9.0997	1.25	Q			V
16+45	9.1080	1.20	Q			V
16+50	9.1161	1.18	Q			V
16+55	9.1242	1.17	Q			V
17+ 0	9.1322	1.16	Q			V
17+ 5	9.1378	0.82	Q			V
17+10	9.1398	0.28	Q			V
17+15	9.1409	0.17	Q			V
17+20	9.1418	0.13	Q			V
17+25	9.1426	0.11	Q			V
17+30	9.1433	0.11	Q			V
17+35	9.1442	0.13	Q			V
17+40	9.1452	0.15	Q			V
17+45	9.1464	0.17	Q			V
17+50	9.1505	0.60	Q			V
17+55	9.1591	1.25	Q			V
18+ 0	9.1689	1.42	Q			V
18+ 5	9.1791	1.49	Q			V
18+10	9.1896	1.53	Q			V
18+15	9.2003	1.55	Q			V
18+20	9.2110	1.55	Q			V
18+25	9.2216	1.55	Q			V
18+30	9.2323	1.55	Q			V
18+35	9.2422	1.43	Q			V
18+40	9.2508	1.25	Q			V
18+45	9.2590	1.20	Q			V
18+50	9.2663	1.06	Q			V
18+55	9.2723	0.87	Q			V
19+ 0	9.2779	0.81	Q			V
19+ 5	9.2842	0.91	Q			V
19+10	9.2917	1.09	Q			V
19+15	9.2994	1.12	Q			V
19+20	9.3081	1.26	Q			V
19+25	9.3182	1.46	Q			V
19+30	9.3286	1.51	Q			V
19+35	9.3383	1.41	Q			V
19+40	9.3469	1.24	Q			V
19+45	9.3551	1.20	Q			V
19+50	9.3624	1.06	Q			V
19+55	9.3684	0.87	Q			V
20+ 0	9.3740	0.81	Q			V
20+ 5	9.3803	0.91	Q			V
20+10	9.3878	1.09	Q			V
20+15	9.3955	1.12	Q			V
20+20	9.4034	1.14	Q			V
20+25	9.4113	1.16	Q			V
20+30	9.4194	1.16	Q			V
20+35	9.4274	1.16	Q			V
20+40	9.4354	1.16	Q			V
20+45	9.4434	1.16	Q			V
20+50	9.4506	1.04	Q			V
20+55	9.4565	0.86	Q			V
21+ 0	9.4621	0.81	Q			V
21+ 5	9.4684	0.91	Q			V
21+10	9.4758	1.09	Q			V
21+15	9.4836	1.12	Q			V
21+20	9.4906	1.03	Q			V
21+25	9.4965	0.85	Q			V
21+30	9.5021	0.81	Q			V
21+35	9.5084	0.91	Q			V
21+40	9.5159	1.09	Q			V
21+45	9.5236	1.12	Q			V
21+50	9.5307	1.03	Q			V
21+55	9.5366	0.85	Q			V
22+ 0	9.5422	0.81	Q			V
22+ 5	9.5484	0.91	Q			V
22+10	9.5559	1.09	Q			V
22+15	9.5637	1.12	Q			V

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22+20	9.5707	1.03	Q			V
22+25	9.5766	0.85	Q			V
22+30	9.5822	0.81	Q			V
22+35	9.5877	0.79	Q			V
22+40	9.5930	0.78	Q			V
22+45	9.5984	0.78	Q			V
22+50	9.6037	0.78	Q			V
22+55	9.6091	0.78	Q			V
23+ 0	9.6144	0.78	Q			V
23+ 5	9.6197	0.78	Q			V
23+10	9.6251	0.78	Q			V
23+15	9.6304	0.78	Q			V
23+20	9.6357	0.78	Q			V
23+25	9.6411	0.78	Q			V
23+30	9.6464	0.78	Q			V
23+35	9.6518	0.78	Q			V
23+40	9.6571	0.78	Q			V
23+45	9.6624	0.78	Q			V
23+50	9.6678	0.78	Q			V
23+55	9.6731	0.78	Q			V
24+ 0	9.6785	0.78	Q			V
24+ 5	9.6822	0.54	Q			V
24+10	9.6833	0.17	Q			V
24+15	9.6838	0.08	Q			V
24+20	9.6841	0.04	Q			V
24+25	9.6842	0.01	Q			V

Appendix

B

DETENTION ROUTING CALCULATIONS

Pacific Emerald Detention Basin: Stage Storage Outflow Table											
Elev	Incremental	Cumulative Depth	Area	Avg Area	Incremental Volume	Cumulative Vol	Cumulative Vol	Two 1.45" Dia. Orifices ⁽¹⁾	Two 2.5" Dia. Orifices ⁽²⁾	50-ft Spillway ⁽³⁾	Total Discharge
(ft)	(ft)	(ft)	(ft ²)	(ft ²)	(ft ³)	(ft ³)	(ac-ft)	(cfs)	(cfs)	(cfs)	(cfs)
1497.00	-	0.00	724.43			0.0	0.000	0.000			0.00
				2339.5							
1497.33	0.33	0.33	3954.65		772.0	772.0	0.018	0.063			0.06
				5012.2							
1497.67	0.34	0.67	6069.77		1704.2	2476.2	0.057	0.095			0.09
				6856.1							
1498.00	0.33	1.00	7642.33		2262.5	4738.7	0.109	0.118			0.12
				8429.5							
1498.33	0.33	1.33	9216.71		2781.7	7520.4	0.173	0.137			0.14
				10186.2							
1498.67	0.34	1.67	11155.69		3463.3	10983.7	0.252	0.154			0.15
				12316.5							
1499.00	0.33	2.00	13477.38		4064.5	15048.2	0.345	0.169			0.17
				13913.6							
1499.33	0.33	2.33	14349.79		4591.5	19639.7	0.451	0.183			0.18
				14805.6							
1499.67	0.34	2.67	15261.49		5033.9	24673.6	0.566	0.196			0.20
				15711.6							
1500.00	0.33	3.00	16161.78		5184.8	29858.4	0.685	0.208			0.21
				16618.8							
1500.33	0.33	3.33	17075.75		5484.2	35342.6	0.811	0.220	0.000		0.22
				17539.6							
1500.67	0.34	3.67	18003.40		5963.5	41306.1	0.948	0.231	0.175		0.41
				18488.3							
1501.00	0.33	4.00	18973.26		6101.1	47407.2	1.088	0.241	0.272		0.51
				20442.6							
1502.00	1.00	5.00	21911.98		20442.6	67849.9	1.558	0.270	0.452		0.72
				23445.0							
1503.00	1.00	6.00	24978.08		23445.0	91294.9	2.096	0.296	0.578		0.87
				25497.7							
1503.33	0.33	6.33	26017.36		8414.2	99709.1	2.289	0.304	0.614	0.00	0.92
				27095.1							
1504.00	0.67	7.00	28172.82		18153.7	117862.8	2.706	0.320	0.682	82.26	83.26
				29813.8							
1505.00	1.00	8.00	31454.69		29813.8	147676.6	3.390	0.342	0.771	323.72	324.83

(1) Two 1.45" Diameter Orifices Elevation = 1497.00
(2) Two 2.50" Diameter Orifices Elevation = 1500.33
(3) Spillway Crest Elevation = 1503.33

Orifice Equation
C = 0.66

$$Q = C * A * (2 * 32.2 * h)^{0.5}$$

Green cells are input values
Gray cells are calculated results

WQ Basin 1: Two 1.45" Circular Openings One Row, Inverts = 1497.00

	1 Hole per Row (cfs)	h(ft)	Basin Depth (ft)	2 Holes per Row (cfs)
Q=	0.0315	0.27	0.33	0.0631
Q=	0.0474	0.61	0.67	0.0948
Q=	0.0589	0.94	1.00	0.1177
Q=	0.0684	1.27	1.33	0.1368
Q=	0.0770	1.61	1.67	0.1541
Q=	0.0846	1.94	2.00	0.1691
Q=	0.0915	2.27	2.33	0.1830
Q=	0.0981	2.61	2.67	0.1962
Q=	0.1041	2.94	3.00	0.2082
Q=	0.1098	3.27	3.33	0.2196
Q=	0.1154	3.61	3.67	0.2307
Q=	0.1205	3.94	4.00	0.2410
Q=	0.1350	4.94	5.00	0.2699
Q=	0.1480	5.94	6.00	0.2960
Q=	0.1520	6.27	6.33	0.3041
Q=	0.1600	6.94	7.00	0.3199
Q=	0.1711	7.94	8.00	0.3422
Pipe Invert = 1497.00			radius(ft)	
Enter Diameter(inch):		1.45	0.060416667	
A(sqft)=	0.011468845			

Orifice Equation
C = 0.66

$$Q = C * A(2 * 32.2 * h)^{0.5}$$

Green cells are input values
Gray cells are calculated results

WQ Basin 1: Two 2.50" Circular Openings One Row, Inverts = 1500.33

	1 Hole per Row (cfs)	h(ft)	Basin Depth (ft)	2 Holes per Row (cfs)
Q=	0.0877	0.24	0.34	0.1753
Q=	0.1358	0.57	0.67	0.2715
Q=	0.2259	1.57	1.67	0.4517
Q=	0.2891	2.57	2.67	0.5783
Q=	0.3072	2.90	3.00	0.6143
Q=	0.3408	3.57	3.67	0.6817
Q=	0.3857	4.57	4.67	0.7714
Pipe Invert = 1500.33			radius(ft)	
Enter Diameter(inch):		2.5	0.104166667	
A(sqft)=	0.034092882			

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FLOOD HYDROGRAPH ROUTING PROGRAM
Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2005
Study date: 10/12/21

Pacific Emerald
HCOC Analysis
2-Year 24-Hour Storm Routing

Program License Serial Number 6062

***** HYDROGRAPH INFORMATION *****

From study/file name: 2yr24hrp242.rte
*****HYDROGRAPH DATA*****
Number of intervals = 293
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 4.706 (CFS)
Total volume = 2.860 (Ac.Ft)
Status of hydrographs being held in storage
Stream 1 Stream 2 Stream 3 Stream 4 Stream 5
Peak (CFS) 0.000 0.000 0.000 0.000 0.000
Vol (Ac.Ft) 0.000 0.000 0.000 0.000 0.000

+++++
Process from Point/Station 1.000 to Point/Station 2.000
**** RETARDING BASIN ROUTING ****

User entry of depth-outflow-storage data

Total number of inflow hydrograph intervals = 293
Hydrograph time unit = 5.000 (Min.)
Initial depth in storage basin = 0.00(Ft.)

Initial basin depth = 0.00 (Ft.)
Initial basin storage = 0.00 (Ac.Ft)
Initial basin outflow = 0.00 (CFS)

Depth vs. Storage and Depth vs. Discharge data:

Basin Depth (Ft.)	Storage (Ac.Ft)	Outflow (CFS)	(S-0*dt/2) (Ac.Ft)	(S+0*dt/2) (Ac.Ft)
0.000	0.000	0.000	0.000	0.000
0.330	0.018	0.060	0.018	0.018
0.670	0.057	0.090	0.057	0.057
1.000	0.109	0.120	0.109	0.109
1.330	0.173	0.140	0.173	0.173
1.670	0.252	0.150	0.251	0.253
2.000	0.345	0.170	0.344	0.346
2.330	0.451	0.180	0.450	0.452
2.670	0.566	0.200	0.565	0.567
3.000	0.685	0.210	0.684	0.686
3.330	0.811	0.220	0.810	0.812
3.670	0.948	0.410	0.947	0.949

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4.000	1.088	0.510	1.086	1.090
5.000	1.558	0.720	1.556	1.560
6.000	2.096	0.870	2.093	2.099
6.330	2.289	0.920	2.286	2.292
7.000	2.706	83.260	2.419	2.993
8.000	3.390	324.830	2.271	4.509

 Hydrograph Detention Basin Routing

Graph values: 'I'= unit inflow; 'O'=outflow at time shown

Time (Hours)	Inflow (CFS)	Outflow (CFS)	Storage (Ac.Ft)	.0	1.2	2.35	3.53	4.71	Depth (Ft.)
0.083	0.08	0.00	0.000	O					0.01
0.167	0.22	0.00	0.001	OI					0.02
0.250	0.25	0.01	0.003	OI					0.05
0.333	0.31	0.02	0.005	O I					0.09
0.417	0.38	0.02	0.007	O I					0.13
0.500	0.40	0.03	0.009	O I					0.17
0.583	0.41	0.04	0.012	O I					0.22
0.667	0.41	0.05	0.015	O I					0.27
0.750	0.42	0.06	0.017	O I					0.31
0.833	0.46	0.06	0.020	O I					0.34
0.917	0.52	0.06	0.023	O I					0.37
1.000	0.54	0.07	0.026	O I					0.40
1.083	0.50	0.07	0.029	O I					0.43
1.167	0.44	0.07	0.032	O I					0.45
1.250	0.43	0.07	0.034	O I					0.47
1.333	0.42	0.07	0.037	O I					0.49
1.417	0.42	0.08	0.039	O I					0.51
1.500	0.42	0.08	0.041	O I					0.53
1.583	0.42	0.08	0.044	O I					0.55
1.667	0.42	0.08	0.046	O I					0.57
1.750	0.42	0.08	0.048	O I					0.59
1.833	0.46	0.09	0.051	O I					0.61
1.917	0.52	0.09	0.053	O I					0.64
2.000	0.54	0.09	0.057	O I					0.67
2.083	0.55	0.09	0.060	O I					0.69
2.167	0.55	0.09	0.063	O I					0.71
2.250	0.55	0.10	0.066	O I					0.73
2.333	0.55	0.10	0.069	O I					0.75
2.417	0.55	0.10	0.072	O I					0.77
2.500	0.55	0.10	0.075	O I					0.79
2.583	0.60	0.10	0.079	O I					0.81
2.667	0.66	0.10	0.082	O I					0.83
2.750	0.68	0.11	0.086	O I					0.85
2.833	0.69	0.11	0.090	O I					0.88
2.917	0.69	0.11	0.094	O I					0.91
3.000	0.69	0.11	0.098	O I					0.93
3.083	0.69	0.12	0.102	O I					0.96
3.167	0.69	0.12	0.106	O I					0.98
3.250	0.69	0.12	0.110	O I					1.00
3.333	0.69	0.12	0.114	O I					1.02
3.417	0.69	0.12	0.118	O I					1.05
3.500	0.69	0.12	0.122	O I					1.07
3.583	0.69	0.13	0.126	O I					1.09
3.667	0.69	0.13	0.129	O I					1.11
3.750	0.69	0.13	0.133	O I					1.13
3.833	0.73	0.13	0.137	O I					1.15
3.917	0.80	0.13	0.142	O I					1.17
4.000	0.82	0.13	0.146	O I					1.19
4.083	0.82	0.13	0.151	O I					1.22
4.167	0.83	0.13	0.156	O I					1.24
4.250	0.83	0.14	0.161	O I					1.27
4.333	0.87	0.14	0.166	O I					1.29
4.417	0.94	0.14	0.171	O I					1.32
4.500	0.96	0.14	0.177	O I					1.35

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4.583	0.96	0.14	0.182	0	I			1.37
4.667	0.97	0.14	0.188	0	I			1.39
4.750	0.97	0.14	0.194	0	I			1.42
4.833	1.01	0.14	0.199	0	I			1.44
4.917	1.08	0.14	0.206	0	I			1.47
5.000	1.09	0.14	0.212	0	I			1.50
5.083	1.02	0.15	0.218	0	I			1.52
5.167	0.89	0.15	0.224	0	I			1.55
5.250	0.86	0.15	0.229	0	I			1.57
5.333	0.89	0.15	0.234	0	I			1.59
5.417	0.94	0.15	0.239	0	I			1.61
5.500	0.96	0.15	0.245	0	I			1.64
5.583	1.01	0.15	0.250	0	I			1.66
5.667	1.07	0.15	0.256	0	I			1.69
5.750	1.09	0.15	0.263	0	I			1.71
5.833	1.10	0.15	0.269	0	I			1.73
5.917	1.10	0.16	0.276	0	I			1.75
6.000	1.11	0.16	0.282	0	I			1.78
6.083	1.15	0.16	0.289	0	I			1.80
6.167	1.22	0.16	0.296	0	I			1.83
6.250	1.23	0.16	0.304	0	I			1.85
6.333	1.24	0.16	0.311	0	I			1.88
6.417	1.24	0.16	0.318	0	I			1.91
6.500	1.25	0.17	0.326	0	I			1.93
6.583	1.29	0.17	0.333	0	I			1.96
6.667	1.35	0.17	0.341	0	I			1.99
6.750	1.37	0.17	0.350	0	I			2.01
6.833	1.38	0.17	0.358	0	I			2.04
6.917	1.38	0.17	0.366	0	I			2.07
7.000	1.38	0.17	0.374	0	I			2.09
7.083	1.38	0.17	0.383	0	I			2.12
7.167	1.38	0.17	0.391	0	I			2.14
7.250	1.38	0.18	0.399	0	I			2.17
7.333	1.43	0.18	0.408	0	I			2.20
7.417	1.49	0.18	0.417	0	I			2.22
7.500	1.51	0.18	0.426	0	I			2.25
7.583	1.56	0.18	0.435	0	I			2.28
7.667	1.63	0.18	0.445	0	I			2.31
7.750	1.65	0.18	0.455	0	I			2.34
7.833	1.70	0.18	0.465	0	I			2.37
7.917	1.77	0.18	0.476	0	I			2.40
8.000	1.79	0.19	0.487	0	I			2.44
8.083	1.88	0.19	0.498	0	I			2.47
8.167	2.01	0.19	0.510	0	I			2.51
8.250	2.05	0.19	0.523	0	I			2.54
8.333	2.06	0.19	0.536	0	I			2.58
8.417	2.07	0.20	0.549	0	I			2.62
8.500	2.08	0.20	0.562	0	I			2.66
8.583	2.12	0.20	0.575	0	I			2.69
8.667	2.18	0.20	0.588	0	I			2.73
8.750	2.20	0.20	0.602	0	I			2.77
8.833	2.25	0.20	0.616	0	I			2.81
8.917	2.32	0.21	0.630	0	I			2.85
9.000	2.34	0.21	0.645	0	I			2.89
9.083	2.43	0.21	0.660	0	I			2.93
9.167	2.57	0.21	0.676	0	I			2.97
9.250	2.60	0.21	0.692	0	I			3.02
9.333	2.66	0.21	0.709	0	I			3.06
9.417	2.73	0.21	0.726	0	I			3.11
9.500	2.75	0.21	0.743	0	I			3.15
9.583	2.80	0.22	0.761	0	I			3.20
9.667	2.87	0.22	0.779	0	I			3.25
9.750	2.89	0.22	0.797	0	I			3.29
9.833	2.94	0.23	0.816	0	I			3.34
9.917	3.01	0.25	0.835	0	I			3.39
10.000	3.03	0.28	0.854	0	I			3.44
10.083	2.74	0.30	0.871	0	I			3.48
10.167	2.28	0.32	0.887	0	I			3.52

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10.250	2.17	0.34	0.900	0	I			3.55
10.333	2.12	0.36	0.912	0	I			3.58
10.417	2.09	0.38	0.924	0	I			3.61
10.500	2.08	0.39	0.936	0	I			3.64
10.583	2.29	0.41	0.948	0	I			3.67
10.667	2.62	0.42	0.962	0	I			3.70
10.750	2.70	0.43	0.977	0	I			3.74
10.833	2.74	0.44	0.993	0	I			3.78
10.917	2.76	0.45	1.009	0	I			3.81
11.000	2.77	0.46	1.025	0	I			3.85
11.083	2.73	0.48	1.040	0	I			3.89
11.167	2.66	0.49	1.056	0	I			3.92
11.250	2.64	0.50	1.071	0	I			3.96
11.333	2.64	0.51	1.085	0	I			3.99
11.417	2.63	0.52	1.100	0	I			4.03
11.500	2.63	0.52	1.114	0	I			4.06
11.583	2.54	0.53	1.129	0	I			4.09
11.667	2.41	0.53	1.142	0	I			4.11
11.750	2.38	0.54	1.155	0	I			4.14
11.833	2.41	0.55	1.168	0	I			4.17
11.917	2.47	0.55	1.181	0	I			4.20
12.000	2.48	0.56	1.194	0	I			4.23
12.083	2.78	0.56	1.208	0	I	I		4.26
12.167	3.25	0.57	1.225	0	I	I		4.29
12.250	3.37	0.58	1.244	0	I	I		4.33
12.333	3.46	0.59	1.263	0	I	I		4.37
12.417	3.55	0.60	1.283	0	I	I		4.42
12.500	3.59	0.61	1.304	0	I	I		4.46
12.583	3.68	0.62	1.324	0	I	I		4.50
12.667	3.81	0.63	1.346	0	I	I		4.55
12.750	3.85	0.64	1.368	0	I	I		4.60
12.833	3.91	0.65	1.390	0	I	I		4.64
12.917	3.98	0.66	1.413	0	I	I		4.69
13.000	4.00	0.67	1.436	0	I	I		4.74
13.083	4.22	0.68	1.460	0	I	I		4.79
13.167	4.55	0.69	1.485	0	I	I		4.85
13.250	4.64	0.70	1.512	0	I	I		4.90
13.333	4.67	0.71	1.539	0	I	I		4.96
13.417	4.69	0.72	1.567	0	I	I		5.02
13.500	4.71	0.73	1.594	0	I	I		5.07
13.583	4.24	0.74	1.620	0	I	I		5.11
13.667	3.51	0.74	1.641	0	I	I		5.15
13.750	3.33	0.75	1.660	0	I	I		5.19
13.833	3.25	0.75	1.677	0	I	I		5.22
13.917	3.21	0.76	1.694	0	I	I		5.25
14.000	3.18	0.76	1.711	0	I	I		5.28
14.083	3.35	0.77	1.728	0	I	I		5.32
14.167	3.62	0.77	1.747	0	I	I		5.35
14.250	3.68	0.78	1.767	0	I	I		5.39
14.333	3.67	0.78	1.787	0	I	I		5.43
14.417	3.62	0.79	1.806	0	I	I		5.46
14.500	3.61	0.79	1.826	0	I	I		5.50
14.583	3.61	0.80	1.845	0	I	I		5.53
14.667	3.60	0.81	1.865	0	I	I		5.57
14.750	3.60	0.81	1.884	0	I	I		5.61
14.833	3.56	0.82	1.903	0	I	I		5.64
14.917	3.49	0.82	1.921	0	I	I		5.68
15.000	3.47	0.83	1.940	0	I	I		5.71
15.083	3.42	0.83	1.958	0	I	I		5.74
15.167	3.35	0.84	1.975	0	I	I		5.78
15.250	3.34	0.84	1.993	0	I	I		5.81
15.333	3.29	0.85	2.010	0	I	I		5.84
15.417	3.22	0.85	2.026	0	I	I		5.87
15.500	3.20	0.86	2.042	0	I	I		5.90
15.583	3.02	0.86	2.058	0	I	I		5.93
15.667	2.75	0.86	2.072	0	I	I		5.96
15.750	2.68	0.87	2.085	0	I	I		5.98
15.833	2.66	0.87	2.097	0	I	I		6.00

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15.917	2.64	0.87	2.109	0	I	6.02
16.000	2.63	0.88	2.121	0	I	6.04
16.083	1.99	0.88	2.131	0	I	6.06
16.167	1.00	0.88	2.135	OI		6.07
16.250	0.76	0.88	2.135	0		6.07
16.333	0.65	0.88	2.134	IO		6.07
16.417	0.59	0.88	2.132	IO		6.06
16.500	0.55	0.88	2.130	I O		6.06
16.583	0.51	0.88	2.128	I O		6.05
16.667	0.45	0.88	2.125	I O		6.05
16.750	0.43	0.88	2.122	I O		6.04
16.833	0.42	0.88	2.119	I O		6.04
16.917	0.42	0.88	2.116	I O		6.03
17.000	0.42	0.87	2.113	I O		6.03
17.083	0.50	0.87	2.110	I O		6.02
17.167	0.63	0.87	2.108	IO		6.02
17.250	0.66	0.87	2.106	IO		6.02
17.333	0.68	0.87	2.105	IO		6.02
17.417	0.69	0.87	2.104	IO		6.01
17.500	0.69	0.87	2.102	IO		6.01
17.583	0.69	0.87	2.101	IO		6.01
17.667	0.69	0.87	2.100	IO		6.01
17.750	0.69	0.87	2.099	IO		6.00
17.833	0.65	0.87	2.097	IO		6.00
17.917	0.58	0.87	2.095	I O		6.00
18.000	0.57	0.87	2.093	I O		6.00
18.083	0.56	0.87	2.091	I O		5.99
18.167	0.56	0.87	2.089	I O		5.99
18.250	0.55	0.87	2.087	I O		5.98
18.333	0.55	0.87	2.085	I O		5.98
18.417	0.55	0.87	2.083	I O		5.98
18.500	0.55	0.87	2.081	I O		5.97
18.583	0.51	0.87	2.078	I O		5.97
18.667	0.45	0.86	2.076	I O		5.96
18.750	0.43	0.86	2.073	I O		5.96
18.833	0.38	0.86	2.070	I O		5.95
18.917	0.31	0.86	2.066	I O		5.94
19.000	0.29	0.86	2.062	I O		5.94
19.083	0.33	0.86	2.058	I O		5.93
19.167	0.39	0.86	2.055	I O		5.92
19.250	0.40	0.86	2.052	I O		5.92
19.333	0.45	0.86	2.049	I O		5.91
19.417	0.52	0.86	2.046	I O		5.91
19.500	0.54	0.86	2.044	I O		5.90
19.583	0.50	0.85	2.042	I O		5.90
19.667	0.44	0.85	2.039	I O		5.89
19.750	0.43	0.85	2.036	I O		5.89
19.833	0.38	0.85	2.033	I O		5.88
19.917	0.31	0.85	2.030	I O		5.88
20.000	0.29	0.85	2.026	I O		5.87
20.083	0.33	0.85	2.022	I O		5.86
20.167	0.39	0.85	2.019	I O		5.86
20.250	0.40	0.85	2.015	I O		5.85
20.333	0.41	0.85	2.012	I O		5.84
20.417	0.41	0.85	2.009	I O		5.84
20.500	0.42	0.85	2.006	I O		5.83
20.583	0.42	0.84	2.004	I O		5.83
20.667	0.42	0.84	2.001	I O		5.82
20.750	0.42	0.84	1.998	I O		5.82
20.833	0.37	0.84	1.995	I O		5.81
20.917	0.31	0.84	1.991	I O		5.80
21.000	0.29	0.84	1.987	I O		5.80
21.083	0.33	0.84	1.984	I O		5.79
21.167	0.39	0.84	1.980	I O		5.79
21.250	0.40	0.84	1.977	I O		5.78
21.333	0.37	0.84	1.974	I O		5.77
21.417	0.30	0.84	1.971	I O		5.77
21.500	0.29	0.83	1.967	I O		5.76

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21.583	0.33	0.83	1.963	I	0	5.75
21.667	0.39	0.83	1.960	I	0	5.75
21.750	0.40	0.83	1.957	I	0	5.74
21.833	0.37	0.83	1.954	I	0	5.74
21.917	0.30	0.83	1.951	I	0	5.73
22.000	0.29	0.83	1.947	I	0	5.72
22.083	0.33	0.83	1.943	I	0	5.72
22.167	0.39	0.83	1.940	I	0	5.71
22.250	0.40	0.83	1.937	I	0	5.70
22.333	0.37	0.82	1.934	I	0	5.70
22.417	0.30	0.82	1.931	I	0	5.69
22.500	0.29	0.82	1.927	I	0	5.69
22.583	0.28	0.82	1.924	I	0	5.68
22.667	0.28	0.82	1.920	I	0	5.67
22.750	0.28	0.82	1.916	I	0	5.67
22.833	0.28	0.82	1.912	I	0	5.66
22.917	0.28	0.82	1.909	I	0	5.65
23.000	0.28	0.82	1.905	I	0	5.64
23.083	0.28	0.82	1.901	I	0	5.64
23.167	0.28	0.81	1.897	I	0	5.63
23.250	0.28	0.81	1.894	I	0	5.62
23.333	0.28	0.81	1.890	I	0	5.62
23.417	0.28	0.81	1.886	I	0	5.61
23.500	0.28	0.81	1.883	I	0	5.60
23.583	0.28	0.81	1.879	I	0	5.60
23.667	0.28	0.81	1.875	I	0	5.59
23.750	0.28	0.81	1.872	I	0	5.58
23.833	0.28	0.81	1.868	I	0	5.58
23.917	0.28	0.81	1.864	I	0	5.57
24.000	0.28	0.80	1.861	I	0	5.56
24.083	0.19	0.80	1.857	I	0	5.56
24.167	0.06	0.80	1.852	I	0	5.55
24.250	0.03	0.80	1.847	I	0	5.54
24.333	0.01	0.80	1.842	I	0	5.53
24.417	0.01	0.80	1.836	I	0	5.52
24.500	0.00	0.80	1.831	I	0	5.51
24.583	0.00	0.79	1.825	I	0	5.50
24.667	0.00	0.79	1.820	I	0	5.49
24.750	0.00	0.79	1.814	I	0	5.48
24.833	0.00	0.79	1.809	I	0	5.47
24.917	0.00	0.79	1.803	I	0	5.46
25.000	0.00	0.79	1.798	I	0	5.45
25.083	0.00	0.79	1.793	I	0	5.44
25.167	0.00	0.78	1.787	I	0	5.43
25.250	0.00	0.78	1.782	I	0	5.42
25.333	0.00	0.78	1.776	I	0	5.41
25.417	0.00	0.78	1.771	I	0	5.40
25.500	0.00	0.78	1.766	I	0	5.39
25.583	0.00	0.78	1.760	I	0	5.38
25.667	0.00	0.77	1.755	I	0	5.37
25.750	0.00	0.77	1.750	I	0	5.36
25.833	0.00	0.77	1.744	I	0	5.35
25.917	0.00	0.77	1.739	I	0	5.34
26.000	0.00	0.77	1.734	I	0	5.33
26.083	0.00	0.77	1.728	I	0	5.32
26.167	0.00	0.77	1.723	I	0	5.31
26.250	0.00	0.76	1.718	I	0	5.30
26.333	0.00	0.76	1.713	I	0	5.29
26.417	0.00	0.76	1.707	I	0	5.28
26.500	0.00	0.76	1.702	I	0	5.27
26.583	0.00	0.76	1.697	I	0	5.26
26.667	0.00	0.76	1.692	I	0	5.25
26.750	0.00	0.76	1.686	I	0	5.24
26.833	0.00	0.75	1.681	I	0	5.23
26.917	0.00	0.75	1.676	I	0	5.22
27.000	0.00	0.75	1.671	I	0	5.21
27.083	0.00	0.75	1.666	I	0	5.20
27.167	0.00	0.75	1.661	I	0	5.19

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27.250	0.00	0.75	1.655	I	0	5.18
27.333	0.00	0.75	1.650	I	0	5.17
27.417	0.00	0.74	1.645	I	0	5.16
27.500	0.00	0.74	1.640	I	0	5.15
27.583	0.00	0.74	1.635	I	0	5.14
27.667	0.00	0.74	1.630	I	0	5.13
27.750	0.00	0.74	1.625	I	0	5.12
27.833	0.00	0.74	1.620	I	0	5.11
27.917	0.00	0.74	1.615	I	0	5.11
28.000	0.00	0.73	1.609	I	0	5.10
28.083	0.00	0.73	1.604	I	0	5.09
28.167	0.00	0.73	1.599	I	0	5.08
28.250	0.00	0.73	1.594	I	0	5.07
28.333	0.00	0.73	1.589	I	0	5.06
28.417	0.00	0.73	1.584	I	0	5.05
28.500	0.00	0.73	1.579	I	0	5.04
28.583	0.00	0.72	1.574	I	0	5.03
28.667	0.00	0.72	1.569	I	0	5.02
28.750	0.00	0.72	1.564	I	0	5.01
28.833	0.00	0.72	1.559	I	0	5.00
28.917	0.00	0.72	1.554	I	0	4.99
29.000	0.00	0.72	1.549	I	0	4.98
29.083	0.00	0.71	1.545	I	0	4.97
29.167	0.00	0.71	1.540	I	0	4.96
29.250	0.00	0.71	1.535	I	0	4.95
29.333	0.00	0.71	1.530	I	0	4.94
29.417	0.00	0.71	1.525	I	0	4.93
29.500	0.00	0.70	1.520	I	0	4.92
29.583	0.00	0.70	1.515	I	0	4.91
29.667	0.00	0.70	1.511	I	0	4.90
29.750	0.00	0.70	1.506	I	0	4.89
29.833	0.00	0.69	1.501	I	0	4.88
29.917	0.00	0.69	1.496	I	0	4.87
30.000	0.00	0.69	1.491	I	0	4.86
30.083	0.00	0.69	1.487	I	0	4.85
30.167	0.00	0.69	1.482	I	0	4.84
30.250	0.00	0.68	1.477	I	0	4.83
30.333	0.00	0.68	1.472	I	0	4.82
30.417	0.00	0.68	1.468	I	0	4.81
30.500	0.00	0.68	1.463	I	0	4.80
30.583	0.00	0.68	1.458	I	0	4.79
30.667	0.00	0.67	1.454	I	0	4.78
30.750	0.00	0.67	1.449	I	0	4.77
30.833	0.00	0.67	1.445	I	0	4.76
30.917	0.00	0.67	1.440	I	0	4.75
31.000	0.00	0.67	1.435	I	0	4.74
31.083	0.00	0.66	1.431	I	0	4.73
31.167	0.00	0.66	1.426	I	0	4.72
31.250	0.00	0.66	1.422	I	0	4.71
31.333	0.00	0.66	1.417	I	0	4.70
31.417	0.00	0.66	1.413	I	0	4.69
31.500	0.00	0.65	1.408	I	0	4.68
31.583	0.00	0.65	1.404	I	0	4.67
31.667	0.00	0.65	1.399	I	0	4.66
31.750	0.00	0.65	1.395	I	0	4.65
31.833	0.00	0.65	1.390	I	0	4.64
31.917	0.00	0.64	1.386	I	0	4.63
32.000	0.00	0.64	1.381	I	0	4.62
32.083	0.00	0.64	1.377	I	0	4.61
32.167	0.00	0.64	1.373	I	0	4.61
32.250	0.00	0.64	1.368	I	0	4.60
32.333	0.00	0.63	1.364	I	0	4.59
32.417	0.00	0.63	1.359	I	0	4.58
32.500	0.00	0.63	1.355	I	0	4.57
32.583	0.00	0.63	1.351	I	0	4.56
32.667	0.00	0.63	1.347	I	0	4.55
32.750	0.00	0.62	1.342	I	0	4.54
32.833	0.00	0.62	1.338	I	0	4.53

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32.917	0.00	0.62	1.334	I	0	4.52
33.000	0.00	0.62	1.329	I	0	4.51
33.083	0.00	0.62	1.325	I	0	4.50
33.167	0.00	0.61	1.321	I	0	4.50
33.250	0.00	0.61	1.317	I	0	4.49
33.333	0.00	0.61	1.312	I	0	4.48
33.417	0.00	0.61	1.308	I	0	4.47
33.500	0.00	0.61	1.304	I	0	4.46
33.583	0.00	0.60	1.300	I	0	4.45
33.667	0.00	0.60	1.296	I	0	4.44
33.750	0.00	0.60	1.292	I	0	4.43
33.833	0.00	0.60	1.287	I	0	4.42
33.917	0.00	0.60	1.283	I	0	4.42
34.000	0.00	0.60	1.279	I	0	4.41
34.083	0.00	0.59	1.275	I	0	4.40
34.167	0.00	0.59	1.271	I	0	4.39
34.250	0.00	0.59	1.267	I	0	4.38
34.333	0.00	0.59	1.263	I	0	4.37
34.417	0.00	0.59	1.259	I	0	4.36
34.500	0.00	0.58	1.255	I	0	4.36
34.583	0.00	0.58	1.251	I	0	4.35
34.667	0.00	0.58	1.247	I	0	4.34
34.750	0.00	0.58	1.243	I	0	4.33
34.833	0.00	0.58	1.239	I	0	4.32
34.917	0.00	0.58	1.235	I	0	4.31
35.000	0.00	0.57	1.231	I	0	4.30
35.083	0.00	0.57	1.227	I	0	4.30
35.167	0.00	0.57	1.223	I	0	4.29
35.250	0.00	0.57	1.219	I	0	4.28
35.333	0.00	0.57	1.215	I	0	4.27
35.417	0.00	0.57	1.211	I	0	4.26
35.500	0.00	0.56	1.207	I	0	4.25
35.583	0.00	0.56	1.204	I	0	4.25
35.667	0.00	0.56	1.200	I	0	4.24
35.750	0.00	0.56	1.196	I	0	4.23
35.833	0.00	0.56	1.192	I	0	4.22
35.917	0.00	0.55	1.188	I	0	4.21
36.000	0.00	0.55	1.184	I	0	4.21
36.083	0.00	0.55	1.181	I	0	4.20
36.167	0.00	0.55	1.177	I	0	4.19
36.250	0.00	0.55	1.173	I	0	4.18
36.333	0.00	0.55	1.169	I	0	4.17
36.417	0.00	0.54	1.165	I	0	4.16
36.500	0.00	0.54	1.162	I	0	4.16
36.583	0.00	0.54	1.158	I	0	4.15
36.667	0.00	0.54	1.154	I	0	4.14
36.750	0.00	0.54	1.151	I	0	4.13
36.833	0.00	0.54	1.147	I	0	4.13
36.917	0.00	0.53	1.143	I	0	4.12
37.000	0.00	0.53	1.139	I	0	4.11
37.083	0.00	0.53	1.136	I	0	4.10
37.167	0.00	0.53	1.132	I	0	4.09
37.250	0.00	0.53	1.129	I	0	4.09
37.333	0.00	0.53	1.125	I	0	4.08
37.417	0.00	0.52	1.121	I	0	4.07
37.500	0.00	0.52	1.118	I	0	4.06
37.583	0.00	0.52	1.114	I	0	4.06
37.667	0.00	0.52	1.110	I	0	4.05
37.750	0.00	0.52	1.107	I	0	4.04
37.833	0.00	0.52	1.103	I	0	4.03
37.917	0.00	0.52	1.100	I	0	4.03
38.000	0.00	0.51	1.096	I	0	4.02
38.083	0.00	0.51	1.093	I	0	4.01
38.167	0.00	0.51	1.089	I	0	4.00
38.250	0.00	0.51	1.086	I	0	3.99
38.333	0.00	0.51	1.082	I	0	3.99
38.417	0.00	0.50	1.079	I	0	3.98
38.500	0.00	0.50	1.075	I	0	3.97

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38.583	0.00	0.50	1.072	I	0	3.96
38.667	0.00	0.50	1.068	I	0	3.95
38.750	0.00	0.49	1.065	I	0	3.95
38.833	0.00	0.49	1.062	I	0	3.94
38.917	0.00	0.49	1.058	I	0	3.93
39.000	0.00	0.49	1.055	I	0	3.92
39.083	0.00	0.48	1.052	I	0	3.91
39.167	0.00	0.48	1.048	I	0	3.91
39.250	0.00	0.48	1.045	I	0	3.90
39.333	0.00	0.48	1.042	I	0	3.89
39.417	0.00	0.47	1.038	I	0	3.88
39.500	0.00	0.47	1.035	I	0	3.88
39.583	0.00	0.47	1.032	I	0	3.87
39.667	0.00	0.47	1.029	I	0	3.86
39.750	0.00	0.47	1.025	I	0	3.85
39.833	0.00	0.46	1.022	I	0	3.84
39.917	0.00	0.46	1.019	I	0	3.84
40.000	0.00	0.46	1.016	I	0	3.83
40.083	0.00	0.46	1.013	I	0	3.82
40.167	0.00	0.45	1.010	I	0	3.82
40.250	0.00	0.45	1.006	I	0	3.81
40.333	0.00	0.45	1.003	I	0	3.80
40.417	0.00	0.45	1.000	I	0	3.79
40.500	0.00	0.45	0.997	I	0	3.79
40.583	0.00	0.44	0.994	I	0	3.78
40.667	0.00	0.44	0.991	I	0	3.77
40.750	0.00	0.44	0.988	I	0	3.76
40.833	0.00	0.44	0.985	I	0	3.76
40.917	0.00	0.43	0.982	I	0	3.75
41.000	0.00	0.43	0.979	I	0	3.74
41.083	0.00	0.43	0.976	I	0	3.74
41.167	0.00	0.43	0.973	I	0	3.73
41.250	0.00	0.43	0.970	I	0	3.72
41.333	0.00	0.42	0.967	I	0	3.72
41.417	0.00	0.42	0.964	I	0	3.71
41.500	0.00	0.42	0.961	I	0	3.70
41.583	0.00	0.42	0.959	I	0	3.69
41.667	0.00	0.42	0.956	I	0	3.69
41.750	0.00	0.41	0.953	I	0	3.68
41.833	0.00	0.41	0.950	I	0	3.67
41.917	0.00	0.41	0.947	I	0	3.67
42.000	0.00	0.40	0.944	I	0	3.66
42.083	0.00	0.40	0.942	I	0	3.65
42.167	0.00	0.40	0.939	I	0	3.65
42.250	0.00	0.39	0.936	I	0	3.64
42.333	0.00	0.39	0.933	I	0	3.63
42.417	0.00	0.39	0.931	I	0	3.63
42.500	0.00	0.38	0.928	I	0	3.62
42.583	0.00	0.38	0.925	I	0	3.61
42.667	0.00	0.38	0.923	I	0	3.61
42.750	0.00	0.37	0.920	I	0	3.60
42.833	0.00	0.37	0.918	I	0	3.59
42.917	0.00	0.36	0.915	I	0	3.59
43.000	0.00	0.36	0.913	I	0	3.58
43.083	0.00	0.36	0.910	I	0	3.58
43.167	0.00	0.35	0.908	I	0	3.57
43.250	0.00	0.35	0.905	I	0	3.56
43.333	0.00	0.35	0.903	I	0	3.56
43.417	0.00	0.34	0.901	I	0	3.55
43.500	0.00	0.34	0.898	I	0	3.55
43.583	0.00	0.34	0.896	I	0	3.54
43.667	0.00	0.33	0.894	I	0	3.53
43.750	0.00	0.33	0.891	I	0	3.53
43.833	0.00	0.33	0.889	I	0	3.52
43.917	0.00	0.33	0.887	I	0	3.52
44.000	0.00	0.32	0.885	I	0	3.51
44.083	0.00	0.32	0.882	I	0	3.51
44.167	0.00	0.32	0.880	I	0	3.50

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44.250	0.00	0.31	0.878	I 0	3.50
44.333	0.00	0.31	0.876	I 0	3.49
44.417	0.00	0.31	0.874	I 0	3.49
44.500	0.00	0.30	0.872	I 0	3.48
44.583	0.00	0.30	0.870	I 0	3.48
44.667	0.00	0.30	0.867	I 0	3.47
44.750	0.00	0.30	0.865	I 0	3.47
44.833	0.00	0.29	0.863	IO	3.46
44.917	0.00	0.29	0.861	IO	3.46
45.000	0.00	0.29	0.859	IO	3.45
45.083	0.00	0.28	0.857	IO	3.45
45.167	0.00	0.28	0.855	IO	3.44
45.250	0.00	0.28	0.854	IO	3.44
45.333	0.00	0.28	0.852	IO	3.43
45.417	0.00	0.27	0.850	IO	3.43
45.500	0.00	0.27	0.848	IO	3.42
45.583	0.00	0.27	0.846	IO	3.42
45.667	0.00	0.27	0.844	IO	3.41
45.750	0.00	0.26	0.842	IO	3.41
45.833	0.00	0.26	0.841	IO	3.40
45.917	0.00	0.26	0.839	IO	3.40
46.000	0.00	0.26	0.837	IO	3.39
46.083	0.00	0.25	0.835	IO	3.39
46.167	0.00	0.25	0.833	IO	3.39
46.250	0.00	0.25	0.832	IO	3.38
46.333	0.00	0.25	0.830	IO	3.38
46.417	0.00	0.24	0.828	IO	3.37
46.500	0.00	0.24	0.827	IO	3.37
46.583	0.00	0.24	0.825	IO	3.36
46.667	0.00	0.24	0.823	IO	3.36
46.750	0.00	0.23	0.822	IO	3.36
46.833	0.00	0.23	0.820	IO	3.35
46.917	0.00	0.23	0.819	IO	3.35
47.000	0.00	0.23	0.817	IO	3.34
47.083	0.00	0.23	0.815	IO	3.34
47.167	0.00	0.22	0.814	IO	3.34
47.250	0.00	0.22	0.812	IO	3.33
47.333	0.00	0.22	0.811	IO	3.33
47.417	0.00	0.22	0.809	IO	3.33
47.500	0.00	0.22	0.808	IO	3.32
47.583	0.00	0.22	0.806	IO	3.32
47.667	0.00	0.22	0.805	IO	3.31
47.750	0.00	0.22	0.803	IO	3.31
47.833	0.00	0.22	0.802	IO	3.31
47.917	0.00	0.22	0.800	IO	3.30
48.000	0.00	0.22	0.799	IO	3.30
48.083	0.00	0.22	0.797	IO	3.29
48.167	0.00	0.22	0.796	IO	3.29
48.250	0.00	0.22	0.794	IO	3.29
48.333	0.00	0.22	0.793	IO	3.28
48.417	0.00	0.22	0.791	IO	3.28
48.500	0.00	0.22	0.790	IO	3.27
48.583	0.00	0.22	0.788	IO	3.27
48.667	0.00	0.22	0.787	IO	3.27
48.750	0.00	0.22	0.785	IO	3.26
48.833	0.00	0.22	0.784	IO	3.26
48.917	0.00	0.22	0.782	IO	3.25
49.000	0.00	0.22	0.781	IO	3.25
49.083	0.00	0.22	0.779	IO	3.25
49.167	0.00	0.22	0.778	IO	3.24
49.250	0.00	0.22	0.776	IO	3.24
49.333	0.00	0.22	0.775	IO	3.23
49.417	0.00	0.22	0.773	IO	3.23
49.500	0.00	0.22	0.772	IO	3.23
49.583	0.00	0.22	0.770	IO	3.22
49.667	0.00	0.22	0.769	IO	3.22
49.750	0.00	0.22	0.767	IO	3.22
49.833	0.00	0.22	0.766	IO	3.21

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49.917	0.00	0.22	0.764	IO	3.21
50.000	0.00	0.22	0.763	IO	3.20
50.083	0.00	0.22	0.761	IO	3.20
50.167	0.00	0.22	0.760	IO	3.20
50.250	0.00	0.22	0.758	IO	3.19
50.333	0.00	0.22	0.757	IO	3.19
50.417	0.00	0.22	0.755	IO	3.18
50.500	0.00	0.22	0.754	IO	3.18
50.583	0.00	0.22	0.752	IO	3.18
50.667	0.00	0.22	0.751	IO	3.17
50.750	0.00	0.22	0.749	IO	3.17
50.833	0.00	0.21	0.748	IO	3.16
50.917	0.00	0.21	0.746	IO	3.16
51.000	0.00	0.21	0.745	IO	3.16
51.083	0.00	0.21	0.743	IO	3.15
51.167	0.00	0.21	0.742	IO	3.15
51.250	0.00	0.21	0.741	IO	3.15
51.333	0.00	0.21	0.739	IO	3.14
51.417	0.00	0.21	0.738	IO	3.14
51.500	0.00	0.21	0.736	IO	3.13
51.583	0.00	0.21	0.735	IO	3.13
51.667	0.00	0.21	0.733	IO	3.13
51.750	0.00	0.21	0.732	IO	3.12
51.833	0.00	0.21	0.730	IO	3.12
51.917	0.00	0.21	0.729	IO	3.11
52.000	0.00	0.21	0.727	IO	3.11
52.083	0.00	0.21	0.726	IO	3.11
52.167	0.00	0.21	0.724	IO	3.10
52.250	0.00	0.21	0.723	IO	3.10
52.333	0.00	0.21	0.721	IO	3.10
52.417	0.00	0.21	0.720	IO	3.09
52.500	0.00	0.21	0.718	IO	3.09
52.583	0.00	0.21	0.717	IO	3.08
52.667	0.00	0.21	0.716	IO	3.08
52.750	0.00	0.21	0.714	IO	3.08
52.833	0.00	0.21	0.713	IO	3.07
52.917	0.00	0.21	0.711	IO	3.07
53.000	0.00	0.21	0.710	IO	3.06
53.083	0.00	0.21	0.708	IO	3.06
53.167	0.00	0.21	0.707	IO	3.06
53.250	0.00	0.21	0.705	IO	3.05
53.333	0.00	0.21	0.704	IO	3.05
53.417	0.00	0.21	0.702	IO	3.05
53.500	0.00	0.21	0.701	IO	3.04
53.583	0.00	0.21	0.699	IO	3.04
53.667	0.00	0.21	0.698	IO	3.03
53.750	0.00	0.21	0.697	IO	3.03
53.833	0.00	0.21	0.695	IO	3.03
53.917	0.00	0.21	0.694	IO	3.02
54.000	0.00	0.21	0.692	IO	3.02
54.083	0.00	0.21	0.691	IO	3.02
54.167	0.00	0.21	0.689	IO	3.01
54.250	0.00	0.21	0.688	IO	3.01
54.333	0.00	0.21	0.686	IO	3.00
54.417	0.00	0.21	0.685	IO	3.00
54.500	0.00	0.21	0.684	IO	3.00
54.583	0.00	0.21	0.682	IO	2.99
54.667	0.00	0.21	0.681	IO	2.99
54.750	0.00	0.21	0.679	IO	2.98
54.833	0.00	0.21	0.678	IO	2.98
54.917	0.00	0.21	0.676	IO	2.98
55.000	0.00	0.21	0.675	IO	2.97
55.083	0.00	0.21	0.673	IO	2.97
55.167	0.00	0.21	0.672	IO	2.96
55.250	0.00	0.21	0.671	IO	2.96
55.333	0.00	0.21	0.669	IO	2.96
55.417	0.00	0.21	0.668	IO	2.95
55.500	0.00	0.21	0.666	IO	2.95

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55.583	0.00	0.21	0.665	IO	2.94
55.667	0.00	0.21	0.663	IO	2.94
55.750	0.00	0.21	0.662	IO	2.94
55.833	0.00	0.21	0.661	IO	2.93
55.917	0.00	0.21	0.659	IO	2.93
56.000	0.00	0.21	0.658	IO	2.92
56.083	0.00	0.21	0.656	IO	2.92
56.167	0.00	0.21	0.655	IO	2.92
56.250	0.00	0.21	0.653	IO	2.91
56.333	0.00	0.21	0.652	IO	2.91
56.417	0.00	0.21	0.651	IO	2.90
56.500	0.00	0.21	0.649	IO	2.90
56.583	0.00	0.21	0.648	IO	2.90
56.667	0.00	0.21	0.646	IO	2.89
56.750	0.00	0.21	0.645	IO	2.89
56.833	0.00	0.21	0.643	IO	2.88
56.917	0.00	0.21	0.642	IO	2.88
57.000	0.00	0.21	0.641	IO	2.88
57.083	0.00	0.21	0.639	IO	2.87
57.167	0.00	0.21	0.638	IO	2.87
57.250	0.00	0.21	0.636	IO	2.86
57.333	0.00	0.21	0.635	IO	2.86
57.417	0.00	0.21	0.633	IO	2.86
57.500	0.00	0.21	0.632	IO	2.85
57.583	0.00	0.21	0.631	IO	2.85
57.667	0.00	0.21	0.629	IO	2.85
57.750	0.00	0.21	0.628	IO	2.84
57.833	0.00	0.21	0.626	IO	2.84
57.917	0.00	0.20	0.625	IO	2.83
58.000	0.00	0.20	0.624	IO	2.83
58.083	0.00	0.20	0.622	IO	2.83
58.167	0.00	0.20	0.621	IO	2.82
58.250	0.00	0.20	0.619	IO	2.82
58.333	0.00	0.20	0.618	IO	2.81
58.417	0.00	0.20	0.617	IO	2.81
58.500	0.00	0.20	0.615	IO	2.81
58.583	0.00	0.20	0.614	IO	2.80
58.667	0.00	0.20	0.612	IO	2.80
58.750	0.00	0.20	0.611	IO	2.79
58.833	0.00	0.20	0.610	IO	2.79
58.917	0.00	0.20	0.608	IO	2.79
59.000	0.00	0.20	0.607	IO	2.78
59.083	0.00	0.20	0.605	IO	2.78
59.167	0.00	0.20	0.604	IO	2.78
59.250	0.00	0.20	0.602	IO	2.77
59.333	0.00	0.20	0.601	IO	2.77
59.417	0.00	0.20	0.600	IO	2.76
59.500	0.00	0.20	0.598	IO	2.76
59.583	0.00	0.20	0.597	IO	2.76
59.667	0.00	0.20	0.596	IO	2.75
59.750	0.00	0.20	0.594	IO	2.75
59.833	0.00	0.20	0.593	IO	2.74
59.917	0.00	0.20	0.591	IO	2.74
60.000	0.00	0.20	0.590	IO	2.74
60.083	0.00	0.20	0.589	IO	2.73
60.167	0.00	0.20	0.587	IO	2.73
60.250	0.00	0.20	0.586	IO	2.72
60.333	0.00	0.20	0.584	IO	2.72
60.417	0.00	0.20	0.583	IO	2.72
60.500	0.00	0.20	0.582	IO	2.71
60.583	0.00	0.20	0.580	IO	2.71
60.667	0.00	0.20	0.579	IO	2.71
60.750	0.00	0.20	0.577	IO	2.70
60.833	0.00	0.20	0.576	IO	2.70
60.917	0.00	0.20	0.575	IO	2.69
61.000	0.00	0.20	0.573	IO	2.69
61.083	0.00	0.20	0.572	IO	2.69
61.167	0.00	0.20	0.571	IO	2.68

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61.250	0.00	0.20	0.569	IO	2.68
61.333	0.00	0.20	0.568	IO	2.67
61.417	0.00	0.20	0.566	IO	2.67
61.500	0.00	0.20	0.565	IO	2.67
61.583	0.00	0.20	0.564	IO	2.66
61.667	0.00	0.20	0.562	IO	2.66
61.750	0.00	0.20	0.561	IO	2.65
61.833	0.00	0.20	0.560	IO	2.65
61.917	0.00	0.20	0.558	IO	2.65
62.000	0.00	0.20	0.557	IO	2.64
62.083	0.00	0.20	0.555	IO	2.64
62.167	0.00	0.20	0.554	IO	2.63
62.250	0.00	0.20	0.553	IO	2.63
62.333	0.00	0.20	0.551	IO	2.63
62.417	0.00	0.20	0.550	IO	2.62
62.500	0.00	0.20	0.549	IO	2.62
62.583	0.00	0.20	0.547	IO	2.61
62.667	0.00	0.20	0.546	IO	2.61
62.750	0.00	0.20	0.545	IO	2.61
62.833	0.00	0.20	0.543	IO	2.60
62.917	0.00	0.20	0.542	IO	2.60
63.000	0.00	0.20	0.541	IO	2.59
63.083	0.00	0.20	0.539	IO	2.59
63.167	0.00	0.20	0.538	IO	2.59
63.250	0.00	0.19	0.536	IO	2.58
63.333	0.00	0.19	0.535	IO	2.58
63.417	0.00	0.19	0.534	IO	2.57
63.500	0.00	0.19	0.532	IO	2.57
63.583	0.00	0.19	0.531	IO	2.57
63.667	0.00	0.19	0.530	IO	2.56
63.750	0.00	0.19	0.528	IO	2.56
63.833	0.00	0.19	0.527	IO	2.56
63.917	0.00	0.19	0.526	IO	2.55
64.000	0.00	0.19	0.524	IO	2.55
64.083	0.00	0.19	0.523	IO	2.54
64.167	0.00	0.19	0.522	IO	2.54
64.250	0.00	0.19	0.521	IO	2.54
64.333	0.00	0.19	0.519	IO	2.53
64.417	0.00	0.19	0.518	IO	2.53
64.500	0.00	0.19	0.517	IO	2.52
64.583	0.00	0.19	0.515	IO	2.52
64.667	0.00	0.19	0.514	IO	2.52
64.750	0.00	0.19	0.513	IO	2.51
64.833	0.00	0.19	0.511	IO	2.51
64.917	0.00	0.19	0.510	IO	2.50
65.000	0.00	0.19	0.509	IO	2.50
65.083	0.00	0.19	0.507	IO	2.50
65.167	0.00	0.19	0.506	IO	2.49
65.250	0.00	0.19	0.505	IO	2.49
65.333	0.00	0.19	0.503	IO	2.49
65.417	0.00	0.19	0.502	IO	2.48
65.500	0.00	0.19	0.501	IO	2.48
65.583	0.00	0.19	0.500	IO	2.47
65.667	0.00	0.19	0.498	IO	2.47
65.750	0.00	0.19	0.497	IO	2.47
65.833	0.00	0.19	0.496	IO	2.46
65.917	0.00	0.19	0.494	IO	2.46
66.000	0.00	0.19	0.493	IO	2.45
66.083	0.00	0.19	0.492	IO	2.45
66.167	0.00	0.19	0.490	IO	2.45
66.250	0.00	0.19	0.489	IO	2.44
66.333	0.00	0.19	0.488	IO	2.44
66.417	0.00	0.19	0.487	IO	2.44
66.500	0.00	0.19	0.485	IO	2.43
66.583	0.00	0.19	0.484	IO	2.43
66.667	0.00	0.19	0.483	IO	2.42
66.750	0.00	0.19	0.482	IO	2.42
66.833	0.00	0.19	0.480	IO	2.42

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66.917	0.00	0.18	0.479	IO	2.41
67.000	0.00	0.18	0.478	IO	2.41
67.083	0.00	0.18	0.476	IO	2.41
67.167	0.00	0.18	0.475	IO	2.40
67.250	0.00	0.18	0.474	IO	2.40
67.333	0.00	0.18	0.473	IO	2.39
67.417	0.00	0.18	0.471	IO	2.39
67.500	0.00	0.18	0.470	IO	2.39
67.583	0.00	0.18	0.469	IO	2.38
67.667	0.00	0.18	0.468	IO	2.38
67.750	0.00	0.18	0.466	IO	2.38
67.833	0.00	0.18	0.465	IO	2.37
67.917	0.00	0.18	0.464	IO	2.37
68.000	0.00	0.18	0.463	IO	2.36
68.083	0.00	0.18	0.461	IO	2.36
68.167	0.00	0.18	0.460	IO	2.36
68.250	0.00	0.18	0.459	IO	2.35
68.333	0.00	0.18	0.458	IO	2.35
68.417	0.00	0.18	0.456	IO	2.35
68.500	0.00	0.18	0.455	IO	2.34
68.583	0.00	0.18	0.454	IO	2.34
68.667	0.00	0.18	0.453	IO	2.33
68.750	0.00	0.18	0.451	IO	2.33
68.833	0.00	0.18	0.450	IO	2.33
68.917	0.00	0.18	0.449	IO	2.32
69.000	0.00	0.18	0.448	IO	2.32
69.083	0.00	0.18	0.446	IO	2.32
69.167	0.00	0.18	0.445	IO	2.31
69.250	0.00	0.18	0.444	IO	2.31
69.333	0.00	0.18	0.443	IO	2.30
69.417	0.00	0.18	0.441	IO	2.30
69.500	0.00	0.18	0.440	IO	2.30
69.583	0.00	0.18	0.439	IO	2.29
69.667	0.00	0.18	0.438	IO	2.29
69.750	0.00	0.18	0.437	IO	2.28
69.833	0.00	0.18	0.435	IO	2.28
69.917	0.00	0.18	0.434	IO	2.28
70.000	0.00	0.18	0.433	IO	2.27
70.083	0.00	0.18	0.432	IO	2.27
70.167	0.00	0.18	0.430	IO	2.27
70.250	0.00	0.18	0.429	IO	2.26
70.333	0.00	0.18	0.428	IO	2.26
70.417	0.00	0.18	0.427	IO	2.25
70.500	0.00	0.18	0.425	IO	2.25
70.583	0.00	0.18	0.424	IO	2.25
70.667	0.00	0.18	0.423	IO	2.24
70.750	0.00	0.18	0.422	IO	2.24
70.833	0.00	0.18	0.421	IO	2.24
70.917	0.00	0.18	0.419	IO	2.23
71.000	0.00	0.18	0.418	IO	2.23
71.083	0.00	0.18	0.417	IO	2.22
71.167	0.00	0.18	0.416	IO	2.22
71.250	0.00	0.18	0.414	IO	2.22
71.333	0.00	0.18	0.413	IO	2.21
71.417	0.00	0.18	0.412	IO	2.21
71.500	0.00	0.18	0.411	IO	2.20
71.583	0.00	0.18	0.410	IO	2.20
71.667	0.00	0.18	0.408	IO	2.20
71.750	0.00	0.18	0.407	IO	2.19
71.833	0.00	0.18	0.406	IO	2.19
71.917	0.00	0.18	0.405	IO	2.19
72.000	0.00	0.18	0.404	IO	2.18
72.083	0.00	0.18	0.402	IO	2.18
72.167	0.00	0.18	0.401	IO	2.17
72.250	0.00	0.18	0.400	IO	2.17
72.333	0.00	0.18	0.399	IO	2.17
72.417	0.00	0.17	0.398	IO	2.16
72.500	0.00	0.17	0.396	IO	2.16

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72.583	0.00	0.17	0.395	IO	2.16
72.667	0.00	0.17	0.394	IO	2.15
72.750	0.00	0.17	0.393	IO	2.15
72.833	0.00	0.17	0.392	IO	2.14
72.917	0.00	0.17	0.390	IO	2.14
73.000	0.00	0.17	0.389	IO	2.14
73.083	0.00	0.17	0.388	IO	2.13
73.167	0.00	0.17	0.387	IO	2.13
73.250	0.00	0.17	0.386	IO	2.13
73.333	0.00	0.17	0.384	IO	2.12
73.417	0.00	0.17	0.383	IO	2.12
73.500	0.00	0.17	0.382	IO	2.12
73.583	0.00	0.17	0.381	IO	2.11
73.667	0.00	0.17	0.380	IO	2.11
73.750	0.00	0.17	0.378	IO	2.10
73.833	0.00	0.17	0.377	IO	2.10
73.917	0.00	0.17	0.376	IO	2.10
74.000	0.00	0.17	0.375	IO	2.09
74.083	0.00	0.17	0.374	IO	2.09
74.167	0.00	0.17	0.372	IO	2.09
74.250	0.00	0.17	0.371	IO	2.08
74.333	0.00	0.17	0.370	IO	2.08
74.417	0.00	0.17	0.369	IO	2.07
74.500	0.00	0.17	0.368	IO	2.07
74.583	0.00	0.17	0.366	IO	2.07
74.667	0.00	0.17	0.365	IO	2.06
74.750	0.00	0.17	0.364	IO	2.06
74.833	0.00	0.17	0.363	IO	2.06
74.917	0.00	0.17	0.362	IO	2.05
75.000	0.00	0.17	0.361	IO	2.05
75.083	0.00	0.17	0.359	IO	2.04
75.167	0.00	0.17	0.358	IO	2.04
75.250	0.00	0.17	0.357	IO	2.04
75.333	0.00	0.17	0.356	IO	2.03
75.417	0.00	0.17	0.355	IO	2.03
75.500	0.00	0.17	0.353	IO	2.03
75.583	0.00	0.17	0.352	IO	2.02
75.667	0.00	0.17	0.351	IO	2.02
75.750	0.00	0.17	0.350	IO	2.02
75.833	0.00	0.17	0.349	IO	2.01
75.917	0.00	0.17	0.348	IO	2.01
76.000	0.00	0.17	0.346	IO	2.00
76.083	0.00	0.17	0.345	IO	2.00
76.167	0.00	0.17	0.344	IO	2.00
76.250	0.00	0.17	0.343	IO	1.99
76.333	0.00	0.17	0.342	IO	1.99
76.417	0.00	0.17	0.341	IO	1.98
76.500	0.00	0.17	0.339	IO	1.98
76.583	0.00	0.17	0.338	IO	1.98
76.667	0.00	0.17	0.337	IO	1.97
76.750	0.00	0.17	0.336	IO	1.97
76.833	0.00	0.17	0.335	IO	1.96
76.917	0.00	0.17	0.334	IO	1.96
77.000	0.00	0.17	0.332	IO	1.96
77.083	0.00	0.17	0.331	IO	1.95
77.167	0.00	0.17	0.330	IO	1.95
77.250	0.00	0.17	0.329	IO	1.94
77.333	0.00	0.17	0.328	IO	1.94
77.417	0.00	0.17	0.327	IO	1.94
77.500	0.00	0.17	0.326	IO	1.93
77.583	0.00	0.17	0.324	IO	1.93
77.667	0.00	0.17	0.323	IO	1.92
77.750	0.00	0.17	0.322	IO	1.92
77.833	0.00	0.16	0.321	IO	1.92
77.917	0.00	0.16	0.320	IO	1.91
78.000	0.00	0.16	0.319	IO	1.91
78.083	0.00	0.16	0.318	IO	1.90
78.167	0.00	0.16	0.317	IO	1.90

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78.250	0.00	0.16	0.315	IO	1.89
78.333	0.00	0.16	0.314	IO	1.89
78.417	0.00	0.16	0.313	IO	1.89
78.500	0.00	0.16	0.312	IO	1.88
78.583	0.00	0.16	0.311	IO	1.88
78.667	0.00	0.16	0.310	IO	1.88
78.750	0.00	0.16	0.309	IO	1.87
78.833	0.00	0.16	0.308	IO	1.87
78.917	0.00	0.16	0.306	IO	1.86
79.000	0.00	0.16	0.305	IO	1.86
79.083	0.00	0.16	0.304	IO	1.86
79.167	0.00	0.16	0.303	IO	1.85
79.250	0.00	0.16	0.302	IO	1.85
79.333	0.00	0.16	0.301	IO	1.84
79.417	0.00	0.16	0.300	IO	1.84
79.500	0.00	0.16	0.299	IO	1.84
79.583	0.00	0.16	0.298	IO	1.83
79.667	0.00	0.16	0.296	IO	1.83
79.750	0.00	0.16	0.295	IO	1.82
79.833	0.00	0.16	0.294	IO	1.82
79.917	0.00	0.16	0.293	IO	1.82
80.000	0.00	0.16	0.292	IO	1.81
80.083	0.00	0.16	0.291	IO	1.81
80.167	0.00	0.16	0.290	IO	1.80
80.250	0.00	0.16	0.289	IO	1.80
80.333	0.00	0.16	0.288	IO	1.80
80.417	0.00	0.16	0.287	IO	1.79
80.500	0.00	0.16	0.286	IO	1.79
80.583	0.00	0.16	0.284	IO	1.79
80.667	0.00	0.16	0.283	IO	1.78
80.750	0.00	0.16	0.282	IO	1.78
80.833	0.00	0.16	0.281	IO	1.77
80.917	0.00	0.16	0.280	IO	1.77
81.000	0.00	0.16	0.279	IO	1.77
81.083	0.00	0.16	0.278	IO	1.76
81.167	0.00	0.16	0.277	IO	1.76
81.250	0.00	0.16	0.276	IO	1.75
81.333	0.00	0.15	0.275	IO	1.75
81.417	0.00	0.15	0.274	IO	1.75
81.500	0.00	0.15	0.273	IO	1.74
81.583	0.00	0.15	0.272	IO	1.74
81.667	0.00	0.15	0.271	IO	1.74
81.750	0.00	0.15	0.270	IO	1.73
81.833	0.00	0.15	0.268	IO	1.73
81.917	0.00	0.15	0.267	IO	1.72
82.000	0.00	0.15	0.266	IO	1.72
82.083	0.00	0.15	0.265	IO	1.72
82.167	0.00	0.15	0.264	IO	1.71
82.250	0.00	0.15	0.263	IO	1.71
82.333	0.00	0.15	0.262	IO	1.71
82.417	0.00	0.15	0.261	IO	1.70
82.500	0.00	0.15	0.260	IO	1.70
82.583	0.00	0.15	0.259	IO	1.69
82.667	0.00	0.15	0.258	IO	1.69
82.750	0.00	0.15	0.257	IO	1.69
82.833	0.00	0.15	0.256	IO	1.68
82.917	0.00	0.15	0.255	IO	1.68
83.000	0.00	0.15	0.254	IO	1.68
83.083	0.00	0.15	0.253	IO	1.67
83.167	0.00	0.15	0.252	IO	1.67
83.250	0.00	0.15	0.251	IO	1.66
83.333	0.00	0.15	0.250	IO	1.66
83.417	0.00	0.15	0.249	IO	1.66
83.500	0.00	0.15	0.248	IO	1.65
83.583	0.00	0.15	0.247	IO	1.65
83.667	0.00	0.15	0.246	IO	1.64
83.750	0.00	0.15	0.245	IO	1.64
83.833	0.00	0.15	0.244	IO	1.63

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83.917	0.00	0.15	0.242	IO				1.63
84.000	0.00	0.15	0.241	IO				1.62
84.083	0.00	0.15	0.240	IO				1.62
84.167	0.00	0.15	0.239	IO				1.62
84.250	0.00	0.15	0.238	IO				1.61
84.333	0.00	0.15	0.237	IO				1.61
84.417	0.00	0.15	0.236	IO				1.60
84.500	0.00	0.15	0.235	IO				1.60
84.583	0.00	0.15	0.234	IO				1.59
84.667	0.00	0.15	0.233	IO				1.59
84.750	0.00	0.15	0.232	IO				1.59
84.833	0.00	0.15	0.231	IO				1.58
84.917	0.00	0.15	0.230	IO				1.58
85.000	0.00	0.15	0.229	IO				1.57
85.083	0.00	0.15	0.228	O				1.57
85.167	0.00	0.15	0.227	O				1.56
85.250	0.00	0.15	0.226	O				1.56
85.333	0.00	0.15	0.225	O				1.55
85.417	0.00	0.15	0.224	O				1.55
85.500	0.00	0.15	0.223	O				1.55
85.583	0.00	0.15	0.222	O				1.54
85.667	0.00	0.15	0.221	O				1.54
85.750	0.00	0.15	0.220	O				1.53
85.833	0.00	0.15	0.219	O				1.53
85.917	0.00	0.15	0.218	O				1.52
86.000	0.00	0.15	0.217	O				1.52
86.083	0.00	0.15	0.216	O				1.52
86.167	0.00	0.15	0.215	O				1.51
86.250	0.00	0.15	0.214	O				1.51
86.333	0.00	0.15	0.213	O				1.50
86.417	0.00	0.14	0.212	O				1.50
86.500	0.00	0.14	0.211	O				1.49
86.583	0.00	0.14	0.210	O				1.49
86.667	0.00	0.14	0.209	O				1.49
86.750	0.00	0.14	0.208	O				1.48
86.833	0.00	0.14	0.207	O				1.48
86.917	0.00	0.14	0.206	O				1.47
87.000	0.00	0.14	0.205	O				1.47
87.083	0.00	0.14	0.204	O				1.46
87.167	0.00	0.14	0.203	O				1.46
87.250	0.00	0.14	0.202	O				1.46
87.333	0.00	0.14	0.201	O				1.45
87.417	0.00	0.14	0.200	O				1.45
87.500	0.00	0.14	0.199	O				1.44
87.583	0.00	0.14	0.198	O				1.44
87.667	0.00	0.14	0.197	O				1.43
87.750	0.00	0.14	0.196	O				1.43
87.833	0.00	0.14	0.195	O				1.43
87.917	0.00	0.14	0.194	O				1.42
88.000	0.00	0.14	0.193	O				1.42
88.083	0.00	0.14	0.192	O				1.41
88.167	0.00	0.14	0.191	O				1.41
88.250	0.00	0.14	0.190	O				1.40
88.333	0.00	0.14	0.189	O				1.40
88.417	0.00	0.14	0.188	O				1.40
88.500	0.00	0.14	0.187	O				1.39
88.583	0.00	0.14	0.186	O				1.39
88.667	0.00	0.14	0.185	O				1.38
88.750	0.00	0.14	0.185	O				1.38
88.833	0.00	0.14	0.184	O				1.38
88.917	0.00	0.14	0.183	O				1.37
89.000	0.00	0.14	0.182	O				1.37
89.083	0.00	0.14	0.181	O				1.36
89.167	0.00	0.14	0.180	O				1.36
89.250	0.00	0.14	0.179	O				1.35
89.333	0.00	0.14	0.178	O				1.35
89.417	0.00	0.14	0.177	O				1.35
89.500	0.00	0.14	0.176	O				1.34

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89.583	0.00	0.14	0.175	0	1.34
89.667	0.00	0.14	0.174	0	1.33
89.750	0.00	0.14	0.173	0	1.33
89.833	0.00	0.14	0.172	0	1.32
89.917	0.00	0.14	0.171	0	1.32
90.000	0.00	0.14	0.170	0	1.31
90.083	0.00	0.14	0.169	0	1.31
90.167	0.00	0.14	0.168	0	1.30
90.250	0.00	0.14	0.167	0	1.30
90.333	0.00	0.14	0.166	0	1.29
90.417	0.00	0.14	0.165	0	1.29
90.500	0.00	0.14	0.164	0	1.29
90.583	0.00	0.14	0.163	0	1.28
90.667	0.00	0.14	0.162	0	1.28
90.750	0.00	0.14	0.161	0	1.27
90.833	0.00	0.14	0.161	0	1.27
90.917	0.00	0.14	0.160	0	1.26
91.000	0.00	0.14	0.159	0	1.26
91.083	0.00	0.14	0.158	0	1.25
91.167	0.00	0.13	0.157	0	1.25
91.250	0.00	0.13	0.156	0	1.24
91.333	0.00	0.13	0.155	0	1.24
91.417	0.00	0.13	0.154	0	1.23
91.500	0.00	0.13	0.153	0	1.23
91.583	0.00	0.13	0.152	0	1.22
91.667	0.00	0.13	0.151	0	1.22
91.750	0.00	0.13	0.150	0	1.21
91.833	0.00	0.13	0.149	0	1.21
91.917	0.00	0.13	0.149	0	1.20
92.000	0.00	0.13	0.148	0	1.20
92.083	0.00	0.13	0.147	0	1.19
92.167	0.00	0.13	0.146	0	1.19
92.250	0.00	0.13	0.145	0	1.19
92.333	0.00	0.13	0.144	0	1.18
92.417	0.00	0.13	0.143	0	1.18
92.500	0.00	0.13	0.142	0	1.17
92.583	0.00	0.13	0.141	0	1.17
92.667	0.00	0.13	0.140	0	1.16
92.750	0.00	0.13	0.139	0	1.16
92.833	0.00	0.13	0.139	0	1.15
92.917	0.00	0.13	0.138	0	1.15
93.000	0.00	0.13	0.137	0	1.14
93.083	0.00	0.13	0.136	0	1.14
93.167	0.00	0.13	0.135	0	1.13
93.250	0.00	0.13	0.134	0	1.13
93.333	0.00	0.13	0.133	0	1.13
93.417	0.00	0.13	0.132	0	1.12
93.500	0.00	0.13	0.132	0	1.12
93.583	0.00	0.13	0.131	0	1.11
93.667	0.00	0.13	0.130	0	1.11
93.750	0.00	0.13	0.129	0	1.10
93.833	0.00	0.13	0.128	0	1.10
93.917	0.00	0.13	0.127	0	1.09
94.000	0.00	0.13	0.126	0	1.09
94.083	0.00	0.13	0.125	0	1.08
94.167	0.00	0.12	0.125	0	1.08
94.250	0.00	0.12	0.124	0	1.08
94.333	0.00	0.12	0.123	0	1.07
94.417	0.00	0.12	0.122	0	1.07
94.500	0.00	0.12	0.121	0	1.06
94.583	0.00	0.12	0.120	0	1.06
94.667	0.00	0.12	0.119	0	1.05
94.750	0.00	0.12	0.119	0	1.05
94.833	0.00	0.12	0.118	0	1.05
94.917	0.00	0.12	0.117	0	1.04
95.000	0.00	0.12	0.116	0	1.04
95.083	0.00	0.12	0.115	0	1.03
95.167	0.00	0.12	0.114	0	1.03

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95.250	0.00	0.12	0.114	0				1.02
95.333	0.00	0.12	0.113	0				1.02
95.417	0.00	0.12	0.112	0				1.02
95.500	0.00	0.12	0.111	0				1.01
95.583	0.00	0.12	0.110	0				1.01
95.667	0.00	0.12	0.109	0				1.00
95.750	0.00	0.12	0.109	0				1.00
95.833	0.00	0.12	0.108	0				0.99
95.917	0.00	0.12	0.107	0				0.99
96.000	0.00	0.12	0.106	0				0.98
96.083	0.00	0.12	0.105	0				0.98
96.167	0.00	0.12	0.105	0				0.97
96.250	0.00	0.12	0.104	0				0.97
96.333	0.00	0.12	0.103	0				0.96
96.417	0.00	0.12	0.102	0				0.96
96.500	0.00	0.12	0.101	0				0.95
96.583	0.00	0.12	0.101	0				0.95
96.667	0.00	0.11	0.100	0				0.94
96.750	0.00	0.11	0.099	0				0.94
96.833	0.00	0.11	0.098	0				0.93
96.917	0.00	0.11	0.097	0				0.93
97.000	0.00	0.11	0.097	0				0.92
97.083	0.00	0.11	0.096	0				0.92
97.167	0.00	0.11	0.095	0				0.91
97.250	0.00	0.11	0.094	0				0.91
97.333	0.00	0.11	0.093	0				0.90
97.417	0.00	0.11	0.093	0				0.90
97.500	0.00	0.11	0.092	0				0.89
97.583	0.00	0.11	0.091	0				0.89
97.667	0.00	0.11	0.090	0				0.88
97.750	0.00	0.11	0.090	0				0.88
97.833	0.00	0.11	0.089	0				0.87
97.917	0.00	0.11	0.088	0				0.87
98.000	0.00	0.11	0.087	0				0.86
98.083	0.00	0.11	0.087	0				0.86
98.167	0.00	0.11	0.086	0				0.85
98.250	0.00	0.11	0.085	0				0.85
98.333	0.00	0.11	0.085	0				0.84
98.417	0.00	0.11	0.084	0				0.84
98.500	0.00	0.11	0.083	0				0.84
98.583	0.00	0.10	0.082	0				0.83
98.667	0.00	0.10	0.082	0				0.83
98.750	0.00	0.10	0.081	0				0.82
98.833	0.00	0.10	0.080	0				0.82
98.917	0.00	0.10	0.080	0				0.81
99.000	0.00	0.10	0.079	0				0.81
99.083	0.00	0.10	0.078	0				0.80
99.167	0.00	0.10	0.077	0				0.80
99.250	0.00	0.10	0.077	0				0.79
99.333	0.00	0.10	0.076	0				0.79
99.417	0.00	0.10	0.075	0				0.79
99.500	0.00	0.10	0.075	0				0.78
99.583	0.00	0.10	0.074	0				0.78
99.667	0.00	0.10	0.073	0				0.77
99.750	0.00	0.10	0.073	0				0.77
99.833	0.00	0.10	0.072	0				0.76
99.917	0.00	0.10	0.071	0				0.76
100.000	0.00	0.10	0.071	0				0.76
100.083	0.00	0.10	0.070	0				0.75
100.167	0.00	0.10	0.069	0				0.75
100.250	0.00	0.10	0.069	0				0.74
100.333	0.00	0.10	0.068	0				0.74
100.417	0.00	0.10	0.067	0				0.73
100.500	0.00	0.10	0.067	0				0.73
100.583	0.00	0.10	0.066	0				0.73
100.667	0.00	0.09	0.065	0				0.72
100.750	0.00	0.09	0.065	0				0.72
100.833	0.00	0.09	0.064	0				0.71

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100.917	0.00	0.09	0.063	0				0.71
101.000	0.00	0.09	0.063	0				0.71
101.083	0.00	0.09	0.062	0				0.70
101.167	0.00	0.09	0.061	0				0.70
101.250	0.00	0.09	0.061	0				0.69
101.333	0.00	0.09	0.060	0				0.69
101.417	0.00	0.09	0.059	0				0.69
101.500	0.00	0.09	0.059	0				0.68
101.583	0.00	0.09	0.058	0				0.68
101.667	0.00	0.09	0.058	0				0.67
101.750	0.00	0.09	0.057	0				0.67
101.833	0.00	0.09	0.056	0				0.66
101.917	0.00	0.09	0.056	0				0.66
102.000	0.00	0.09	0.055	0				0.65
102.083	0.00	0.09	0.054	0				0.65
102.167	0.00	0.09	0.054	0				0.64
102.250	0.00	0.09	0.053	0				0.64
102.333	0.00	0.09	0.053	0				0.63
102.417	0.00	0.09	0.052	0				0.63
102.500	0.00	0.09	0.052	0				0.62
102.583	0.00	0.09	0.051	0				0.62
102.667	0.00	0.08	0.050	0				0.61
102.750	0.00	0.08	0.050	0				0.61
102.833	0.00	0.08	0.049	0				0.60
102.917	0.00	0.08	0.049	0				0.60
103.000	0.00	0.08	0.048	0				0.59
103.083	0.00	0.08	0.047	0				0.59
103.167	0.00	0.08	0.047	0				0.58
103.250	0.00	0.08	0.046	0				0.58
103.333	0.00	0.08	0.046	0				0.57
103.417	0.00	0.08	0.045	0				0.57
103.500	0.00	0.08	0.045	0				0.56
103.583	0.00	0.08	0.044	0				0.56
103.667	0.00	0.08	0.044	0				0.55
103.750	0.00	0.08	0.043	0				0.55
103.833	0.00	0.08	0.042	0				0.54
103.917	0.00	0.08	0.042	0				0.54
104.000	0.00	0.08	0.041	0				0.53
104.083	0.00	0.08	0.041	0				0.53
104.167	0.00	0.08	0.040	0				0.52
104.250	0.00	0.08	0.040	0				0.52
104.333	0.00	0.08	0.039	0				0.52
104.417	0.00	0.08	0.039	0				0.51
104.500	0.00	0.08	0.038	0				0.51
104.583	0.00	0.08	0.038	0				0.50
104.667	0.00	0.07	0.037	0				0.50
104.750	0.00	0.07	0.037	0				0.49
104.833	0.00	0.07	0.036	0				0.49
104.917	0.00	0.07	0.036	0				0.48
105.000	0.00	0.07	0.035	0				0.48
105.083	0.00	0.07	0.035	0				0.47
105.167	0.00	0.07	0.034	0				0.47
105.250	0.00	0.07	0.034	0				0.47
105.333	0.00	0.07	0.033	0				0.46
105.417	0.00	0.07	0.033	0				0.46
105.500	0.00	0.07	0.032	0				0.45
105.583	0.00	0.07	0.032	0				0.45
105.667	0.00	0.07	0.031	0				0.44
105.750	0.00	0.07	0.031	0				0.44
105.833	0.00	0.07	0.030	0				0.44
105.917	0.00	0.07	0.030	0				0.43
106.000	0.00	0.07	0.029	0				0.43
106.083	0.00	0.07	0.029	0				0.42
106.167	0.00	0.07	0.028	0				0.42
106.250	0.00	0.07	0.028	0				0.42
106.333	0.00	0.07	0.027	0				0.41
106.417	0.00	0.07	0.027	0				0.41
106.500	0.00	0.07	0.026	0				0.40

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106.583	0.00	0.07	0.026	0				0.40
106.667	0.00	0.07	0.026	0				0.40
106.750	0.00	0.07	0.025	0				0.39
106.833	0.00	0.07	0.025	0				0.39
106.917	0.00	0.06	0.024	0				0.38
107.000	0.00	0.06	0.024	0				0.38
107.083	0.00	0.06	0.023	0				0.38
107.167	0.00	0.06	0.023	0				0.37
107.250	0.00	0.06	0.022	0				0.37
107.333	0.00	0.06	0.022	0				0.36
107.417	0.00	0.06	0.022	0				0.36
107.500	0.00	0.06	0.021	0				0.36
107.583	0.00	0.06	0.021	0				0.35
107.667	0.00	0.06	0.020	0				0.35
107.750	0.00	0.06	0.020	0				0.35
107.833	0.00	0.06	0.019	0				0.34
107.917	0.00	0.06	0.019	0				0.34
108.000	0.00	0.06	0.019	0				0.34
108.083	0.00	0.06	0.018	0				0.33
108.167	0.00	0.06	0.018	0				0.33
108.250	0.00	0.06	0.017	0				0.32
108.333	0.00	0.06	0.017	0				0.31
108.417	0.00	0.06	0.017	0				0.30
108.500	0.00	0.05	0.016	0				0.30
108.583	0.00	0.05	0.016	0				0.29
108.667	0.00	0.05	0.015	0				0.28
108.750	0.00	0.05	0.015	0				0.28
108.833	0.00	0.05	0.015	0				0.27
108.917	0.00	0.05	0.014	0				0.27
109.000	0.00	0.05	0.014	0				0.26
109.083	0.00	0.05	0.014	0				0.25
109.167	0.00	0.04	0.013	0				0.25
109.250	0.00	0.04	0.013	0				0.24
109.333	0.00	0.04	0.013	0				0.24
109.417	0.00	0.04	0.013	0				0.23
109.500	0.00	0.04	0.012	0				0.23
109.583	0.00	0.04	0.012	0				0.22
109.667	0.00	0.04	0.012	0				0.22
109.750	0.00	0.04	0.011	0				0.21
109.833	0.00	0.04	0.011	0				0.21
109.917	0.00	0.04	0.011	0				0.20
110.000	0.00	0.04	0.011	0				0.20
110.083	0.00	0.03	0.010	0				0.19
110.167	0.00	0.03	0.010	0				0.19
110.250	0.00	0.03	0.010	0				0.18
110.333	0.00	0.03	0.010	0				0.18
110.417	0.00	0.03	0.010	0				0.18
110.500	0.00	0.03	0.009	0				0.17
110.583	0.00	0.03	0.009	0				0.17
110.667	0.00	0.03	0.009	0				0.16
110.750	0.00	0.03	0.009	0				0.16
110.833	0.00	0.03	0.009	0				0.16
110.917	0.00	0.03	0.008	0				0.15
111.000	0.00	0.03	0.008	0				0.15
111.083	0.00	0.03	0.008	0				0.15
111.167	0.00	0.03	0.008	0				0.14
111.250	0.00	0.03	0.008	0				0.14
111.333	0.00	0.02	0.007	0				0.14
111.417	0.00	0.02	0.007	0				0.13
111.500	0.00	0.02	0.007	0				0.13
111.583	0.00	0.02	0.007	0				0.13
111.667	0.00	0.02	0.007	0				0.12
111.750	0.00	0.02	0.007	0				0.12
111.833	0.00	0.02	0.006	0				0.12
111.917	0.00	0.02	0.006	0				0.12
112.000	0.00	0.02	0.006	0				0.11
112.083	0.00	0.02	0.006	0				0.11
112.167	0.00	0.02	0.006	0				0.11

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112.250	0.00	0.02	0.006	0				0.11
112.333	0.00	0.02	0.006	0				0.10
112.417	0.00	0.02	0.006	0				0.10
112.500	0.00	0.02	0.005	0				0.10
112.583	0.00	0.02	0.005	0				0.10
112.667	0.00	0.02	0.005	0				0.09
112.750	0.00	0.02	0.005	0				0.09
112.833	0.00	0.02	0.005	0				0.09
112.917	0.00	0.02	0.005	0				0.09
113.000	0.00	0.02	0.005	0				0.09
113.083	0.00	0.02	0.005	0				0.08
113.167	0.00	0.01	0.004	0				0.08
113.250	0.00	0.01	0.004	0				0.08
113.333	0.00	0.01	0.004	0				0.08
113.417	0.00	0.01	0.004	0				0.08
113.500	0.00	0.01	0.004	0				0.07
113.583	0.00	0.01	0.004	0				0.07
113.667	0.00	0.01	0.004	0				0.07
113.750	0.00	0.01	0.004	0				0.07
113.833	0.00	0.01	0.004	0				0.07
113.917	0.00	0.01	0.004	0				0.07
114.000	0.00	0.01	0.004	0				0.07
114.083	0.00	0.01	0.003	0				0.06
114.167	0.00	0.01	0.003	0				0.06
114.250	0.00	0.01	0.003	0				0.06
114.333	0.00	0.01	0.003	0				0.06
114.417	0.00	0.01	0.003	0				0.06
114.500	0.00	0.01	0.003	0				0.06
114.583	0.00	0.01	0.003	0				0.06
114.667	0.00	0.01	0.003	0				0.05
114.750	0.00	0.01	0.003	0				0.05
114.833	0.00	0.01	0.003	0				0.05
114.917	0.00	0.01	0.003	0				0.05
115.000	0.00	0.01	0.003	0				0.05
115.083	0.00	0.01	0.003	0				0.05
115.167	0.00	0.01	0.003	0				0.05
115.250	0.00	0.01	0.003	0				0.05
115.333	0.00	0.01	0.002	0				0.05
115.417	0.00	0.01	0.002	0				0.04
115.500	0.00	0.01	0.002	0				0.04
115.583	0.00	0.01	0.002	0				0.04
115.667	0.00	0.01	0.002	0				0.04
115.750	0.00	0.01	0.002	0				0.04
115.833	0.00	0.01	0.002	0				0.04
115.917	0.00	0.01	0.002	0				0.04
116.000	0.00	0.01	0.002	0				0.04
116.083	0.00	0.01	0.002	0				0.04
116.167	0.00	0.01	0.002	0				0.04
116.250	0.00	0.01	0.002	0				0.04
116.333	0.00	0.01	0.002	0				0.03
116.417	0.00	0.01	0.002	0				0.03
116.500	0.00	0.01	0.002	0				0.03
116.583	0.00	0.01	0.002	0				0.03
116.667	0.00	0.01	0.002	0				0.03
116.750	0.00	0.01	0.002	0				0.03
116.833	0.00	0.01	0.002	0				0.03
116.917	0.00	0.01	0.002	0				0.03
117.000	0.00	0.01	0.002	0				0.03
117.083	0.00	0.01	0.002	0				0.03
117.167	0.00	0.00	0.001	0				0.03
117.250	0.00	0.00	0.001	0				0.03
117.333	0.00	0.00	0.001	0				0.03
117.417	0.00	0.00	0.001	0				0.03
117.500	0.00	0.00	0.001	0				0.02
117.583	0.00	0.00	0.001	0				0.02
117.667	0.00	0.00	0.001	0				0.02
117.750	0.00	0.00	0.001	0				0.02
117.833	0.00	0.00	0.001	0				0.02

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117.917	0.00	0.00	0.001	0				0.02
118.000	0.00	0.00	0.001	0				0.02
118.083	0.00	0.00	0.001	0				0.02
118.167	0.00	0.00	0.001	0				0.02
118.250	0.00	0.00	0.001	0				0.02
118.333	0.00	0.00	0.001	0				0.02
118.417	0.00	0.00	0.001	0				0.02
118.500	0.00	0.00	0.001	0				0.02
118.583	0.00	0.00	0.001	0				0.02
118.667	0.00	0.00	0.001	0				0.02
118.750	0.00	0.00	0.001	0				0.02
118.833	0.00	0.00	0.001	0				0.02
118.917	0.00	0.00	0.001	0				0.02
119.000	0.00	0.00	0.001	0				0.02
119.083	0.00	0.00	0.001	0				0.02
119.167	0.00	0.00	0.001	0				0.02
119.250	0.00	0.00	0.001	0				0.02
119.333	0.00	0.00	0.001	0				0.02
119.417	0.00	0.00	0.001	0				0.01
119.500	0.00	0.00	0.001	0				0.01
119.583	0.00	0.00	0.001	0				0.01
119.667	0.00	0.00	0.001	0				0.01
119.750	0.00	0.00	0.001	0				0.01
119.833	0.00	0.00	0.001	0				0.01
119.917	0.00	0.00	0.001	0				0.01
120.000	0.00	0.00	0.001	0				0.01
120.083	0.00	0.00	0.001	0				0.01
120.167	0.00	0.00	0.001	0				0.01
120.250	0.00	0.00	0.001	0				0.01
120.333	0.00	0.00	0.001	0				0.01
120.417	0.00	0.00	0.001	0				0.01
120.500	0.00	0.00	0.001	0				0.01
120.583	0.00	0.00	0.001	0				0.01
120.667	0.00	0.00	0.001	0				0.01
120.750	0.00	0.00	0.001	0				0.01
120.833	0.00	0.00	0.001	0				0.01
120.917	0.00	0.00	0.001	0				0.01
121.000	0.00	0.00	0.001	0				0.01
121.083	0.00	0.00	0.001	0				0.01
121.167	0.00	0.00	0.000	0				0.01
121.250	0.00	0.00	0.000	0				0.01
121.333	0.00	0.00	0.000	0				0.01
121.417	0.00	0.00	0.000	0				0.01
121.500	0.00	0.00	0.000	0				0.01
121.583	0.00	0.00	0.000	0				0.01
121.667	0.00	0.00	0.000	0				0.01
121.750	0.00	0.00	0.000	0				0.01
121.833	0.00	0.00	0.000	0				0.01
121.917	0.00	0.00	0.000	0				0.01
122.000	0.00	0.00	0.000	0				0.01
122.083	0.00	0.00	0.000	0				0.01
122.167	0.00	0.00	0.000	0				0.01
122.250	0.00	0.00	0.000	0				0.01
122.333	0.00	0.00	0.000	0				0.01
122.417	0.00	0.00	0.000	0				0.01
122.500	0.00	0.00	0.000	0				0.01
122.583	0.00	0.00	0.000	0				0.01
122.667	0.00	0.00	0.000	0				0.01
122.750	0.00	0.00	0.000	0				0.01
122.833	0.00	0.00	0.000	0				0.01
122.917	0.00	0.00	0.000	0				0.01
123.000	0.00	0.00	0.000	0				0.01

*****HYDROGRAPH DATA*****

Number of intervals = 1476
 Time interval = 5.0 (Min.)
 Maximum/Peak flow rate = 0.880 (CFS)
 Total volume = 2.860 (Ac.Ft)

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Status of hydrographs being held in storage

	Stream 1	Stream 2	Stream 3	Stream 4	Stream 5
Peak (CFS)	0.000	0.000	0.000	0.000	0.000
Vol (Ac.Ft)	0.000	0.000	0.000	0.000	0.000

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FLOOD HYDROGRAPH ROUTING PROGRAM
Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2005
Study date: 10/12/21

Pacific Emerald
100-Year 1-Hour Storm Routing
Proposed Condition

Program License Serial Number 6062

***** HYDROGRAPH INFORMATION *****

From study/file name: 100yr1hrp1100.rte
*****HYDROGRAPH DATA*****
Number of intervals = 17
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 91.078 (CFS)
Total volume = 3.198 (Ac.Ft)
Status of hydrographs being held in storage
Stream 1 Stream 2 Stream 3 Stream 4 Stream 5
Peak (CFS) 0.000 0.000 0.000 0.000 0.000
Vol (Ac.Ft) 0.000 0.000 0.000 0.000 0.000

+++++
Process from Point/Station 1.000 to Point/Station 2.000
**** RETARDING BASIN ROUTING ****

User entry of depth-outflow-storage data

Total number of inflow hydrograph intervals = 17
Hydrograph time unit = 5.000 (Min.)
Initial depth in storage basin = 0.00(Ft.)

Initial basin depth = 0.00 (Ft.)
Initial basin storage = 0.00 (Ac.Ft)
Initial basin outflow = 0.00 (CFS)

Depth vs. Storage and Depth vs. Discharge data:

Basin Depth (Ft.)	Storage (Ac.Ft)	Outflow (CFS)	(S-0*dt/2) (Ac.Ft)	(S+0*dt/2) (Ac.Ft)
0.000	0.000	0.000	0.000	0.000
0.330	0.018	0.060	0.018	0.018
0.670	0.057	0.090	0.057	0.057
1.000	0.109	0.120	0.109	0.109
1.330	0.173	0.140	0.173	0.173
1.670	0.252	0.150	0.251	0.253
2.000	0.345	0.170	0.344	0.346
2.330	0.451	0.180	0.450	0.452
2.670	0.566	0.200	0.565	0.567
3.000	0.685	0.210	0.684	0.686
3.330	0.811	0.220	0.810	0.812
3.670	0.948	0.410	0.947	0.949

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4.000	1.088	0.510	1.086	1.090
5.000	1.558	0.720	1.556	1.560
6.000	2.096	0.870	2.093	2.099
6.330	2.289	0.920	2.286	2.292
7.000	2.706	83.260	2.419	2.993
8.000	3.390	324.830	2.271	4.509

Hydrograph Detention Basin Routing

Graph values: 'I'= unit inflow; 'O'=outflow at time shown

Time (Hours)	Inflow (CFS)	Outflow (CFS)	Storage (Ac.Ft)	Depth (Ft.)
0.083	5.13	0.06	0.017	0.32
0.167	13.28	0.10	0.080	0.82
0.250	16.65	0.14	0.183	1.37
0.333	19.35	0.16	0.305	1.86
0.417	21.59	0.18	0.445	2.31
0.500	25.27	0.20	0.605	2.78
0.583	29.13	0.22	0.791	3.28
0.667	34.10	0.45	1.007	3.81
0.750	44.05	0.59	1.272	4.39
0.833	82.01	0.76	1.702	5.27
0.917	91.08	1.25	2.291	6.33
1.000	43.44	54.68	2.561	6.77
1.083	23.76	37.61	2.475	6.63
1.167	9.29	20.54	2.388	6.49
1.250	4.67	9.57	2.333	6.40
1.333	1.14	4.18	2.305	6.36
1.417	0.39	1.41	2.291	6.33
1.500	0.00	0.92	2.285	6.32
1.583	0.00	0.92	2.278	6.31
1.667	0.00	0.92	2.272	6.30
1.750	0.00	0.91	2.266	6.29
1.833	0.00	0.91	2.260	6.28
1.917	0.00	0.91	2.253	6.27
2.000	0.00	0.91	2.247	6.26
2.083	0.00	0.91	2.241	6.25
2.167	0.00	0.91	2.235	6.24
2.250	0.00	0.90	2.228	6.23
2.333	0.00	0.90	2.222	6.22
2.417	0.00	0.90	2.216	6.20
2.500	0.00	0.90	2.210	6.19
2.583	0.00	0.90	2.203	6.18
2.667	0.00	0.90	2.197	6.17
2.750	0.00	0.89	2.191	6.16
2.833	0.00	0.89	2.185	6.15
2.917	0.00	0.89	2.179	6.14
3.000	0.00	0.89	2.173	6.13
3.083	0.00	0.89	2.167	6.12
3.167	0.00	0.89	2.160	6.11
3.250	0.00	0.89	2.154	6.10
3.333	0.00	0.88	2.148	6.09
3.417	0.00	0.88	2.142	6.08
3.500	0.00	0.88	2.136	6.07
3.583	0.00	0.88	2.130	6.06
3.667	0.00	0.88	2.124	6.05
3.750	0.00	0.88	2.118	6.04
3.833	0.00	0.87	2.112	6.03
3.917	0.00	0.87	2.106	6.02
4.000	0.00	0.87	2.100	6.01
4.083	0.00	0.87	2.094	6.00
4.167	0.00	0.87	2.088	5.99
4.250	0.00	0.87	2.082	5.97
4.333	0.00	0.86	2.076	5.96
4.417	0.00	0.86	2.070	5.95
4.500	0.00	0.86	2.064	5.94

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4.583	0.00	0.86	2.058	0	5.93
4.667	0.00	0.86	2.052	0	5.92
4.750	0.00	0.86	2.046	0	5.91
4.833	0.00	0.85	2.041	0	5.90
4.917	0.00	0.85	2.035	0	5.89
5.000	0.00	0.85	2.029	0	5.88
5.083	0.00	0.85	2.023	0	5.86
5.167	0.00	0.85	2.017	0	5.85
5.250	0.00	0.85	2.011	0	5.84
5.333	0.00	0.84	2.005	0	5.83
5.417	0.00	0.84	2.000	0	5.82
5.500	0.00	0.84	1.994	0	5.81
5.583	0.00	0.84	1.988	0	5.80
5.667	0.00	0.84	1.982	0	5.79
5.750	0.00	0.84	1.976	0	5.78
5.833	0.00	0.84	1.971	0	5.77
5.917	0.00	0.83	1.965	0	5.76
6.000	0.00	0.83	1.959	0	5.75
6.083	0.00	0.83	1.953	0	5.74
6.167	0.00	0.83	1.948	0	5.72
6.250	0.00	0.83	1.942	0	5.71
6.333	0.00	0.83	1.936	0	5.70
6.417	0.00	0.82	1.931	0	5.69
6.500	0.00	0.82	1.925	0	5.68
6.583	0.00	0.82	1.919	0	5.67
6.667	0.00	0.82	1.914	0	5.66
6.750	0.00	0.82	1.908	0	5.65
6.833	0.00	0.82	1.902	0	5.64
6.917	0.00	0.81	1.897	0	5.63
7.000	0.00	0.81	1.891	0	5.62
7.083	0.00	0.81	1.886	0	5.61
7.167	0.00	0.81	1.880	0	5.60
7.250	0.00	0.81	1.875	0	5.59
7.333	0.00	0.81	1.869	0	5.58
7.417	0.00	0.81	1.863	0	5.57
7.500	0.00	0.80	1.858	0	5.56
7.583	0.00	0.80	1.852	0	5.55
7.667	0.00	0.80	1.847	0	5.54
7.750	0.00	0.80	1.841	0	5.53
7.833	0.00	0.80	1.836	0	5.52
7.917	0.00	0.80	1.830	0	5.51
8.000	0.00	0.79	1.825	0	5.50
8.083	0.00	0.79	1.819	0	5.49
8.167	0.00	0.79	1.814	0	5.48
8.250	0.00	0.79	1.808	0	5.47
8.333	0.00	0.79	1.803	0	5.46
8.417	0.00	0.79	1.798	0	5.45
8.500	0.00	0.79	1.792	0	5.44
8.583	0.00	0.78	1.787	0	5.43
8.667	0.00	0.78	1.781	0	5.42
8.750	0.00	0.78	1.776	0	5.41
8.833	0.00	0.78	1.771	0	5.40
8.917	0.00	0.78	1.765	0	5.39
9.000	0.00	0.78	1.760	0	5.38
9.083	0.00	0.77	1.755	0	5.37
9.167	0.00	0.77	1.749	0	5.36
9.250	0.00	0.77	1.744	0	5.35
9.333	0.00	0.77	1.739	0	5.34
9.417	0.00	0.77	1.733	0	5.33
9.500	0.00	0.77	1.728	0	5.32
9.583	0.00	0.77	1.723	0	5.31
9.667	0.00	0.76	1.717	0	5.30
9.750	0.00	0.76	1.712	0	5.29
9.833	0.00	0.76	1.707	0	5.28
9.917	0.00	0.76	1.702	0	5.27
10.000	0.00	0.76	1.697	0	5.26
10.083	0.00	0.76	1.691	0	5.25
10.167	0.00	0.76	1.686	0	5.24

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10.250	0.00	0.75	1.681	0				5.23
10.333	0.00	0.75	1.676	0				5.22
10.417	0.00	0.75	1.671	0				5.21
10.500	0.00	0.75	1.665	0				5.20
10.583	0.00	0.75	1.660	0				5.19
10.667	0.00	0.75	1.655	0				5.18
10.750	0.00	0.75	1.650	0				5.17
10.833	0.00	0.74	1.645	0				5.16
10.917	0.00	0.74	1.640	0				5.15
11.000	0.00	0.74	1.635	0				5.14
11.083	0.00	0.74	1.629	0				5.13
11.167	0.00	0.74	1.624	0				5.12
11.250	0.00	0.74	1.619	0				5.11
11.333	0.00	0.74	1.614	0				5.10
11.417	0.00	0.73	1.609	0				5.10
11.500	0.00	0.73	1.604	0				5.09
11.583	0.00	0.73	1.599	0				5.08
11.667	0.00	0.73	1.594	0				5.07
11.750	0.00	0.73	1.589	0				5.06
11.833	0.00	0.73	1.584	0				5.05
11.917	0.00	0.73	1.579	0				5.04
12.000	0.00	0.72	1.574	0				5.03
12.083	0.00	0.72	1.569	0				5.02
12.167	0.00	0.72	1.564	0				5.01
12.250	0.00	0.72	1.559	0				5.00
12.333	0.00	0.72	1.554	0				4.99
12.417	0.00	0.72	1.549	0				4.98
12.500	0.00	0.71	1.544	0				4.97
12.583	0.00	0.71	1.539	0				4.96
12.667	0.00	0.71	1.534	0				4.95
12.750	0.00	0.71	1.530	0				4.94
12.833	0.00	0.71	1.525	0				4.93
12.917	0.00	0.70	1.520	0				4.92
13.000	0.00	0.70	1.515	0				4.91
13.083	0.00	0.70	1.510	0				4.90
13.167	0.00	0.70	1.505	0				4.89
13.250	0.00	0.69	1.501	0				4.88
13.333	0.00	0.69	1.496	0				4.87
13.417	0.00	0.69	1.491	0				4.86
13.500	0.00	0.69	1.486	0				4.85
13.583	0.00	0.69	1.482	0				4.84
13.667	0.00	0.68	1.477	0				4.83
13.750	0.00	0.68	1.472	0				4.82
13.833	0.00	0.68	1.467	0				4.81
13.917	0.00	0.68	1.463	0				4.80
14.000	0.00	0.68	1.458	0				4.79
14.083	0.00	0.67	1.453	0				4.78
14.167	0.00	0.67	1.449	0				4.77
14.250	0.00	0.67	1.444	0				4.76
14.333	0.00	0.67	1.440	0				4.75
14.417	0.00	0.67	1.435	0				4.74
14.500	0.00	0.66	1.430	0				4.73
14.583	0.00	0.66	1.426	0				4.72
14.667	0.00	0.66	1.421	0				4.71
14.750	0.00	0.66	1.417	0				4.70
14.833	0.00	0.65	1.412	0				4.69
14.917	0.00	0.65	1.408	0				4.68
15.000	0.00	0.65	1.403	0				4.67
15.083	0.00	0.65	1.399	0				4.66
15.167	0.00	0.65	1.394	0				4.65
15.250	0.00	0.64	1.390	0				4.64
15.333	0.00	0.64	1.386	0				4.63
15.417	0.00	0.64	1.381	0				4.62
15.500	0.00	0.64	1.377	0				4.61
15.583	0.00	0.64	1.372	0				4.60
15.667	0.00	0.64	1.368	0				4.60
15.750	0.00	0.63	1.364	0				4.59
15.833	0.00	0.63	1.359	0				4.58

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15.917	0.00	0.63	1.355	0	4.57
16.000	0.00	0.63	1.351	0	4.56
16.083	0.00	0.63	1.346	0	4.55
16.167	0.00	0.62	1.342	0	4.54
16.250	0.00	0.62	1.338	0	4.53
16.333	0.00	0.62	1.333	0	4.52
16.417	0.00	0.62	1.329	0	4.51
16.500	0.00	0.62	1.325	0	4.50
16.583	0.00	0.61	1.321	0	4.49
16.667	0.00	0.61	1.316	0	4.49
16.750	0.00	0.61	1.312	0	4.48
16.833	0.00	0.61	1.308	0	4.47
16.917	0.00	0.61	1.304	0	4.46
17.000	0.00	0.60	1.300	0	4.45
17.083	0.00	0.60	1.295	0	4.44
17.167	0.00	0.60	1.291	0	4.43
17.250	0.00	0.60	1.287	0	4.42
17.333	0.00	0.60	1.283	0	4.42
17.417	0.00	0.60	1.279	0	4.41
17.500	0.00	0.59	1.275	0	4.40
17.583	0.00	0.59	1.271	0	4.39
17.667	0.00	0.59	1.267	0	4.38
17.750	0.00	0.59	1.263	0	4.37
17.833	0.00	0.59	1.259	0	4.36
17.917	0.00	0.58	1.255	0	4.35
18.000	0.00	0.58	1.251	0	4.35
18.083	0.00	0.58	1.247	0	4.34
18.167	0.00	0.58	1.243	0	4.33
18.250	0.00	0.58	1.239	0	4.32
18.333	0.00	0.58	1.235	0	4.31
18.417	0.00	0.57	1.231	0	4.30
18.500	0.00	0.57	1.227	0	4.30
18.583	0.00	0.57	1.223	0	4.29
18.667	0.00	0.57	1.219	0	4.28
18.750	0.00	0.57	1.215	0	4.27
18.833	0.00	0.56	1.211	0	4.26
18.917	0.00	0.56	1.207	0	4.25
19.000	0.00	0.56	1.203	0	4.25
19.083	0.00	0.56	1.199	0	4.24
19.167	0.00	0.56	1.196	0	4.23
19.250	0.00	0.56	1.192	0	4.22
19.333	0.00	0.55	1.188	0	4.21
19.417	0.00	0.55	1.184	0	4.20
19.500	0.00	0.55	1.180	0	4.20
19.583	0.00	0.55	1.177	0	4.19
19.667	0.00	0.55	1.173	0	4.18
19.750	0.00	0.55	1.169	0	4.17
19.833	0.00	0.54	1.165	0	4.16
19.917	0.00	0.54	1.161	0	4.16
20.000	0.00	0.54	1.158	0	4.15
20.083	0.00	0.54	1.154	0	4.14
20.167	0.00	0.54	1.150	0	4.13
20.250	0.00	0.54	1.147	0	4.12
20.333	0.00	0.53	1.143	0	4.12
20.417	0.00	0.53	1.139	0	4.11
20.500	0.00	0.53	1.136	0	4.10
20.583	0.00	0.53	1.132	0	4.09
20.667	0.00	0.53	1.128	0	4.09
20.750	0.00	0.53	1.125	0	4.08
20.833	0.00	0.52	1.121	0	4.07
20.917	0.00	0.52	1.117	0	4.06
21.000	0.00	0.52	1.114	0	4.05
21.083	0.00	0.52	1.110	0	4.05
21.167	0.00	0.52	1.107	0	4.04
21.250	0.00	0.52	1.103	0	4.03
21.333	0.00	0.52	1.100	0	4.02
21.417	0.00	0.51	1.096	0	4.02
21.500	0.00	0.51	1.092	0	4.01

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21.583	0.00	0.51	1.089	0				4.00
21.667	0.00	0.51	1.085	0				3.99
21.750	0.00	0.51	1.082	0				3.99
21.833	0.00	0.50	1.078	0				3.98
21.917	0.00	0.50	1.075	0				3.97
22.000	0.00	0.50	1.072	0				3.96
22.083	0.00	0.50	1.068	0				3.95
22.167	0.00	0.49	1.065	0				3.95
22.250	0.00	0.49	1.061	0				3.94
22.333	0.00	0.49	1.058	0				3.93
22.417	0.00	0.49	1.055	0				3.92
22.500	0.00	0.48	1.051	0				3.91
22.583	0.00	0.48	1.048	0				3.91
22.667	0.00	0.48	1.045	0				3.90
22.750	0.00	0.48	1.041	0				3.89
22.833	0.00	0.47	1.038	0				3.88
22.917	0.00	0.47	1.035	0				3.87
23.000	0.00	0.47	1.032	0				3.87
23.083	0.00	0.47	1.028	0				3.86
23.167	0.00	0.47	1.025	0				3.85
23.250	0.00	0.46	1.022	0				3.84
23.333	0.00	0.46	1.019	0				3.84
23.417	0.00	0.46	1.016	0				3.83
23.500	0.00	0.46	1.012	0				3.82
23.583	0.00	0.45	1.009	0				3.81
23.667	0.00	0.45	1.006	0				3.81
23.750	0.00	0.45	1.003	0				3.80
23.833	0.00	0.45	1.000	0				3.79
23.917	0.00	0.44	0.997	0				3.79
24.000	0.00	0.44	0.994	0				3.78
24.083	0.00	0.44	0.991	0				3.77
24.167	0.00	0.44	0.988	0				3.76
24.250	0.00	0.44	0.985	0				3.76
24.333	0.00	0.43	0.982	0				3.75
24.417	0.00	0.43	0.979	0				3.74
24.500	0.00	0.43	0.976	0				3.74
24.583	0.00	0.43	0.973	0				3.73
24.667	0.00	0.43	0.970	0				3.72
24.750	0.00	0.42	0.967	0				3.71
24.833	0.00	0.42	0.964	0				3.71
24.917	0.00	0.42	0.961	0				3.70
25.000	0.00	0.42	0.958	0				3.69
25.083	0.00	0.42	0.956	0				3.69
25.167	0.00	0.41	0.953	0				3.68
25.250	0.00	0.41	0.950	0				3.67
25.333	0.00	0.41	0.947	0				3.67
25.417	0.00	0.40	0.944	0				3.66
25.500	0.00	0.40	0.941	0				3.65
25.583	0.00	0.40	0.939	0				3.65
25.667	0.00	0.39	0.936	0				3.64
25.750	0.00	0.39	0.933	0				3.63
25.833	0.00	0.39	0.931	0				3.63
25.917	0.00	0.38	0.928	0				3.62
26.000	0.00	0.38	0.925	0				3.61
26.083	0.00	0.37	0.923	0				3.61
26.167	0.00	0.37	0.920	0				3.60
26.250	0.00	0.37	0.918	0				3.59
26.333	0.00	0.36	0.915	0				3.59
26.417	0.00	0.36	0.913	0				3.58
26.500	0.00	0.36	0.910	0				3.58
26.583	0.00	0.35	0.908	0				3.57
26.667	0.00	0.35	0.905	0				3.56
26.750	0.00	0.35	0.903	0				3.56
26.833	0.00	0.34	0.900	0				3.55
26.917	0.00	0.34	0.898	0				3.55
27.000	0.00	0.34	0.896	0				3.54
27.083	0.00	0.33	0.893	0				3.53
27.167	0.00	0.33	0.891	0				3.53

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27.250	0.00	0.33	0.889	0				3.52
27.333	0.00	0.32	0.887	0				3.52
27.417	0.00	0.32	0.884	0				3.51
27.500	0.00	0.32	0.882	0				3.51
27.583	0.00	0.32	0.880	0				3.50
27.667	0.00	0.31	0.878	0				3.50
27.750	0.00	0.31	0.876	0				3.49
27.833	0.00	0.31	0.874	0				3.49
27.917	0.00	0.30	0.871	0				3.48
28.000	0.00	0.30	0.869	0				3.47
28.083	0.00	0.30	0.867	0				3.47
28.167	0.00	0.30	0.865	0				3.46
28.250	0.00	0.29	0.863	0				3.46
28.333	0.00	0.29	0.861	0				3.45
28.417	0.00	0.29	0.859	0				3.45
28.500	0.00	0.28	0.857	0				3.44
28.583	0.00	0.28	0.855	0				3.44
28.667	0.00	0.28	0.853	0				3.44
28.750	0.00	0.28	0.852	0				3.43
28.833	0.00	0.27	0.850	0				3.43
28.917	0.00	0.27	0.848	0				3.42
29.000	0.00	0.27	0.846	0				3.42
29.083	0.00	0.27	0.844	0				3.41
29.167	0.00	0.26	0.842	0				3.41
29.250	0.00	0.26	0.840	0				3.40
29.333	0.00	0.26	0.839	0				3.40
29.417	0.00	0.26	0.837	0				3.39
29.500	0.00	0.25	0.835	0				3.39
29.583	0.00	0.25	0.833	0				3.39
29.667	0.00	0.25	0.832	0				3.38
29.750	0.00	0.25	0.830	0				3.38
29.833	0.00	0.24	0.828	0				3.37
29.917	0.00	0.24	0.827	0				3.37
30.000	0.00	0.24	0.825	0				3.36
30.083	0.00	0.24	0.823	0				3.36
30.167	0.00	0.23	0.822	0				3.36
30.250	0.00	0.23	0.820	0				3.35
30.333	0.00	0.23	0.818	0				3.35
30.417	0.00	0.23	0.817	0				3.34
30.500	0.00	0.23	0.815	0				3.34
30.583	0.00	0.22	0.814	0				3.34
30.667	0.00	0.22	0.812	0				3.33
30.750	0.00	0.22	0.811	0				3.33
30.833	0.00	0.22	0.809	0				3.33
30.917	0.00	0.22	0.808	0				3.32
31.000	0.00	0.22	0.806	0				3.32
31.083	0.00	0.22	0.805	0				3.31
31.167	0.00	0.22	0.803	0				3.31
31.250	0.00	0.22	0.802	0				3.31
31.333	0.00	0.22	0.800	0				3.30
31.417	0.00	0.22	0.799	0				3.30
31.500	0.00	0.22	0.797	0				3.29
31.583	0.00	0.22	0.796	0				3.29
31.667	0.00	0.22	0.794	0				3.29
31.750	0.00	0.22	0.793	0				3.28
31.833	0.00	0.22	0.791	0				3.28
31.917	0.00	0.22	0.790	0				3.27
32.000	0.00	0.22	0.788	0				3.27
32.083	0.00	0.22	0.787	0				3.27
32.167	0.00	0.22	0.785	0				3.26
32.250	0.00	0.22	0.784	0				3.26
32.333	0.00	0.22	0.782	0				3.25
32.417	0.00	0.22	0.781	0				3.25
32.500	0.00	0.22	0.779	0				3.25
32.583	0.00	0.22	0.778	0				3.24
32.667	0.00	0.22	0.776	0				3.24
32.750	0.00	0.22	0.775	0				3.23
32.833	0.00	0.22	0.773	0				3.23

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32.917	0.00	0.22	0.772	0				3.23
33.000	0.00	0.22	0.770	0				3.22
33.083	0.00	0.22	0.769	0				3.22
33.167	0.00	0.22	0.767	0				3.22
33.250	0.00	0.22	0.766	0				3.21
33.333	0.00	0.22	0.764	0				3.21
33.417	0.00	0.22	0.763	0				3.20
33.500	0.00	0.22	0.761	0				3.20
33.583	0.00	0.22	0.760	0				3.20
33.667	0.00	0.22	0.758	0				3.19
33.750	0.00	0.22	0.757	0				3.19
33.833	0.00	0.22	0.755	0				3.18
33.917	0.00	0.22	0.754	0				3.18
34.000	0.00	0.22	0.752	0				3.18
34.083	0.00	0.22	0.751	0				3.17
34.167	0.00	0.22	0.749	0				3.17
34.250	0.00	0.21	0.748	0				3.16
34.333	0.00	0.21	0.746	0				3.16
34.417	0.00	0.21	0.745	0				3.16
34.500	0.00	0.21	0.743	0				3.15
34.583	0.00	0.21	0.742	0				3.15
34.667	0.00	0.21	0.740	0				3.15
34.750	0.00	0.21	0.739	0				3.14
34.833	0.00	0.21	0.737	0				3.14
34.917	0.00	0.21	0.736	0				3.13
35.000	0.00	0.21	0.735	0				3.13
35.083	0.00	0.21	0.733	0				3.13
35.167	0.00	0.21	0.732	0				3.12
35.250	0.00	0.21	0.730	0				3.12
35.333	0.00	0.21	0.729	0				3.11
35.417	0.00	0.21	0.727	0				3.11
35.500	0.00	0.21	0.726	0				3.11
35.583	0.00	0.21	0.724	0				3.10
35.667	0.00	0.21	0.723	0				3.10
35.750	0.00	0.21	0.721	0				3.10
35.833	0.00	0.21	0.720	0				3.09
35.917	0.00	0.21	0.718	0				3.09
36.000	0.00	0.21	0.717	0				3.08
36.083	0.00	0.21	0.715	0				3.08
36.167	0.00	0.21	0.714	0				3.08
36.250	0.00	0.21	0.713	0				3.07
36.333	0.00	0.21	0.711	0				3.07
36.417	0.00	0.21	0.710	0				3.06
36.500	0.00	0.21	0.708	0				3.06
36.583	0.00	0.21	0.707	0				3.06
36.667	0.00	0.21	0.705	0				3.05
36.750	0.00	0.21	0.704	0				3.05
36.833	0.00	0.21	0.702	0				3.05
36.917	0.00	0.21	0.701	0				3.04
37.000	0.00	0.21	0.699	0				3.04
37.083	0.00	0.21	0.698	0				3.03
37.167	0.00	0.21	0.696	0				3.03
37.250	0.00	0.21	0.695	0				3.03
37.333	0.00	0.21	0.694	0				3.02
37.417	0.00	0.21	0.692	0				3.02
37.500	0.00	0.21	0.691	0				3.01
37.583	0.00	0.21	0.689	0				3.01
37.667	0.00	0.21	0.688	0				3.01
37.750	0.00	0.21	0.686	0				3.00
37.833	0.00	0.21	0.685	0				3.00
37.917	0.00	0.21	0.683	0				3.00
38.000	0.00	0.21	0.682	0				2.99
38.083	0.00	0.21	0.681	0				2.99
38.167	0.00	0.21	0.679	0				2.98
38.250	0.00	0.21	0.678	0				2.98
38.333	0.00	0.21	0.676	0				2.98
38.417	0.00	0.21	0.675	0				2.97
38.500	0.00	0.21	0.673	0				2.97

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38.583	0.00	0.21	0.672	0	2.96
38.667	0.00	0.21	0.670	0	2.96
38.750	0.00	0.21	0.669	0	2.96
38.833	0.00	0.21	0.668	0	2.95
38.917	0.00	0.21	0.666	0	2.95
39.000	0.00	0.21	0.665	0	2.94
39.083	0.00	0.21	0.663	0	2.94
39.167	0.00	0.21	0.662	0	2.94
39.250	0.00	0.21	0.660	0	2.93
39.333	0.00	0.21	0.659	0	2.93
39.417	0.00	0.21	0.658	0	2.92
39.500	0.00	0.21	0.656	0	2.92
39.583	0.00	0.21	0.655	0	2.92
39.667	0.00	0.21	0.653	0	2.91
39.750	0.00	0.21	0.652	0	2.91
39.833	0.00	0.21	0.650	0	2.90
39.917	0.00	0.21	0.649	0	2.90
40.000	0.00	0.21	0.648	0	2.90
40.083	0.00	0.21	0.646	0	2.89
40.167	0.00	0.21	0.645	0	2.89
40.250	0.00	0.21	0.643	0	2.88
40.333	0.00	0.21	0.642	0	2.88
40.417	0.00	0.21	0.640	0	2.88
40.500	0.00	0.21	0.639	0	2.87
40.583	0.00	0.21	0.638	0	2.87
40.667	0.00	0.21	0.636	0	2.86
40.750	0.00	0.21	0.635	0	2.86
40.833	0.00	0.21	0.633	0	2.86
40.917	0.00	0.21	0.632	0	2.85
41.000	0.00	0.21	0.631	0	2.85
41.083	0.00	0.21	0.629	0	2.85
41.167	0.00	0.21	0.628	0	2.84
41.250	0.00	0.21	0.626	0	2.84
41.333	0.00	0.20	0.625	0	2.83
41.417	0.00	0.20	0.623	0	2.83
41.500	0.00	0.20	0.622	0	2.83
41.583	0.00	0.20	0.621	0	2.82
41.667	0.00	0.20	0.619	0	2.82
41.750	0.00	0.20	0.618	0	2.81
41.833	0.00	0.20	0.616	0	2.81
41.917	0.00	0.20	0.615	0	2.81
42.000	0.00	0.20	0.614	0	2.80
42.083	0.00	0.20	0.612	0	2.80
42.167	0.00	0.20	0.611	0	2.79
42.250	0.00	0.20	0.609	0	2.79
42.333	0.00	0.20	0.608	0	2.79
42.417	0.00	0.20	0.607	0	2.78
42.500	0.00	0.20	0.605	0	2.78
42.583	0.00	0.20	0.604	0	2.77
42.667	0.00	0.20	0.602	0	2.77
42.750	0.00	0.20	0.601	0	2.77
42.833	0.00	0.20	0.600	0	2.76
42.917	0.00	0.20	0.598	0	2.76
43.000	0.00	0.20	0.597	0	2.76
43.083	0.00	0.20	0.595	0	2.75
43.167	0.00	0.20	0.594	0	2.75
43.250	0.00	0.20	0.593	0	2.74
43.333	0.00	0.20	0.591	0	2.74
43.417	0.00	0.20	0.590	0	2.74
43.500	0.00	0.20	0.588	0	2.73
43.583	0.00	0.20	0.587	0	2.73
43.667	0.00	0.20	0.586	0	2.72
43.750	0.00	0.20	0.584	0	2.72
43.833	0.00	0.20	0.583	0	2.72
43.917	0.00	0.20	0.582	0	2.71
44.000	0.00	0.20	0.580	0	2.71
44.083	0.00	0.20	0.579	0	2.71
44.167	0.00	0.20	0.577	0	2.70

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44.250	0.00	0.20	0.576	0					2.70
44.333	0.00	0.20	0.575	0					2.69
44.417	0.00	0.20	0.573	0					2.69
44.500	0.00	0.20	0.572	0					2.69
44.583	0.00	0.20	0.570	0					2.68
44.667	0.00	0.20	0.569	0					2.68
44.750	0.00	0.20	0.568	0					2.67
44.833	0.00	0.20	0.566	0					2.67
44.917	0.00	0.20	0.565	0					2.67
45.000	0.00	0.20	0.564	0					2.66
45.083	0.00	0.20	0.562	0					2.66
45.167	0.00	0.20	0.561	0					2.65
45.250	0.00	0.20	0.559	0					2.65
45.333	0.00	0.20	0.558	0					2.65
45.417	0.00	0.20	0.557	0					2.64
45.500	0.00	0.20	0.555	0					2.64
45.583	0.00	0.20	0.554	0					2.63
45.667	0.00	0.20	0.553	0					2.63
45.750	0.00	0.20	0.551	0					2.63
45.833	0.00	0.20	0.550	0					2.62
45.917	0.00	0.20	0.549	0					2.62
46.000	0.00	0.20	0.547	0					2.61
46.083	0.00	0.20	0.546	0					2.61
46.167	0.00	0.20	0.544	0					2.61
46.250	0.00	0.20	0.543	0					2.60
46.333	0.00	0.20	0.542	0					2.60
46.417	0.00	0.20	0.540	0					2.59
46.500	0.00	0.20	0.539	0					2.59
46.583	0.00	0.20	0.538	0					2.59
46.667	0.00	0.19	0.536	0					2.58
46.750	0.00	0.19	0.535	0					2.58
46.833	0.00	0.19	0.534	0					2.57
46.917	0.00	0.19	0.532	0					2.57
47.000	0.00	0.19	0.531	0					2.57
47.083	0.00	0.19	0.530	0					2.56
47.167	0.00	0.19	0.528	0					2.56
47.250	0.00	0.19	0.527	0					2.55
47.333	0.00	0.19	0.526	0					2.55
47.417	0.00	0.19	0.524	0					2.55
47.500	0.00	0.19	0.523	0					2.54
47.583	0.00	0.19	0.522	0					2.54
47.667	0.00	0.19	0.520	0					2.54
47.750	0.00	0.19	0.519	0					2.53
47.833	0.00	0.19	0.518	0					2.53
47.917	0.00	0.19	0.516	0					2.52
48.000	0.00	0.19	0.515	0					2.52
48.083	0.00	0.19	0.514	0					2.52
48.167	0.00	0.19	0.513	0					2.51
48.250	0.00	0.19	0.511	0					2.51
48.333	0.00	0.19	0.510	0					2.50
48.417	0.00	0.19	0.509	0					2.50
48.500	0.00	0.19	0.507	0					2.50
48.583	0.00	0.19	0.506	0					2.49
48.667	0.00	0.19	0.505	0					2.49
48.750	0.00	0.19	0.503	0					2.48
48.833	0.00	0.19	0.502	0					2.48
48.917	0.00	0.19	0.501	0					2.48
49.000	0.00	0.19	0.499	0					2.47
49.083	0.00	0.19	0.498	0					2.47
49.167	0.00	0.19	0.497	0					2.47
49.250	0.00	0.19	0.496	0					2.46
49.333	0.00	0.19	0.494	0					2.46
49.417	0.00	0.19	0.493	0					2.45
49.500	0.00	0.19	0.492	0					2.45
49.583	0.00	0.19	0.490	0					2.45
49.667	0.00	0.19	0.489	0					2.44
49.750	0.00	0.19	0.488	0					2.44
49.833	0.00	0.19	0.487	0					2.44

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49.917	0.00	0.19	0.485	0				2.43
50.000	0.00	0.19	0.484	0				2.43
50.083	0.00	0.19	0.483	0				2.42
50.167	0.00	0.19	0.481	0				2.42
50.250	0.00	0.19	0.480	0				2.42
50.333	0.00	0.18	0.479	0				2.41
50.417	0.00	0.18	0.478	0				2.41
50.500	0.00	0.18	0.476	0				2.40
50.583	0.00	0.18	0.475	0				2.40
50.667	0.00	0.18	0.474	0				2.40
50.750	0.00	0.18	0.473	0				2.39
50.833	0.00	0.18	0.471	0				2.39
50.917	0.00	0.18	0.470	0				2.39
51.000	0.00	0.18	0.469	0				2.38
51.083	0.00	0.18	0.467	0				2.38
51.167	0.00	0.18	0.466	0				2.38
51.250	0.00	0.18	0.465	0				2.37
51.333	0.00	0.18	0.464	0				2.37
51.417	0.00	0.18	0.462	0				2.36
51.500	0.00	0.18	0.461	0				2.36
51.583	0.00	0.18	0.460	0				2.36
51.667	0.00	0.18	0.459	0				2.35
51.750	0.00	0.18	0.457	0				2.35
51.833	0.00	0.18	0.456	0				2.35
51.917	0.00	0.18	0.455	0				2.34
52.000	0.00	0.18	0.454	0				2.34
52.083	0.00	0.18	0.452	0				2.33
52.167	0.00	0.18	0.451	0				2.33
52.250	0.00	0.18	0.450	0				2.33
52.333	0.00	0.18	0.449	0				2.32
52.417	0.00	0.18	0.448	0				2.32
52.500	0.00	0.18	0.446	0				2.32
52.583	0.00	0.18	0.445	0				2.31
52.667	0.00	0.18	0.444	0				2.31
52.750	0.00	0.18	0.443	0				2.30
52.833	0.00	0.18	0.441	0				2.30
52.917	0.00	0.18	0.440	0				2.30
53.000	0.00	0.18	0.439	0				2.29
53.083	0.00	0.18	0.438	0				2.29
53.167	0.00	0.18	0.436	0				2.28
53.250	0.00	0.18	0.435	0				2.28
53.333	0.00	0.18	0.434	0				2.28
53.417	0.00	0.18	0.433	0				2.27
53.500	0.00	0.18	0.432	0				2.27
53.583	0.00	0.18	0.430	0				2.27
53.667	0.00	0.18	0.429	0				2.26
53.750	0.00	0.18	0.428	0				2.26
53.833	0.00	0.18	0.427	0				2.25
53.917	0.00	0.18	0.425	0				2.25
54.000	0.00	0.18	0.424	0				2.25
54.083	0.00	0.18	0.423	0				2.24
54.167	0.00	0.18	0.422	0				2.24
54.250	0.00	0.18	0.420	0				2.24
54.333	0.00	0.18	0.419	0				2.23
54.417	0.00	0.18	0.418	0				2.23
54.500	0.00	0.18	0.417	0				2.22
54.583	0.00	0.18	0.416	0				2.22
54.667	0.00	0.18	0.414	0				2.22
54.750	0.00	0.18	0.413	0				2.21
54.833	0.00	0.18	0.412	0				2.21
54.917	0.00	0.18	0.411	0				2.20
55.000	0.00	0.18	0.410	0				2.20
55.083	0.00	0.18	0.408	0				2.20
55.167	0.00	0.18	0.407	0				2.19
55.250	0.00	0.18	0.406	0				2.19
55.333	0.00	0.18	0.405	0				2.19
55.417	0.00	0.18	0.403	0				2.18
55.500	0.00	0.18	0.402	0				2.18

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55.583	0.00	0.18	0.401	0				2.17
55.667	0.00	0.18	0.400	0				2.17
55.750	0.00	0.18	0.399	0				2.17
55.833	0.00	0.17	0.397	0				2.16
55.917	0.00	0.17	0.396	0				2.16
56.000	0.00	0.17	0.395	0				2.16
56.083	0.00	0.17	0.394	0				2.15
56.167	0.00	0.17	0.393	0				2.15
56.250	0.00	0.17	0.391	0				2.14
56.333	0.00	0.17	0.390	0				2.14
56.417	0.00	0.17	0.389	0				2.14
56.500	0.00	0.17	0.388	0				2.13
56.583	0.00	0.17	0.387	0				2.13
56.667	0.00	0.17	0.385	0				2.13
56.750	0.00	0.17	0.384	0				2.12
56.833	0.00	0.17	0.383	0				2.12
56.917	0.00	0.17	0.382	0				2.11
57.000	0.00	0.17	0.381	0				2.11
57.083	0.00	0.17	0.379	0				2.11
57.167	0.00	0.17	0.378	0				2.10
57.250	0.00	0.17	0.377	0				2.10
57.333	0.00	0.17	0.376	0				2.10
57.417	0.00	0.17	0.375	0				2.09
57.500	0.00	0.17	0.374	0				2.09
57.583	0.00	0.17	0.372	0				2.09
57.667	0.00	0.17	0.371	0				2.08
57.750	0.00	0.17	0.370	0				2.08
57.833	0.00	0.17	0.369	0				2.07
57.917	0.00	0.17	0.368	0				2.07
58.000	0.00	0.17	0.366	0				2.07
58.083	0.00	0.17	0.365	0				2.06
58.167	0.00	0.17	0.364	0				2.06
58.250	0.00	0.17	0.363	0				2.06
58.333	0.00	0.17	0.362	0				2.05
58.417	0.00	0.17	0.360	0				2.05
58.500	0.00	0.17	0.359	0				2.04
58.583	0.00	0.17	0.358	0				2.04
58.667	0.00	0.17	0.357	0				2.04
58.750	0.00	0.17	0.356	0				2.03
58.833	0.00	0.17	0.355	0				2.03
58.917	0.00	0.17	0.353	0				2.03
59.000	0.00	0.17	0.352	0				2.02
59.083	0.00	0.17	0.351	0				2.02
59.167	0.00	0.17	0.350	0				2.02
59.250	0.00	0.17	0.349	0				2.01
59.333	0.00	0.17	0.348	0				2.01
59.417	0.00	0.17	0.346	0				2.00
59.500	0.00	0.17	0.345	0				2.00
59.583	0.00	0.17	0.344	0				2.00
59.667	0.00	0.17	0.343	0				1.99
59.750	0.00	0.17	0.342	0				1.99
59.833	0.00	0.17	0.341	0				1.98
59.917	0.00	0.17	0.339	0				1.98
60.000	0.00	0.17	0.338	0				1.98
60.083	0.00	0.17	0.337	0				1.97
60.167	0.00	0.17	0.336	0				1.97
60.250	0.00	0.17	0.335	0				1.96
60.333	0.00	0.17	0.334	0				1.96
60.417	0.00	0.17	0.332	0				1.96
60.500	0.00	0.17	0.331	0				1.95
60.583	0.00	0.17	0.330	0				1.95
60.667	0.00	0.17	0.329	0				1.94
60.750	0.00	0.17	0.328	0				1.94
60.833	0.00	0.17	0.327	0				1.93
60.917	0.00	0.17	0.326	0				1.93
61.000	0.00	0.17	0.324	0				1.93
61.083	0.00	0.17	0.323	0				1.92
61.167	0.00	0.17	0.322	0				1.92

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61.250	0.00	0.16	0.321	0				1.91
61.333	0.00	0.16	0.320	0				1.91
61.417	0.00	0.16	0.319	0				1.91
61.500	0.00	0.16	0.318	0				1.90
61.583	0.00	0.16	0.316	0				1.90
61.667	0.00	0.16	0.315	0				1.89
61.750	0.00	0.16	0.314	0				1.89
61.833	0.00	0.16	0.313	0				1.89
61.917	0.00	0.16	0.312	0				1.88
62.000	0.00	0.16	0.311	0				1.88
62.083	0.00	0.16	0.310	0				1.87
62.167	0.00	0.16	0.309	0				1.87
62.250	0.00	0.16	0.307	0				1.87
62.333	0.00	0.16	0.306	0				1.86
62.417	0.00	0.16	0.305	0				1.86
62.500	0.00	0.16	0.304	0				1.86
62.583	0.00	0.16	0.303	0				1.85
62.667	0.00	0.16	0.302	0				1.85
62.750	0.00	0.16	0.301	0				1.84
62.833	0.00	0.16	0.300	0				1.84
62.917	0.00	0.16	0.299	0				1.84
63.000	0.00	0.16	0.298	0				1.83
63.083	0.00	0.16	0.296	0				1.83
63.167	0.00	0.16	0.295	0				1.82
63.250	0.00	0.16	0.294	0				1.82
63.333	0.00	0.16	0.293	0				1.82
63.417	0.00	0.16	0.292	0				1.81
63.500	0.00	0.16	0.291	0				1.81
63.583	0.00	0.16	0.290	0				1.80
63.667	0.00	0.16	0.289	0				1.80
63.750	0.00	0.16	0.288	0				1.80
63.833	0.00	0.16	0.287	0				1.79
63.917	0.00	0.16	0.286	0				1.79
64.000	0.00	0.16	0.284	0				1.79
64.083	0.00	0.16	0.283	0				1.78
64.167	0.00	0.16	0.282	0				1.78
64.250	0.00	0.16	0.281	0				1.77
64.333	0.00	0.16	0.280	0				1.77
64.417	0.00	0.16	0.279	0				1.77
64.500	0.00	0.16	0.278	0				1.76
64.583	0.00	0.16	0.277	0				1.76
64.667	0.00	0.16	0.276	0				1.75
64.750	0.00	0.15	0.275	0				1.75
64.833	0.00	0.15	0.274	0				1.75
64.917	0.00	0.15	0.273	0				1.74
65.000	0.00	0.15	0.272	0				1.74
65.083	0.00	0.15	0.271	0				1.74
65.167	0.00	0.15	0.269	0				1.73
65.250	0.00	0.15	0.268	0				1.73
65.333	0.00	0.15	0.267	0				1.72
65.417	0.00	0.15	0.266	0				1.72
65.500	0.00	0.15	0.265	0				1.72
65.583	0.00	0.15	0.264	0				1.71
65.667	0.00	0.15	0.263	0				1.71
65.750	0.00	0.15	0.262	0				1.71
65.833	0.00	0.15	0.261	0				1.70
65.917	0.00	0.15	0.260	0				1.70
66.000	0.00	0.15	0.259	0				1.69
66.083	0.00	0.15	0.258	0				1.69
66.167	0.00	0.15	0.257	0				1.69
66.250	0.00	0.15	0.256	0				1.68
66.333	0.00	0.15	0.255	0				1.68
66.417	0.00	0.15	0.254	0				1.68
66.500	0.00	0.15	0.253	0				1.67
66.583	0.00	0.15	0.252	0				1.67
66.667	0.00	0.15	0.251	0				1.66
66.750	0.00	0.15	0.250	0				1.66
66.833	0.00	0.15	0.249	0				1.66

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66.917	0.00	0.15	0.248	0				1.65
67.000	0.00	0.15	0.247	0				1.65
67.083	0.00	0.15	0.245	0				1.64
67.167	0.00	0.15	0.244	0				1.64
67.250	0.00	0.15	0.243	0				1.63
67.333	0.00	0.15	0.242	0				1.63
67.417	0.00	0.15	0.241	0				1.62
67.500	0.00	0.15	0.240	0				1.62
67.583	0.00	0.15	0.239	0				1.62
67.667	0.00	0.15	0.238	0				1.61
67.750	0.00	0.15	0.237	0				1.61
67.833	0.00	0.15	0.236	0				1.60
67.917	0.00	0.15	0.235	0				1.60
68.000	0.00	0.15	0.234	0				1.59
68.083	0.00	0.15	0.233	0				1.59
68.167	0.00	0.15	0.232	0				1.58
68.250	0.00	0.15	0.231	0				1.58
68.333	0.00	0.15	0.230	0				1.58
68.417	0.00	0.15	0.229	0				1.57
68.500	0.00	0.15	0.228	0				1.57
68.583	0.00	0.15	0.227	0				1.56
68.667	0.00	0.15	0.226	0				1.56
68.750	0.00	0.15	0.225	0				1.55
68.833	0.00	0.15	0.224	0				1.55
68.917	0.00	0.15	0.223	0				1.55
69.000	0.00	0.15	0.222	0				1.54
69.083	0.00	0.15	0.221	0				1.54
69.167	0.00	0.15	0.220	0				1.53
69.250	0.00	0.15	0.219	0				1.53
69.333	0.00	0.15	0.218	0				1.52
69.417	0.00	0.15	0.217	0				1.52
69.500	0.00	0.15	0.216	0				1.52
69.583	0.00	0.15	0.215	0				1.51
69.667	0.00	0.15	0.214	0				1.51
69.750	0.00	0.15	0.213	0				1.50
69.833	0.00	0.14	0.212	0				1.50
69.917	0.00	0.14	0.211	0				1.49
70.000	0.00	0.14	0.210	0				1.49
70.083	0.00	0.14	0.209	0				1.49
70.167	0.00	0.14	0.208	0				1.48
70.250	0.00	0.14	0.207	0				1.48
70.333	0.00	0.14	0.206	0				1.47
70.417	0.00	0.14	0.205	0				1.47
70.500	0.00	0.14	0.204	0				1.46
70.583	0.00	0.14	0.203	0				1.46
70.667	0.00	0.14	0.202	0				1.46
70.750	0.00	0.14	0.201	0				1.45
70.833	0.00	0.14	0.200	0				1.45
70.917	0.00	0.14	0.199	0				1.44
71.000	0.00	0.14	0.198	0				1.44
71.083	0.00	0.14	0.197	0				1.43
71.167	0.00	0.14	0.196	0				1.43
71.250	0.00	0.14	0.195	0				1.43
71.333	0.00	0.14	0.194	0				1.42
71.417	0.00	0.14	0.193	0				1.42
71.500	0.00	0.14	0.192	0				1.41
71.583	0.00	0.14	0.191	0				1.41
71.667	0.00	0.14	0.190	0				1.40
71.750	0.00	0.14	0.189	0				1.40
71.833	0.00	0.14	0.188	0				1.40
71.917	0.00	0.14	0.187	0				1.39
72.000	0.00	0.14	0.186	0				1.39
72.083	0.00	0.14	0.185	0				1.38
72.167	0.00	0.14	0.184	0				1.38
72.250	0.00	0.14	0.183	0				1.38
72.333	0.00	0.14	0.183	0				1.37
72.417	0.00	0.14	0.182	0				1.37
72.500	0.00	0.14	0.181	0				1.36

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72.583	0.00	0.14	0.180	0	1.36
72.667	0.00	0.14	0.179	0	1.35
72.750	0.00	0.14	0.178	0	1.35
72.833	0.00	0.14	0.177	0	1.35
72.917	0.00	0.14	0.176	0	1.34
73.000	0.00	0.14	0.175	0	1.34
73.083	0.00	0.14	0.174	0	1.33
73.167	0.00	0.14	0.173	0	1.33
73.250	0.00	0.14	0.172	0	1.32
73.333	0.00	0.14	0.171	0	1.32
73.417	0.00	0.14	0.170	0	1.31
73.500	0.00	0.14	0.169	0	1.31
73.583	0.00	0.14	0.168	0	1.30
73.667	0.00	0.14	0.167	0	1.30
73.750	0.00	0.14	0.166	0	1.29
73.833	0.00	0.14	0.165	0	1.29
73.917	0.00	0.14	0.164	0	1.28
74.000	0.00	0.14	0.163	0	1.28
74.083	0.00	0.14	0.162	0	1.28
74.167	0.00	0.14	0.161	0	1.27
74.250	0.00	0.14	0.160	0	1.27
74.333	0.00	0.14	0.160	0	1.26
74.417	0.00	0.14	0.159	0	1.26
74.500	0.00	0.14	0.158	0	1.25
74.583	0.00	0.13	0.157	0	1.25
74.667	0.00	0.13	0.156	0	1.24
74.750	0.00	0.13	0.155	0	1.24
74.833	0.00	0.13	0.154	0	1.23
74.917	0.00	0.13	0.153	0	1.23
75.000	0.00	0.13	0.152	0	1.22
75.083	0.00	0.13	0.151	0	1.22
75.167	0.00	0.13	0.150	0	1.21
75.250	0.00	0.13	0.149	0	1.21
75.333	0.00	0.13	0.148	0	1.20
75.417	0.00	0.13	0.148	0	1.20
75.500	0.00	0.13	0.147	0	1.19
75.583	0.00	0.13	0.146	0	1.19
75.667	0.00	0.13	0.145	0	1.18
75.750	0.00	0.13	0.144	0	1.18
75.833	0.00	0.13	0.143	0	1.18
75.917	0.00	0.13	0.142	0	1.17
76.000	0.00	0.13	0.141	0	1.17
76.083	0.00	0.13	0.140	0	1.16
76.167	0.00	0.13	0.139	0	1.16
76.250	0.00	0.13	0.139	0	1.15
76.333	0.00	0.13	0.138	0	1.15
76.417	0.00	0.13	0.137	0	1.14
76.500	0.00	0.13	0.136	0	1.14
76.583	0.00	0.13	0.135	0	1.13
76.667	0.00	0.13	0.134	0	1.13
76.750	0.00	0.13	0.133	0	1.12
76.833	0.00	0.13	0.132	0	1.12
76.917	0.00	0.13	0.131	0	1.12
77.000	0.00	0.13	0.131	0	1.11
77.083	0.00	0.13	0.130	0	1.11
77.167	0.00	0.13	0.129	0	1.10
77.250	0.00	0.13	0.128	0	1.10
77.333	0.00	0.13	0.127	0	1.09
77.417	0.00	0.13	0.126	0	1.09
77.500	0.00	0.13	0.125	0	1.08
77.583	0.00	0.12	0.125	0	1.08
77.667	0.00	0.12	0.124	0	1.08
77.750	0.00	0.12	0.123	0	1.07
77.833	0.00	0.12	0.122	0	1.07
77.917	0.00	0.12	0.121	0	1.06
78.000	0.00	0.12	0.120	0	1.06
78.083	0.00	0.12	0.119	0	1.05
78.167	0.00	0.12	0.119	0	1.05

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78.250	0.00	0.12	0.118	0				1.04
78.333	0.00	0.12	0.117	0				1.04
78.417	0.00	0.12	0.116	0				1.04
78.500	0.00	0.12	0.115	0				1.03
78.583	0.00	0.12	0.114	0				1.03
78.667	0.00	0.12	0.114	0				1.02
78.750	0.00	0.12	0.113	0				1.02
78.833	0.00	0.12	0.112	0				1.01
78.917	0.00	0.12	0.111	0				1.01
79.000	0.00	0.12	0.110	0				1.01
79.083	0.00	0.12	0.109	0				1.00
79.167	0.00	0.12	0.109	0				1.00
79.250	0.00	0.12	0.108	0				0.99
79.333	0.00	0.12	0.107	0				0.99
79.417	0.00	0.12	0.106	0				0.98
79.500	0.00	0.12	0.105	0				0.98
79.583	0.00	0.12	0.104	0				0.97
79.667	0.00	0.12	0.104	0				0.97
79.750	0.00	0.12	0.103	0				0.96
79.833	0.00	0.12	0.102	0				0.96
79.917	0.00	0.12	0.101	0				0.95
80.000	0.00	0.12	0.100	0				0.95
80.083	0.00	0.11	0.100	0				0.94
80.167	0.00	0.11	0.099	0				0.94
80.250	0.00	0.11	0.098	0				0.93
80.333	0.00	0.11	0.097	0				0.93
80.417	0.00	0.11	0.097	0				0.92
80.500	0.00	0.11	0.096	0				0.92
80.583	0.00	0.11	0.095	0				0.91
80.667	0.00	0.11	0.094	0				0.91
80.750	0.00	0.11	0.093	0				0.90
80.833	0.00	0.11	0.093	0				0.90
80.917	0.00	0.11	0.092	0				0.89
81.000	0.00	0.11	0.091	0				0.89
81.083	0.00	0.11	0.090	0				0.88
81.167	0.00	0.11	0.090	0				0.88
81.250	0.00	0.11	0.089	0				0.87
81.333	0.00	0.11	0.088	0				0.87
81.417	0.00	0.11	0.087	0				0.86
81.500	0.00	0.11	0.087	0				0.86
81.583	0.00	0.11	0.086	0				0.85
81.667	0.00	0.11	0.085	0				0.85
81.750	0.00	0.11	0.084	0				0.84
81.833	0.00	0.11	0.084	0				0.84
81.917	0.00	0.11	0.083	0				0.84
82.000	0.00	0.10	0.082	0				0.83
82.083	0.00	0.10	0.082	0				0.83
82.167	0.00	0.10	0.081	0				0.82
82.250	0.00	0.10	0.080	0				0.82
82.333	0.00	0.10	0.079	0				0.81
82.417	0.00	0.10	0.079	0				0.81
82.500	0.00	0.10	0.078	0				0.80
82.583	0.00	0.10	0.077	0				0.80
82.667	0.00	0.10	0.077	0				0.79
82.750	0.00	0.10	0.076	0				0.79
82.833	0.00	0.10	0.075	0				0.79
82.917	0.00	0.10	0.075	0				0.78
83.000	0.00	0.10	0.074	0				0.78
83.083	0.00	0.10	0.073	0				0.77
83.167	0.00	0.10	0.073	0				0.77
83.250	0.00	0.10	0.072	0				0.76
83.333	0.00	0.10	0.071	0				0.76
83.417	0.00	0.10	0.070	0				0.76
83.500	0.00	0.10	0.070	0				0.75
83.583	0.00	0.10	0.069	0				0.75
83.667	0.00	0.10	0.068	0				0.74
83.750	0.00	0.10	0.068	0				0.74
83.833	0.00	0.10	0.067	0				0.73

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83.917	0.00	0.10	0.066	0				0.73
84.000	0.00	0.10	0.066	0				0.73
84.083	0.00	0.09	0.065	0				0.72
84.167	0.00	0.09	0.065	0				0.72
84.250	0.00	0.09	0.064	0				0.71
84.333	0.00	0.09	0.063	0				0.71
84.417	0.00	0.09	0.063	0				0.71
84.500	0.00	0.09	0.062	0				0.70
84.583	0.00	0.09	0.061	0				0.70
84.667	0.00	0.09	0.061	0				0.69
84.750	0.00	0.09	0.060	0				0.69
84.833	0.00	0.09	0.059	0				0.69
84.917	0.00	0.09	0.059	0				0.68
85.000	0.00	0.09	0.058	0				0.68
85.083	0.00	0.09	0.058	0				0.67
85.167	0.00	0.09	0.057	0				0.67
85.250	0.00	0.09	0.056	0				0.66
85.333	0.00	0.09	0.056	0				0.66
85.417	0.00	0.09	0.055	0				0.65
85.500	0.00	0.09	0.054	0				0.65
85.583	0.00	0.09	0.054	0				0.64
85.667	0.00	0.09	0.053	0				0.64
85.750	0.00	0.09	0.053	0				0.63
85.833	0.00	0.09	0.052	0				0.63
85.917	0.00	0.09	0.051	0				0.62
86.000	0.00	0.09	0.051	0				0.62
86.083	0.00	0.08	0.050	0				0.61
86.167	0.00	0.08	0.050	0				0.61
86.250	0.00	0.08	0.049	0				0.60
86.333	0.00	0.08	0.049	0				0.60
86.417	0.00	0.08	0.048	0				0.59
86.500	0.00	0.08	0.047	0				0.59
86.583	0.00	0.08	0.047	0				0.58
86.667	0.00	0.08	0.046	0				0.58
86.750	0.00	0.08	0.046	0				0.57
86.833	0.00	0.08	0.045	0				0.57
86.917	0.00	0.08	0.045	0				0.56
87.000	0.00	0.08	0.044	0				0.56
87.083	0.00	0.08	0.043	0				0.55
87.167	0.00	0.08	0.043	0				0.55
87.250	0.00	0.08	0.042	0				0.54
87.333	0.00	0.08	0.042	0				0.54
87.417	0.00	0.08	0.041	0				0.53
87.500	0.00	0.08	0.041	0				0.53
87.583	0.00	0.08	0.040	0				0.52
87.667	0.00	0.08	0.040	0				0.52
87.750	0.00	0.08	0.039	0				0.51
87.833	0.00	0.08	0.039	0				0.51
87.917	0.00	0.08	0.038	0				0.51
88.000	0.00	0.08	0.038	0				0.50
88.083	0.00	0.07	0.037	0				0.50
88.167	0.00	0.07	0.037	0				0.49
88.250	0.00	0.07	0.036	0				0.49
88.333	0.00	0.07	0.036	0				0.48
88.417	0.00	0.07	0.035	0				0.48
88.500	0.00	0.07	0.035	0				0.47
88.583	0.00	0.07	0.034	0				0.47
88.667	0.00	0.07	0.034	0				0.47
88.750	0.00	0.07	0.033	0				0.46
88.833	0.00	0.07	0.033	0				0.46
88.917	0.00	0.07	0.032	0				0.45
89.000	0.00	0.07	0.032	0				0.45
89.083	0.00	0.07	0.031	0				0.44
89.167	0.00	0.07	0.031	0				0.44
89.250	0.00	0.07	0.030	0				0.44
89.333	0.00	0.07	0.030	0				0.43
89.417	0.00	0.07	0.029	0				0.43
89.500	0.00	0.07	0.029	0				0.42

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89.583	0.00	0.07	0.028	0				0.42
89.667	0.00	0.07	0.028	0				0.42
89.750	0.00	0.07	0.027	0				0.41
89.833	0.00	0.07	0.027	0				0.41
89.917	0.00	0.07	0.026	0				0.40
90.000	0.00	0.07	0.026	0				0.40
90.083	0.00	0.07	0.026	0				0.40
90.167	0.00	0.07	0.025	0				0.39
90.250	0.00	0.07	0.025	0				0.39
90.333	0.00	0.06	0.024	0				0.38
90.417	0.00	0.06	0.024	0				0.38
90.500	0.00	0.06	0.023	0				0.38
90.583	0.00	0.06	0.023	0				0.37
90.667	0.00	0.06	0.022	0				0.37
90.750	0.00	0.06	0.022	0				0.36
90.833	0.00	0.06	0.022	0				0.36
90.917	0.00	0.06	0.021	0				0.36
91.000	0.00	0.06	0.021	0				0.35
91.083	0.00	0.06	0.020	0				0.35
91.167	0.00	0.06	0.020	0				0.35
91.250	0.00	0.06	0.019	0				0.34
91.333	0.00	0.06	0.019	0				0.34
91.417	0.00	0.06	0.019	0				0.33
91.500	0.00	0.06	0.018	0				0.33
91.583	0.00	0.06	0.018	0				0.33
91.667	0.00	0.06	0.017	0				0.32
91.750	0.00	0.06	0.017	0				0.31
91.833	0.00	0.06	0.017	0				0.30
91.917	0.00	0.05	0.016	0				0.30
92.000	0.00	0.05	0.016	0				0.29
92.083	0.00	0.05	0.015	0				0.28
92.167	0.00	0.05	0.015	0				0.28
92.250	0.00	0.05	0.015	0				0.27
92.333	0.00	0.05	0.014	0				0.26
92.417	0.00	0.05	0.014	0				0.26
92.500	0.00	0.05	0.014	0				0.25
92.583	0.00	0.04	0.013	0				0.25
92.667	0.00	0.04	0.013	0				0.24
92.750	0.00	0.04	0.013	0				0.24
92.833	0.00	0.04	0.013	0				0.23
92.917	0.00	0.04	0.012	0				0.23
93.000	0.00	0.04	0.012	0				0.22
93.083	0.00	0.04	0.012	0				0.22
93.167	0.00	0.04	0.011	0				0.21
93.250	0.00	0.04	0.011	0				0.21
93.333	0.00	0.04	0.011	0				0.20
93.417	0.00	0.04	0.011	0				0.20
93.500	0.00	0.03	0.010	0				0.19
93.583	0.00	0.03	0.010	0				0.19
93.667	0.00	0.03	0.010	0				0.18
93.750	0.00	0.03	0.010	0				0.18
93.833	0.00	0.03	0.010	0				0.18
93.917	0.00	0.03	0.009	0				0.17
94.000	0.00	0.03	0.009	0				0.17
94.083	0.00	0.03	0.009	0				0.16
94.167	0.00	0.03	0.009	0				0.16
94.250	0.00	0.03	0.009	0				0.16
94.333	0.00	0.03	0.008	0				0.15
94.417	0.00	0.03	0.008	0				0.15
94.500	0.00	0.03	0.008	0				0.15
94.583	0.00	0.03	0.008	0				0.14
94.667	0.00	0.03	0.008	0				0.14
94.750	0.00	0.02	0.007	0				0.14
94.833	0.00	0.02	0.007	0				0.13
94.917	0.00	0.02	0.007	0				0.13
95.000	0.00	0.02	0.007	0				0.13
95.083	0.00	0.02	0.007	0				0.12
95.167	0.00	0.02	0.007	0				0.12

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95.250	0.00	0.02	0.006	0				0.12
95.333	0.00	0.02	0.006	0				0.12
95.417	0.00	0.02	0.006	0				0.11
95.500	0.00	0.02	0.006	0				0.11
95.583	0.00	0.02	0.006	0				0.11
95.667	0.00	0.02	0.006	0				0.11
95.750	0.00	0.02	0.006	0				0.10
95.833	0.00	0.02	0.006	0				0.10
95.917	0.00	0.02	0.005	0				0.10
96.000	0.00	0.02	0.005	0				0.10
96.083	0.00	0.02	0.005	0				0.09
96.167	0.00	0.02	0.005	0				0.09
96.250	0.00	0.02	0.005	0				0.09
96.333	0.00	0.02	0.005	0				0.09
96.417	0.00	0.02	0.005	0				0.09
96.500	0.00	0.02	0.005	0				0.08
96.583	0.00	0.01	0.004	0				0.08
96.667	0.00	0.01	0.004	0				0.08
96.750	0.00	0.01	0.004	0				0.08
96.833	0.00	0.01	0.004	0				0.08
96.917	0.00	0.01	0.004	0				0.07
97.000	0.00	0.01	0.004	0				0.07
97.083	0.00	0.01	0.004	0				0.07
97.167	0.00	0.01	0.004	0				0.07
97.250	0.00	0.01	0.004	0				0.07
97.333	0.00	0.01	0.004	0				0.07
97.417	0.00	0.01	0.004	0				0.07
97.500	0.00	0.01	0.003	0				0.06
97.583	0.00	0.01	0.003	0				0.06
97.667	0.00	0.01	0.003	0				0.06
97.750	0.00	0.01	0.003	0				0.06
97.833	0.00	0.01	0.003	0				0.06
97.917	0.00	0.01	0.003	0				0.06
98.000	0.00	0.01	0.003	0				0.06
98.083	0.00	0.01	0.003	0				0.05
98.167	0.00	0.01	0.003	0				0.05
98.250	0.00	0.01	0.003	0				0.05
98.333	0.00	0.01	0.003	0				0.05
98.417	0.00	0.01	0.003	0				0.05
98.500	0.00	0.01	0.003	0				0.05
98.583	0.00	0.01	0.003	0				0.05
98.667	0.00	0.01	0.003	0				0.05
98.750	0.00	0.01	0.002	0				0.05
98.833	0.00	0.01	0.002	0				0.04
98.917	0.00	0.01	0.002	0				0.04
99.000	0.00	0.01	0.002	0				0.04
99.083	0.00	0.01	0.002	0				0.04
99.167	0.00	0.01	0.002	0				0.04
99.250	0.00	0.01	0.002	0				0.04
99.333	0.00	0.01	0.002	0				0.04
99.417	0.00	0.01	0.002	0				0.04
99.500	0.00	0.01	0.002	0				0.04
99.583	0.00	0.01	0.002	0				0.04
99.667	0.00	0.01	0.002	0				0.04
99.750	0.00	0.01	0.002	0				0.03
99.833	0.00	0.01	0.002	0				0.03
99.917	0.00	0.01	0.002	0				0.03
100.000	0.00	0.01	0.002	0				0.03
100.083	0.00	0.01	0.002	0				0.03
100.167	0.00	0.01	0.002	0				0.03
100.250	0.00	0.01	0.002	0				0.03
100.333	0.00	0.01	0.002	0				0.03
100.417	0.00	0.01	0.002	0				0.03
100.500	0.00	0.01	0.002	0				0.03
100.583	0.00	0.00	0.001	0				0.03
100.667	0.00	0.00	0.001	0				0.03
100.750	0.00	0.00	0.001	0				0.03
100.833	0.00	0.00	0.001	0				0.03

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100.917	0.00	0.00	0.001	0				0.02
101.000	0.00	0.00	0.001	0				0.02
101.083	0.00	0.00	0.001	0				0.02
101.167	0.00	0.00	0.001	0				0.02
101.250	0.00	0.00	0.001	0				0.02
101.333	0.00	0.00	0.001	0				0.02
101.417	0.00	0.00	0.001	0				0.02
101.500	0.00	0.00	0.001	0				0.02
101.583	0.00	0.00	0.001	0				0.02
101.667	0.00	0.00	0.001	0				0.02
101.750	0.00	0.00	0.001	0				0.02
101.833	0.00	0.00	0.001	0				0.02
101.917	0.00	0.00	0.001	0				0.02
102.000	0.00	0.00	0.001	0				0.02
102.083	0.00	0.00	0.001	0				0.02
102.167	0.00	0.00	0.001	0				0.02
102.250	0.00	0.00	0.001	0				0.02
102.333	0.00	0.00	0.001	0				0.02
102.417	0.00	0.00	0.001	0				0.02
102.500	0.00	0.00	0.001	0				0.02
102.583	0.00	0.00	0.001	0				0.02
102.667	0.00	0.00	0.001	0				0.02
102.750	0.00	0.00	0.001	0				0.02
102.833	0.00	0.00	0.001	0				0.01
102.917	0.00	0.00	0.001	0				0.01
103.000	0.00	0.00	0.001	0				0.01
103.083	0.00	0.00	0.001	0				0.01
103.167	0.00	0.00	0.001	0				0.01
103.250	0.00	0.00	0.001	0				0.01
103.333	0.00	0.00	0.001	0				0.01
103.417	0.00	0.00	0.001	0				0.01
103.500	0.00	0.00	0.001	0				0.01
103.583	0.00	0.00	0.001	0				0.01
103.667	0.00	0.00	0.001	0				0.01
103.750	0.00	0.00	0.001	0				0.01
103.833	0.00	0.00	0.001	0				0.01
103.917	0.00	0.00	0.001	0				0.01
104.000	0.00	0.00	0.001	0				0.01
104.083	0.00	0.00	0.001	0				0.01
104.167	0.00	0.00	0.001	0				0.01
104.250	0.00	0.00	0.001	0				0.01
104.333	0.00	0.00	0.001	0				0.01
104.417	0.00	0.00	0.001	0				0.01
104.500	0.00	0.00	0.001	0				0.01
104.583	0.00	0.00	0.000	0				0.01
104.667	0.00	0.00	0.000	0				0.01
104.750	0.00	0.00	0.000	0				0.01
104.833	0.00	0.00	0.000	0				0.01
104.917	0.00	0.00	0.000	0				0.01
105.000	0.00	0.00	0.000	0				0.01
105.083	0.00	0.00	0.000	0				0.01
105.167	0.00	0.00	0.000	0				0.01
105.250	0.00	0.00	0.000	0				0.01
105.333	0.00	0.00	0.000	0				0.01
105.417	0.00	0.00	0.000	0				0.01
105.500	0.00	0.00	0.000	0				0.01
105.583	0.00	0.00	0.000	0				0.01
105.667	0.00	0.00	0.000	0				0.01
105.750	0.00	0.00	0.000	0				0.01
105.833	0.00	0.00	0.000	0				0.01
105.917	0.00	0.00	0.000	0				0.01
106.000	0.00	0.00	0.000	0				0.01
106.083	0.00	0.00	0.000	0				0.01
106.167	0.00	0.00	0.000	0				0.01
106.250	0.00	0.00	0.000	0				0.01
106.333	0.00	0.00	0.000	0				0.01
106.417	0.00	0.00	0.000	0				0.01

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*****HYDROGRAPH DATA*****

Number of intervals = 1277
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 54.682 (CFS)
Total volume = 3.198 (Ac.Ft)

Status of hydrographs being held in storage

	Stream 1	Stream 2	Stream 3	Stream 4	Stream 5
Peak (CFS)	0.000	0.000	0.000	0.000	0.000
Vol (Ac.Ft)	0.000	0.000	0.000	0.000	0.000

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FLOOD HYDROGRAPH ROUTING PROGRAM
Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2005
Study date: 10/12/21

Pacific Emerald
100-Year 24-Hour Storm Routing
Proposed Condition

Program License Serial Number 6062

***** HYDROGRAPH INFORMATION *****

From study/file name: 100yr24hrp24100.rte
*****HYDROGRAPH DATA*****
Number of intervals = 293
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 21.542 (CFS)
Total volume = 9.684 (Ac.Ft)
Status of hydrographs being held in storage
Stream 1 Stream 2 Stream 3 Stream 4 Stream 5
Peak (CFS) 0.000 0.000 0.000 0.000 0.000
Vol (Ac.Ft) 0.000 0.000 0.000 0.000 0.000

++++
Process from Point/Station 1.000 to Point/Station 2.000
**** RETARDING BASIN ROUTING ****

User entry of depth-outflow-storage data

Total number of inflow hydrograph intervals = 293
Hydrograph time unit = 5.000 (Min.)
Initial depth in storage basin = 0.00(Ft.)

Initial basin depth = 0.00 (Ft.)
Initial basin storage = 0.00 (Ac.Ft)
Initial basin outflow = 0.00 (CFS)

Depth vs. Storage and Depth vs. Discharge data:

Basin Depth (Ft.)	Storage (Ac.Ft)	Outflow (CFS)	(S-0*dt/2) (Ac.Ft)	(S+0*dt/2) (Ac.Ft)
0.000	0.000	0.000	0.000	0.000
0.330	0.018	0.060	0.018	0.018
0.670	0.057	0.090	0.057	0.057
1.000	0.109	0.120	0.109	0.109
1.330	0.173	0.140	0.173	0.173
1.670	0.252	0.150	0.251	0.253
2.000	0.345	0.170	0.344	0.346
2.330	0.451	0.180	0.450	0.452
2.670	0.566	0.200	0.565	0.567
3.000	0.685	0.210	0.684	0.686
3.330	0.811	0.220	0.810	0.812
3.670	0.948	0.410	0.947	0.949

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4.000	1.088	0.510	1.086	1.090
5.000	1.558	0.720	1.556	1.560
6.000	2.096	0.870	2.093	2.099
6.330	2.289	0.920	2.286	2.292
7.000	2.706	83.260	2.419	2.993
8.000	3.390	324.830	2.271	4.509

 Hydrograph Detention Basin Routing

Graph values: 'I'= unit inflow; 'O'=outflow at time shown

Time (Hours)	Inflow (CFS)	Outflow (CFS)	Storage (Ac.Ft)	.0	5.4	10.77	16.16	21.54	Depth (Ft.)
0.083	0.24	0.00	0.001	O					0.01
0.167	0.61	0.01	0.004	O					0.07
0.250	0.70	0.03	0.008	OI					0.15
0.333	0.86	0.04	0.013	OI					0.24
0.417	1.06	0.06	0.019	OI					0.34
0.500	1.12	0.07	0.027	OI					0.40
0.583	1.14	0.07	0.034	OI					0.47
0.667	1.16	0.08	0.041	OI					0.53
0.750	1.16	0.08	0.049	OI					0.60
0.833	1.28	0.09	0.057	OI					0.67
0.917	1.47	0.09	0.065	O I					0.72
1.000	1.51	0.10	0.075	O I					0.78
1.083	1.41	0.11	0.084	O I					0.84
1.167	1.24	0.11	0.093	OI					0.90
1.250	1.20	0.11	0.100	OI					0.94
1.333	1.18	0.12	0.108	OI					0.99
1.417	1.17	0.12	0.115	OI					1.03
1.500	1.16	0.12	0.122	OI					1.07
1.583	1.16	0.13	0.129	OI					1.10
1.667	1.16	0.13	0.136	OI					1.14
1.750	1.16	0.13	0.144	OI					1.18
1.833	1.28	0.13	0.151	OI					1.22
1.917	1.47	0.14	0.160	O I					1.26
2.000	1.51	0.14	0.169	O I					1.31
2.083	1.53	0.14	0.178	O I					1.35
2.167	1.54	0.14	0.188	O I					1.39
2.250	1.55	0.14	0.198	O I					1.44
2.333	1.55	0.14	0.207	O I					1.48
2.417	1.55	0.15	0.217	O I					1.52
2.500	1.55	0.15	0.227	O I					1.56
2.583	1.67	0.15	0.237	O I					1.60
2.667	1.85	0.15	0.248	O I					1.65
2.750	1.90	0.15	0.260	O I					1.70
2.833	1.92	0.15	0.272	O I					1.74
2.917	1.93	0.16	0.284	O I					1.78
3.000	1.94	0.16	0.296	O I					1.83
3.083	1.94	0.16	0.309	O I					1.87
3.167	1.94	0.16	0.321	O I					1.91
3.250	1.94	0.17	0.333	O I					1.96
3.333	1.94	0.17	0.345	O I					2.00
3.417	1.94	0.17	0.357	O I					2.04
3.500	1.94	0.17	0.369	O I					2.08
3.583	1.94	0.17	0.382	O I					2.11
3.667	1.94	0.17	0.394	O I					2.15
3.750	1.94	0.18	0.406	O I					2.19
3.833	2.06	0.18	0.418	O I					2.23
3.917	2.24	0.18	0.432	O I					2.27
4.000	2.29	0.18	0.446	O I					2.32
4.083	2.31	0.18	0.461	O I					2.36
4.167	2.32	0.18	0.476	O I					2.40
4.250	2.33	0.19	0.490	O I					2.45
4.333	2.44	0.19	0.506	O I					2.49
4.417	2.63	0.19	0.522	O I					2.54
4.500	2.67	0.20	0.539	O I					2.59

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4.583	2.70	0.20	0.556	0	I				2.64
4.667	2.71	0.20	0.573	0	I				2.69
4.750	2.71	0.20	0.590	0	I				2.74
4.833	2.83	0.20	0.608	0	I				2.79
4.917	3.02	0.21	0.627	0	I				2.84
5.000	3.06	0.21	0.646	0	I				2.89
5.083	2.84	0.21	0.665	0	I				2.94
5.167	2.49	0.21	0.682	0	I				2.99
5.250	2.40	0.21	0.697	0	I				3.03
5.333	2.48	0.21	0.713	0	I				3.07
5.417	2.64	0.21	0.729	0	I				3.12
5.500	2.67	0.21	0.746	0	I				3.16
5.583	2.81	0.22	0.763	0	I				3.20
5.667	3.01	0.22	0.782	0	I				3.25
5.750	3.06	0.22	0.801	0	I				3.30
5.833	3.08	0.23	0.821	0	I				3.35
5.917	3.09	0.26	0.840	0	I				3.40
6.000	3.10	0.29	0.860	0	I				3.45
6.083	3.22	0.31	0.879	0	I				3.50
6.167	3.40	0.34	0.900	0	I				3.55
6.250	3.45	0.37	0.921	0	I				3.60
6.333	3.47	0.40	0.942	0	I				3.66
6.417	3.48	0.42	0.963	0	I				3.71
6.500	3.49	0.44	0.984	0	I				3.76
6.583	2.60	0.45	1.002	0	I				3.80
6.667	1.24	0.46	1.012	O	I				3.82
6.750	0.92	0.46	1.017	O	I				3.83
6.833	0.80	0.46	1.019	O	I				3.84
6.917	0.75	0.46	1.022	O	I				3.84
7.000	0.73	0.46	1.024	O	I				3.85
7.083	0.76	0.47	1.025	O	I				3.85
7.167	0.79	0.47	1.028	O	I				3.86
7.250	0.82	0.47	1.030	O	I				3.86
7.333	1.09	0.47	1.033	O	I				3.87
7.417	1.49	0.47	1.039	O	I				3.88
7.500	1.62	0.48	1.046	O	I				3.90
7.583	1.93	0.49	1.055	O	I				3.92
7.667	2.35	0.49	1.067	O	I				3.95
7.750	2.49	0.50	1.080	O	I				3.98
7.833	2.80	0.51	1.095	O	I				4.01
7.917	3.22	0.52	1.112	O	I				4.05
8.000	3.35	0.53	1.131	O	I				4.09
8.083	3.90	0.54	1.152	O	I				4.14
8.167	4.69	0.55	1.178	O	I				4.19
8.250	4.92	0.56	1.207	O	I				4.25
8.333	5.03	0.58	1.237	O	I				4.32
8.417	5.11	0.59	1.268	O	I				4.38
8.500	5.16	0.60	1.300	O	I				4.45
8.583	5.43	0.62	1.332	O	I				4.52
8.667	5.83	0.63	1.366	O	I				4.59
8.750	5.95	0.65	1.402	O	I				4.67
8.833	6.26	0.67	1.440	O	I				4.75
8.917	6.68	0.69	1.480	O	I				4.83
9.000	6.82	0.70	1.522	O	I				4.92
9.083	7.36	0.72	1.566	O	I				5.01
9.167	8.15	0.74	1.614	O	I				5.10
9.250	8.38	0.75	1.666	O	I				5.20
9.333	8.73	0.77	1.720	O	I				5.30
9.417	9.17	0.78	1.776	O	I				5.40
9.500	9.32	0.80	1.834	O	I				5.51
9.583	9.63	0.81	1.894	O	I				5.62
9.667	10.05	0.83	1.956	O	I				5.74
9.750	10.18	0.85	2.020	O	I				5.86
9.833	10.49	0.87	2.085	O	I				5.98
9.917	10.91	0.88	2.153	O	I				6.10
10.000	11.04	0.90	2.222	O	I				6.22
10.083	9.45	0.92	2.286	O	I				6.33
10.167	6.91	6.50	2.317		O	I			6.38

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10.250	6.31	6.59	2.318	0				6.38
10.333	6.06	6.26	2.316	0				6.37
10.417	5.94	6.05	2.315	0				6.37
10.500	5.87	5.93	2.314	0				6.37
10.583	7.08	6.37	2.317	OI				6.37
10.667	8.96	7.71	2.323	0 I				6.39
10.750	9.44	8.92	2.330	OI				6.40
10.833	9.67	9.44	2.332	0				6.40
10.917	9.81	9.68	2.333	0				6.40
11.000	9.91	9.83	2.334	0				6.40
11.083	9.70	9.81	2.334	0				6.40
11.167	9.36	9.58	2.333	IO				6.40
11.250	9.29	9.37	2.332	0				6.40
11.333	9.28	9.30	2.331	0				6.40
11.417	9.28	9.28	2.331	0				6.40
11.500	9.30	9.29	2.331	0				6.40
11.583	8.85	9.11	2.330	0				6.40
11.667	8.13	8.61	2.328	0				6.39
11.750	7.98	8.16	2.326	IO				6.39
11.833	8.16	8.09	2.325	0				6.39
11.917	8.52	8.29	2.326	0				6.39
12.000	8.61	8.51	2.327	0				6.39
12.083	10.34	9.29	2.331	0 I				6.40
12.167	12.97	11.20	2.341	0 I				6.41
12.250	13.65	12.91	2.350	OI				6.43
12.333	14.20	13.73	2.354	OI				6.43
12.417	14.75	14.33	2.357	0				6.44
12.500	14.96	14.75	2.359	OI				6.44
12.583	15.50	15.14	2.361	OI				6.45
12.667	16.29	15.75	2.364	OI				6.45
12.750	16.51	16.28	2.367	0				6.45
12.833	16.86	16.61	2.368	OI				6.46
12.917	17.30	16.99	2.370	0				6.46
13.000	17.44	17.30	2.372	0				6.46
13.083	18.70	17.92	2.375	OI				6.47
13.167	20.59	19.32	2.382	0 I				6.48
13.250	21.09	20.55	2.388	OI				6.49
13.333	21.31	21.08	2.391	0				6.49
13.417	21.45	21.32	2.392	0				6.50
13.500	21.54	21.46	2.393	OI				6.50
13.583	18.95	20.48	2.388	I 0				6.49
13.667	14.91	17.60	2.373	I 0				6.47
13.750	13.92	15.02	2.360	I 0				6.44
13.833	13.51	13.96	2.355	0				6.44
13.917	13.29	13.51	2.353	IO				6.43
14.000	13.16	13.28	2.352	0				6.43
14.083	14.14	13.58	2.353	0				6.43
14.167	15.64	14.64	2.358	0 I				6.44
14.250	16.03	15.61	2.363	0				6.45
14.333	15.97	15.93	2.365	0				6.45
14.417	15.71	15.86	2.365	0				6.45
14.500	15.70	15.74	2.364	0				6.45
14.583	15.69	15.70	2.364	0				6.45
14.667	15.69	15.69	2.364	0				6.45
14.750	15.70	15.69	2.364	0				6.45
14.833	15.48	15.61	2.363	IO				6.45
14.917	15.13	15.37	2.362	0				6.45
15.000	15.07	15.15	2.361	0				6.45
15.083	14.81	14.98	2.360	IO				6.44
15.167	14.44	14.69	2.359	0				6.44
15.250	14.36	14.46	2.358	0				6.44
15.333	14.10	14.27	2.357	IO				6.44
15.417	13.73	13.98	2.355	0				6.44
15.500	13.65	13.75	2.354	0				6.43
15.583	12.68	13.27	2.352	IO				6.43
15.667	11.20	12.19	2.346	I 0				6.42
15.750	10.84	11.24	2.341	0				6.41
15.833	10.70	10.86	2.339	IO				6.41

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15.917	10.64	10.71	2.339			0		6.41
16.000	10.60	10.64	2.338			0		6.41
16.083	7.83	9.49	2.332			I	0	6.40
16.167	3.51	6.40	2.317		I	0		6.37
16.250	2.44	3.63	2.303		I	0		6.35
16.333	1.97	2.47	2.297		IO			6.34
16.417	1.72	1.96	2.294		0			6.34
16.500	1.55	1.70	2.293		0			6.34
16.583	1.43	1.53	2.292		0			6.33
16.667	1.25	1.38	2.291		IO			6.33
16.750	1.20	1.25	2.291		0			6.33
16.833	1.18	1.20	2.290		0			6.33
16.917	1.17	1.18	2.290		0			6.33
17.000	1.16	1.17	2.290		0			6.33
17.083	0.82	1.02	2.290		0			6.33
17.167	0.28	0.92	2.287		IO			6.33
17.250	0.17	0.92	2.282		IO			6.32
17.333	0.13	0.92	2.277		IO			6.31
17.417	0.11	0.92	2.271		IO			6.30
17.500	0.11	0.91	2.266		IO			6.29
17.583	0.13	0.91	2.260		IO			6.28
17.667	0.15	0.91	2.255		IO			6.27
17.750	0.17	0.91	2.250		IO			6.26
17.833	0.60	0.91	2.246		IO			6.26
17.917	1.25	0.91	2.246		0			6.26
18.000	1.42	0.91	2.249		OI			6.26
18.083	1.49	0.91	2.253		OI			6.27
18.167	1.53	0.91	2.257		OI			6.27
18.250	1.55	0.91	2.261		OI			6.28
18.333	1.55	0.91	2.265		OI			6.29
18.417	1.55	0.92	2.270		OI			6.30
18.500	1.55	0.92	2.274		OI			6.30
18.583	1.43	0.92	2.278		OI			6.31
18.667	1.25	0.92	2.281		0			6.32
18.750	1.20	0.92	2.283		0			6.32
18.833	1.06	0.92	2.285		0			6.32
18.917	0.87	0.92	2.285		0			6.32
19.000	0.81	0.92	2.284		0			6.32
19.083	0.91	0.92	2.284		0			6.32
19.167	1.09	0.92	2.285		0			6.32
19.250	1.12	0.92	2.286		0			6.32
19.333	1.26	0.92	2.288		0			6.33
19.417	1.46	1.13	2.290		OI			6.33
19.500	1.51	1.42	2.292		0			6.33
19.583	1.41	1.45	2.292		0			6.33
19.667	1.24	1.35	2.291		IO			6.33
19.750	1.20	1.24	2.291		0			6.33
19.833	1.06	1.15	2.290		0			6.33
19.917	0.87	1.00	2.289		0			6.33
20.000	0.81	0.92	2.289		0			6.33
20.083	0.91	0.92	2.288		0			6.33
20.167	1.09	0.92	2.289		0			6.33
20.250	1.12	1.04	2.290		0			6.33
20.333	1.14	1.12	2.290		0			6.33
20.417	1.16	1.14	2.290		0			6.33
20.500	1.16	1.16	2.290		0			6.33
20.583	1.16	1.16	2.290		0			6.33
20.667	1.16	1.16	2.290		0			6.33
20.750	1.16	1.16	2.290		0			6.33
20.833	1.04	1.11	2.290		0			6.33
20.917	0.86	0.98	2.289		0			6.33
21.000	0.81	0.92	2.289		0			6.33
21.083	0.91	0.92	2.288		0			6.33
21.167	1.09	0.92	2.289		0			6.33
21.250	1.12	1.03	2.290		0			6.33
21.333	1.03	1.07	2.290		0			6.33
21.417	0.85	0.96	2.289		0			6.33
21.500	0.81	0.92	2.288		0			6.33

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21.583	0.91	0.92	2.288	0				6.33
21.667	1.09	0.92	2.289	0				6.33
21.750	1.12	1.03	2.290	0				6.33
21.833	1.03	1.07	2.290	0				6.33
21.917	0.85	0.96	2.289	0				6.33
22.000	0.81	0.92	2.288	0				6.33
22.083	0.91	0.92	2.288	0				6.33
22.167	1.09	0.92	2.289	0				6.33
22.250	1.12	1.03	2.290	0				6.33
22.333	1.03	1.07	2.290	0				6.33
22.417	0.85	0.96	2.289	0				6.33
22.500	0.81	0.92	2.288	0				6.33
22.583	0.79	0.92	2.288	0				6.33
22.667	0.78	0.92	2.287	0				6.33
22.750	0.78	0.92	2.286	0				6.32
22.833	0.78	0.92	2.285	0				6.32
22.917	0.78	0.92	2.284	0				6.32
23.000	0.78	0.92	2.283	0				6.32
23.083	0.78	0.92	2.282	0				6.32
23.167	0.78	0.92	2.281	0				6.32
23.250	0.78	0.92	2.280	0				6.31
23.333	0.78	0.92	2.279	0				6.31
23.417	0.78	0.92	2.278	0				6.31
23.500	0.78	0.92	2.277	0				6.31
23.583	0.78	0.92	2.276	0				6.31
23.667	0.78	0.92	2.275	0				6.31
23.750	0.78	0.92	2.274	0				6.30
23.833	0.78	0.92	2.273	0				6.30
23.917	0.78	0.92	2.272	0				6.30
24.000	0.78	0.92	2.271	0				6.30
24.083	0.54	0.91	2.269	IO				6.30
24.167	0.17	0.91	2.265	IO				6.29
24.250	0.08	0.91	2.260	IO				6.28
24.333	0.04	0.91	2.254	IO				6.27
24.417	0.01	0.91	2.248	IO				6.26
24.500	0.00	0.91	2.242	IO				6.25
24.583	0.00	0.91	2.236	IO				6.24
24.667	0.00	0.90	2.229	IO				6.23
24.750	0.00	0.90	2.223	IO				6.22
24.833	0.00	0.90	2.217	IO				6.21
24.917	0.00	0.90	2.211	IO				6.20
25.000	0.00	0.90	2.204	IO				6.19
25.083	0.00	0.90	2.198	IO				6.17
25.167	0.00	0.89	2.192	IO				6.16
25.250	0.00	0.89	2.186	IO				6.15
25.333	0.00	0.89	2.180	IO				6.14
25.417	0.00	0.89	2.174	IO				6.13
25.500	0.00	0.89	2.168	IO				6.12
25.583	0.00	0.89	2.161	IO				6.11
25.667	0.00	0.89	2.155	IO				6.10
25.750	0.00	0.88	2.149	IO				6.09
25.833	0.00	0.88	2.143	IO				6.08
25.917	0.00	0.88	2.137	IO				6.07
26.000	0.00	0.88	2.131	IO				6.06
26.083	0.00	0.88	2.125	IO				6.05
26.167	0.00	0.88	2.119	IO				6.04
26.250	0.00	0.87	2.113	IO				6.03
26.333	0.00	0.87	2.107	IO				6.02
26.417	0.00	0.87	2.101	IO				6.01
26.500	0.00	0.87	2.095	IO				6.00
26.583	0.00	0.87	2.089	IO				5.99
26.667	0.00	0.87	2.083	IO				5.98
26.750	0.00	0.86	2.077	IO				5.96
26.833	0.00	0.86	2.071	IO				5.95
26.917	0.00	0.86	2.065	IO				5.94
27.000	0.00	0.86	2.059	IO				5.93
27.083	0.00	0.86	2.053	IO				5.92
27.167	0.00	0.86	2.047	IO				5.91

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27.250	0.00	0.85	2.041	IO	5.90
27.333	0.00	0.85	2.036	IO	5.89
27.417	0.00	0.85	2.030	IO	5.88
27.500	0.00	0.85	2.024	IO	5.87
27.583	0.00	0.85	2.018	IO	5.86
27.667	0.00	0.85	2.012	IO	5.84
27.750	0.00	0.85	2.006	IO	5.83
27.833	0.00	0.84	2.001	IO	5.82
27.917	0.00	0.84	1.995	IO	5.81
28.000	0.00	0.84	1.989	IO	5.80
28.083	0.00	0.84	1.983	IO	5.79
28.167	0.00	0.84	1.977	IO	5.78
28.250	0.00	0.84	1.972	IO	5.77
28.333	0.00	0.83	1.966	IO	5.76
28.417	0.00	0.83	1.960	IO	5.75
28.500	0.00	0.83	1.954	IO	5.74
28.583	0.00	0.83	1.949	IO	5.73
28.667	0.00	0.83	1.943	IO	5.72
28.750	0.00	0.83	1.937	IO	5.71
28.833	0.00	0.82	1.932	IO	5.69
28.917	0.00	0.82	1.926	IO	5.68
29.000	0.00	0.82	1.920	IO	5.67
29.083	0.00	0.82	1.915	IO	5.66
29.167	0.00	0.82	1.909	IO	5.65
29.250	0.00	0.82	1.903	IO	5.64
29.333	0.00	0.81	1.898	IO	5.63
29.417	0.00	0.81	1.892	IO	5.62
29.500	0.00	0.81	1.887	IO	5.61
29.583	0.00	0.81	1.881	IO	5.60
29.667	0.00	0.81	1.875	IO	5.59
29.750	0.00	0.81	1.870	IO	5.58
29.833	0.00	0.81	1.864	IO	5.57
29.917	0.00	0.80	1.859	IO	5.56
30.000	0.00	0.80	1.853	IO	5.55
30.083	0.00	0.80	1.848	IO	5.54
30.167	0.00	0.80	1.842	IO	5.53
30.250	0.00	0.80	1.837	IO	5.52
30.333	0.00	0.80	1.831	IO	5.51
30.417	0.00	0.79	1.826	IO	5.50
30.500	0.00	0.79	1.820	IO	5.49
30.583	0.00	0.79	1.815	IO	5.48
30.667	0.00	0.79	1.809	IO	5.47
30.750	0.00	0.79	1.804	IO	5.46
30.833	0.00	0.79	1.799	IO	5.45
30.917	0.00	0.79	1.793	IO	5.44
31.000	0.00	0.78	1.788	IO	5.43
31.083	0.00	0.78	1.782	IO	5.42
31.167	0.00	0.78	1.777	IO	5.41
31.250	0.00	0.78	1.772	IO	5.40
31.333	0.00	0.78	1.766	IO	5.39
31.417	0.00	0.78	1.761	IO	5.38
31.500	0.00	0.78	1.755	IO	5.37
31.583	0.00	0.77	1.750	IO	5.36
31.667	0.00	0.77	1.745	IO	5.35
31.750	0.00	0.77	1.740	IO	5.34
31.833	0.00	0.77	1.734	IO	5.33
31.917	0.00	0.77	1.729	IO	5.32
32.000	0.00	0.77	1.724	IO	5.31
32.083	0.00	0.76	1.718	IO	5.30
32.167	0.00	0.76	1.713	IO	5.29
32.250	0.00	0.76	1.708	IO	5.28
32.333	0.00	0.76	1.703	IO	5.27
32.417	0.00	0.76	1.697	IO	5.26
32.500	0.00	0.76	1.692	IO	5.25
32.583	0.00	0.76	1.687	IO	5.24
32.667	0.00	0.75	1.682	IO	5.23
32.750	0.00	0.75	1.677	IO	5.22
32.833	0.00	0.75	1.671	IO	5.21

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32.917	0.00	0.75	1.666	IO	5.20
33.000	0.00	0.75	1.661	IO	5.19
33.083	0.00	0.75	1.656	IO	5.18
33.167	0.00	0.75	1.651	IO	5.17
33.250	0.00	0.74	1.646	IO	5.16
33.333	0.00	0.74	1.640	IO	5.15
33.417	0.00	0.74	1.635	IO	5.14
33.500	0.00	0.74	1.630	IO	5.13
33.583	0.00	0.74	1.625	IO	5.12
33.667	0.00	0.74	1.620	IO	5.12
33.750	0.00	0.74	1.615	IO	5.11
33.833	0.00	0.73	1.610	IO	5.10
33.917	0.00	0.73	1.605	IO	5.09
34.000	0.00	0.73	1.600	IO	5.08
34.083	0.00	0.73	1.595	IO	5.07
34.167	0.00	0.73	1.590	IO	5.06
34.250	0.00	0.73	1.585	IO	5.05
34.333	0.00	0.73	1.580	IO	5.04
34.417	0.00	0.72	1.575	IO	5.03
34.500	0.00	0.72	1.570	IO	5.02
34.583	0.00	0.72	1.565	IO	5.01
34.667	0.00	0.72	1.560	IO	5.00
34.750	0.00	0.72	1.555	IO	4.99
34.833	0.00	0.72	1.550	IO	4.98
34.917	0.00	0.71	1.545	IO	4.97
35.000	0.00	0.71	1.540	IO	4.96
35.083	0.00	0.71	1.535	IO	4.95
35.167	0.00	0.71	1.530	IO	4.94
35.250	0.00	0.71	1.525	IO	4.93
35.333	0.00	0.70	1.521	IO	4.92
35.417	0.00	0.70	1.516	IO	4.91
35.500	0.00	0.70	1.511	IO	4.90
35.583	0.00	0.70	1.506	IO	4.89
35.667	0.00	0.69	1.501	IO	4.88
35.750	0.00	0.69	1.497	IO	4.87
35.833	0.00	0.69	1.492	IO	4.86
35.917	0.00	0.69	1.487	IO	4.85
36.000	0.00	0.69	1.482	IO	4.84
36.083	0.00	0.68	1.478	IO	4.83
36.167	0.00	0.68	1.473	IO	4.82
36.250	0.00	0.68	1.468	IO	4.81
36.333	0.00	0.68	1.464	IO	4.80
36.417	0.00	0.68	1.459	IO	4.79
36.500	0.00	0.67	1.454	IO	4.78
36.583	0.00	0.67	1.450	0	4.77
36.667	0.00	0.67	1.445	0	4.76
36.750	0.00	0.67	1.440	0	4.75
36.833	0.00	0.67	1.436	0	4.74
36.917	0.00	0.66	1.431	0	4.73
37.000	0.00	0.66	1.427	0	4.72
37.083	0.00	0.66	1.422	0	4.71
37.167	0.00	0.66	1.418	0	4.70
37.250	0.00	0.66	1.413	0	4.69
37.333	0.00	0.65	1.409	0	4.68
37.417	0.00	0.65	1.404	0	4.67
37.500	0.00	0.65	1.400	0	4.66
37.583	0.00	0.65	1.395	0	4.65
37.667	0.00	0.65	1.391	0	4.64
37.750	0.00	0.64	1.386	0	4.63
37.833	0.00	0.64	1.382	0	4.63
37.917	0.00	0.64	1.377	0	4.62
38.000	0.00	0.64	1.373	0	4.61
38.083	0.00	0.64	1.369	0	4.60
38.167	0.00	0.63	1.364	0	4.59
38.250	0.00	0.63	1.360	0	4.58
38.333	0.00	0.63	1.356	0	4.57
38.417	0.00	0.63	1.351	0	4.56
38.500	0.00	0.63	1.347	0	4.55

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38.583	0.00	0.62	1.343	0				4.54
38.667	0.00	0.62	1.338	0				4.53
38.750	0.00	0.62	1.334	0				4.52
38.833	0.00	0.62	1.330	0				4.51
38.917	0.00	0.62	1.326	0				4.51
39.000	0.00	0.61	1.321	0				4.50
39.083	0.00	0.61	1.317	0				4.49
39.167	0.00	0.61	1.313	0				4.48
39.250	0.00	0.61	1.309	0				4.47
39.333	0.00	0.61	1.304	0				4.46
39.417	0.00	0.60	1.300	0				4.45
39.500	0.00	0.60	1.296	0				4.44
39.583	0.00	0.60	1.292	0				4.43
39.667	0.00	0.60	1.288	0				4.43
39.750	0.00	0.60	1.284	0				4.42
39.833	0.00	0.60	1.280	0				4.41
39.917	0.00	0.59	1.276	0				4.40
40.000	0.00	0.59	1.271	0				4.39
40.083	0.00	0.59	1.267	0				4.38
40.167	0.00	0.59	1.263	0				4.37
40.250	0.00	0.59	1.259	0				4.36
40.333	0.00	0.58	1.255	0				4.36
40.417	0.00	0.58	1.251	0				4.35
40.500	0.00	0.58	1.247	0				4.34
40.583	0.00	0.58	1.243	0				4.33
40.667	0.00	0.58	1.239	0				4.32
40.750	0.00	0.58	1.235	0				4.31
40.833	0.00	0.57	1.231	0				4.30
40.917	0.00	0.57	1.227	0				4.30
41.000	0.00	0.57	1.223	0				4.29
41.083	0.00	0.57	1.220	0				4.28
41.167	0.00	0.57	1.216	0				4.27
41.250	0.00	0.57	1.212	0				4.26
41.333	0.00	0.56	1.208	0				4.25
41.417	0.00	0.56	1.204	0				4.25
41.500	0.00	0.56	1.200	0				4.24
41.583	0.00	0.56	1.196	0				4.23
41.667	0.00	0.56	1.192	0				4.22
41.750	0.00	0.55	1.189	0				4.21
41.833	0.00	0.55	1.185	0				4.21
41.917	0.00	0.55	1.181	0				4.20
42.000	0.00	0.55	1.177	0				4.19
42.083	0.00	0.55	1.173	0				4.18
42.167	0.00	0.55	1.170	0				4.17
42.250	0.00	0.54	1.166	0				4.17
42.333	0.00	0.54	1.162	0				4.16
42.417	0.00	0.54	1.158	0				4.15
42.500	0.00	0.54	1.155	0				4.14
42.583	0.00	0.54	1.151	0				4.13
42.667	0.00	0.54	1.147	0				4.13
42.750	0.00	0.53	1.144	0				4.12
42.833	0.00	0.53	1.140	0				4.11
42.917	0.00	0.53	1.136	0				4.10
43.000	0.00	0.53	1.133	0				4.09
43.083	0.00	0.53	1.129	0				4.09
43.167	0.00	0.53	1.125	0				4.08
43.250	0.00	0.53	1.122	0				4.07
43.333	0.00	0.52	1.118	0				4.06
43.417	0.00	0.52	1.114	0				4.06
43.500	0.00	0.52	1.111	0				4.05
43.583	0.00	0.52	1.107	0				4.04
43.667	0.00	0.52	1.104	0				4.03
43.750	0.00	0.52	1.100	0				4.03
43.833	0.00	0.51	1.097	0				4.02
43.917	0.00	0.51	1.093	0				4.01
44.000	0.00	0.51	1.090	0				4.00
44.083	0.00	0.51	1.086	0				4.00
44.167	0.00	0.51	1.083	0				3.99

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44.250	0.00	0.50	1.079	0				3.98
44.333	0.00	0.50	1.076	0				3.97
44.417	0.00	0.50	1.072	0				3.96
44.500	0.00	0.50	1.069	0				3.95
44.583	0.00	0.49	1.065	0				3.95
44.667	0.00	0.49	1.062	0				3.94
44.750	0.00	0.49	1.059	0				3.93
44.833	0.00	0.49	1.055	0				3.92
44.917	0.00	0.48	1.052	0				3.91
45.000	0.00	0.48	1.049	0				3.91
45.083	0.00	0.48	1.045	0				3.90
45.167	0.00	0.48	1.042	0				3.89
45.250	0.00	0.47	1.039	0				3.88
45.333	0.00	0.47	1.035	0				3.88
45.417	0.00	0.47	1.032	0				3.87
45.500	0.00	0.47	1.029	0				3.86
45.583	0.00	0.47	1.026	0				3.85
45.667	0.00	0.46	1.022	0				3.85
45.750	0.00	0.46	1.019	0				3.84
45.833	0.00	0.46	1.016	0				3.83
45.917	0.00	0.46	1.013	0				3.82
46.000	0.00	0.45	1.010	0				3.82
46.083	0.00	0.45	1.007	0				3.81
46.167	0.00	0.45	1.004	0				3.80
46.250	0.00	0.45	1.001	0				3.79
46.333	0.00	0.45	0.997	0				3.79
46.417	0.00	0.44	0.994	0				3.78
46.500	0.00	0.44	0.991	0				3.77
46.583	0.00	0.44	0.988	0				3.77
46.667	0.00	0.44	0.985	0				3.76
46.750	0.00	0.43	0.982	0				3.75
46.833	0.00	0.43	0.979	0				3.74
46.917	0.00	0.43	0.976	0				3.74
47.000	0.00	0.43	0.973	0				3.73
47.083	0.00	0.43	0.970	0				3.72
47.167	0.00	0.42	0.968	0				3.72
47.250	0.00	0.42	0.965	0				3.71
47.333	0.00	0.42	0.962	0				3.70
47.417	0.00	0.42	0.959	0				3.70
47.500	0.00	0.42	0.956	0				3.69
47.583	0.00	0.41	0.953	0				3.68
47.667	0.00	0.41	0.950	0				3.68
47.750	0.00	0.41	0.947	0				3.67
47.833	0.00	0.41	0.945	0				3.66
47.917	0.00	0.40	0.942	0				3.65
48.000	0.00	0.40	0.939	0				3.65
48.083	0.00	0.39	0.936	0				3.64
48.167	0.00	0.39	0.934	0				3.63
48.250	0.00	0.39	0.931	0				3.63
48.333	0.00	0.38	0.928	0				3.62
48.417	0.00	0.38	0.926	0				3.61
48.500	0.00	0.38	0.923	0				3.61
48.583	0.00	0.37	0.921	0				3.60
48.667	0.00	0.37	0.918	0				3.60
48.750	0.00	0.36	0.915	0				3.59
48.833	0.00	0.36	0.913	0				3.58
48.917	0.00	0.36	0.911	0				3.58
49.000	0.00	0.35	0.908	0				3.57
49.083	0.00	0.35	0.906	0				3.56
49.167	0.00	0.35	0.903	0				3.56
49.250	0.00	0.34	0.901	0				3.55
49.333	0.00	0.34	0.898	0				3.55
49.417	0.00	0.34	0.896	0				3.54
49.500	0.00	0.33	0.894	0				3.54
49.583	0.00	0.33	0.892	0				3.53
49.667	0.00	0.33	0.889	0				3.52
49.750	0.00	0.33	0.887	0				3.52
49.833	0.00	0.32	0.885	0				3.51

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49.917	0.00	0.32	0.883	0	3.51
50.000	0.00	0.32	0.880	0	3.50
50.083	0.00	0.31	0.878	0	3.50
50.167	0.00	0.31	0.876	0	3.49
50.250	0.00	0.31	0.874	0	3.49
50.333	0.00	0.30	0.872	0	3.48
50.417	0.00	0.30	0.870	0	3.48
50.500	0.00	0.30	0.868	0	3.47
50.583	0.00	0.30	0.866	0	3.47
50.667	0.00	0.29	0.864	0	3.46
50.750	0.00	0.29	0.862	0	3.46
50.833	0.00	0.29	0.860	0	3.45
50.917	0.00	0.28	0.858	0	3.45
51.000	0.00	0.28	0.856	0	3.44
51.083	0.00	0.28	0.854	0	3.44
51.167	0.00	0.28	0.852	0	3.43
51.250	0.00	0.27	0.850	0	3.43
51.333	0.00	0.27	0.848	0	3.42
51.417	0.00	0.27	0.846	0	3.42
51.500	0.00	0.27	0.844	0	3.41
51.583	0.00	0.26	0.843	0	3.41
51.667	0.00	0.26	0.841	0	3.40
51.750	0.00	0.26	0.839	0	3.40
51.833	0.00	0.26	0.837	0	3.39
51.917	0.00	0.25	0.835	0	3.39
52.000	0.00	0.25	0.834	0	3.39
52.083	0.00	0.25	0.832	0	3.38
52.167	0.00	0.25	0.830	0	3.38
52.250	0.00	0.24	0.829	0	3.37
52.333	0.00	0.24	0.827	0	3.37
52.417	0.00	0.24	0.825	0	3.37
52.500	0.00	0.24	0.824	0	3.36
52.583	0.00	0.24	0.822	0	3.36
52.667	0.00	0.23	0.820	0	3.35
52.750	0.00	0.23	0.819	0	3.35
52.833	0.00	0.23	0.817	0	3.35
52.917	0.00	0.23	0.816	0	3.34
53.000	0.00	0.22	0.814	0	3.34
53.083	0.00	0.22	0.812	0	3.33
53.167	0.00	0.22	0.811	0	3.33
53.250	0.00	0.22	0.809	0	3.33
53.333	0.00	0.22	0.808	0	3.32
53.417	0.00	0.22	0.806	0	3.32
53.500	0.00	0.22	0.805	0	3.31
53.583	0.00	0.22	0.803	0	3.31
53.667	0.00	0.22	0.802	0	3.31
53.750	0.00	0.22	0.800	0	3.30
53.833	0.00	0.22	0.799	0	3.30
53.917	0.00	0.22	0.797	0	3.29
54.000	0.00	0.22	0.796	0	3.29
54.083	0.00	0.22	0.794	0	3.29
54.167	0.00	0.22	0.793	0	3.28
54.250	0.00	0.22	0.791	0	3.28
54.333	0.00	0.22	0.790	0	3.27
54.417	0.00	0.22	0.788	0	3.27
54.500	0.00	0.22	0.787	0	3.27
54.583	0.00	0.22	0.785	0	3.26
54.667	0.00	0.22	0.784	0	3.26
54.750	0.00	0.22	0.782	0	3.25
54.833	0.00	0.22	0.781	0	3.25
54.917	0.00	0.22	0.779	0	3.25
55.000	0.00	0.22	0.778	0	3.24
55.083	0.00	0.22	0.776	0	3.24
55.167	0.00	0.22	0.775	0	3.24
55.250	0.00	0.22	0.773	0	3.23
55.333	0.00	0.22	0.772	0	3.23
55.417	0.00	0.22	0.770	0	3.22
55.500	0.00	0.22	0.769	0	3.22

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55.583	0.00	0.22	0.767	0				3.22
55.667	0.00	0.22	0.766	0				3.21
55.750	0.00	0.22	0.764	0				3.21
55.833	0.00	0.22	0.763	0				3.20
55.917	0.00	0.22	0.761	0				3.20
56.000	0.00	0.22	0.760	0				3.20
56.083	0.00	0.22	0.758	0				3.19
56.167	0.00	0.22	0.757	0				3.19
56.250	0.00	0.22	0.755	0				3.18
56.333	0.00	0.22	0.754	0				3.18
56.417	0.00	0.22	0.753	0				3.18
56.500	0.00	0.22	0.751	0				3.17
56.583	0.00	0.22	0.750	0				3.17
56.667	0.00	0.22	0.748	0				3.17
56.750	0.00	0.21	0.747	0				3.16
56.833	0.00	0.21	0.745	0				3.16
56.917	0.00	0.21	0.744	0				3.15
57.000	0.00	0.21	0.742	0				3.15
57.083	0.00	0.21	0.741	0				3.15
57.167	0.00	0.21	0.739	0				3.14
57.250	0.00	0.21	0.738	0				3.14
57.333	0.00	0.21	0.736	0				3.13
57.417	0.00	0.21	0.735	0				3.13
57.500	0.00	0.21	0.733	0				3.13
57.583	0.00	0.21	0.732	0				3.12
57.667	0.00	0.21	0.730	0				3.12
57.750	0.00	0.21	0.729	0				3.11
57.833	0.00	0.21	0.727	0				3.11
57.917	0.00	0.21	0.726	0				3.11
58.000	0.00	0.21	0.724	0				3.10
58.083	0.00	0.21	0.723	0				3.10
58.167	0.00	0.21	0.722	0				3.10
58.250	0.00	0.21	0.720	0				3.09
58.333	0.00	0.21	0.719	0				3.09
58.417	0.00	0.21	0.717	0				3.08
58.500	0.00	0.21	0.716	0				3.08
58.583	0.00	0.21	0.714	0				3.08
58.667	0.00	0.21	0.713	0				3.07
58.750	0.00	0.21	0.711	0				3.07
58.833	0.00	0.21	0.710	0				3.07
58.917	0.00	0.21	0.708	0				3.06
59.000	0.00	0.21	0.707	0				3.06
59.083	0.00	0.21	0.705	0				3.05
59.167	0.00	0.21	0.704	0				3.05
59.250	0.00	0.21	0.703	0				3.05
59.333	0.00	0.21	0.701	0				3.04
59.417	0.00	0.21	0.700	0				3.04
59.500	0.00	0.21	0.698	0				3.03
59.583	0.00	0.21	0.697	0				3.03
59.667	0.00	0.21	0.695	0				3.03
59.750	0.00	0.21	0.694	0				3.02
59.833	0.00	0.21	0.692	0				3.02
59.917	0.00	0.21	0.691	0				3.02
60.000	0.00	0.21	0.689	0				3.01
60.083	0.00	0.21	0.688	0				3.01
60.167	0.00	0.21	0.687	0				3.00
60.250	0.00	0.21	0.685	0				3.00
60.333	0.00	0.21	0.684	0				3.00
60.417	0.00	0.21	0.682	0				2.99
60.500	0.00	0.21	0.681	0				2.99
60.583	0.00	0.21	0.679	0				2.98
60.667	0.00	0.21	0.678	0				2.98
60.750	0.00	0.21	0.676	0				2.98
60.833	0.00	0.21	0.675	0				2.97
60.917	0.00	0.21	0.674	0				2.97
61.000	0.00	0.21	0.672	0				2.96
61.083	0.00	0.21	0.671	0				2.96
61.167	0.00	0.21	0.669	0				2.96

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61.250	0.00	0.21	0.668	0	2.95
61.333	0.00	0.21	0.666	0	2.95
61.417	0.00	0.21	0.665	0	2.94
61.500	0.00	0.21	0.664	0	2.94
61.583	0.00	0.21	0.662	0	2.94
61.667	0.00	0.21	0.661	0	2.93
61.750	0.00	0.21	0.659	0	2.93
61.833	0.00	0.21	0.658	0	2.92
61.917	0.00	0.21	0.656	0	2.92
62.000	0.00	0.21	0.655	0	2.92
62.083	0.00	0.21	0.654	0	2.91
62.167	0.00	0.21	0.652	0	2.91
62.250	0.00	0.21	0.651	0	2.90
62.333	0.00	0.21	0.649	0	2.90
62.417	0.00	0.21	0.648	0	2.90
62.500	0.00	0.21	0.646	0	2.89
62.583	0.00	0.21	0.645	0	2.89
62.667	0.00	0.21	0.644	0	2.89
62.750	0.00	0.21	0.642	0	2.88
62.833	0.00	0.21	0.641	0	2.88
62.917	0.00	0.21	0.639	0	2.87
63.000	0.00	0.21	0.638	0	2.87
63.083	0.00	0.21	0.636	0	2.87
63.167	0.00	0.21	0.635	0	2.86
63.250	0.00	0.21	0.634	0	2.86
63.333	0.00	0.21	0.632	0	2.85
63.417	0.00	0.21	0.631	0	2.85
63.500	0.00	0.21	0.629	0	2.85
63.583	0.00	0.21	0.628	0	2.84
63.667	0.00	0.21	0.627	0	2.84
63.750	0.00	0.20	0.625	0	2.83
63.833	0.00	0.20	0.624	0	2.83
63.917	0.00	0.20	0.622	0	2.83
64.000	0.00	0.20	0.621	0	2.82
64.083	0.00	0.20	0.619	0	2.82
64.167	0.00	0.20	0.618	0	2.81
64.250	0.00	0.20	0.617	0	2.81
64.333	0.00	0.20	0.615	0	2.81
64.417	0.00	0.20	0.614	0	2.80
64.500	0.00	0.20	0.612	0	2.80
64.583	0.00	0.20	0.611	0	2.79
64.667	0.00	0.20	0.610	0	2.79
64.750	0.00	0.20	0.608	0	2.79
64.833	0.00	0.20	0.607	0	2.78
64.917	0.00	0.20	0.605	0	2.78
65.000	0.00	0.20	0.604	0	2.78
65.083	0.00	0.20	0.603	0	2.77
65.167	0.00	0.20	0.601	0	2.77
65.250	0.00	0.20	0.600	0	2.76
65.333	0.00	0.20	0.598	0	2.76
65.417	0.00	0.20	0.597	0	2.76
65.500	0.00	0.20	0.596	0	2.75
65.583	0.00	0.20	0.594	0	2.75
65.667	0.00	0.20	0.593	0	2.74
65.750	0.00	0.20	0.591	0	2.74
65.833	0.00	0.20	0.590	0	2.74
65.917	0.00	0.20	0.589	0	2.73
66.000	0.00	0.20	0.587	0	2.73
66.083	0.00	0.20	0.586	0	2.73
66.167	0.00	0.20	0.585	0	2.72
66.250	0.00	0.20	0.583	0	2.72
66.333	0.00	0.20	0.582	0	2.71
66.417	0.00	0.20	0.580	0	2.71
66.500	0.00	0.20	0.579	0	2.71
66.583	0.00	0.20	0.578	0	2.70
66.667	0.00	0.20	0.576	0	2.70
66.750	0.00	0.20	0.575	0	2.69
66.833	0.00	0.20	0.573	0	2.69

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66.917	0.00	0.20	0.572	0	2.69
67.000	0.00	0.20	0.571	0	2.68
67.083	0.00	0.20	0.569	0	2.68
67.167	0.00	0.20	0.568	0	2.68
67.250	0.00	0.20	0.567	0	2.67
67.333	0.00	0.20	0.565	0	2.67
67.417	0.00	0.20	0.564	0	2.66
67.500	0.00	0.20	0.562	0	2.66
67.583	0.00	0.20	0.561	0	2.66
67.667	0.00	0.20	0.560	0	2.65
67.750	0.00	0.20	0.558	0	2.65
67.833	0.00	0.20	0.557	0	2.64
67.917	0.00	0.20	0.556	0	2.64
68.000	0.00	0.20	0.554	0	2.64
68.083	0.00	0.20	0.553	0	2.63
68.167	0.00	0.20	0.551	0	2.63
68.250	0.00	0.20	0.550	0	2.62
68.333	0.00	0.20	0.549	0	2.62
68.417	0.00	0.20	0.547	0	2.62
68.500	0.00	0.20	0.546	0	2.61
68.583	0.00	0.20	0.545	0	2.61
68.667	0.00	0.20	0.543	0	2.60
68.750	0.00	0.20	0.542	0	2.60
68.833	0.00	0.20	0.541	0	2.60
68.917	0.00	0.20	0.539	0	2.59
69.000	0.00	0.20	0.538	0	2.59
69.083	0.00	0.19	0.537	0	2.58
69.167	0.00	0.19	0.535	0	2.58
69.250	0.00	0.19	0.534	0	2.58
69.333	0.00	0.19	0.533	0	2.57
69.417	0.00	0.19	0.531	0	2.57
69.500	0.00	0.19	0.530	0	2.56
69.583	0.00	0.19	0.529	0	2.56
69.667	0.00	0.19	0.527	0	2.56
69.750	0.00	0.19	0.526	0	2.55
69.833	0.00	0.19	0.525	0	2.55
69.917	0.00	0.19	0.523	0	2.54
70.000	0.00	0.19	0.522	0	2.54
70.083	0.00	0.19	0.521	0	2.54
70.167	0.00	0.19	0.519	0	2.53
70.250	0.00	0.19	0.518	0	2.53
70.333	0.00	0.19	0.517	0	2.52
70.417	0.00	0.19	0.515	0	2.52
70.500	0.00	0.19	0.514	0	2.52
70.583	0.00	0.19	0.513	0	2.51
70.667	0.00	0.19	0.511	0	2.51
70.750	0.00	0.19	0.510	0	2.50
70.833	0.00	0.19	0.509	0	2.50
70.917	0.00	0.19	0.507	0	2.50
71.000	0.00	0.19	0.506	0	2.49
71.083	0.00	0.19	0.505	0	2.49
71.167	0.00	0.19	0.504	0	2.49
71.250	0.00	0.19	0.502	0	2.48
71.333	0.00	0.19	0.501	0	2.48
71.417	0.00	0.19	0.500	0	2.47
71.500	0.00	0.19	0.498	0	2.47
71.583	0.00	0.19	0.497	0	2.47
71.667	0.00	0.19	0.496	0	2.46
71.750	0.00	0.19	0.494	0	2.46
71.833	0.00	0.19	0.493	0	2.45
71.917	0.00	0.19	0.492	0	2.45
72.000	0.00	0.19	0.491	0	2.45
72.083	0.00	0.19	0.489	0	2.44
72.167	0.00	0.19	0.488	0	2.44
72.250	0.00	0.19	0.487	0	2.44
72.333	0.00	0.19	0.485	0	2.43
72.417	0.00	0.19	0.484	0	2.43
72.500	0.00	0.19	0.483	0	2.42

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72.583	0.00	0.19	0.482	0				2.42
72.667	0.00	0.19	0.480	0				2.42
72.750	0.00	0.18	0.479	0				2.41
72.833	0.00	0.18	0.478	0				2.41
72.917	0.00	0.18	0.477	0				2.41
73.000	0.00	0.18	0.475	0				2.40
73.083	0.00	0.18	0.474	0				2.40
73.167	0.00	0.18	0.473	0				2.39
73.250	0.00	0.18	0.471	0				2.39
73.333	0.00	0.18	0.470	0				2.39
73.417	0.00	0.18	0.469	0				2.38
73.500	0.00	0.18	0.468	0				2.38
73.583	0.00	0.18	0.466	0				2.38
73.667	0.00	0.18	0.465	0				2.37
73.750	0.00	0.18	0.464	0				2.37
73.833	0.00	0.18	0.463	0				2.36
73.917	0.00	0.18	0.461	0				2.36
74.000	0.00	0.18	0.460	0				2.36
74.083	0.00	0.18	0.459	0				2.35
74.167	0.00	0.18	0.458	0				2.35
74.250	0.00	0.18	0.456	0				2.35
74.333	0.00	0.18	0.455	0				2.34
74.417	0.00	0.18	0.454	0				2.34
74.500	0.00	0.18	0.453	0				2.33
74.583	0.00	0.18	0.451	0				2.33
74.667	0.00	0.18	0.450	0				2.33
74.750	0.00	0.18	0.449	0				2.32
74.833	0.00	0.18	0.448	0				2.32
74.917	0.00	0.18	0.446	0				2.32
75.000	0.00	0.18	0.445	0				2.31
75.083	0.00	0.18	0.444	0				2.31
75.167	0.00	0.18	0.443	0				2.30
75.250	0.00	0.18	0.442	0				2.30
75.333	0.00	0.18	0.440	0				2.30
75.417	0.00	0.18	0.439	0				2.29
75.500	0.00	0.18	0.438	0				2.29
75.583	0.00	0.18	0.437	0				2.29
75.667	0.00	0.18	0.435	0				2.28
75.750	0.00	0.18	0.434	0				2.28
75.833	0.00	0.18	0.433	0				2.27
75.917	0.00	0.18	0.432	0				2.27
76.000	0.00	0.18	0.430	0				2.27
76.083	0.00	0.18	0.429	0				2.26
76.167	0.00	0.18	0.428	0				2.26
76.250	0.00	0.18	0.427	0				2.25
76.333	0.00	0.18	0.426	0				2.25
76.417	0.00	0.18	0.424	0				2.25
76.500	0.00	0.18	0.423	0				2.24
76.583	0.00	0.18	0.422	0				2.24
76.667	0.00	0.18	0.421	0				2.24
76.750	0.00	0.18	0.419	0				2.23
76.833	0.00	0.18	0.418	0				2.23
76.917	0.00	0.18	0.417	0				2.22
77.000	0.00	0.18	0.416	0				2.22
77.083	0.00	0.18	0.415	0				2.22
77.167	0.00	0.18	0.413	0				2.21
77.250	0.00	0.18	0.412	0				2.21
77.333	0.00	0.18	0.411	0				2.21
77.417	0.00	0.18	0.410	0				2.20
77.500	0.00	0.18	0.409	0				2.20
77.583	0.00	0.18	0.407	0				2.19
77.667	0.00	0.18	0.406	0				2.19
77.750	0.00	0.18	0.405	0				2.19
77.833	0.00	0.18	0.404	0				2.18
77.917	0.00	0.18	0.402	0				2.18
78.000	0.00	0.18	0.401	0				2.18
78.083	0.00	0.18	0.400	0				2.17
78.167	0.00	0.18	0.399	0				2.17

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78.250	0.00	0.17	0.398	0			2.16
78.333	0.00	0.17	0.396	0			2.16
78.417	0.00	0.17	0.395	0			2.16
78.500	0.00	0.17	0.394	0			2.15
78.583	0.00	0.17	0.393	0			2.15
78.667	0.00	0.17	0.392	0			2.15
78.750	0.00	0.17	0.390	0			2.14
78.833	0.00	0.17	0.389	0			2.14
78.917	0.00	0.17	0.388	0			2.13
79.000	0.00	0.17	0.387	0			2.13
79.083	0.00	0.17	0.386	0			2.13
79.167	0.00	0.17	0.384	0			2.12
79.250	0.00	0.17	0.383	0			2.12
79.333	0.00	0.17	0.382	0			2.12
79.417	0.00	0.17	0.381	0			2.11
79.500	0.00	0.17	0.380	0			2.11
79.583	0.00	0.17	0.378	0			2.10
79.667	0.00	0.17	0.377	0			2.10
79.750	0.00	0.17	0.376	0			2.10
79.833	0.00	0.17	0.375	0			2.09
79.917	0.00	0.17	0.374	0			2.09
80.000	0.00	0.17	0.373	0			2.09
80.083	0.00	0.17	0.371	0			2.08
80.167	0.00	0.17	0.370	0			2.08
80.250	0.00	0.17	0.369	0			2.07
80.333	0.00	0.17	0.368	0			2.07
80.417	0.00	0.17	0.367	0			2.07
80.500	0.00	0.17	0.365	0			2.06
80.583	0.00	0.17	0.364	0			2.06
80.667	0.00	0.17	0.363	0			2.06
80.750	0.00	0.17	0.362	0			2.05
80.833	0.00	0.17	0.361	0			2.05
80.917	0.00	0.17	0.359	0			2.05
81.000	0.00	0.17	0.358	0			2.04
81.083	0.00	0.17	0.357	0			2.04
81.167	0.00	0.17	0.356	0			2.03
81.250	0.00	0.17	0.355	0			2.03
81.333	0.00	0.17	0.354	0			2.03
81.417	0.00	0.17	0.352	0			2.02
81.500	0.00	0.17	0.351	0			2.02
81.583	0.00	0.17	0.350	0			2.02
81.667	0.00	0.17	0.349	0			2.01
81.750	0.00	0.17	0.348	0			2.01
81.833	0.00	0.17	0.347	0			2.00
81.917	0.00	0.17	0.345	0			2.00
82.000	0.00	0.17	0.344	0			2.00
82.083	0.00	0.17	0.343	0			1.99
82.167	0.00	0.17	0.342	0			1.99
82.250	0.00	0.17	0.341	0			1.98
82.333	0.00	0.17	0.340	0			1.98
82.417	0.00	0.17	0.338	0			1.98
82.500	0.00	0.17	0.337	0			1.97
82.583	0.00	0.17	0.336	0			1.97
82.667	0.00	0.17	0.335	0			1.96
82.750	0.00	0.17	0.334	0			1.96
82.833	0.00	0.17	0.333	0			1.96
82.917	0.00	0.17	0.331	0			1.95
83.000	0.00	0.17	0.330	0			1.95
83.083	0.00	0.17	0.329	0			1.94
83.167	0.00	0.17	0.328	0			1.94
83.250	0.00	0.17	0.327	0			1.94
83.333	0.00	0.17	0.326	0			1.93
83.417	0.00	0.17	0.325	0			1.93
83.500	0.00	0.17	0.323	0			1.92
83.583	0.00	0.17	0.322	0			1.92
83.667	0.00	0.16	0.321	0			1.92
83.750	0.00	0.16	0.320	0			1.91
83.833	0.00	0.16	0.319	0			1.91

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83.917	0.00	0.16	0.318	0			1.90
84.000	0.00	0.16	0.317	0			1.90
84.083	0.00	0.16	0.316	0			1.90
84.167	0.00	0.16	0.314	0			1.89
84.250	0.00	0.16	0.313	0			1.89
84.333	0.00	0.16	0.312	0			1.88
84.417	0.00	0.16	0.311	0			1.88
84.500	0.00	0.16	0.310	0			1.88
84.583	0.00	0.16	0.309	0			1.87
84.667	0.00	0.16	0.308	0			1.87
84.750	0.00	0.16	0.307	0			1.86
84.833	0.00	0.16	0.305	0			1.86
84.917	0.00	0.16	0.304	0			1.86
85.000	0.00	0.16	0.303	0			1.85
85.083	0.00	0.16	0.302	0			1.85
85.167	0.00	0.16	0.301	0			1.84
85.250	0.00	0.16	0.300	0			1.84
85.333	0.00	0.16	0.299	0			1.84
85.417	0.00	0.16	0.298	0			1.83
85.500	0.00	0.16	0.297	0			1.83
85.583	0.00	0.16	0.295	0			1.82
85.667	0.00	0.16	0.294	0			1.82
85.750	0.00	0.16	0.293	0			1.82
85.833	0.00	0.16	0.292	0			1.81
85.917	0.00	0.16	0.291	0			1.81
86.000	0.00	0.16	0.290	0			1.80
86.083	0.00	0.16	0.289	0			1.80
86.167	0.00	0.16	0.288	0			1.80
86.250	0.00	0.16	0.287	0			1.79
86.333	0.00	0.16	0.286	0			1.79
86.417	0.00	0.16	0.285	0			1.79
86.500	0.00	0.16	0.284	0			1.78
86.583	0.00	0.16	0.282	0			1.78
86.667	0.00	0.16	0.281	0			1.77
86.750	0.00	0.16	0.280	0			1.77
86.833	0.00	0.16	0.279	0			1.77
86.917	0.00	0.16	0.278	0			1.76
87.000	0.00	0.16	0.277	0			1.76
87.083	0.00	0.16	0.276	0			1.76
87.167	0.00	0.15	0.275	0			1.75
87.250	0.00	0.15	0.274	0			1.75
87.333	0.00	0.15	0.273	0			1.74
87.417	0.00	0.15	0.272	0			1.74
87.500	0.00	0.15	0.271	0			1.74
87.583	0.00	0.15	0.270	0			1.73
87.667	0.00	0.15	0.269	0			1.73
87.750	0.00	0.15	0.268	0			1.73
87.833	0.00	0.15	0.266	0			1.72
87.917	0.00	0.15	0.265	0			1.72
88.000	0.00	0.15	0.264	0			1.71
88.083	0.00	0.15	0.263	0			1.71
88.167	0.00	0.15	0.262	0			1.71
88.250	0.00	0.15	0.261	0			1.70
88.333	0.00	0.15	0.260	0			1.70
88.417	0.00	0.15	0.259	0			1.70
88.500	0.00	0.15	0.258	0			1.69
88.583	0.00	0.15	0.257	0			1.69
88.667	0.00	0.15	0.256	0			1.68
88.750	0.00	0.15	0.255	0			1.68
88.833	0.00	0.15	0.254	0			1.68
88.917	0.00	0.15	0.253	0			1.67
89.000	0.00	0.15	0.252	0			1.67
89.083	0.00	0.15	0.251	0			1.66
89.167	0.00	0.15	0.250	0			1.66
89.250	0.00	0.15	0.249	0			1.66
89.333	0.00	0.15	0.248	0			1.65
89.417	0.00	0.15	0.247	0			1.65
89.500	0.00	0.15	0.246	0			1.64

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89.583	0.00	0.15	0.245	0	1.64
89.667	0.00	0.15	0.244	0	1.63
89.750	0.00	0.15	0.243	0	1.63
89.833	0.00	0.15	0.242	0	1.63
89.917	0.00	0.15	0.241	0	1.62
90.000	0.00	0.15	0.240	0	1.62
90.083	0.00	0.15	0.238	0	1.61
90.167	0.00	0.15	0.237	0	1.61
90.250	0.00	0.15	0.236	0	1.60
90.333	0.00	0.15	0.235	0	1.60
90.417	0.00	0.15	0.234	0	1.59
90.500	0.00	0.15	0.233	0	1.59
90.583	0.00	0.15	0.232	0	1.59
90.667	0.00	0.15	0.231	0	1.58
90.750	0.00	0.15	0.230	0	1.58
90.833	0.00	0.15	0.229	0	1.57
90.917	0.00	0.15	0.228	0	1.57
91.000	0.00	0.15	0.227	0	1.56
91.083	0.00	0.15	0.226	0	1.56
91.167	0.00	0.15	0.225	0	1.56
91.250	0.00	0.15	0.224	0	1.55
91.333	0.00	0.15	0.223	0	1.55
91.417	0.00	0.15	0.222	0	1.54
91.500	0.00	0.15	0.221	0	1.54
91.583	0.00	0.15	0.220	0	1.53
91.667	0.00	0.15	0.219	0	1.53
91.750	0.00	0.15	0.218	0	1.52
91.833	0.00	0.15	0.217	0	1.52
91.917	0.00	0.15	0.216	0	1.52
92.000	0.00	0.15	0.215	0	1.51
92.083	0.00	0.15	0.214	0	1.51
92.167	0.00	0.15	0.213	0	1.50
92.250	0.00	0.14	0.212	0	1.50
92.333	0.00	0.14	0.211	0	1.49
92.417	0.00	0.14	0.210	0	1.49
92.500	0.00	0.14	0.209	0	1.49
92.583	0.00	0.14	0.208	0	1.48
92.667	0.00	0.14	0.207	0	1.48
92.750	0.00	0.14	0.206	0	1.47
92.833	0.00	0.14	0.205	0	1.47
92.917	0.00	0.14	0.204	0	1.46
93.000	0.00	0.14	0.203	0	1.46
93.083	0.00	0.14	0.202	0	1.46
93.167	0.00	0.14	0.201	0	1.45
93.250	0.00	0.14	0.200	0	1.45
93.333	0.00	0.14	0.199	0	1.44
93.417	0.00	0.14	0.198	0	1.44
93.500	0.00	0.14	0.197	0	1.43
93.583	0.00	0.14	0.196	0	1.43
93.667	0.00	0.14	0.195	0	1.43
93.750	0.00	0.14	0.194	0	1.42
93.833	0.00	0.14	0.193	0	1.42
93.917	0.00	0.14	0.192	0	1.41
94.000	0.00	0.14	0.191	0	1.41
94.083	0.00	0.14	0.190	0	1.41
94.167	0.00	0.14	0.189	0	1.40
94.250	0.00	0.14	0.189	0	1.40
94.333	0.00	0.14	0.188	0	1.39
94.417	0.00	0.14	0.187	0	1.39
94.500	0.00	0.14	0.186	0	1.38
94.583	0.00	0.14	0.185	0	1.38
94.667	0.00	0.14	0.184	0	1.38
94.750	0.00	0.14	0.183	0	1.37
94.833	0.00	0.14	0.182	0	1.37
94.917	0.00	0.14	0.181	0	1.36
95.000	0.00	0.14	0.180	0	1.36
95.083	0.00	0.14	0.179	0	1.35
95.167	0.00	0.14	0.178	0	1.35

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95.250	0.00	0.14	0.177	0			1.35
95.333	0.00	0.14	0.176	0			1.34
95.417	0.00	0.14	0.175	0			1.34
95.500	0.00	0.14	0.174	0			1.33
95.583	0.00	0.14	0.173	0			1.33
95.667	0.00	0.14	0.172	0			1.32
95.750	0.00	0.14	0.171	0			1.32
95.833	0.00	0.14	0.170	0			1.32
95.917	0.00	0.14	0.169	0			1.31
96.000	0.00	0.14	0.168	0			1.31
96.083	0.00	0.14	0.167	0			1.30
96.167	0.00	0.14	0.166	0			1.30
96.250	0.00	0.14	0.165	0			1.29
96.333	0.00	0.14	0.164	0			1.29
96.417	0.00	0.14	0.163	0			1.28
96.500	0.00	0.14	0.163	0			1.28
96.583	0.00	0.14	0.162	0			1.27
96.667	0.00	0.14	0.161	0			1.27
96.750	0.00	0.14	0.160	0			1.26
96.833	0.00	0.14	0.159	0			1.26
96.917	0.00	0.14	0.158	0			1.25
97.000	0.00	0.13	0.157	0			1.25
97.083	0.00	0.13	0.156	0			1.24
97.167	0.00	0.13	0.155	0			1.24
97.250	0.00	0.13	0.154	0			1.23
97.333	0.00	0.13	0.153	0			1.23
97.417	0.00	0.13	0.152	0			1.22
97.500	0.00	0.13	0.151	0			1.22
97.583	0.00	0.13	0.150	0			1.21
97.667	0.00	0.13	0.150	0			1.21
97.750	0.00	0.13	0.149	0			1.20
97.833	0.00	0.13	0.148	0			1.20
97.917	0.00	0.13	0.147	0			1.19
98.000	0.00	0.13	0.146	0			1.19
98.083	0.00	0.13	0.145	0			1.19
98.167	0.00	0.13	0.144	0			1.18
98.250	0.00	0.13	0.143	0			1.18
98.333	0.00	0.13	0.142	0			1.17
98.417	0.00	0.13	0.141	0			1.17
98.500	0.00	0.13	0.140	0			1.16
98.583	0.00	0.13	0.140	0			1.16
98.667	0.00	0.13	0.139	0			1.15
98.750	0.00	0.13	0.138	0			1.15
98.833	0.00	0.13	0.137	0			1.14
98.917	0.00	0.13	0.136	0			1.14
99.000	0.00	0.13	0.135	0			1.13
99.083	0.00	0.13	0.134	0			1.13
99.167	0.00	0.13	0.133	0			1.13
99.250	0.00	0.13	0.133	0			1.12
99.333	0.00	0.13	0.132	0			1.12
99.417	0.00	0.13	0.131	0			1.11
99.500	0.00	0.13	0.130	0			1.11
99.583	0.00	0.13	0.129	0			1.10
99.667	0.00	0.13	0.128	0			1.10
99.750	0.00	0.13	0.127	0			1.09
99.833	0.00	0.13	0.126	0			1.09
99.917	0.00	0.13	0.126	0			1.09
100.000	0.00	0.12	0.125	0			1.08
100.083	0.00	0.12	0.124	0			1.08
100.167	0.00	0.12	0.123	0			1.07
100.250	0.00	0.12	0.122	0			1.07
100.333	0.00	0.12	0.121	0			1.06
100.417	0.00	0.12	0.120	0			1.06
100.500	0.00	0.12	0.120	0			1.05
100.583	0.00	0.12	0.119	0			1.05
100.667	0.00	0.12	0.118	0			1.05
100.750	0.00	0.12	0.117	0			1.04
100.833	0.00	0.12	0.116	0			1.04

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100.917	0.00	0.12	0.115	0			1.03
101.000	0.00	0.12	0.114	0			1.03
101.083	0.00	0.12	0.114	0			1.02
101.167	0.00	0.12	0.113	0			1.02
101.250	0.00	0.12	0.112	0			1.02
101.333	0.00	0.12	0.111	0			1.01
101.417	0.00	0.12	0.110	0			1.01
101.500	0.00	0.12	0.110	0			1.00
101.583	0.00	0.12	0.109	0			1.00
101.667	0.00	0.12	0.108	0			0.99
101.750	0.00	0.12	0.107	0			0.99
101.833	0.00	0.12	0.106	0			0.98
101.917	0.00	0.12	0.105	0			0.98
102.000	0.00	0.12	0.105	0			0.97
102.083	0.00	0.12	0.104	0			0.97
102.167	0.00	0.12	0.103	0			0.96
102.250	0.00	0.12	0.102	0			0.96
102.333	0.00	0.12	0.101	0			0.95
102.417	0.00	0.12	0.101	0			0.95
102.500	0.00	0.11	0.100	0			0.94
102.583	0.00	0.11	0.099	0			0.94
102.667	0.00	0.11	0.098	0			0.93
102.750	0.00	0.11	0.097	0			0.93
102.833	0.00	0.11	0.097	0			0.92
102.917	0.00	0.11	0.096	0			0.92
103.000	0.00	0.11	0.095	0			0.91
103.083	0.00	0.11	0.094	0			0.91
103.167	0.00	0.11	0.094	0			0.90
103.250	0.00	0.11	0.093	0			0.90
103.333	0.00	0.11	0.092	0			0.89
103.417	0.00	0.11	0.091	0			0.89
103.500	0.00	0.11	0.091	0			0.88
103.583	0.00	0.11	0.090	0			0.88
103.667	0.00	0.11	0.089	0			0.87
103.750	0.00	0.11	0.088	0			0.87
103.833	0.00	0.11	0.088	0			0.86
103.917	0.00	0.11	0.087	0			0.86
104.000	0.00	0.11	0.086	0			0.85
104.083	0.00	0.11	0.085	0			0.85
104.167	0.00	0.11	0.085	0			0.85
104.250	0.00	0.11	0.084	0			0.84
104.333	0.00	0.11	0.083	0			0.84
104.417	0.00	0.10	0.082	0			0.83
104.500	0.00	0.10	0.082	0			0.83
104.583	0.00	0.10	0.081	0			0.82
104.667	0.00	0.10	0.080	0			0.82
104.750	0.00	0.10	0.080	0			0.81
104.833	0.00	0.10	0.079	0			0.81
104.917	0.00	0.10	0.078	0			0.80
105.000	0.00	0.10	0.077	0			0.80
105.083	0.00	0.10	0.077	0			0.80
105.167	0.00	0.10	0.076	0			0.79
105.250	0.00	0.10	0.075	0			0.79
105.333	0.00	0.10	0.075	0			0.78
105.417	0.00	0.10	0.074	0			0.78
105.500	0.00	0.10	0.073	0			0.77
105.583	0.00	0.10	0.073	0			0.77
105.667	0.00	0.10	0.072	0			0.76
105.750	0.00	0.10	0.071	0			0.76
105.833	0.00	0.10	0.071	0			0.76
105.917	0.00	0.10	0.070	0			0.75
106.000	0.00	0.10	0.069	0			0.75
106.083	0.00	0.10	0.069	0			0.74
106.167	0.00	0.10	0.068	0			0.74
106.250	0.00	0.10	0.067	0			0.74
106.333	0.00	0.10	0.067	0			0.73
106.417	0.00	0.10	0.066	0			0.73
106.500	0.00	0.09	0.065	0			0.72

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106.583	0.00	0.09	0.065	0			0.72
106.667	0.00	0.09	0.064	0			0.71
106.750	0.00	0.09	0.063	0			0.71
106.833	0.00	0.09	0.063	0			0.71
106.917	0.00	0.09	0.062	0			0.70
107.000	0.00	0.09	0.061	0			0.70
107.083	0.00	0.09	0.061	0			0.69
107.167	0.00	0.09	0.060	0			0.69
107.250	0.00	0.09	0.060	0			0.69
107.333	0.00	0.09	0.059	0			0.68
107.417	0.00	0.09	0.058	0			0.68
107.500	0.00	0.09	0.058	0			0.67
107.583	0.00	0.09	0.057	0			0.67
107.667	0.00	0.09	0.056	0			0.66
107.750	0.00	0.09	0.056	0			0.66
107.833	0.00	0.09	0.055	0			0.65
107.917	0.00	0.09	0.055	0			0.65
108.000	0.00	0.09	0.054	0			0.64
108.083	0.00	0.09	0.053	0			0.64
108.167	0.00	0.09	0.053	0			0.63
108.250	0.00	0.09	0.052	0			0.63
108.333	0.00	0.09	0.052	0			0.62
108.417	0.00	0.09	0.051	0			0.62
108.500	0.00	0.08	0.050	0			0.61
108.583	0.00	0.08	0.050	0			0.61
108.667	0.00	0.08	0.049	0			0.60
108.750	0.00	0.08	0.049	0			0.60
108.833	0.00	0.08	0.048	0			0.59
108.917	0.00	0.08	0.047	0			0.59
109.000	0.00	0.08	0.047	0			0.58
109.083	0.00	0.08	0.046	0			0.58
109.167	0.00	0.08	0.046	0			0.57
109.250	0.00	0.08	0.045	0			0.57
109.333	0.00	0.08	0.045	0			0.56
109.417	0.00	0.08	0.044	0			0.56
109.500	0.00	0.08	0.044	0			0.55
109.583	0.00	0.08	0.043	0			0.55
109.667	0.00	0.08	0.042	0			0.54
109.750	0.00	0.08	0.042	0			0.54
109.833	0.00	0.08	0.041	0			0.53
109.917	0.00	0.08	0.041	0			0.53
110.000	0.00	0.08	0.040	0			0.52
110.083	0.00	0.08	0.040	0			0.52
110.167	0.00	0.08	0.039	0			0.52
110.250	0.00	0.08	0.039	0			0.51
110.333	0.00	0.08	0.038	0			0.51
110.417	0.00	0.08	0.038	0			0.50
110.500	0.00	0.07	0.037	0			0.50
110.583	0.00	0.07	0.037	0			0.49
110.667	0.00	0.07	0.036	0			0.49
110.750	0.00	0.07	0.036	0			0.48
110.833	0.00	0.07	0.035	0			0.48
110.917	0.00	0.07	0.035	0			0.48
111.000	0.00	0.07	0.034	0			0.47
111.083	0.00	0.07	0.034	0			0.47
111.167	0.00	0.07	0.033	0			0.46
111.250	0.00	0.07	0.033	0			0.46
111.333	0.00	0.07	0.032	0			0.45
111.417	0.00	0.07	0.032	0			0.45
111.500	0.00	0.07	0.031	0			0.45
111.583	0.00	0.07	0.031	0			0.44
111.667	0.00	0.07	0.030	0			0.44
111.750	0.00	0.07	0.030	0			0.43
111.833	0.00	0.07	0.029	0			0.43
111.917	0.00	0.07	0.029	0			0.42
112.000	0.00	0.07	0.028	0			0.42
112.083	0.00	0.07	0.028	0			0.42
112.167	0.00	0.07	0.027	0			0.41

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112.250	0.00	0.07	0.027	0				0.41
112.333	0.00	0.07	0.027	0				0.40
112.417	0.00	0.07	0.026	0				0.40
112.500	0.00	0.07	0.026	0				0.40
112.583	0.00	0.07	0.025	0				0.39
112.667	0.00	0.07	0.025	0				0.39
112.750	0.00	0.06	0.024	0				0.38
112.833	0.00	0.06	0.024	0				0.38
112.917	0.00	0.06	0.023	0				0.38
113.000	0.00	0.06	0.023	0				0.37
113.083	0.00	0.06	0.022	0				0.37
113.167	0.00	0.06	0.022	0				0.37
113.250	0.00	0.06	0.022	0				0.36
113.333	0.00	0.06	0.021	0				0.36
113.417	0.00	0.06	0.021	0				0.35
113.500	0.00	0.06	0.020	0				0.35
113.583	0.00	0.06	0.020	0				0.35
113.667	0.00	0.06	0.019	0				0.34
113.750	0.00	0.06	0.019	0				0.34
113.833	0.00	0.06	0.019	0				0.34
113.917	0.00	0.06	0.018	0				0.33
114.000	0.00	0.06	0.018	0				0.33
114.083	0.00	0.06	0.017	0				0.32
114.167	0.00	0.06	0.017	0				0.31
114.250	0.00	0.06	0.017	0				0.30
114.333	0.00	0.05	0.016	0				0.30
114.417	0.00	0.05	0.016	0				0.29
114.500	0.00	0.05	0.016	0				0.28
114.583	0.00	0.05	0.015	0				0.28
114.667	0.00	0.05	0.015	0				0.27
114.750	0.00	0.05	0.014	0				0.27
114.833	0.00	0.05	0.014	0				0.26
114.917	0.00	0.05	0.014	0				0.25
115.000	0.00	0.05	0.014	0				0.25
115.083	0.00	0.04	0.013	0				0.24
115.167	0.00	0.04	0.013	0				0.24
115.250	0.00	0.04	0.013	0				0.23
115.333	0.00	0.04	0.012	0				0.23
115.417	0.00	0.04	0.012	0				0.22
115.500	0.00	0.04	0.012	0				0.22
115.583	0.00	0.04	0.012	0				0.21
115.667	0.00	0.04	0.011	0				0.21
115.750	0.00	0.04	0.011	0				0.20
115.833	0.00	0.04	0.011	0				0.20
115.917	0.00	0.04	0.011	0				0.19
116.000	0.00	0.03	0.010	0				0.19
116.083	0.00	0.03	0.010	0				0.18
116.167	0.00	0.03	0.010	0				0.18
116.250	0.00	0.03	0.010	0				0.18
116.333	0.00	0.03	0.009	0				0.17
116.417	0.00	0.03	0.009	0				0.17
116.500	0.00	0.03	0.009	0				0.16
116.583	0.00	0.03	0.009	0				0.16
116.667	0.00	0.03	0.009	0				0.16
116.750	0.00	0.03	0.008	0				0.15
116.833	0.00	0.03	0.008	0				0.15
116.917	0.00	0.03	0.008	0				0.15
117.000	0.00	0.03	0.008	0				0.14
117.083	0.00	0.03	0.008	0				0.14
117.167	0.00	0.02	0.007	0				0.14
117.250	0.00	0.02	0.007	0				0.13
117.333	0.00	0.02	0.007	0				0.13
117.417	0.00	0.02	0.007	0				0.13
117.500	0.00	0.02	0.007	0				0.12
117.583	0.00	0.02	0.007	0				0.12
117.667	0.00	0.02	0.006	0				0.12
117.750	0.00	0.02	0.006	0				0.12
117.833	0.00	0.02	0.006	0				0.11

100yr24hrbasin.out

117.917	0.00	0.02	0.006	0			0.11
118.000	0.00	0.02	0.006	0			0.11
118.083	0.00	0.02	0.006	0			0.11
118.167	0.00	0.02	0.006	0			0.10
118.250	0.00	0.02	0.006	0			0.10
118.333	0.00	0.02	0.005	0			0.10
118.417	0.00	0.02	0.005	0			0.10
118.500	0.00	0.02	0.005	0			0.09
118.583	0.00	0.02	0.005	0			0.09
118.667	0.00	0.02	0.005	0			0.09
118.750	0.00	0.02	0.005	0			0.09
118.833	0.00	0.02	0.005	0			0.09
118.917	0.00	0.02	0.005	0			0.08
119.000	0.00	0.01	0.004	0			0.08
119.083	0.00	0.01	0.004	0			0.08
119.167	0.00	0.01	0.004	0			0.08
119.250	0.00	0.01	0.004	0			0.08
119.333	0.00	0.01	0.004	0			0.08
119.417	0.00	0.01	0.004	0			0.07
119.500	0.00	0.01	0.004	0			0.07
119.583	0.00	0.01	0.004	0			0.07
119.667	0.00	0.01	0.004	0			0.07
119.750	0.00	0.01	0.004	0			0.07
119.833	0.00	0.01	0.004	0			0.07
119.917	0.00	0.01	0.003	0			0.06
120.000	0.00	0.01	0.003	0			0.06
120.083	0.00	0.01	0.003	0			0.06
120.167	0.00	0.01	0.003	0			0.06
120.250	0.00	0.01	0.003	0			0.06
120.333	0.00	0.01	0.003	0			0.06
120.417	0.00	0.01	0.003	0			0.06
120.500	0.00	0.01	0.003	0			0.05
120.583	0.00	0.01	0.003	0			0.05
120.667	0.00	0.01	0.003	0			0.05
120.750	0.00	0.01	0.003	0			0.05
120.833	0.00	0.01	0.003	0			0.05
120.917	0.00	0.01	0.003	0			0.05
121.000	0.00	0.01	0.003	0			0.05
121.083	0.00	0.01	0.003	0			0.05
121.167	0.00	0.01	0.002	0			0.05
121.250	0.00	0.01	0.002	0			0.04
121.333	0.00	0.01	0.002	0			0.04
121.417	0.00	0.01	0.002	0			0.04
121.500	0.00	0.01	0.002	0			0.04
121.583	0.00	0.01	0.002	0			0.04
121.667	0.00	0.01	0.002	0			0.04
121.750	0.00	0.01	0.002	0			0.04
121.833	0.00	0.01	0.002	0			0.04
121.917	0.00	0.01	0.002	0			0.04
122.000	0.00	0.01	0.002	0			0.04
122.083	0.00	0.01	0.002	0			0.04
122.167	0.00	0.01	0.002	0			0.03
122.250	0.00	0.01	0.002	0			0.03
122.333	0.00	0.01	0.002	0			0.03
122.417	0.00	0.01	0.002	0			0.03
122.500	0.00	0.01	0.002	0			0.03
122.583	0.00	0.01	0.002	0			0.03
122.667	0.00	0.01	0.002	0			0.03
122.750	0.00	0.01	0.002	0			0.03
122.833	0.00	0.01	0.002	0			0.03
122.917	0.00	0.01	0.002	0			0.03
123.000	0.00	0.00	0.001	0			0.03
123.083	0.00	0.00	0.001	0			0.03
123.167	0.00	0.00	0.001	0			0.03
123.250	0.00	0.00	0.001	0			0.03
123.333	0.00	0.00	0.001	0			0.02
123.417	0.00	0.00	0.001	0			0.02
123.500	0.00	0.00	0.001	0			0.02

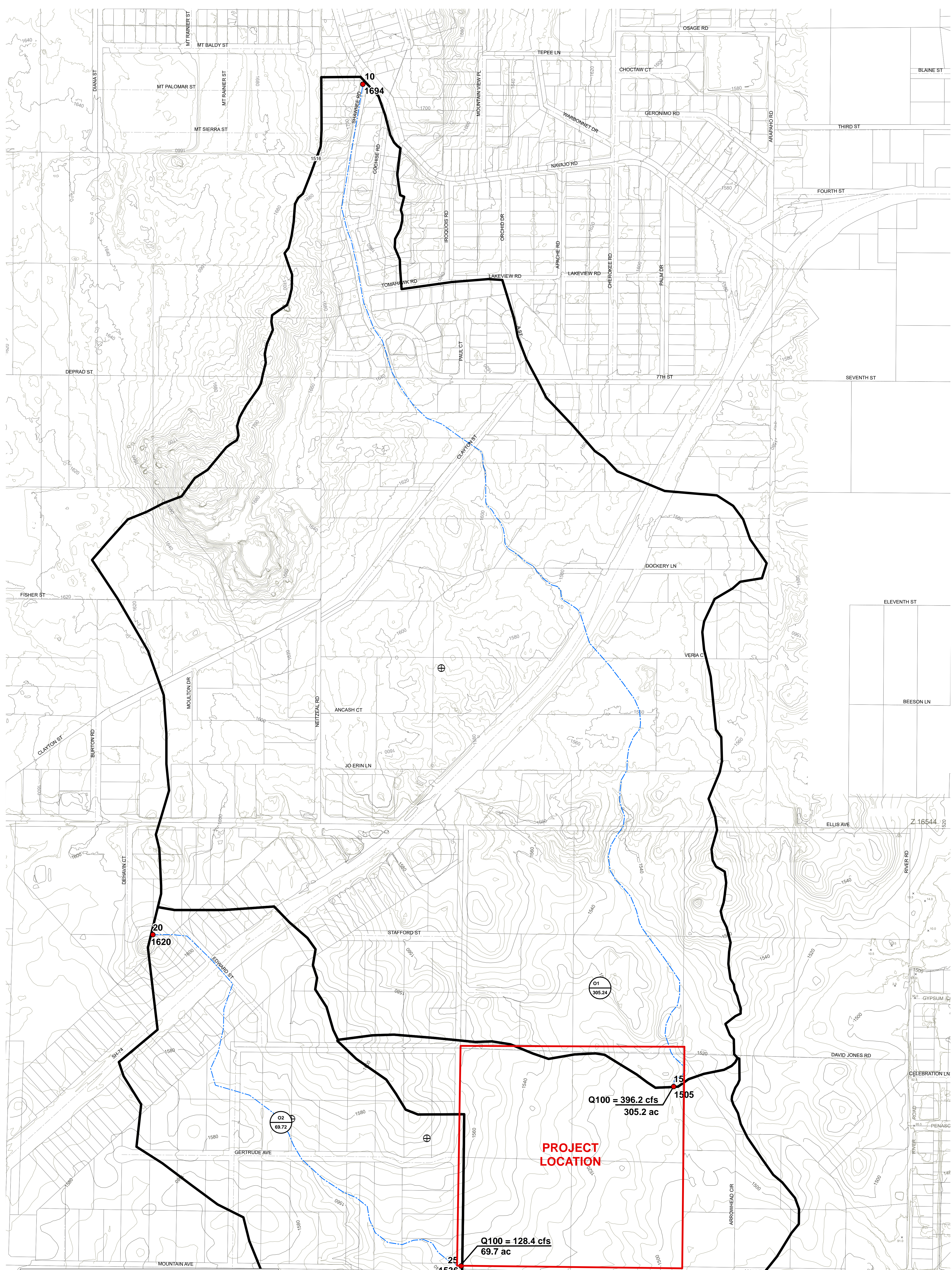
100yr24hrbasin.out

123.583	0.00	0.00	0.001	0				0.02
123.667	0.00	0.00	0.001	0				0.02
123.750	0.00	0.00	0.001	0				0.02
123.833	0.00	0.00	0.001	0				0.02
123.917	0.00	0.00	0.001	0				0.02
124.000	0.00	0.00	0.001	0				0.02
124.083	0.00	0.00	0.001	0				0.02
124.167	0.00	0.00	0.001	0				0.02
124.250	0.00	0.00	0.001	0				0.02
124.333	0.00	0.00	0.001	0				0.02
124.417	0.00	0.00	0.001	0				0.02
124.500	0.00	0.00	0.001	0				0.02
124.583	0.00	0.00	0.001	0				0.02
124.667	0.00	0.00	0.001	0				0.02
124.750	0.00	0.00	0.001	0				0.02
124.833	0.00	0.00	0.001	0				0.02
124.917	0.00	0.00	0.001	0				0.02
125.000	0.00	0.00	0.001	0				0.02
125.083	0.00	0.00	0.001	0				0.02
125.167	0.00	0.00	0.001	0				0.02
125.250	0.00	0.00	0.001	0				0.01
125.333	0.00	0.00	0.001	0				0.01
125.417	0.00	0.00	0.001	0				0.01
125.500	0.00	0.00	0.001	0				0.01
125.583	0.00	0.00	0.001	0				0.01
125.667	0.00	0.00	0.001	0				0.01
125.750	0.00	0.00	0.001	0				0.01
125.833	0.00	0.00	0.001	0				0.01
125.917	0.00	0.00	0.001	0				0.01
126.000	0.00	0.00	0.001	0				0.01
126.083	0.00	0.00	0.001	0				0.01
126.167	0.00	0.00	0.001	0				0.01
126.250	0.00	0.00	0.001	0				0.01
126.333	0.00	0.00	0.001	0				0.01
126.417	0.00	0.00	0.001	0				0.01
126.500	0.00	0.00	0.001	0				0.01
126.583	0.00	0.00	0.001	0				0.01
126.667	0.00	0.00	0.001	0				0.01
126.750	0.00	0.00	0.001	0				0.01
126.833	0.00	0.00	0.001	0				0.01
126.917	0.00	0.00	0.001	0				0.01
127.000	0.00	0.00	0.000	0				0.01
127.083	0.00	0.00	0.000	0				0.01
127.167	0.00	0.00	0.000	0				0.01
127.250	0.00	0.00	0.000	0				0.01
127.333	0.00	0.00	0.000	0				0.01
127.417	0.00	0.00	0.000	0				0.01
127.500	0.00	0.00	0.000	0				0.01
127.583	0.00	0.00	0.000	0				0.01
127.667	0.00	0.00	0.000	0				0.01
127.750	0.00	0.00	0.000	0				0.01
127.833	0.00	0.00	0.000	0				0.01
127.917	0.00	0.00	0.000	0				0.01
128.000	0.00	0.00	0.000	0				0.01
128.083	0.00	0.00	0.000	0				0.01
128.167	0.00	0.00	0.000	0				0.01
128.250	0.00	0.00	0.000	0				0.01
128.333	0.00	0.00	0.000	0				0.01
128.417	0.00	0.00	0.000	0				0.01
128.500	0.00	0.00	0.000	0				0.01
128.583	0.00	0.00	0.000	0				0.01
128.667	0.00	0.00	0.000	0				0.01
128.750	0.00	0.00	0.000	0				0.01
128.833	0.00	0.00	0.000	0				0.01

*****HYDROGRAPH DATA*****

Number of intervals = 1546
 Time interval = 5.0 (Min.)

100yr24hrbasin.out
Maximum/Peak flow rate = 21.461 (CFS)
Total volume = 9.684 (Ac.Ft)
Status of hydrographs being held in storage
Stream 1 Stream 2 Stream 3 Stream 4 Stream 5
Peak (CFS) 0.000 0.000 0.000 0.000 0.000
Vol (Ac.Ft) 0.000 0.000 0.000 0.000 0.000

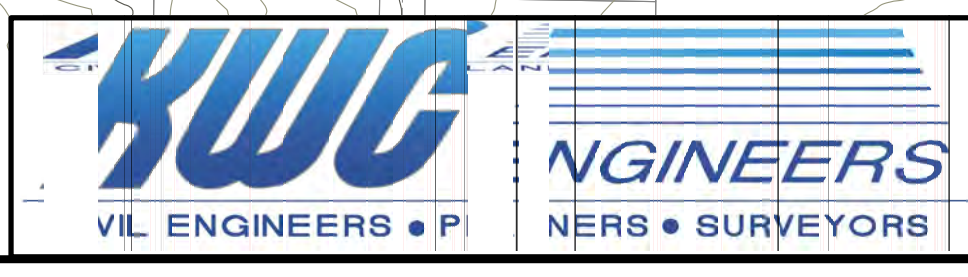


Legend

- Watershed Boundary
- Flowpath
- Node Number
- Node Elevation
- Watershed Centroid

**Pacific Emerald
Tract 31304**

**Exhibit C
Offsite
Hydrograph Map**



Unit Hydrograph Analysis

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Study date 09/29/20 File: 011100.out

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Riverside County Synthetic Unit Hydrology Method
RCFC & WCD Manual date - April 1978

Program License Serial Number 6062

English (in-lb) Input Units Used
English Rainfall Data (Inches) Input Values Used

English Units used in output format

Pacific Emerald Tract No. 31304
Offsite Drainage Area 01
Existing Condition
100-Year 1-Hour Storm

Drainage Area = 305.24(Ac.) = 0.477 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 305.24(Ac.) = 0.477 Sq. Mi.
Length along longest watercourse = 6881.00(Ft.)
Length along longest watercourse measured to centroid = 3510.00(Ft.)
Length along longest watercourse = 1.303 Mi.
Length along longest watercourse measured to centroid = 0.665 Mi.
Difference in elevation = 189.00(Ft.)
Slope along watercourse = 145.0254 Ft./Mi.
Average Manning's 'N' = 0.045
Lag time = 0.397 Hr.
Lag time = 23.84 Min.
25% of lag time = 5.96 Min.
40% of lag time = 9.53 Min.
Unit time = 5.00 Min.
Duration of storm = 1 Hour(s)
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

Area(Ac.)[1] Rainfall(In)[2] Weighting[1*2]
305.24 0.50 152.62

100 YEAR Area rainfall data:

Area(Ac.)[1] Rainfall(In)[2] Weighting[1*2]
305.24 1.28 390.71

STORM EVENT (YEAR) = 100.00
Area Averaged 2-Year Rainfall = 0.500(In)
Area Averaged 100-Year Rainfall = 1.280(In)

Point rain (area averaged) = 1.280(In)
Areal adjustment factor = 99.72 %
Adjusted average point rain = 1.276(In)

Sub-Area Data:

Area(Ac.) Runoff Index Impervious %
2.460 56.00 0.500
21.650 69.00 0.500
4.140 69.00 0.900

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132.290	78.00	0.200
144.700	86.00	0.200
Total Area Entered = 305.24(Ac.)		

RI	RI	Infil. Rate	Impervious	Adj. Infil. Rate	Area%	F
AMC2	AMC-2	(In/Hr)	(Dec.%)	(In/Hr)	(Dec.)	(In/Hr)
56.0	56.0	0.511	0.500	0.281	0.008	0.002
69.0	69.0	0.373	0.500	0.205	0.071	0.015
69.0	69.0	0.373	0.900	0.071	0.014	0.001
78.0	78.0	0.268	0.200	0.219	0.433	0.095
86.0	86.0	0.176	0.200	0.144	0.474	0.068
						Sum (F) = 0.181

Area averaged mean soil loss (F) (In/Hr) = 0.181
 Minimum soil loss rate ((In/Hr)) = 0.091
 (for 24 hour storm duration)
 Soil low loss rate (decimal) = 0.620

 Slope of intensity-duration curve for a 1 hour storm =0.5000

Unit Hydrograph
 VALLEY S-Curve

 Unit Hydrograph Data

Unit time period (hrs)	Time % of lag	Distribution Graph %	Unit Hydrograph (CFS)
1	0.083	20.977	1.875
2	0.167	41.954	5.614
3	0.250	62.932	9.825
4	0.333	83.909	13.624
5	0.417	104.886	14.917
6	0.500	125.863	11.911
7	0.583	146.840	7.809
8	0.667	167.817	5.416
9	0.750	188.795	3.770
10	0.833	209.772	3.068
11	0.917	230.749	2.585
12	1.000	251.726	2.207
13	1.083	272.703	1.952
14	1.167	293.680	1.713
15	1.250	314.658	1.451
16	1.333	335.635	1.270
17	1.417	356.612	1.242
18	1.500	377.589	1.002
19	1.583	398.566	0.923
20	1.667	419.543	0.814
21	1.750	440.521	0.672
22	1.833	461.498	0.665
23	1.917	482.475	0.634
24	2.000	503.452	0.627
25	2.083	524.429	0.520
26	2.167	545.406	0.461
27	2.250	566.384	0.436
28	2.333	587.361	0.380
29	2.417	608.338	0.371
30	2.500	629.315	0.309
31	2.583	650.292	0.294
32	2.667	671.269	0.251
33	2.750	692.247	0.210
34	2.833	713.224	0.210
35	2.917	734.201	0.210
36	3.000	755.178	0.210
37	3.083	776.155	0.210
38	3.167	797.132	0.210
39	3.250	818.110	0.134
Sum = 100.000			Sum= 307.625

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Unit	Time (Hr.)	Pattern Percent	Storm Rain (In/Hr)	Loss rate(In./Hr)		Effective (In/Hr)
				Max	Low	
1	0.08	4.20	0.643	0.181	---	0.46
2	0.17	4.30	0.659	0.181	---	0.48
3	0.25	5.00	0.766	0.181	---	0.58
4	0.33	5.00	0.766	0.181	---	0.58
5	0.42	5.80	0.888	0.181	---	0.71
6	0.50	6.50	0.996	0.181	---	0.81
7	0.58	7.40	1.133	0.181	---	0.95
8	0.67	8.60	1.317	0.181	---	1.14
9	0.75	12.30	1.884	0.181	---	1.70
10	0.83	29.10	4.457	0.181	---	4.28
11	0.92	6.80	1.042	0.181	---	0.86
12	1.00	5.00	0.766	0.181	---	0.58
Sum =		100.0				Sum = 13.1

Flood volume = Effective rainfall 1.10(In)
times area 305.2(Ac.)/[In)/(Ft.)] = 27.9(Ac.Ft)
Total soil loss = 0.18(In)
Total soil loss = 4.607(Ac.Ft)
Total rainfall = 1.28(In)
Flood volume = 1213649.3 Cubic Feet
Total soil loss = 200694.6 Cubic Feet

Peak flow rate of this hydrograph = 396.151(CFS)

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1 - H O U R S T O R M
R u n o f f H y d r o g r a p h

Hydrograph in 5 Minute intervals ((CFS))

Time(h+m)	Volume Ac.Ft	Q(CFS)	0	100.0	200.0	300.0	400.0
0+ 5	0.0184	2.67	Q				
0+10	0.0924	10.74	VQ				
0+15	0.2687	25.60	V Q				
0+20	0.5945	47.30	V Q				
0+25	1.0980	73.11	V Q				
0+30	1.7729	98.00	V Q				
0+35	2.6058	120.94	V Q				
0+40	3.6029	144.77	V Q				
0+45	4.7992	173.70	V Q				
0+50	6.3517	225.43	V Q				
0+55	8.3718	293.31	V Q				
1+ 0	10.8281	356.66	V Q				
1+ 5	13.5564	396.15	V Q				
1+10	16.2133	385.78	V Q				
1+15	18.3972	317.11	V Q				
1+20	20.0058	233.56	V Q				
1+25	21.1805	170.58	V Q				
1+30	22.0509	126.37	V Q				
1+35	22.7524	101.86	V Q				
1+40	23.3399	85.31	V Q				
1+45	23.8454	73.40	V Q				
1+50	24.2884	64.32	V Q				
1+55	24.6771	56.45	V Q				
2+ 0	25.0173	49.40	V Q				
2+ 5	25.3194	43.86	V Q				
2+10	25.5949	40.01	V Q				
2+15	25.8347	34.82	V Q				
2+20	26.0517	31.50	V Q				
2+25	26.2450	28.07	V Q				
2+30	26.4169	24.96	V Q				
2+35	26.5778	23.36	V Q				
2+40	26.7272	21.70	V Q				
2+45	26.8667	20.26	V Q				
2+50	26.9899	17.89	V Q				
2+55	27.1010	16.13	V Q				
3+ 0	27.2024	14.73	V Q				
3+ 5	27.2941	13.31	V Q				
3+10	27.3795	12.40	V Q				

011100.out

3+15	27.4553	11.00	Q			V
3+20	27.5238	9.95	Q			V
3+25	27.5835	8.68	Q			V
3+30	27.6360	7.62	Q			V
3+35	27.6845	7.03	Q			V
3+40	27.7291	6.48	Q			V
3+45	27.7698	5.92	Q			V
3+50	27.8061	5.26	Q			V
3+55	27.8363	4.39	Q			V
4+ 0	27.8549	2.69	Q			V
4+ 5	27.8599	0.73	Q			V
4+10	27.8616	0.24	Q			V

Unit Hydrograph Analysis

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Study date 10/08/20 File: 013100.out

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Riverside County Synthetic Unit Hydrology Method
RCFC & WCD Manual date - April 1978

Program License Serial Number 6062

English (in-lb) Input Units Used
English Rainfall Data (Inches) Input Values Used

English Units used in output format

Pacific Emerald Tract No. 31304
Mountain Avenue Wash Watershed (Drainage Area 01)
Existing Condition
100-Year 3-Hour Storm

Drainage Area = 305.24(Ac.) = 0.477 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 305.24(Ac.) = 0.477 Sq. Mi.
Length along longest watercourse = 6881.00(Ft.)
Length along longest watercourse measured to centroid = 3510.00(Ft.)
Length along longest watercourse = 1.303 Mi.
Length along longest watercourse measured to centroid = 0.665 Mi.
Difference in elevation = 189.00(Ft.)
Slope along watercourse = 145.0254 Ft./Mi.
Average Manning's 'N' = 0.045
Lag time = 0.397 Hr.
Lag time = 23.84 Min.
25% of lag time = 5.96 Min.
40% of lag time = 9.53 Min.
Unit time = 5.00 Min.
Duration of storm = 3 Hour(s)
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
305.24	0.87	265.56

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
305.24	1.92	586.06

STORM EVENT (YEAR) = 100.00
Area Averaged 2-Year Rainfall = 0.870(In)
Area Averaged 100-Year Rainfall = 1.920(In)

Point rain (area averaged) = 1.920(In)
Areal adjustment factor = 99.87 %
Adjusted average point rain = 1.917(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
2.460	56.00	0.500
21.650	69.00	0.500
4.140	69.00	0.900

013100.out

132.290 78.00 0.200
 144.700 86.00 0.200
 Total Area Entered = 305.24(Ac.)

RI	RI	Infil. Rate	Impervious	Adj. Infil. Rate	Area%	F
AMC2	AMC-2	(In/Hr)	(Dec.%)	(In/Hr)	(Dec.)	(In/Hr)
56.0	56.0	0.511	0.500	0.281	0.008	0.002
69.0	69.0	0.373	0.500	0.205	0.071	0.015
69.0	69.0	0.373	0.900	0.071	0.014	0.001
78.0	78.0	0.268	0.200	0.219	0.433	0.095
86.0	86.0	0.176	0.200	0.144	0.474	0.068
						Sum (F) = 0.181

Area averaged mean soil loss (F) (In/Hr) = 0.181
 Minimum soil loss rate ((In/Hr)) = 0.091
 (for 24 hour storm duration)
 Soil low loss rate (decimal) = 0.620

Unit Hydrograph
 VALLEY S-Curve

Unit Hydrograph Data

Unit time period (hrs)	Time % of lag	Distribution Graph %	Unit Hydrograph (CFS)
1	0.083	20.977	1.875
2	0.167	41.954	5.614
3	0.250	62.932	9.825
4	0.333	83.909	13.624
5	0.417	104.886	14.917
6	0.500	125.863	11.911
7	0.583	146.840	7.809
8	0.667	167.817	5.416
9	0.750	188.795	3.770
10	0.833	209.772	3.068
11	0.917	230.749	2.585
12	1.000	251.726	2.207
13	1.083	272.703	1.952
14	1.167	293.680	1.713
15	1.250	314.658	1.451
16	1.333	335.635	1.270
17	1.417	356.612	1.242
18	1.500	377.589	1.002
19	1.583	398.566	0.923
20	1.667	419.543	0.814
21	1.750	440.521	0.672
22	1.833	461.498	0.665
23	1.917	482.475	0.634
24	2.000	503.452	0.627
25	2.083	524.429	0.520
26	2.167	545.406	0.461
27	2.250	566.384	0.436
28	2.333	587.361	0.380
29	2.417	608.338	0.371
30	2.500	629.315	0.309
31	2.583	650.292	0.294
32	2.667	671.269	0.251
33	2.750	692.247	0.210
34	2.833	713.224	0.210
35	2.917	734.201	0.210
36	3.000	755.178	0.210
37	3.083	776.155	0.210
38	3.167	797.132	0.210
39	3.250	818.110	0.134
		Sum = 100.000	Sum= 307.625

Unit Time Pattern Storm Rain Loss rate(In./Hr) Effective
 (Hr.) Percent (In/Hr) Max | Low (In/Hr)

013100.out

1	0.08	1.30	0.299	0.181	---	0.12
2	0.17	1.30	0.299	0.181	---	0.12
3	0.25	1.10	0.253	0.181	---	0.07
4	0.33	1.50	0.345	0.181	---	0.16
5	0.42	1.50	0.345	0.181	---	0.16
6	0.50	1.80	0.414	0.181	---	0.23
7	0.58	1.50	0.345	0.181	---	0.16
8	0.67	1.80	0.414	0.181	---	0.23
9	0.75	1.80	0.414	0.181	---	0.23
10	0.83	1.50	0.345	0.181	---	0.16
11	0.92	1.60	0.368	0.181	---	0.19
12	1.00	1.80	0.414	0.181	---	0.23
13	1.08	2.20	0.506	0.181	---	0.33
14	1.17	2.20	0.506	0.181	---	0.33
15	1.25	2.20	0.506	0.181	---	0.33
16	1.33	2.00	0.460	0.181	---	0.28
17	1.42	2.60	0.598	0.181	---	0.42
18	1.50	2.70	0.621	0.181	---	0.44
19	1.58	2.40	0.552	0.181	---	0.37
20	1.67	2.70	0.621	0.181	---	0.44
21	1.75	3.30	0.759	0.181	---	0.58
22	1.83	3.10	0.713	0.181	---	0.53
23	1.92	2.90	0.667	0.181	---	0.49
24	2.00	3.00	0.690	0.181	---	0.51
25	2.08	3.10	0.713	0.181	---	0.53
26	2.17	4.20	0.966	0.181	---	0.79
27	2.25	5.00	1.150	0.181	---	0.97
28	2.33	3.50	0.805	0.181	---	0.62
29	2.42	6.80	1.565	0.181	---	1.38
30	2.50	7.30	1.680	0.181	---	1.50
31	2.58	8.20	1.887	0.181	---	1.71
32	2.67	5.90	1.358	0.181	---	1.18
33	2.75	2.00	0.460	0.181	---	0.28
34	2.83	1.80	0.414	0.181	---	0.23
35	2.92	1.80	0.414	0.181	---	0.23
36	3.00	0.60	0.138	0.181	0.086	0.05
Sum =	100.0				Sum =	16.6

Flood volume = Effective rainfall 1.38(In)
times area 305.2(Ac.)/[(In)/(Ft.)] = 35.2(Ac.Ft)
Total soil loss = 0.54(In)
Total soil loss = 13.619(Ac.Ft)
Total rainfall = 1.92(In)
Flood volume = 1531297.0 Cubic Feet
Total soil loss = 593262.7 Cubic Feet

Peak flow rate of this hydrograph = 303.705(CFS)

+++++
3 - H O U R S T O R M
R u n o f f H y d r o g r a p h

Hydrograph in 5 Minute intervals ((CFS))

Time(h+m)	Volume Ac.Ft	Q(CFS)	0	100.0	200.0	300.0	400.0
0+ 5	0.0047	0.68	Q				
0+10	0.0234	2.72	Q				
0+15	0.0649	6.02	Q				
0+20	0.1386	10.71	VQ				
0+25	0.2510	16.32	VQ				
0+30	0.4019	21.90	V Q				
0+35	0.5897	27.28	V Q				
0+40	0.8175	33.08	V Q				
0+45	1.0841	38.71	V Q				
0+50	1.3819	43.24	V Q				
0+55	1.7012	46.37	V Q				
1+ 0	2.0365	48.68	V Q				
1+ 5	2.3880	51.04	V Q				
1+10	2.7611	54.17	V Q				
1+15	3.1694	59.28	V Q				
1+20	3.6215	65.65	V Q				

Unit Hydrograph Analysis

Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2004, Version 7.0
Study date 10/01/20 File: o31100.out

+++++

Riverside County Synthetic Unit Hydrology Method
RCFC & WCD Manual date - April 1978

Program License Serial Number 6062

English (in-lb) Input Units Used
English Rainfall Data (Inches) Input Values Used

English Units used in output format

Pacific Emerald Tract No. 31304
Offsite Drainage Area 02
Existing Condition
100-Year 1-Hour Storm

Drainage Area = 69.72(Ac.) = 0.109 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 69.72(Ac.) = 0.109 Sq. Mi.
Length along longest watercourse = 3162.00(Ft.)
Length along longest watercourse measured to centroid = 1461.00(Ft.)
Length along longest watercourse = 0.599 Mi.
Length along longest watercourse measured to centroid = 0.277 Mi.
Difference in elevation = 84.00(Ft.)
Slope along watercourse = 140.2657 Ft./Mi.
Average Manning's 'N' = 0.045
Lag time = 0.213 Hr.
Lag time = 12.79 Min.
25% of lag time = 3.20 Min.
40% of lag time = 5.12 Min.
Unit time = 5.00 Min.
Duration of storm = 1 Hour(s)
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
69.72	0.50	34.86

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
69.72	1.28	89.24

STORM EVENT (YEAR) = 100.00
Area Averaged 2-Year Rainfall = 0.500(In)
Area Averaged 100-Year Rainfall = 1.280(In)

Point rain (area averaged) = 1.280(In)
Areal adjustment factor = 99.94 %
Adjusted average point rain = 1.279(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
57.590	78.00	0.200
12.130	86.00	0.200
Total Area Entered = 69.72(Ac.)		

RI	RI	Infil. Rate	Impervious	Adj. Infil. Rate	Area%	F
AMC2	AMC-2	(In/Hr)	(Dec.%)	(In/Hr)	(Dec.)	(In/Hr)
78.0	78.0	0.268	0.200	0.219	0.826	0.181
86.0	86.0	0.176	0.200	0.144	0.174	0.025
						Sum (F) = 0.206

Area averaged mean soil loss (F) (In/Hr) = 0.206

Minimum soil loss rate ((In/Hr)) = 0.103

(for 24 hour storm duration)

Soil low loss rate (decimal) = 0.740

 Slope of intensity-duration curve for a 1 hour storm =0.5000

Unit Hydrograph
 VALLEY S-Curve

 Unit Hydrograph Data

Unit time period (hrs)	Time % of lag	Distribution Graph %	Unit Hydrograph (CFS)
1	0.083	39.081	4.207
2	0.167	78.162	17.168
3	0.250	117.243	26.228
4	0.333	156.324	17.896
5	0.417	195.405	8.796
6	0.500	234.486	5.468
7	0.583	273.567	4.055
8	0.667	312.647	3.161
9	0.750	351.728	2.452
10	0.833	390.809	2.005
11	0.917	429.890	1.582
12	1.000	468.971	1.254
13	1.083	508.052	1.176
14	1.167	547.133	0.958
15	1.250	586.214	0.793
16	1.333	625.295	0.671
17	1.417	664.376	0.546
18	1.500	703.457	0.422
19	1.583	742.538	0.391
20	1.667	781.619	0.391
21	1.750	820.700	0.379
		Sum = 100.000	Sum= 70.265

Unit Time (Hr.)	Pattern Percent	Storm Rain (In/Hr)	Loss rate(In./Hr) Max Low	Effective (In/Hr)
1	0.08	4.20	0.645 0.206	0.44
2	0.17	4.30	0.660 0.206	0.45
3	0.25	5.00	0.768 0.206	0.56
4	0.33	5.00	0.768 0.206	0.56
5	0.42	5.80	0.890 0.206	0.68
6	0.50	6.50	0.998 0.206	0.79
7	0.58	7.40	1.136 0.206	0.93
8	0.67	8.60	1.320 0.206	1.11
9	0.75	12.30	1.888 0.206	1.68
10	0.83	29.10	4.467 0.206	4.26
11	0.92	6.80	1.044 0.206	0.84
12	1.00	5.00	0.768 0.206	0.56
Sum =	100.0			Sum = 12.9

Flood volume = Effective rainfall 1.07(In)
 times area 69.7(Ac.)/[(In)/(Ft.)] = 6.2(Ac.Ft)

Total soil loss = 0.21(In)
 Total soil loss = 1.199(Ac.Ft)
 Total rainfall = 1.28(In)
 Flood volume = 271529.5 Cubic Feet
 Total soil loss = 52212.9 Cubic Feet

 Peak flow rate of this hydrograph = 128.373(CFS)

 +-----+

1 - H O U R S T O R M
 R u n o f f H y d r o g r a p h

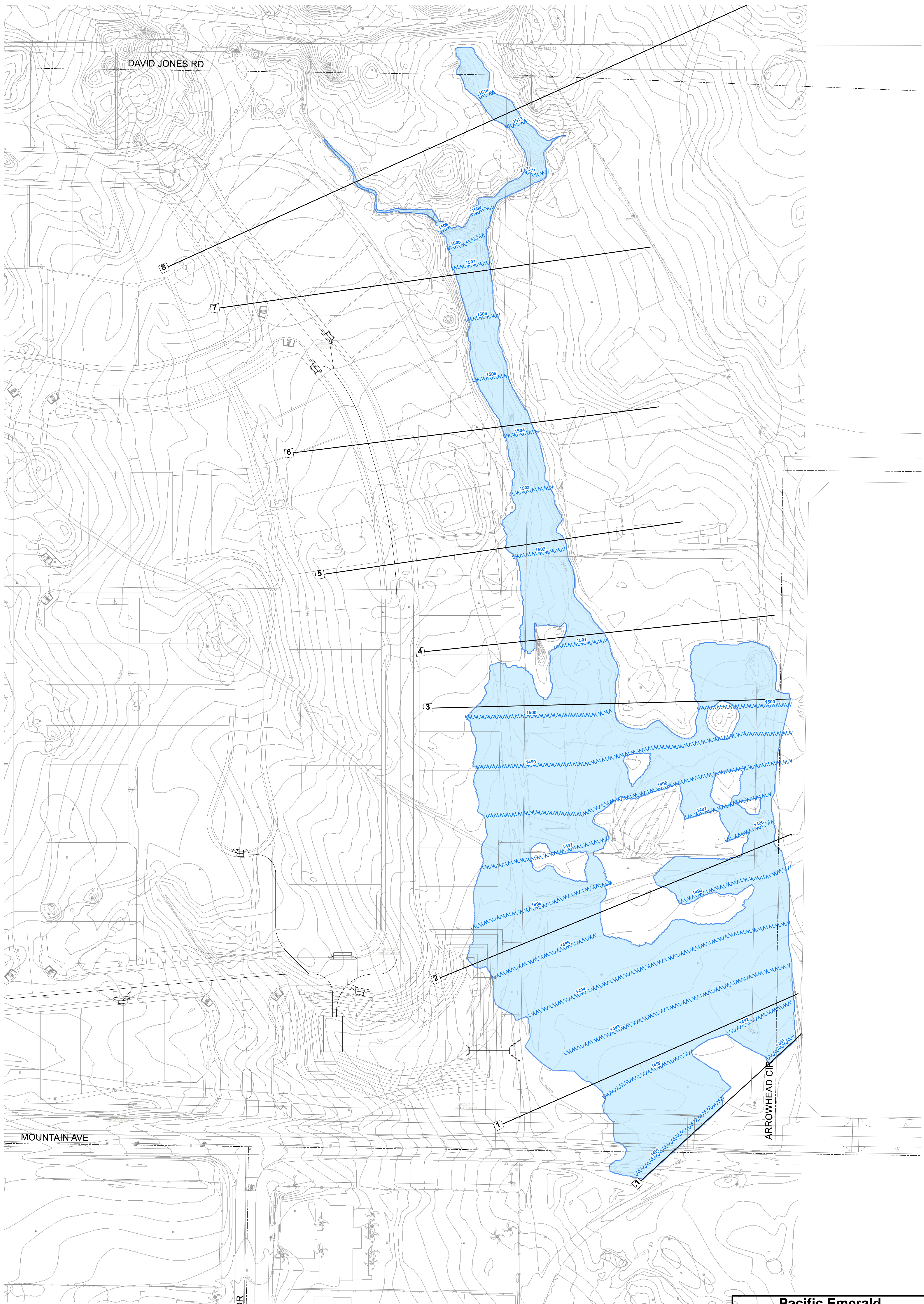
 Hydrograph in 5 Minute intervals ((CFS))

Time(h+m)	Volume	Ac.Ft	Q(CFS)	0	50.0	100.0	150.0	200.0
0+ 5	0.0089		1.30	Q				
0+10	0.0546		6.63	VQ				
0+15	0.1594		15.22	V Q				
0+20	0.3131		22.32	V Q				
0+25	0.5030		27.56	V Q				
0+30	0.7268		32.50	V Q				
0+35	0.9915		38.44	VQ				
0+40	1.3056		45.61	VQ				
0+45	1.6862		55.27	VQ				
0+50	2.2158		76.90	VQ				
0+55	2.9941		113.00	V	Q			
1+ 0	3.8782		128.37	VQ				
1+ 5	4.5550		98.27	Q			V	
1+10	4.9892		63.05	Q			V	
1+15	5.2707		40.88	Q			V	
1+20	5.4676		28.59	Q			V	
1+25	5.6181		21.85	Q			V	
1+30	5.7368		17.23	Q			V	
1+35	5.8330		13.97	Q			V	
1+40	5.9109		11.31	Q			V	
1+45	5.9752		9.34	Q			V	
1+50	6.0304		8.01	Q			V	
1+55	6.0759		6.60	Q			V	
2+ 0	6.1135		5.45	Q			V	
2+ 5	6.1444		4.49	Q			V	
2+10	6.1693		3.62	Q			V	
2+15	6.1890		2.87	Q			V	
2+20	6.2055		2.39	Q			V	
2+25	6.2194		2.02	Q			V	
2+30	6.2298		1.52	Q			V	
2+35	6.2324		0.38	Q			V	
2+40	6.2335		0.15	Q			V	


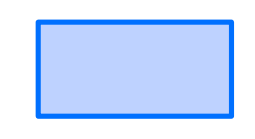
Appendix

C

MOUNTAIN AVE FLOODPLAIN ANALYSIS



Legend

-  1503 100-Year Water Surface Elevation
-  100-Year Floodplain

**Pacific Emerald
Tract 31304**

**Exhibit D
Mountain Avenue Wash
100-Year Floodplain Map**



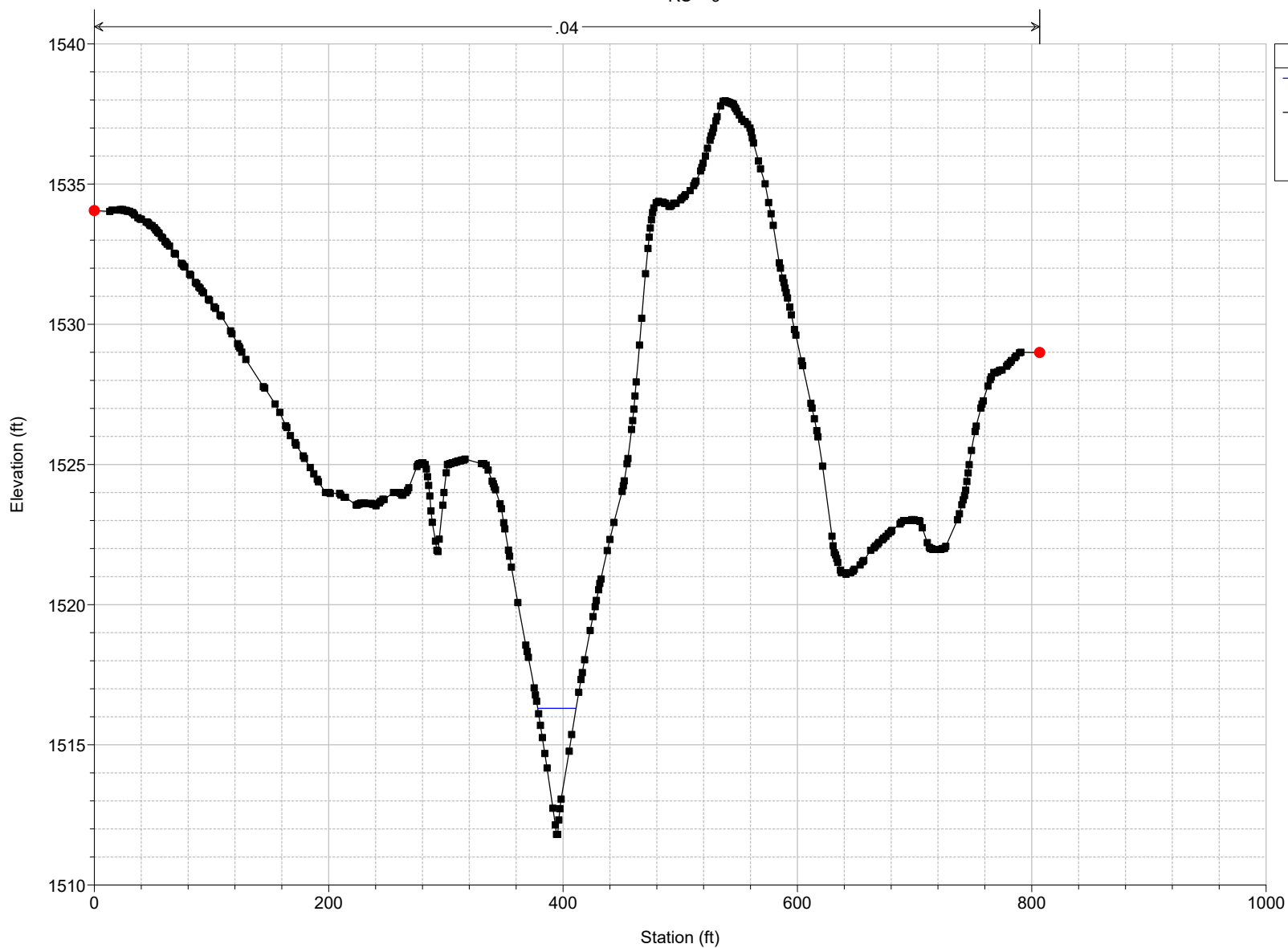
HEC-RAS Plan: Plan 01 River: Existing Reach: Reach 1 Profile: PF 1

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
Reach 1	9	PF 1	396.00	1511.80	1516.30		1516.78	0.008277	5.54	71.45	32.73	0.66
Reach 1	8	PF 1	396.00	1510.00	1513.51	1513.51	1514.37	0.020185	7.46	53.08	34.31	1.00
Reach 1	7	PF 1	396.00	1503.94	1506.76		1507.15	0.008266	5.01	79.08	43.17	0.65
Reach 1	6	PF 1	396.00	1500.13	1504.17	1504.17	1504.93	0.016530	6.98	56.72	37.59	1.00
Reach 1	5	PF 1	396.00	1499.54	1502.10		1502.45	0.010543	4.75	83.39	73.03	0.78
Reach 1	4	PF 1	396.00	1498.77	1501.11	1500.62	1501.46	0.006296	4.70	84.17	69.54	0.64
Reach 1	3	PF 1	396.00	1498.00	1500.21	1500.21	1500.63	0.014154	5.22	75.82	285.49	1.01
Reach 1	2	PF 1	396.00	1493.94	1495.41	1495.41	1495.66	0.018078	4.02	98.59	306.71	1.03
Reach 1	1	PF 1	396.00	1490.62	1492.18	1491.95	1492.29	0.006551	2.70	146.78	265.74	0.64
Reach 1	.1	PF 1	396.00	1490.00	1490.89	1490.88	1491.14	0.015004	4.04	97.96	180.06	0.97

1885FP Plan: Plan 01 9/29/2020

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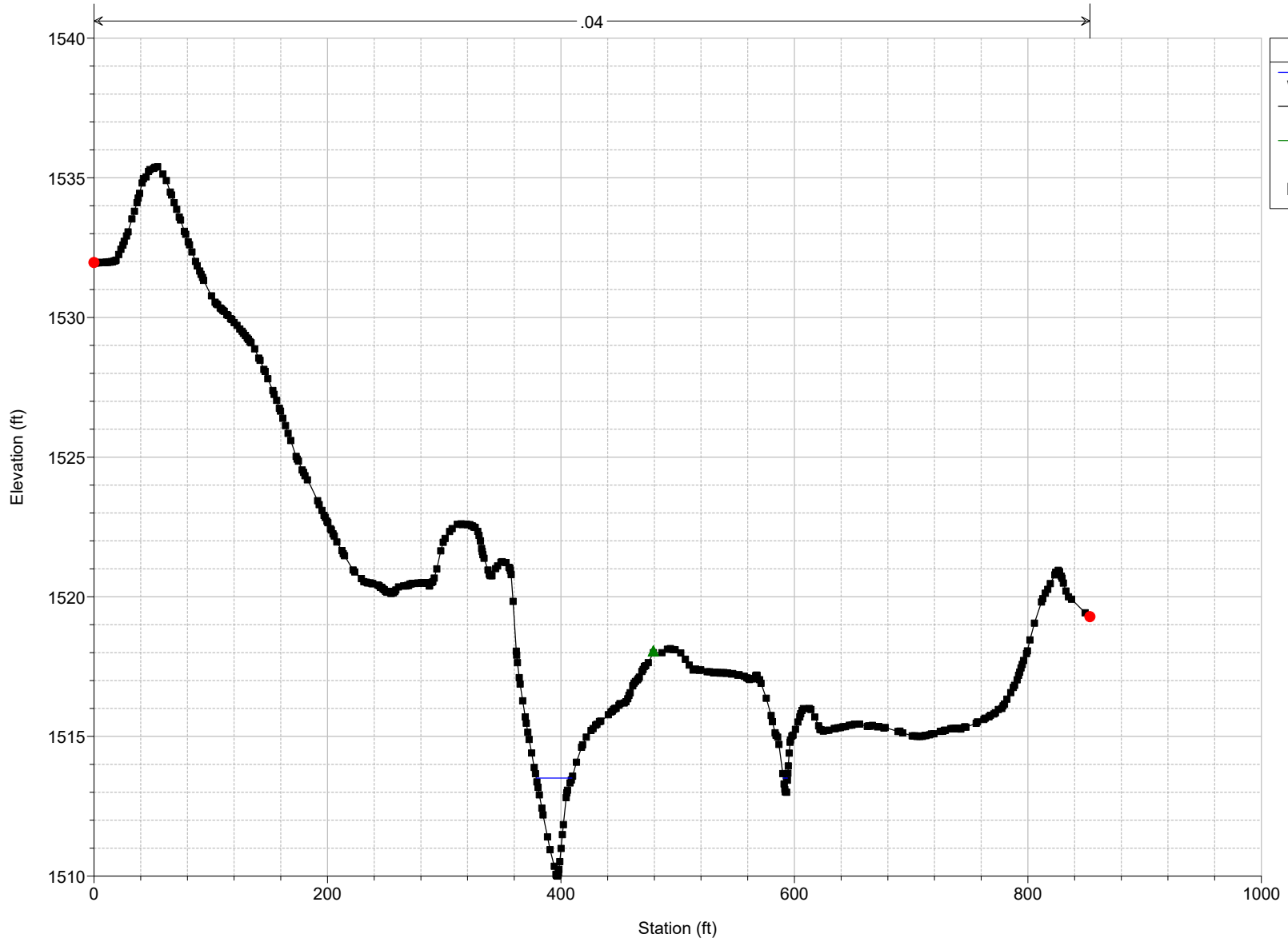
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Legend

- WS PF 1
- Ground
- Bank Sta

1885FP Plan: Plan 01 9/29/2020
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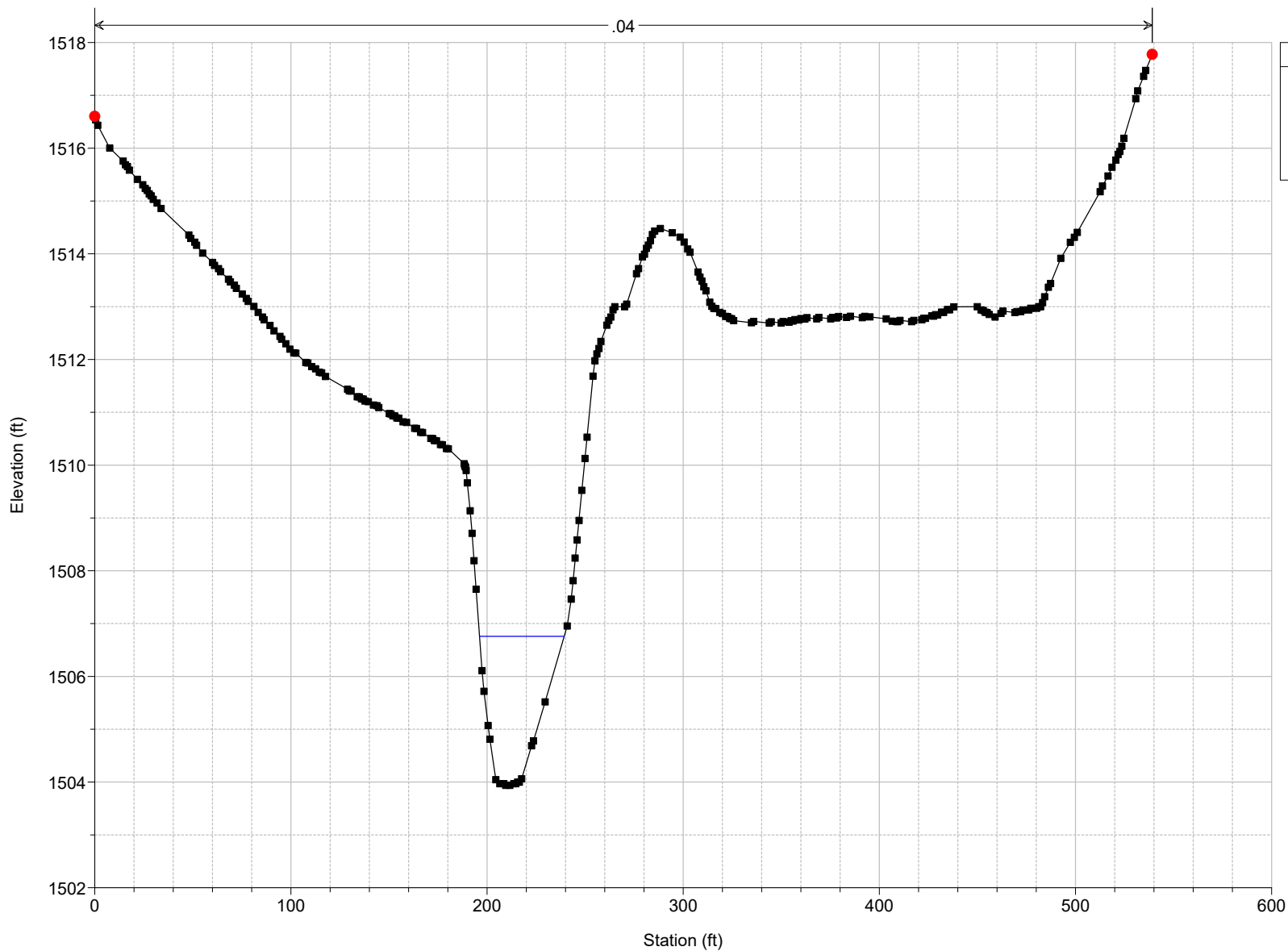
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- WS PF 1
- Ground
- Ineff
- Bank Sta

1885FP Plan: Plan 01 9/29/2020

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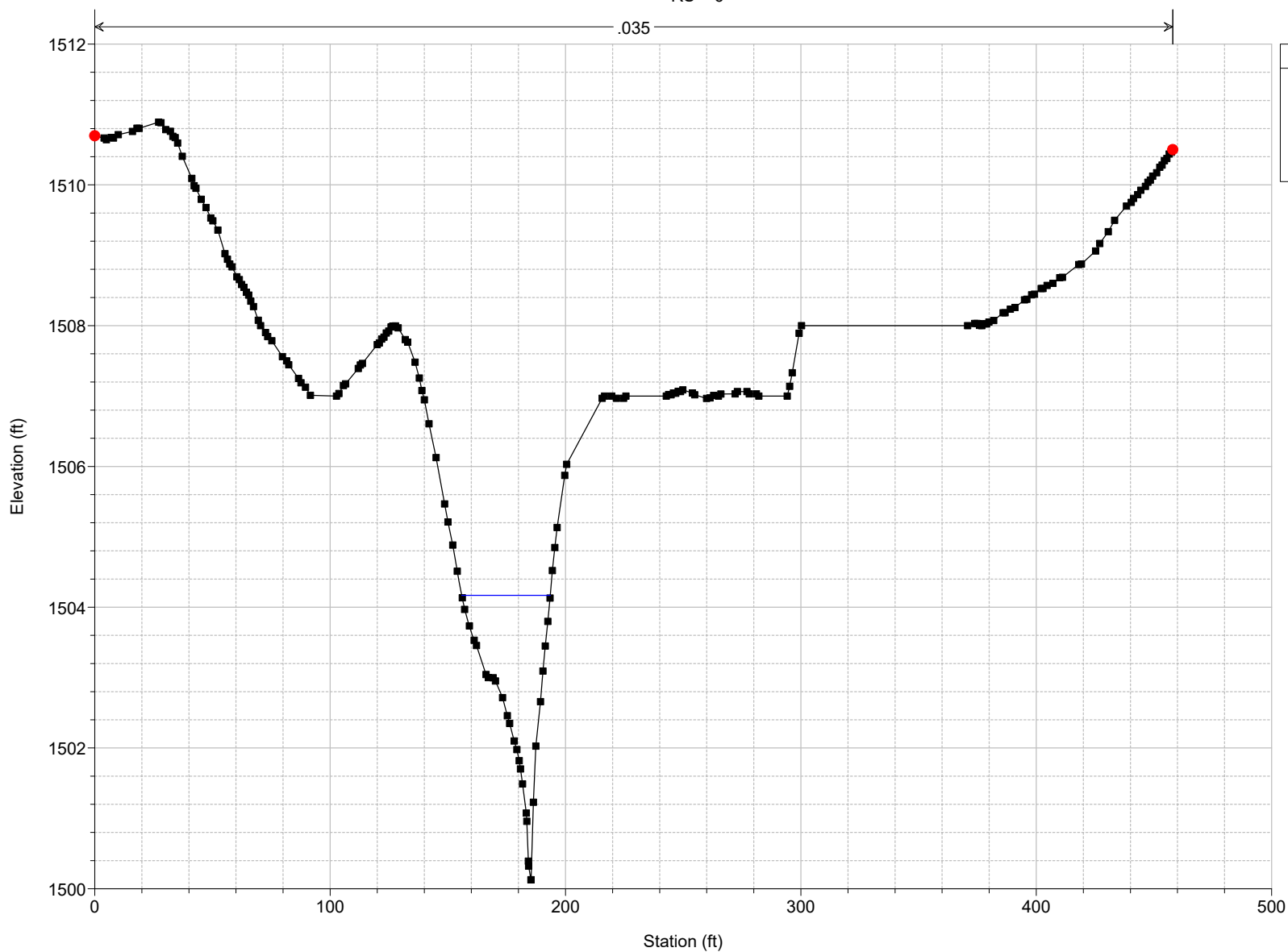
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- WS PF 1
- Ground
- Bank Sta

1885FP Plan: Plan 01 9/29/2020

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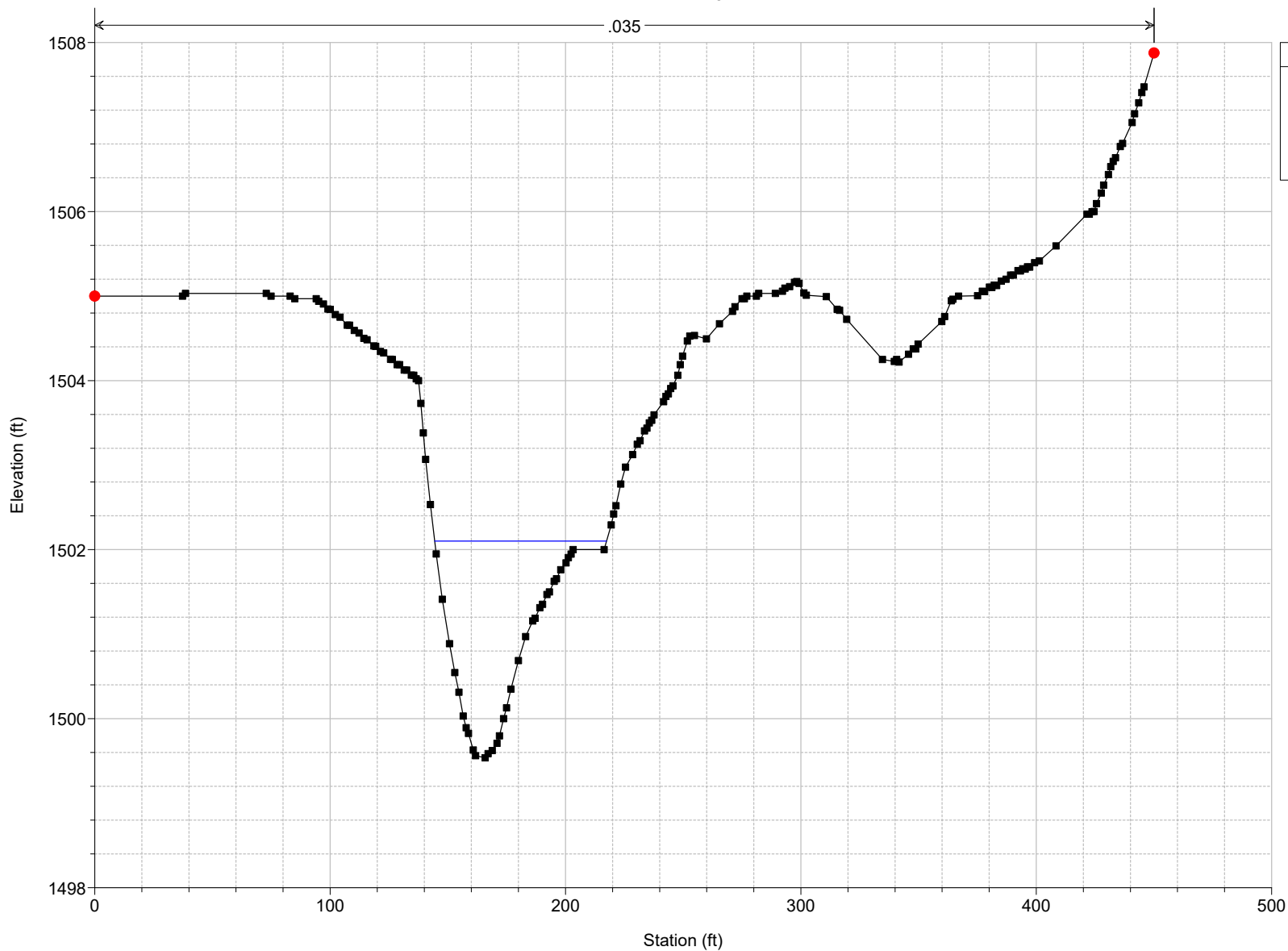


Legend

- WS PF 1
- Ground
- Bank Sta

1885FP Plan: Plan 01 9/29/2020

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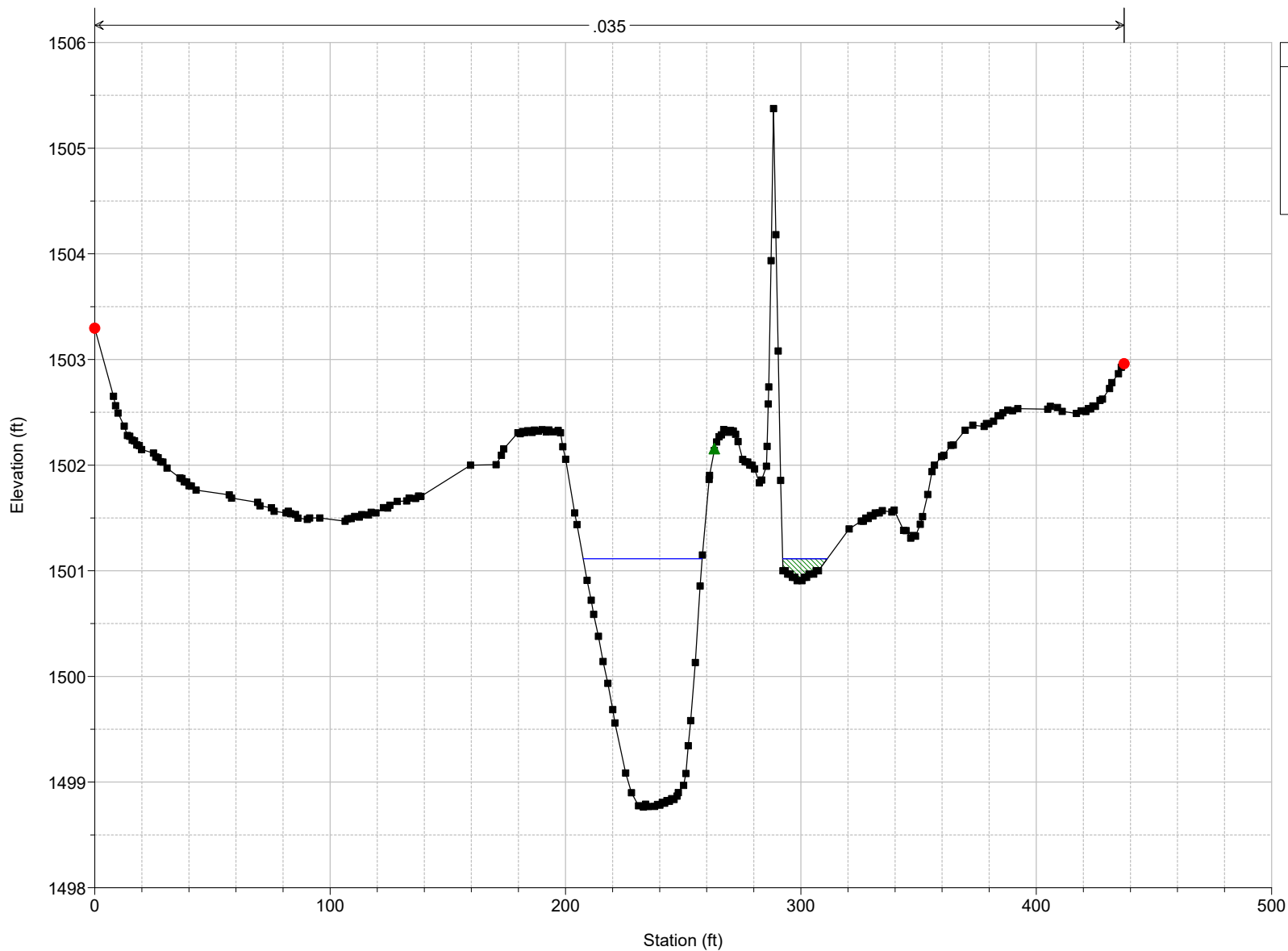
Legend

- WS PF 1
- Ground
- Bank Sta

1885FP Plan: Plan 01 9/29/2020

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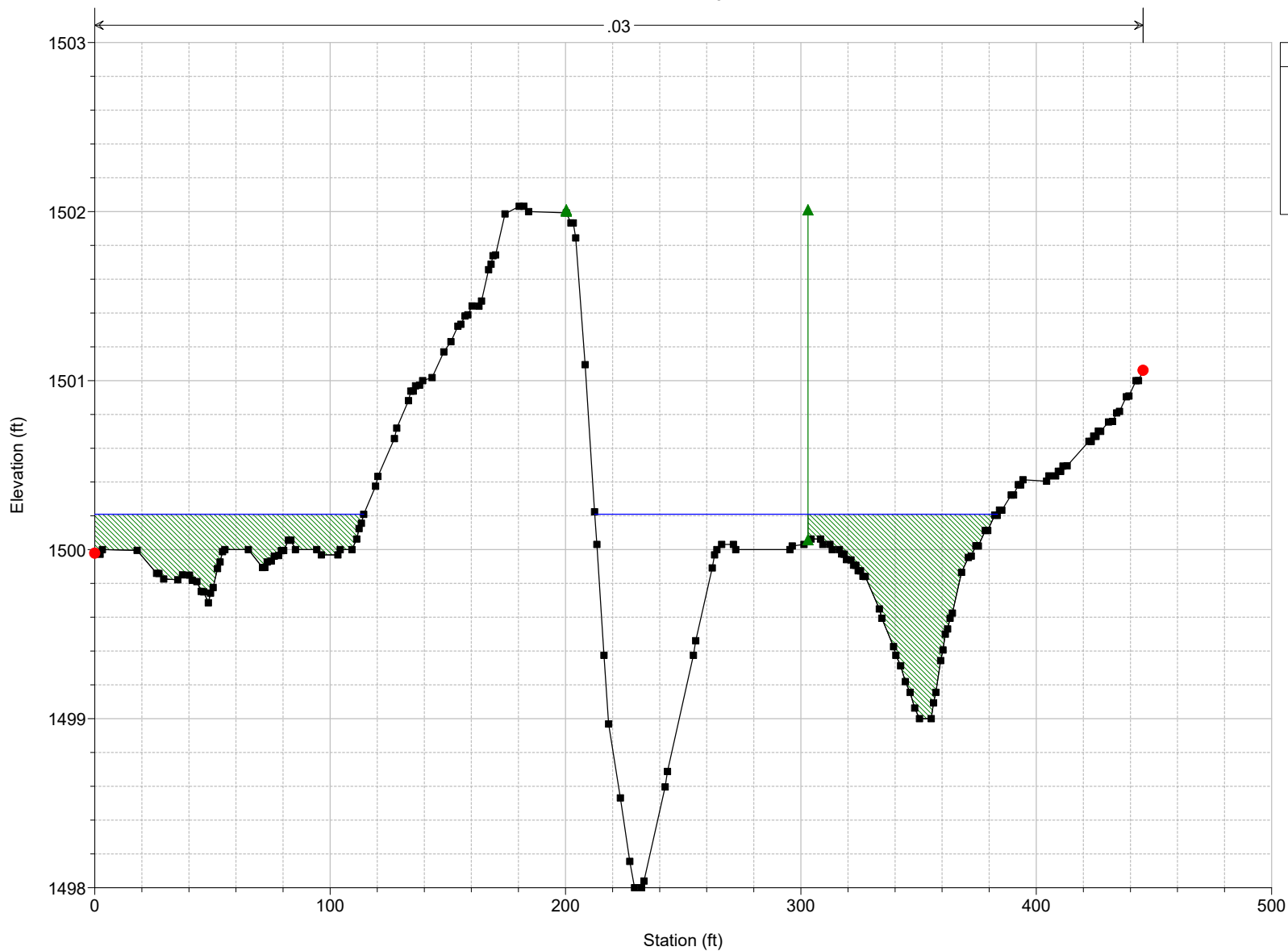


Legend

- WS PF 1
- Ground
- Ineff
- Bank Sta

1885FP Plan: Plan 01 9/29/2020

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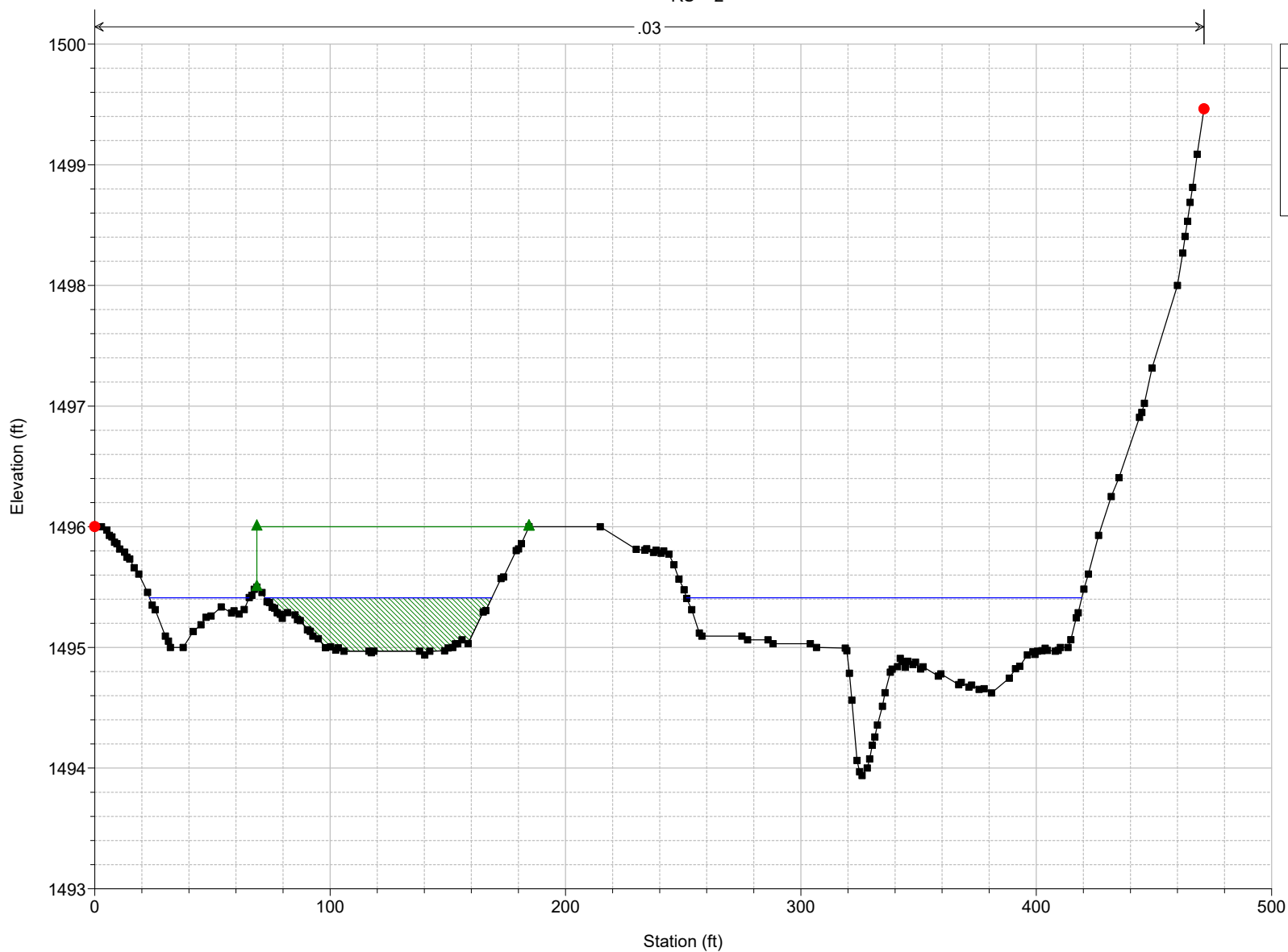
Legend

- WS PF 1
- Ground
- Ineff
- Bank Sta

1885FP Plan: Plan 01 9/29/2020

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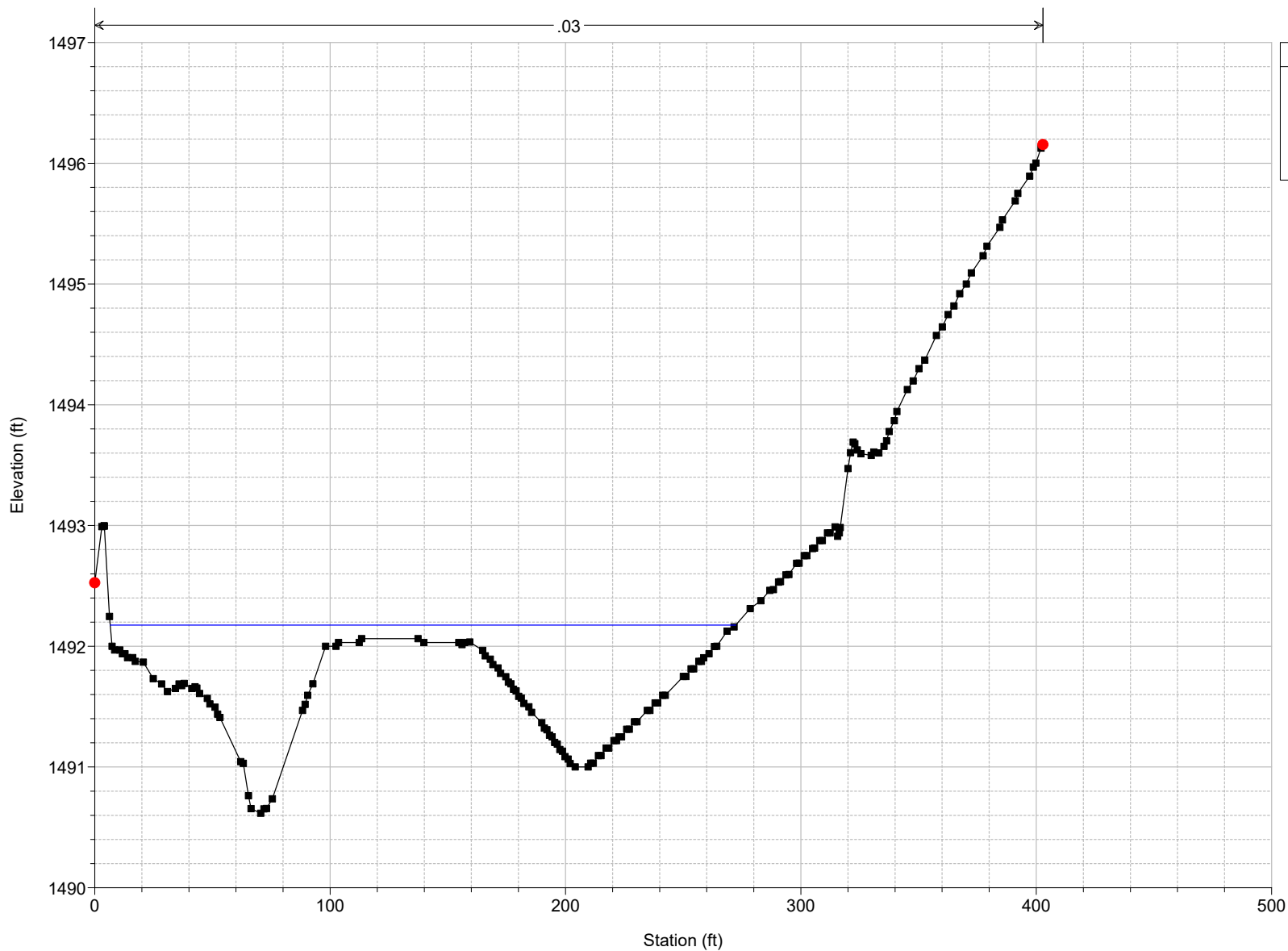
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Legend

- WS PF 1
- Ground
- Ineff
- Bank Sta

1885FP Plan: Plan 01 9/29/2020
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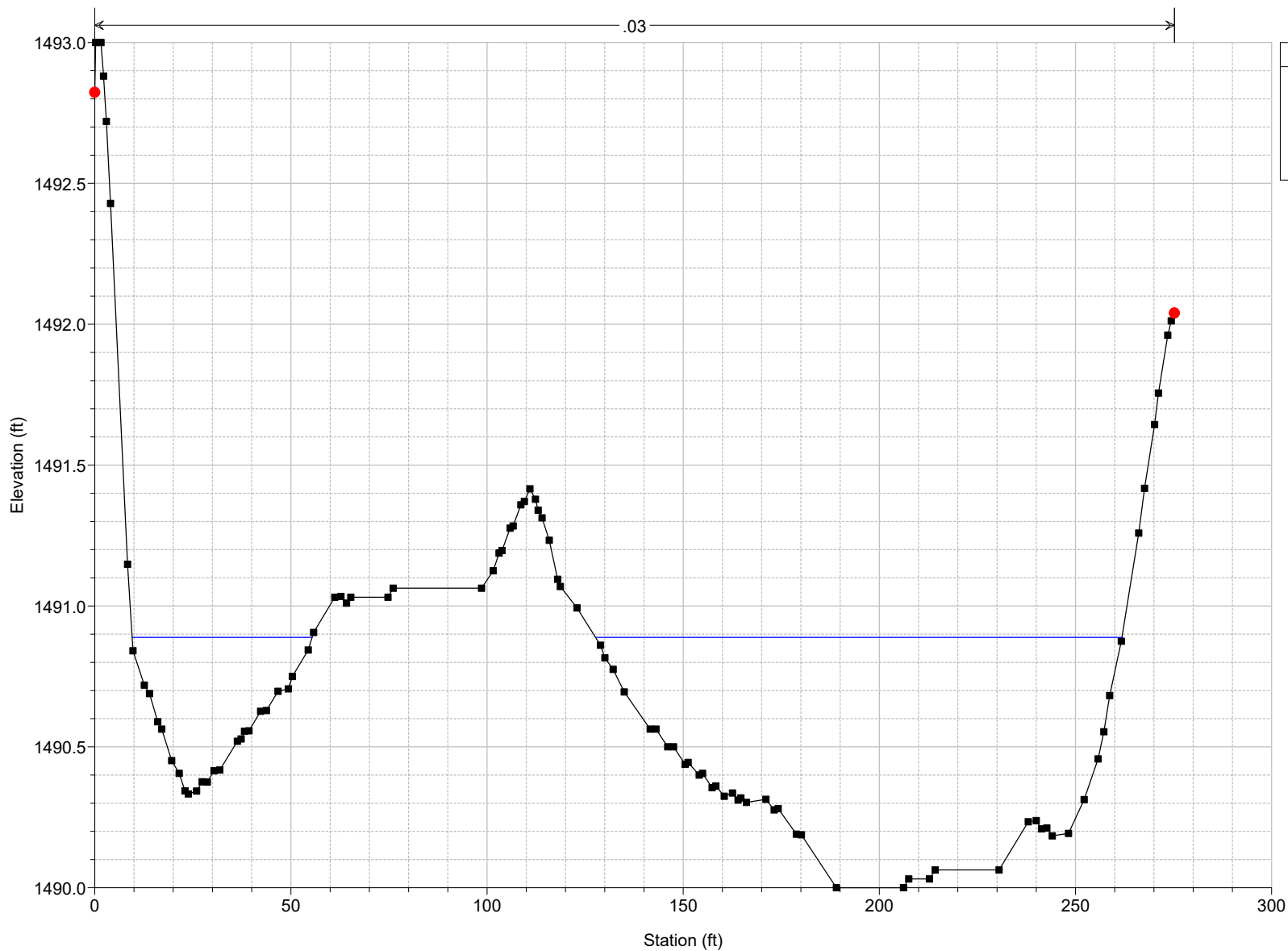
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- WS PF 1
- Ground
- Bank Sta

1885FP Plan: Plan 01 9/29/2020

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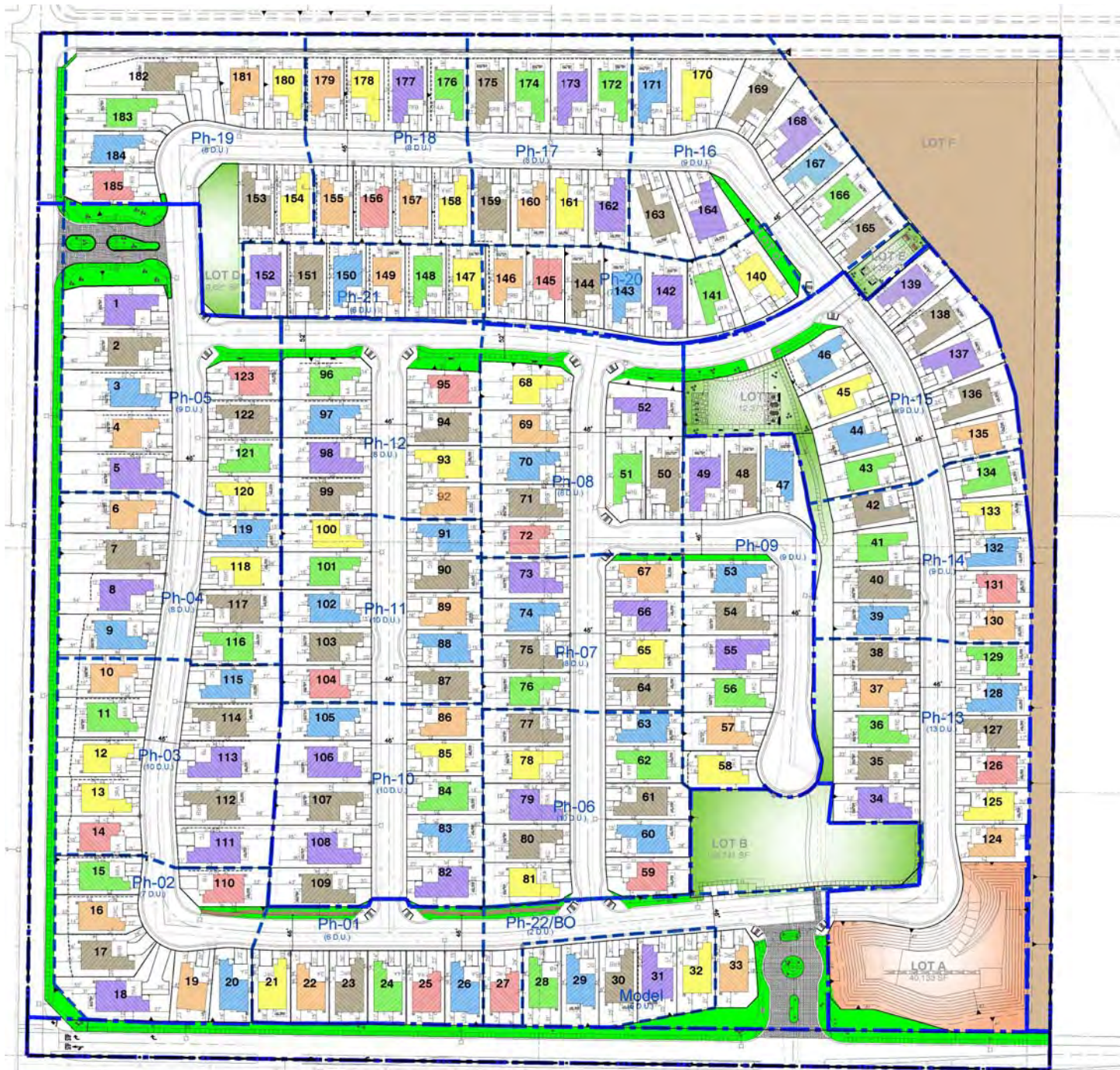
.03



Legend

- WS PF 1
- Ground
- Bank Sta

PACIFIC EMERALD TRACT 37904 NOISE IMPACT STUDY City of Perris, CA



**PACIFIC EMERALD TRACT 37904
NOISE IMPACT STUDY
City of Perris, California**

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**Bryan Estrada, AICP
Becca Morrison**

December 20, 2022

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1.0 Introduction

1.1 Purpose of Analysis and Study Objectives

The purpose of this report is to review potential noise impacts and noise/land use compatibility for the proposed Pacific Emerald Tract 37904 Single Family Residential Development Project. This report also provides preliminary recommendations for building design and floor/wall/ceiling assemblies to meet the State of California and City of Perris interior noise standards.

The following is provided in this report:

- A description of the study area and the proposed project
- Information regarding the fundamentals of noise
- Identification of the regulatory setting and applicable noise standards
- Analysis of the existing noise environment
- Analysis of the project's operational noise impacts
- Analysis of the project's construction noise and vibration impact to adjacent sensitive receptors
- Summary of recommended mitigation measures and project design features to reduce noise level impacts.

1.2 Site Location

The proposed Pacific Emerald Tract 37904 Single Family Residential Development project site is located at the northeast corner of McPherson Road and Mountain Avenue, in the City of Perris, California. The project site is located approximately 1,530 feet above sea level and the topography is relatively uneven.

The project site is located in Planning Area – 7 of the City of Perris General Plan. The existing General Plan Land Use Designation for the site is R-6,000 - Residential 6,000 and the existing zone is R-6,000 Residential 6,000 square-foot lot size) in the City of Perris Zoning Map and in the City of Perris General Plan Land Use Designation Map.

The primary sources of ambient noise at the project site include roadway noise from Mountain Avenue and McPherson Road as well as typical residential neighborhood noise from the existing residential homes surrounding the project site.

The project site location map is provided in Exhibit A.

1.3 Project Description

The proposed project consists of constructing and operating 185 dwelling units of age restricted (55+) senior adult detached housing on approximately 41.70 acres. As part of the project design, six (6) foot noise barrier walls will be constructed along the property lines of the project site, shielding backyards from Mountain Avenue and McPherson Road. The project would provide half-width frontage improvements to McPherson Road, Mountain Avenue, and David Jones Road. 1

The site plan used for this analysis, provided by PACIFIC COMMUNITY BUILDER, INC., is illustrated in Exhibit B.

1.4 Recommended Mitigations Measures (MM)

The following recommended mitigation measures are provided to help ensure the project's construction noise levels do not adversely impact the adjacent noise sensitive land uses:

MM-1 The project developer shall post a sign in a readily visible location at the project site indicating the dates and duration of construction activities, as well as provide a telephone number where residents can enquire about the construction process and register complaints to a designated construction noise disturbance coordinator.

MM-2 The project developer shall ensure all contractors implement construction best management practices to reduce construction noise levels. Best management practices would include the following:

- All construction equipment shall be equipped with mufflers and other suitable noise attenuation devices (e.g., engine shields).
- Grading and construction contractors shall use quieter equipment as opposed to noisier equipment (such as rubber-tired equipment rather than track equipment), to the maximum extent feasible.
- If feasible, electric hook-ups shall be provided to avoid the use of generators. If electric service is determined to be infeasible for the site, only whisper-quiet generators shall be used (i.e., inverter generators capable of providing variable load).

- Use electric air compressors and similar power tools rather than diesel equipment, where feasible.
- Locate staging area, generators and stationary construction equipment as far from the adjacent residential homes as feasible.
- Construction-related equipment, including heavy-duty equipment, motor vehicles, and portable equipment, shall be turned off when not in use for more than 5 minutes.

MM-3 The project developer shall build the proposed CMU block perimeter walls during the first phase of construction to help shield adjacent homes from construction noise.

1.5 Recommended Project Design Features (DF)

The following recommended project design features include standard rules and requirements, best practices and recognized design guidelines for reducing noise levels. Design features are assumed to be part of the conditions of the project and integrated into its design.

Operational Design Features

DF-1 A six (6) foot noise barrier wall will be provided to shield all habitable backyard areas facing exterior roadways and adjacent properties. The designed noise screening will only be accomplished if the barrier's weight is at least 3.5 pounds per square foot of face area without decorative cutouts or line-of-site openings between the shielded areas and the project site. All gaps (except for weep holes) should be filled with grout or caulking to avoid flanking.

Noise control barrier may be constructed using one, or any combination of the following materials:

- Masonry block;
- Stucco veneer over wood framing (or foam core), or 1-inch thick tongue and groove wood of sufficient weight per square foot;

- Transparent glass (3/8-inch-thick), acrylic, polycarbonate, or other transparent material with sufficient weight per square foot.

DF-2 All HVAC equipment will be shielded from the line of sight of adjacent residential properties behind property line walls.

DF-3 The project will be required to incorporate building construction techniques that achieve the minimum interior noise standard of 45 dBA CNEL for all residential units.

DF-4 For proper acoustical performance, all exterior windows, doors, and sliding glass doors shall have a positive seal and leaks/cracks must be kept to a minimum.

Construction Design Features

DF-5 Construction-related noise activities shall comply with the requirements set forth in the City of Perris Municipal Code Chapter 7.34 and Riverside County Ordinance No. 847:

1. It is 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 Lmax in residential zones in the city.
2. Riverside County Ordinance No. 847 indicates that construction noise is exempt from the noise ordinance, provided any of the following are satisfied:
 - Private construction projects located one-quarter (1/4) of a mile or more from an inhabited dwelling
 - Private construction projects located within one-quarter (1/4) of a mile from an inhabited dwelling, provided that:
 - Construction does not occur between the hours of 6:00 PM and 6:00 AM during the months of June through September; and

- Construction does not occur between the hours of 6:00 PM and 7:00 AM during the months of October through May.

DF-6

The project is not expected to require the use of substantial vibration inducing equipment or activities, such as pile drivers or blasting, during construction. If these activities end up being required, a follow-up noise and vibration assessment will be prepared prior to performing any such activities.

2.0 Fundamentals of Noise

This section of the report provides basic information about noise and presents some of the terms used within the report.

2.1 Sound, Noise and Acoustics

Sound is a disturbance created by a moving or vibrating source and is capable of being detected by the hearing organs. Sound may be thought of as mechanical energy of a moving object transmitted by pressure waves through a medium to a human ear. For traffic, or stationary noise, the medium of concern is air. *Noise* is defined as sound that is loud, unpleasant, unexpected, or unwanted.

2.2 Frequency and Hertz

A continuous sound is described by its *frequency* (pitch) and its *amplitude* (loudness). Frequency relates to the number of pressure oscillations per second. Low-frequency sounds are low in pitch (bass sounding) and high-frequency sounds are high in pitch (squeak). These oscillations per second (cycles) are commonly referred to as Hertz (Hz). The human ear can hear from the bass pitch starting out at 20 Hz all the way to the high pitch of 20,000 Hz.

2.3 Sound Pressure Levels and Decibels

The *amplitude* of a sound determines its loudness. The loudness of sound increases or decreases, as the amplitude increases or decreases. Sound pressure amplitude is measured in units of micro-Newton per square inch meter (N/m²), also called micro-Pascal (μ Pa). One μ Pa is approximately one hundred billionths (0.0000000001) of normal atmospheric pressure. Sound pressure level (SPL or L_p) is used to describe in logarithmic units the ratio of actual sound pressures to a reference pressure squared. These units are called decibels and abbreviated dB.

2.4 Addition of Decibels

Because decibels are on a logarithmic scale, sound pressure levels cannot be added or subtracted by simple plus or minus addition. When two (2) sounds of equal SPL are combined, they will produce an SPL 3 dB greater than the original single SPL. In other words, sound energy must be doubled to produce a 3 dB increase.

If two (2) sounds differ by approximately 10 dB the higher sound level is the predominant sound.

2.5 Human Response to Changes in Noise Levels

In general, the healthy human ear is most sensitive to sounds between 1,000 Hz and 5,000 Hz, (A-weighted scale) and it perceives a sound within that range as being more intense than a sound with a higher or lower frequency with the same magnitude. For purposes of this report as well as with most environmental documents, the A-scale weighting is typically reported in terms of A-weighted decibel (dBA). Typically, the human ear can barely perceive the change in noise level of 3 dB. A change in 5 dB is readily perceptible, and a change in 10 dB is perceived as being twice or half as loud¹. As previously discussed, a doubling of sound energy results in a 3 dB increase in sound, which means that a doubling of sound energy (e.g. doubling the volume of traffic on a highway), would result in a barely perceptible change in sound level.

2.6 Noise Descriptors

Noise in our daily environment fluctuates over time. Some noise levels occur in regular patterns, others are random. Some noise levels are constant, while others are sporadic. Noise descriptors were created to describe the different time-varying noise levels. Following are the most commonly used noise descriptors along with brief definitions.

A-Weighted Sound Level

The sound pressure level in decibels as measured on a sound level meter using the A-weighted filter network. The A-weighting filter de-emphasizes the very low and very high frequency components of the sound in a manner similar to the response of the human ear. A numerical method of rating human judgment of loudness.

Ambient Noise Level

The composite of noise from all sources, near and far. In this context, the ambient noise level constitutes the normal or existing level of environmental noise at a given location.

¹ Source: U.S. DOT Federal Highway Administration. Dec. 2011. Highway Traffic Noise: Analysis and Abatement Guidance.

Community Noise Equivalent Level (CNEL)

The average equivalent A-weighted sound level during a 24-hour day, obtained after addition of five (5) decibels to sound levels in the evening from 7:00 to 10:00 PM and after addition of ten (10) decibels to sound levels in the night before 7:00 AM and after 10:00 PM.

Decibel (dB)

A unit for measuring the amplitude of a sound, equal to 20 times the logarithm to the base 10 of the ratio of the pressure of the sound measured to the reference pressure, which is 20 micro-pascals.

dB(A)

A-weighted sound level (see definition above).

Equivalent Sound Level (LEQ)

The sound level corresponding to a steady noise level over a given sample period with the same amount of acoustic energy as the actual time varying noise level. The energy average noise level during the sample period.

Habitable Room

Any room meeting the requirements of the Uniform Building Code or other applicable regulations which is intended to be used for sleeping, living, cooking or dining purposes, excluding such enclosed spaces as closets, pantries, bath or toilet rooms, service rooms, connecting corridors, laundries, unfinished attics, foyers, storage spaces, cellars, utility rooms, and similar spaces.

L(n)

The A-weighted sound level exceeded during a certain percentage of the sample time. For example, L10 is the sound level exceeded 10 percent of the sample time. Similarly L50, L90 and L99, etc.

Noise

Any unwanted sound or sound which is undesirable because it interferes with speech and hearing, or is intense enough to damage hearing, or is otherwise annoying. The State Noise Control Act defines noise as "...excessive undesirable sound...".

Outdoor Living Area

Outdoor spaces that are associated with residential land uses typically used for passive recreational activities or other noise-sensitive uses. Such spaces include patio areas, barbecue areas, jacuzzi areas, etc. associated with residential uses; outdoor patient recovery or resting areas associated with hospitals, convalescent hospitals, or rest homes; outdoor areas associated with places of worship which have a significant role in services or other noise-sensitive activities; and outdoor school facilities routinely used for educational purposes which may be adversely impacted by noise. Outdoor areas usually not included in this definition are: front yard areas, driveways, greenbelts, maintenance areas and storage areas associated with residential land uses; exterior areas at hospitals that are not used for patient activities; outdoor areas associated with places of worship and principally used for short-term social gatherings; and, outdoor areas associated with school facilities that are not typically associated with educational uses prone to adverse noise impacts (for example, school play yard areas).

Percent Noise Levels

See L(n).

Sound Level (Noise Level)

The weighted sound pressure level obtained by use of a sound level meter having a standard frequency-filter for attenuating part of the sound spectrum.

Sound Level Meter

An instrument, including a microphone, an amplifier, an output meter, and frequency weighting networks for the measurement and determination of noise and sound levels.

Single Event Noise Exposure Level (SENEL)

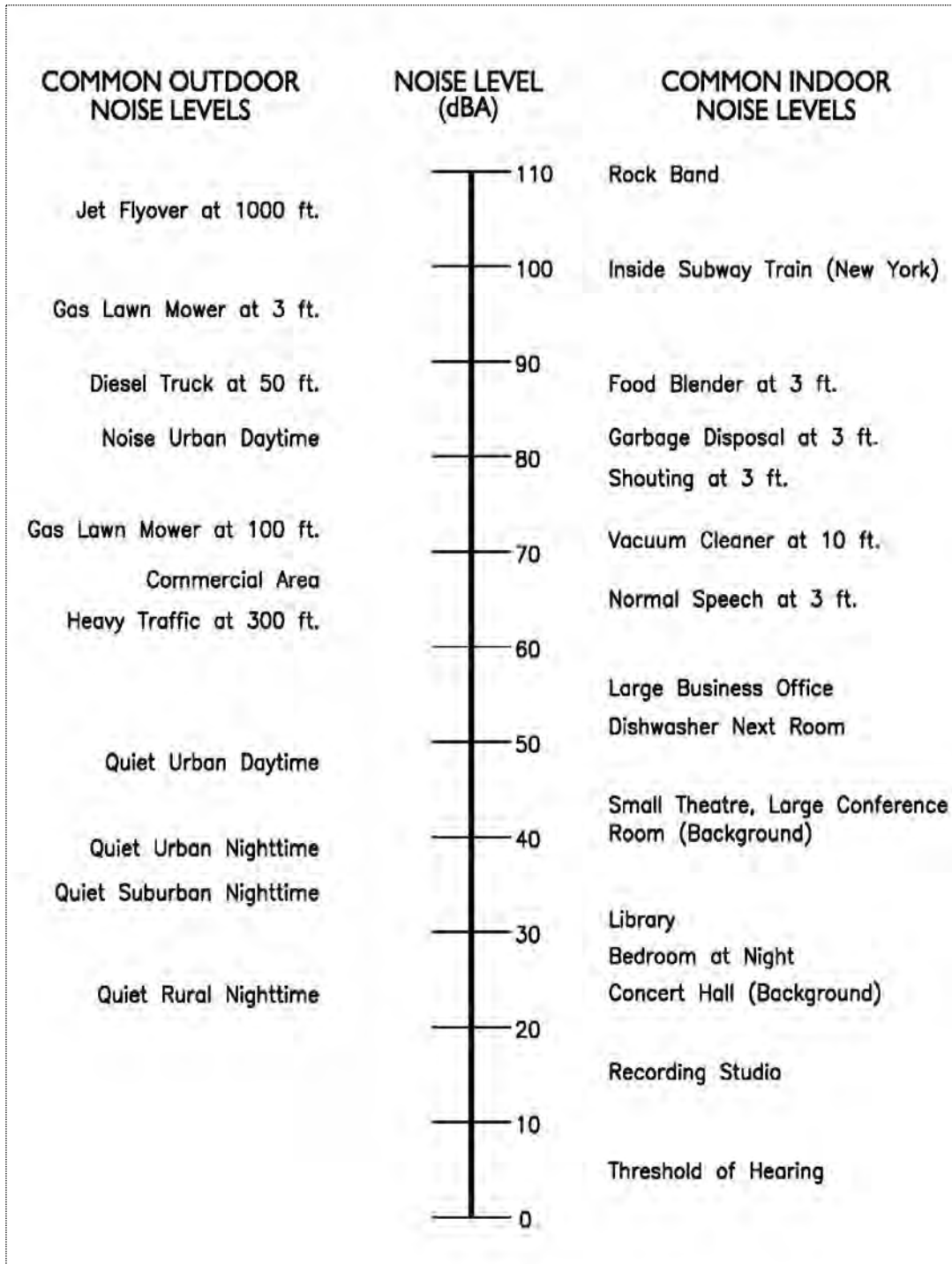
The dBA level which, if it lasted for one (1) second, would produce the same A-weighted sound energy as the actual event.

2.7 Sound Propagation

As sound propagates from a source it spreads geometrically. Sound from a small, localized source (i.e., a point source) radiates uniformly outward as it travels away from the source in a spherical pattern. The sound level attenuates at a rate of 6 dB per doubling of distance. The movement of vehicles down a roadway makes the source of the sound appear to propagate from a line (i.e., line source) rather than a point source. This line source results in the noise propagating from a roadway in a cylindrical spreading versus a spherical spreading that results from a point source. The sound level attenuates for a line source at a rate of 3 dB per doubling of distance.

As noise propagates from the source, it is affected by the ground and atmosphere. Noise models use hard site (reflective surfaces) and soft site (absorptive surfaces) to help calculate predicted noise levels. Hard site conditions assume no excessive ground absorption between the noise source and the receiver. Soft site conditions such as grass, soft dirt or landscaping attenuate noise at an additional rate of 1.5 dB per doubling of distance. When added to the geometric spreading, the excess ground attenuation results in an overall noise attenuation of 3 dB per doubling of distance for a line source and 6.0 dB per doubling of distance for a point source.

Figure 1
Typical Sound Levels from Indoor and Outdoor Noise Sources²



² Source: AASHSTO. 1993. Guide on Evaluation and Abatement of Traffic Noise

2.8 Vibration Descriptors

Ground-borne vibrations consist of rapidly fluctuating motions within the ground that have an average motion of zero. The effects of ground-borne vibrations typically only cause a nuisance to people, but at extreme vibration levels, damage to buildings may occur. Although ground-borne vibration can be felt outdoors, it is typically only an annoyance to people indoors where the associated effects of the shaking of a building can be notable. Ground-borne noise is an effect of ground-borne vibration and only exists indoors since it is produced from noise radiated from the motion of the walls and floors of a room and may also consist of the rattling of windows or dishes on shelves.

Several different methods are used to quantify vibration amplitude.

PPV

Known as the peak particle velocity (PPV) which is the maximum instantaneous peak in vibration velocity, typically given in inches per second.

RMS

Known as the root mean squared (RMS) can be used to denote vibration amplitude.

VdB

A commonly used abbreviation to describe the vibration level (VdB) for a vibration source.

2.9 Vibration Perception

Typically, developed areas are continuously affected by vibration velocities of 50 VdB or lower. These continuous vibrations are not noticeable to humans whose threshold of perception is around 65 VdB. Outdoor sources that may produce perceptible vibrations are usually caused by construction equipment, steel-wheeled trains, and traffic on rough roads, while smooth roads rarely produce perceptible ground-borne noise or vibration. To counter the effects of ground-borne vibration, the Federal Transit Administration (FTA) has published guidance relative to vibration impacts. According to the FTA, fragile buildings can be exposed to ground-borne vibration levels of 0.3 inches per second without experiencing structural damage.

2.10 Vibration Propagation

There are three main types of vibration propagation: surface, compression, and shear waves. Surface waves, or Rayleigh waves, travel along the ground's surface. These waves carry most of their energy along an expanding circular wavefront, similar to ripples produced by throwing a rock into a pool of water. P-waves, or compression waves, are body waves that carry their energy along an expanding spherical wavefront. The particle motion in these waves is longitudinal (i.e., in a "push-pull" fashion). P-waves are analogous to airborne sound waves. S-waves, or shear waves, are also body waves that carry energy along an expanding spherical wavefront. However, unlike P-waves, the particle motion is transverse, or side-to-side and perpendicular to the direction of propagation.

As vibration waves propagate from a source, the vibration energy decreases in a logarithmic nature and the vibration levels typically decrease by 6 VdB per doubling of the distance from the vibration source. As stated above, this drop-off rate can vary greatly depending on the soil but has been shown to be effective enough for screening purposes, in order to identify potential vibration impacts that may need to be studied through actual field tests.

2.11 Construction Related Vibration Level Prediction

Operational activities are separated into two different categories. The vibration can be transient or continuous in nature. Each category can result in varying degrees of ground vibration, depending on the equipment used on the site. Operation of equipment causes ground vibrations that spread through the ground and diminish in strength with distance. Buildings in the vicinity of the project area site respond to these vibrations with varying results ranging from no perceptible effects at the low levels to slight damage at the highest levels. The thresholds from Caltrans Transportation and Construction Induced Vibration Guidance Manual in the table below provide general guidelines as to the maximum vibration limits for when vibration becomes potentially annoying.

Table 1
Vibration Annoyance Potential Criteria

Human Response	PPV (in/sec)	
	Transient Sources	Continuous/Frequent Intermittent Sources
Barely perceptible	0.04	0.01
Distinctly perceptible	0.25	0.04
Strongly perceptible	0.90	0.10
Severe	2.00	0.40

Note: Transient sources create a single isolated vibration event, such as blasting or drop balls. Continuous/frequent intermittent sources include impact pile drivers, pogo-stick compactors, crack-and-seat equipment, vibratory pile drivers, and vibratory compaction equipment.

The Caltrans Transportation and Construction Induced Vibration Guidance Manual provides general thresholds and guidelines as to the vibration damage potential from vibratory impacts. The table below provides general vibration damage potential thresholds:

Table 2
Vibration Damage Potential Threshold Criteria

Structure and Condition	PPV (in/sec)	
	Transient Sources	Continuous/Frequent Intermittent Sources
Extremely fragile historic buildings ruin ancient monuments	0.12	0.08
Fragile buildings	0.20	0.10
Historic and some old buildings	0.50	0.25
Older residential structures	0.50	0.30
New residential structures	1.00	0.50
Modern industrial/commercial buildings	2.00	0.50

Soil conditions have an impact on how vibration propagates through the ground. The Caltrans Transportation and Construction Induced Vibration Guidance Manual provides suggested “n” values based on soil class. The table below outlines the manual’s suggested values and description.

Table 3
Suggested "n" Values Based on Soil Classes

Soil Class	Description of Soil Material	Suggested Value of "n"
I	Weak or soft soils: loose soils, dry or partially saturated peat and muck, mud, loose beach sand, and dune sand.	1.4
II	Most sands, sandy clays, silty clays, gravel, silts, weathered rock.	1.3
III	Hard soils: densely compacted sand, dry consolidated clay, consolidated glacial till, some exposed rock.	1.1
IV	Hard, component rock: bedrock, freshly exposed hard rock.	1.0

3.0 Regulatory Setting

The proposed project is located in the County of Riverside and noise regulations are addressed through various federal, state, and local government agencies. The agencies responsible for regulating noise are discussed below.

3.1 Federal Regulations

The adverse impact of noise was officially recognized by the federal government in the Noise Control Act of 1972, which serves three (3) purposes:

- Publicize noise emission standards for interstate commerce
- Assist state and local abatement efforts
- Promote noise education and research

The Federal Office of Noise Abatement and Control (ONAC) was originally tasked with implementing the Noise Control Act. However, it was eventually eliminated leaving other federal agencies and committees to develop noise policies and programs. Some examples of these agencies are as follows: The Department of Transportation (DOT) assumed a significant role in noise control through its various agencies. The Federal Aviation Agency (FAA) is responsible to regulate noise from aircraft and airports. The Federal Highway Administration (FHWA) is responsible to regulate noise from the interstate highway system. The Occupational Safety and Health Administration (OSHA) is responsible for the prohibition of excessive noise exposure to workers.

The Federal government and the State advocate that local jurisdiction use their land use regulatory authority to arrange new development in such a way that “noise sensitive” uses are either prohibited from being constructed adjacent to a highway or, or alternatively that the developments are planned and constructed in such a manner that potential noise impacts are minimized.

Since the Federal government and the State have preempted the setting of standards for noise levels that can be emitted by the transportation source, the City is restricted to regulating the noise generated by the transportation system through nuisance abatement ordinances and land use planning.

3.2 State Regulations

Established in 1973, the California Department of Health Services Office of Noise Control (ONC) was instrumental in developing regularity tools to control and abate noise for use by local agencies. One significant model is the “Land Use Compatibility for Community Noise Environments Matrix.” The matrix allows the local jurisdiction to clearly delineate compatibility of sensitive uses with various incremental levels of noise.

The State of California has established noise insulation standards as outlined in Title 24 of the California Building Standards Code, which in some cases requires acoustical analyses to outline exterior noise levels and to ensure interior noise levels do not exceed the interior threshold. The State mandates that the legislative body of each county and city adopt a noise element as part of its comprehensive general plan. The local noise element must recognize the land use compatibility guidelines published by the State Department of Health Services. The guidelines rank noise land use compatibility in terms of normally acceptable, conditionally acceptable, normally unacceptable, and clearly unacceptable.

3.3 City of Perris Noise Regulations

The City of Perris outlines their noise regulations and standards within the General Plan, Noise Element and the Municipal Code, Chapter 7.34, Noise Control.

For purposes of this analysis, the City of Perris’s noise element is used to evaluate the project’s noise/land use compatibility and ensure the project is consistent with the established plans, policies and programs for noise control within the City. The Perris General Plan Noise Element and Municipal Code Noise Control are provided in Appendix A.

3.3.1 Noise/Land Use Compatibility

The City of Perris Noise Element establishes planning criteria for determining a development’s noise/land use compatibility based on the community noise equivalent level (CNEL). Table 4 summarizes the City’s Noise/Land Use Compatibility guidelines for land uses applicable to this project:

**Table 4
Noise/Land Use Compatibility Guidelines**

Land Use	Noise Limit (dBA CNEL)			
	Clearly Compatible	Normally Compatible	Normally Incompatible	Clearly Incompatible
Residential - Single Family	<60	60-65	65-75	>75

The City of Perris defines the noise compatibility categories as follows:

Normally Acceptable: Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction without any special noise insulation requirements.

Conditionally Acceptable: New construction or development should be undertaken only after detailed analysis of the noise reduction requirements are made and needed noise insulation features in the design are determined. Conventional construction, 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 the design.

Clearly Unacceptable: New construction or development should generally not be undertaken.

3.3.2 Municipal Code Noise Standards

Per Section 7.34.050 of the Perris Municipal Code, it (is) unlawful for any person to willfully make, cause or suffer, or permit to be made or caused, any loud excessive or offensive noises or sounds which unreasonably disturb the peace and quiet of any residential neighborhood or which are physically annoying to persons of ordinary sensitivity or which are so harsh, prolonged or unnatural or unusual in their use, time or place as to occasion physical discomfort to the inhabitants of the city, or any section thereof. The standards for dBA noise level in section 7.34.040 shall apply to this section. To the extent that the noise created causes the noise level at the property line to exceed the ambient noise level by more than 1.0 decibels, it shall be presumed that the noise being created also is in violation of this section.

Table 5 shows the City of Perris’s noise level standards, as established in the Municipal Code, Section 7.34.040.

**Table 5
City of Perris Residential Noise Standards**

Time Period	Maximum Noise Level (Lmax)
10:01 p.m. – 7:00 a.m.	60 dBA
7:01 a.m. – 10:00 p.m.	80 dBA

3.3.3 Construction Noise Regulation:

The City of Perris Municipal Code Section 7.34.060 specifies the following requirements for construction noise:

It is 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 (Lmax) in residential zones in the city.

3.4 County of Riverside Noise Standards

The project site is located adjacent to properties within the unincorporated County of Riverside. To ensure the project does not cause a noise violation in the County of Riverside, the County’s noise standards are included in this analysis.

3.4.1 Riverside County Noise Ordinance No. 847

The Riverside County Board of Supervisors has adopted Ordinance No. 847 to establish countywide standards regulating noise. Per Ordinance No. 847, no person shall create any sound, or allow the creation of any sound, on any property that causes the exterior sound level on any other occupied property to exceed the sound level standards set forth in the table below.

It should be noted that Ordinance No. 847 is not intended to establish thresholds of significance for the purpose of any analysis required by the California Environmental Quality Act.

Table 6 shows the sound level standards established in the Riverside County Ordinance No. 847, as they pertain to land uses surrounding the project site. The County’s Noise Ordinance No. 847 is provided in Appendix A.

Table 6
Riverside County Ordinance No. 847 Sound Level Standards

Land Use	Maximum Decibel Level (Lmax)	
	7 am—10 pm	10 pm—7 am
Residential	55 dBA	45 dBA

3.4.2 Riverside County Construction Noise Regulation

County of Riverside Ordinance No. 847 indicates that construction noise is exempt from the noise ordinance, provided any of the following are satisfied:

- Private construction projects located one-quarter (1/4) of a mile or more from an inhabited dwelling
- Private construction projects located within one-quarter (1/4) of a mile from an inhabited dwelling, provided that:
 - Construction does not occur between the hours of 6:00 PM and 6:00 AM during the months of June through September; and
 - Construction does not occur between the hours of 6:00 PM and 7:00 AM during the months of October through May.

4.0 Study Method and Procedures

The following section describes the measurement procedures, measurement locations, and noise modeling procedures and assumptions used in the noise analysis.

4.1 Measurement Procedures and Criteria

Noise measurements are taken to determine the existing noise levels. A noise receiver or receptor is any location in the noise analysis in which noise might produce an impact. The following criteria are used to select measurement locations and receptors:

- Locations expected to receive the highest noise impacts, such as the first row of houses
- Locations that are acoustically representative and equivalent of the area of concern
- Human land usage
- Sites clear of major obstruction and contamination

RK conducted the sound level measurements in accordance with Caltrans technical noise specifications. All measurement equipment meets American National Standards Institute (ANSI) specifications for sound level meters (S1.4-1983 identified in Chapter 19.68.020.AA).

A Piccolo-II Type 2 integrating-averaging level meter was used to conduct both short-term (10-minute) noise measurements at the project site and property boundaries.

The Leq, Lmin, Lmax, L2, L8, L25, and L50 statistical data were recorded over the measurement time period intervals and the information was utilized to define the noise characteristics for the project. The following gives a brief description of the Caltrans Technical Noise Supplement procedures for sound level measurements:

- Microphones for sound level meters were placed five (5) feet above the ground for all short-term noise measurements and five (5) feet above ground for long-term noise measurements
- Sound level meters were calibrated before and after each measurement
- Following the calibration of equipment, a windscreen was placed over the microphone
- Frequency weighting was set on "A" and slow response

- Results of the short-term noise measurements were recorded on field data sheets
- During any short-term noise measurements, any noise contaminations such as barking dogs, local traffic, lawn mowers, or aircraft fly-overs were noted
- Temperature and sky conditions were observed and documented

Appendix B includes photos, field sheets, and measured noise data.

4.2 Traffic Noise Modeling

Traffic noise from vehicular traffic was projected using a version of the FHWA Traffic Noise Prediction Model (FHWA-RD-77-108). The FHWA model arrives at the predicted noise level through a series of adjustments to the key input parameters. The following outlines the key adjustments made to the computer model for the roadway inputs:

- Roadway classification – (e.g. freeway, major arterial, arterial, secondary, collector, etc.),
- Roadway Active Width – (distance between the center of the outer most travel lanes on each side of the roadway)
- Average Daily Traffic (ADT) Volumes, Travel Speeds, Percentages of automobiles, medium trucks, and heavy trucks
- Roadway grade and angle of view
- Site Conditions (e.g. soft vs. hard)
- Percentage of total ADT which flows each hour throughout a 24-hour period

The following outlines key adjustments to the computer model for the project site parameter inputs:

- Vertical and horizontal distances (Sensitive receptor distance from noise source)
- Noise barrier vertical and horizontal distances (Noise barrier distance from sound source and receptor).
- Traffic noise source spectra
- Topography

Table 7 indicates the roadway parameters utilized for this study.

**Table 7
Roadway Parameters**

Roadway	Classification ¹	Lanes	Existing ADT ²	Existing Plus Project ADT ²	Opening Year Plus Project ADT ²	Speed (MPH)	Site Conditions
Mountain Avenue	Secondary Arterial	4	3,588	4,233	4,569	25	Hard
McPherson Road	Collector	2	204	365	389	25	Hard

¹ Roadway classification based upon City of Perris General Plan Future Roadway Network

² Source: Pacific Emerald 55+ Housing Traffic Impact Analysis, Albert A. Webb Associates, March 2022. Existing and Future Year average daily traffic (ADT) has been estimated based on peak hour intersection approach/departure volumes (12x peak hour).

Table 8 and Table 9 indicates the vehicle distribution and truck mix utilized for all roadways in this study area.

**Table 8
Vehicle Distribution (Truck Mix) for Arterial Roadways^{1,2}**

Motor-Vehicle Type	Daytime % (7 AM - 7 PM)	Evening % (7 PM - 10 PM)	Night % (10 PM - 7 AM)	Total % of Traffic Flow
Automobiles	69.5	12.9	9.6	92.00
Medium Trucks	1.44	0.06	1.5	3.00
Heavy Trucks	2.4	0.1	2.5	5.00

¹ Roadway classification and average daily traffic (ADT) volume capacity is based on County of Riverside General Plan.

² Vehicle percentages specified are indicated in a memo published by County of Riverside Department of Environmental Health.

**Table 9
Vehicle Distribution (Truck Mix) for Collector Roadways^{1,2}**

Motor-Vehicle Type	Daytime % (7 AM - 7 PM)	Evening % (7 PM - 10 PM)	Night % (10 PM - 7 AM)	Total % of Traffic Flow
Automobiles	73.6	13.6	10.22	97.42
Medium Trucks	0.9	0.04	0.9	1.84
Heavy Trucks	0.35	0.04	0.35	0.74

¹ Roadway classification and average daily traffic (ADT) volume capacity is based on County of Riverside General Plan.

² Vehicle percentages specified are indicated in a memo published by County of Riverside Department of Environmental Health.

4.3 Interior Noise Modeling

The interior noise level is the difference between the projected exterior noise level at the structure's façade and the noise reduction provided by the structure itself. Typical building construction will provide a conservative 12 dBA noise level reduction with a "windows open" condition and a very conservative 20 dBA noise level reduction with "windows closed". RK estimated the interior noise level by subtracting the building shell design from the estimated exterior noise level.

The interior noise analysis is based on industry standards for building noise reduction established by the Federal Highway Administration (FHWA), the 2013 Caltrans Technical Noise Supplement to the Traffic Noise Analysis Protocol (TeNS), the California Office of Noise Control Catalog of STC and IIC Ratings for Wall and Floor/Ceiling Assemblies, and the California Building Standards Code, Title 24.

The TeNS manual shows that the noise reduction due to building exteriors with ordinary sash windows (windows closed) is at least 20 decibels. By providing upgraded STC rated windows, the project design is considered adequate to meet interior noise standards. The building's exterior walls will be constructed per the latest building code insulation requirements and provide occupants with the most protection from exterior noise. Insulated exterior walls, designed per the latest California Building Standards, would provide a minimum of STC 35-40. Windows, on the other hand, are one of the acoustically weakest parts of the structure. Therefore, for a conservative estimate of preliminary interior noise, the building's noise reduction potential is limited to the STC of the windows.

4.4 Construction Noise Modeling

The construction noise analysis utilizes the Federal Highway Administration (FHWA) Roadway Construction Noise Model, together with several key construction parameters. Key inputs include distance to the sensitive receiver, equipment usage, and baseline parameters for the project site. This study evaluates the potential exterior noise impacts during each phase of construction. Noise levels were projected at an average distance of 50 feet for equipment operating over an 8-hour period from to the nearest sensitive receptor property line. While some construction noise activity may occur closer than 50 feet from the property line, noise levels are averaged over an 8-hour period for purposes of assessing impacts.

- Construction phasing and equipment usage assumptions are referenced from Pacific Emerald Tract 37904 SFR Project Air Quality and Greenhouse Gas Analysis, City of Perris, October 2020, by RK Engineering Group.

4.5 Construction Vibration Modeling

The construction vibration assessment is based on the methodology set-forth within the Caltrans Transportation and Construction Induced Vibration Guidance Manual. The vibration impacts from vibratory rollers and compactors, heavy truck loading and bulldozer activity is analyzed. All vibratory activity is analyzed as a continuous and/or frequent event and is required to comply with the applicable guidance thresholds criteria. It is expected that vibration levels will be highest during paving phase. No impact pile driving is expected as part of this project.

Vibratory impacts were calculated from the site area property line to the closest sensitive receptors and structures using the reference vibration levels, soil conditions and the reference equation $PPV = PPV_{ref} (25/D)^n$ (in/sec) (from Caltrans Manual) where:

PPV = reference measurement at 25 feet from vibration source

D = distance from equipment to property line

n = vibration attenuation rate through ground (n=1.0 was utilized for this study)

Table 10 shows the Caltrans Vibration Damage Potential Threshold Criteria.

Table 10
Guideline Vibration Damage Potential Threshold Criteria

Structure and Condition	Maximum PPV (in/sec)	
	Transient Sources	Continuous/Frequent Intermittent Sources
Extremely fragile historic buildings, ruins ancient monuments	0.12	0.08
Fragile buildings	0.20	0.10
Historic and some old buildings	0.50	0.25
Older residential structures	0.50	0.30
New residential structures	1.00	0.50
Modern industrial/commercial buildings	2.00	0.50

Table 11 shows the Caltrans Vibration Annoyance Potential Threshold Criteria.

Table 11
Guideline Vibration Annoyance Potential Criteria

Human Response	Maximum PPV (in/sec)	
	Transient Sources	Continuous/Frequent Intermittent Sources
Barely perceptible	0.04	0.01
Distinctly perceptible	0.25	0.04
Strongly perceptible	0.90	0.10
Severe	2.00	0.40

5.0 Existing Noise Environment

The existing noise environment for the project site and surrounding areas has been established based on noise measurement data collected by RK. Noise measurement data indicates that the ambient noise consist of just environmental noise includes noise from leaves rustling and chirping birds, very minimal traffic noise propagating from the adjacent roadways, as well as activities from the surrounding properties are the main sources of ambient noise at the project site and surrounding area.

5.1 Short-Term (10-Minute) Noise Measurement Results

Using a Piccolo-II Type 2 integrating-averaging sound level meter, four (4) 10-minute noise measurements were recorded at the surrounding property lines. Short term noise measurements are conducted during normal daytime hours and considered samples of typical ambient conditions. The Leq, Lmin, Lmax, L2, L8, L25, and L50, statistical data were reported over the 10-minute period. The information was utilized to define the noise characteristics for the project.

The following details and observations are provided for the short-term noise measurements. The results of the short-term (ST) measurements are presented in Table 12.

Table 12
Short-Term Noise Measurement Results¹

Site No.	Time Started	Leq	Lmax	Lmin	L ₂	L ₈	L ₂₅	L ₅₀
ST-1	10:18 AM	42.7	63.0	32.6	50.9	47.6	42.0	37.9
ST-2	10:35 AM	43.4	60.9	31.9	50.8	46.9	42.7	39.7
ST-3	10:51 AM	40.0	61.1	35.8	44.3	41.9	40.2	39.0
ST-4	11:15 AM	49.9	69.4	38.5	59.7	52.0	48.1	45.3

¹ Noise measurements conducted for 10-minute intervals during normal daytime conditions.

ST-1 Measurement was taken at the intersection of the McPherson Rd and Gertrude Ave line and at approximately 660 feet from the Mountain Ave roadway. Ambient noise includes traffic noise from Mountain Ave and McPherson Rd.

- ST-2 Measurement was taken along the David Jones Road, approximately 370 feet from the centerline of McPherson Road. Ambient noise includes traffic noise from McPherson Road and overhead airplane noise.
- ST-3 Measurement was taken along the eastern property line (near adjacent residential home), approximately 865 feet from the centerline of the Mountain Avenue. Ambient noise includes traffic noise from Mountain Avenue and overhead airplane noise.
- ST-4 Measurement was taken along the south side of Mountain Avenue, east of Sunnysands Drive (in front of the Church). Measurement location was approximately 30 feet from the centerline of the Mountain Avenue. Ambient noise includes traffic noise from Mountain Avenue and overhead airplane noise.

Exhibit C shows the noise measurement locations. Appendix B includes photos, field sheets, and measured noise data.

It should be noted that noise level measurements referenced in this report are based on observed data from October 2020. Based on 2022 satellite imagery provided by Google Earth, it does not appear that substantial changes to the built environment surrounding the project has occurred since the time the original measurements were conducted. As a result, the existing noise measurement data presented herein would still provide an adequate estimate of the existing ambient conditions near the site.

6.0 Operational Noise Impacts

A noise analysis has been performed to determine whether the proposed project would result in a substantial increase in ambient noise levels in the vicinity of the site. Additionally, the noise analysis examines whether the project can meet the City of Perris and State of California requirements for residential exterior and interior noise exposure. The State of California requires that interior noise levels due to exterior sources must not exceed a community noise equivalent level (CNEL) or a day-night level (LDN) of 45 dBA, in any habitable room.

6.1 Project Operational Noise Impacts

The project is consistent with the General Plan Land Use Designation and consists of single-family residential housing. On-site noise would include typical neighborhood noise, such as motor vehicle traffic, HVAC equipment and general human activities. Many project noise sources will be screened behind the proposed six-foot property line walls that will shield backyard areas of the site. Thus, most of the typical on-site outdoor residential activity and HVAC equipment would be screened from the neighboring property's line of sight. As a result, the project is not expected to generate on-site stationary noise that would adversely affect the existing ambient conditions in the vicinity of the site.

The project will also contribute additional traffic to the area which may affect roadway noise levels. Typically, a doubling of traffic volume along a roadway would result in approximately a 3 dBA increase in noise, which is typically considered the threshold of significance for causing a perceptible change. Based on the TIA, the project will not double the amount of traffic volumes on any of the roadways adjacent to the project, including Mountain Avenue or McPherson Road, either directly or cumulatively, and therefore the project may be presumed to have a less than significant impact to future roadway noise levels.

Table 13 shows the project's impact to existing traffic noise levels in the vicinity of the site.

**Table 13
Traffic Noise Impact Analysis (dBA CNEL)¹**

Roadway	Segment	Existing CNEL (dBA)	Existing Plus Project CNEL (dBA)	Change in Noise Level as a Result of Project (dBA)	Significant Impact ²
Mountain Avenue	McPherson – “A” Street	56.4	57.1	0.7	No
McPherson Road	David Jones Road to Mountain Avenue	42.8	45.3	2.5	No

¹ Traffic noise impacts are based on existing traffic volume data from the Pacific Emerald 55+ Housing Traffic Impact Analysis, Albert A. Webb Associates, March 2022. See Appendix C for traffic noise calculations.

² A significant increase typically requires a doubling of traffic volume to result in a barely perceptible change of 3 dBA above ambient noise levels.

6.2 Noise/Land Use Compatibility

Traffic noise impacts from Mountain Avenue and McPherson Road are analyzed at the proposed project site and are compared to the City’s Noise Standards for determining the project’s noise/land use compatibility.

Traffic noise along Mountain Avenue and McPherson Road will be the main sources of noise impacting the project site. The first row of residential lots will be set back approximately 50 feet from the centerline of Mountain Avenue and 40 feet from the centerline of McPherson Road. As previously mentioned, the project is proposing to build a six (6) foot CMU block wall along the property lines facing the external roadways to help reduce noise impacts.

Table 14 indicates the noise level projections to the backyard habitable areas and the facades of the residential units nearest the subject roadways. Future exterior noise levels on the project site range from 46.2 dBA CNEL along the Mountain Avenue and 42.8 dBA CNEL along McPherson Road.

**Table 14
Future Exterior Roadway Noise Levels (dBA CNEL)¹**

Roadway	Exterior Façade Study Locations	Noise Level at Façade	Noise/Land Use Compatibility
Mountain Avenue	Backyard/Patio	51.4	Normally Acceptable
	1st Floor Façade	48.1	Normally Acceptable
McPherson Road	Backyard/Patio	39.4	Normally Acceptable
	1st Floor Façade	37.9	Normally Acceptable

¹ Exterior noise levels calculated 5-feet above pad elevation, perpendicular to subject roadway.

Based on the City of Perris General Plan Noise/Land Use Compatibility Guidelines, the project site falls within the Normally Acceptable range for Residential – Single Family development.

The roadway calculation sheets are provided in Appendix C.

6.3 Perris Valley Airport

The Riverside County Airport Land Use Commission governs 16 airports in Riverside County, including the Perris Valley Airport in Perris. In November 2004, the ALUC adopted the Riverside County Airport Land Use Compatibility Plan (ALUCP) Policy Document, which establishes land use, noise and safety policies in the vicinity of airports throughout Riverside County, including compatibility criteria and maps for the influence areas of individual airports. The ALUCP also establishes procedural requirements for compatibility review of development proposals related to the Perris Valley Airport Influence Area.

The Perris Valley Airport is located approximately 1.5 miles to the east of the project site. A noise/land use compatibility assessment has been performed based on the project's location to the Perris Valley Airport. The noise contour maps for the Perris Valley Airport are provided in Exhibit C.

The project site is located outside of the 60 dBA CNEL noise contour limit; therefore, the exterior noise impact from the airport would be within the allowable limits for residential land uses and the project is considered compatible with the surrounding land use and

noise environment. Noise from airport operations would generate a less than significant impact on the proposed project.

6.4 March Air Reserve Base/Inland Port Airport

The project site is located within the influence area of the March Air Reserve Base / Inland Port Airport, which is located approximately 6.5 miles away to the north of the site. A noise/land use compatibility assessment has been performed based on the Noise Impact Area from the Riverside County Airport Land Use Commissions March Air Reserve Base / Inland Port Airport Land Use Compatibility Plan, adopted November 13, 2014. The airport's noise contour map is provided in Exhibit C.

The project is located outside of the 60 dBA CNEL noise contour limit; therefore, the exterior noise impact from the airport would be within the allowable limits for residential land uses and the project is considered compatible with the surrounding land use and noise environment. Noise from airport operations would generate a less than significant impact on the proposed project.

6.5 Future Interior Noise

A preliminary interior noise analysis has been performed for the first row of habitable dwellings facing adjacent roadways using a typical "windows open" and "windows closed" condition. A "windows open" condition assumes 12 dBA of noise attenuation from the exterior noise level. A "windows closed" condition" assumes 20 dBA of noise attenuation from the exterior noise level.

California standard building shell and residential windows are expected to provide adequate attenuation to meet interior noise standards with a window open and windows closed condition.

Table 15 indicates the future interior noise levels along the adjacent roadways.

Table 15
Future Interior Noise Levels (dBA CNEL)¹

Roadway	Exterior Façade Study Location	Exterior Noise Level at Façade	Required Interior Noise Reduction	Interior Noise Level w/Standard Windows (STC ~ 25)		STC Rating
				"Windows Open" ¹	"Windows Closed" ²	
Mountain Avenue	1st Floor (All lots along Mountain Ave)	48.1	3.1	36.1	28.1	25
McPherson Road	1st Floor (All lots along McPherson Road)	37.9	--	25.9	17.9	25

¹ A minimum of 12 dBA noise reduction is assumed with the "windows open" condition.

² A minimum of 20 dBA noise reduction is assumed with the "windows closed" condition.

6.6 Operational Design Features

The following recommendations are provided to help ensure the proposed project meets the City of Perris and State of California requirements for residential interior noise exposure:

DF-1 A six (6) foot noise barrier wall will be provided to shield all habitable backyard areas facing exterior roadways and adjacent properties. The designed noise screening will only be accomplished if the barrier's weight is at least 3.5 pounds per square foot of face area without decorative cutouts or line-of-site openings between the shielded areas and the project site. All gaps (except for weep holes) should be filled with grout or caulking to avoid flanking.

Noise control barrier may be constructed using one, or any combination of the following materials:

- Masonry block;
- Stucco veneer over wood framing (or foam core), or 1-inch thick tongue and groove wood of sufficient weight per square foot;
- Transparent glass (3/8-inch-thick), acrylic, polycarbonate, or other transparent material with sufficient weight per square foot.

DF-2 All HVAC equipment will be shielded from the line of sight of adjacent residential properties behind property line walls.

DF-3 The project will be required to incorporate building construction techniques that achieve the minimum interior noise standard of 45 dBA CNEL for all residential units.

DF-4 For proper acoustical performance, all exterior windows, doors, and sliding glass doors shall have a positive seal and leaks/cracks must be kept to a minimum.

7.0 Construction Noise and Vibration Impacts

Temporary construction noise and vibration impacts have been assessed from the project site to the surrounding adjacent land uses. The degree of construction noise will vary depending on the type of construction activity taking place and the location of the activity relative to the surrounding properties.

The City of Perris Municipal Code, Section 7.34.060 regulates construction noise within City boundaries. Section 7.34.060 states the following:

- It is 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 Lmax in residential zones in the city.

This assessment analyzes potential noise impacts during all expected phases of construction, including; site preparation, grading, building construction, paving, and architectural coating.

Construction phasing and equipment usage assumptions are referenced from the *Pacific Emerald Tract 37904 Air Quality and Greenhouse Gas Analysis, City of Perris, August 2022*, by RK Engineering Group.

7.1 Typical Construction Noise Levels

Table 16 shows typical construction noise levels compiled by the Environmental Protection Agency (EPA) for common type construction equipment. Typical construction noise levels are used to estimate potential project construction noise levels at the adjacent sensitive receptors.

Table 16
Typical Construction Noise Levels¹

Type	Noise Levels (dBA) at 50 Feet
Earth Moving	
Compactors (Rollers)	73 - 76
Front Loaders	73 - 84
Backhoes	73 - 92
Tractors	75 - 95
Scrapers, Graders	78 - 92
Pavers	85 - 87
Trucks	81 - 94
Materials Handling	
Concrete Mixers	72 - 87
Concrete Pumps	81 - 83
Cranes (Movable)	72 - 86
Cranes (Derrick)	85 - 87
Stationary	
Pumps	68 - 71
Generators	71 - 83
Compressors	75 - 86
Impact Equipment	
Pneumatic Wrenches	82 - 87
Jack Hammers, Rock Drills	80 - 99
Pile Drivers (Peak)	95-105
Other	
Vibrators	68 - 82
Saws	71 - 82

¹ Referenced Noise Levels from the Environmental Protection Agency (EPA)

7.2 Construction Noise Impact Analysis

Noise levels are calculated based on an average distance of equipment to the nearest adjacent property. The project's estimated construction noise levels have been calculated using the Federal Highway Administration Roadway Construction Noise Model Version 1.1.

Table 17 show the noise level impacts to the surrounding property lines. Construction noise calculation worksheets are provided in Appendix D.

Table 17

Project Construction Noise Levels (dBA)¹

Phase	Equipment	Quantity	Calculated Noise Level at 100 ft (dBA)	Combined Noise Level at 100 ft (dBA) ²
			Lmax	Lmax
Site Preparation	Rubber Tired Dozers	3	75.6	81.0
	Tractors/Loaders/Backhoes	4	78.0	
Grading	Excavators	2	74.7	81.5
	Graders	1	79.0	
	Rubber Tired Dozers	1	75.6	
	Scrapers	2	77.6	
	Tractors/Loaders/Backhoes	2	78.0	
Building Construction	Cranes	1	74.5	81.0
	Forklifts	3	69.0	
	Generator Sets	1	74.6	
	Tractors/Loaders/Backhoes	3	78.0	
	Welders	1	68.0	
Paving	Pavers	2	71.2	81.0
	Paving Equipment	2	74.0	
	Tractors/Loaders/Backhoes	2	78.0	
Architectural Coating	Air Compressors	1	71.6	71.6
Worst Case Construction Phase Noise Level - Lmax				81.5
City of Perris Construction Noise Standard - dBA Lmax				80
Worst Case Construction Phase Noise Level - Lmax (With Mitigation)^{3, 4}				76.5

1. Construction noise levels calculated using the Federal Highway Administration Roadway Construction Noise Model Version 1.1.
2. Combined noise level of two (2) of the loudest pieces of equipment operating simultaneously at 100 feet.
3. Mitigated noise levels include the attenuation effects of the 6-foot-high property line block wall, which the project will be required to construct during the first phase of construction.
4. Per County of Riverside Department of Environmental Health Requirements for Determining and Mitigating Traffic Noise Impacts to Residential Structures, when determining the placement of the noise barrier design, the receiver height was first set at five (5) feet above ground level, however the resulting barrier height was calculated to be higher than six (6) feet, therefore it was re-calculated using a receiver height of three (3) feet.

As shown in Table 17, with the implementation of the below listed mitigation measures, the project construction noise levels are expected to be below the recommended 80 dB noise threshold provided by the City of Perris.

In order to help reduce the construction noise impacts, the following mitigation measures will be required:

Construction Mitigation Measures

MM-1 The project developer shall post a sign in a readily visible location at the project site indicating the dates and duration of construction activities, as well as provide a telephone number where residents can enquire about the construction process and register complaints to a designated construction noise disturbance coordinator.

MM-2 The project developer shall ensure all contractors implement construction best management practices to reduce construction noise levels. Best management practices would include the following:

- All construction equipment shall be equipped with muffles and other suitable noise attenuation devices (e.g., engine shields).
- Grading and construction contractors shall use quieter equipment as opposed to noisier equipment (such as rubber-tired equipment rather than track equipment), to the maximum extent feasible.
- If feasible, electric hook-ups shall be provided to avoid the use of generators. If electric service is determined to be infeasible for the site, only whisper-quiet generators shall be used (i.e., inverter generators capable of providing variable load).
- Use electric air compressors and similar power tools rather than diesel equipment, where feasible.
- Locate staging area, generators and stationary construction equipment as far from the adjacent residential homes as feasible.

- Construction-related equipment, including heavy-duty equipment, motor vehicles, and portable equipment, shall be turned off when not in use for more than 5 minutes.

MM-3 The project developer shall build the proposed CMU block perimeter walls during the first phase of construction to help shield adjacent homes from construction noise.

7.3 Construction Vibration

To determine the vibratory impacts during construction, reference construction equipment vibration levels were utilized and then extrapolated to the façade of the nearest adjacent structures. The nearest sensitive receptors are the residential structures located adjacent to the western property line. All structures surrounding the project site are “new residential structures”. No historical or fragile buildings are known to be located within the vicinity of the site.

The construction of the proposed project is not expected to require the use of substantial vibration inducing equipment or activities, such as pile drivers or blasting. The main sources of vibration impacts during construction of the project would be the operation of equipment such as bulldozer activity during demolition, loading trucks during grading and excavation, and vibratory rollers during paving. The construction vibration assessment utilizes the referenced vibration levels and methodology set-forth within the Caltrans Transportation and Construction Induced Vibration Guidance Manual.

Table 18 shows the referenced vibration levels.

Table 18
Typical Construction Vibration Levels¹

Equipment	Peak Particle Velocity (PPV) (inches/second) at 25 feet	Approximate Vibration Level (LV) at 25 feet
Piledriver (impact)	1.518 (upper range)	112
	0.644 (typical)	104
Piledriver (sonic)	0.734 upper range	105
	0.170 typical	93
Clam shovel drop (slurry wall)	0.202	94
Hydro mill	0.008 in soil	66
(slurry wall)	0.017 in rock	75
Vibratory Roller	0.210	94
Hoe Ram	0.089	87
Large bulldozer	0.089	87
Caisson drill	0.089	87
Loaded trucks	0.076	86
Jackhammer	0.035	79
Small bulldozer	0.003	58

¹ Transit Noise and Vibration Impact Assessment, Federal Transit Administration, May 2006.

Table 19 shows the project's construction-related vibration analysis at the nearest structures to the project construction area. Construction impacts are assessed from the closest area on the project site to the nearest adjacent structure.

Table 19
Project Construction Vibration Levels

Construction Activity	Distance to Nearest Structure (ft)	Duration	Calculated Vibration Level - PPV (in/sec)	Damage Potential Level	Annoyance Criteria Level
Large Bulldozer	50	Continuous/Frequent	0.098	Extremely Fragile Buildings, Ruins Ancient Monuments	Barely perceptible
Vibratory Roller	50	Continuous/Frequent	0.098		Barely perceptible
Loaded Trucks	50	Continuous/Frequent	0.035		Barely perceptible

As shown in Table 19, project related construction activity is not expected to cause any potential damage to the nearest structures. The annoyance potential of vibration from construction activities would be "barely perceptible".

Construction vibration calculation worksheets are shown in Appendix D.

7.4 Construction Project Design Features

The following project design features will be implemented during construction to help ensure compliance with the required noise standards in the City of Perris and County of Riverside.

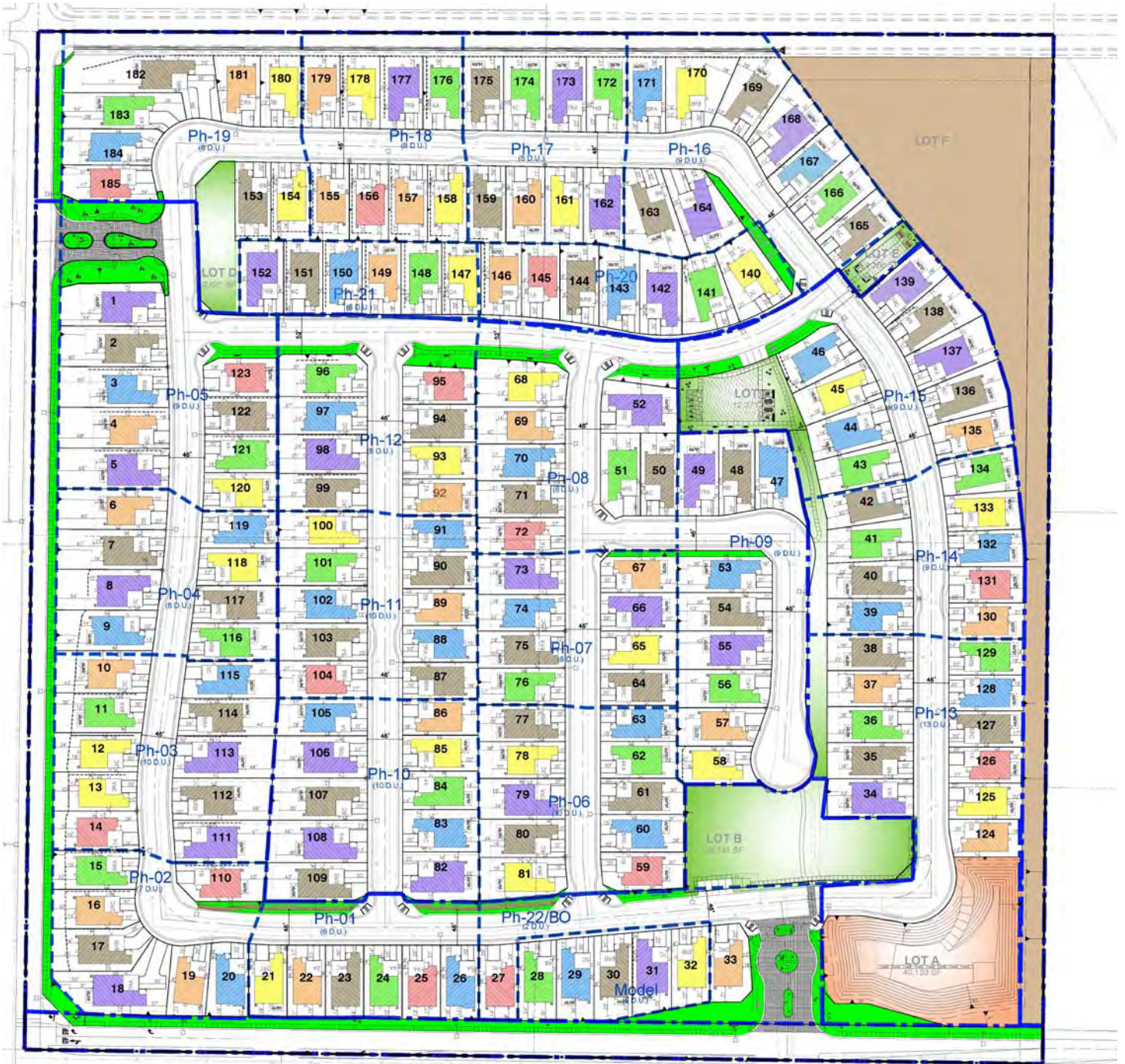
DF-5 Construction-related noise activities shall comply with the requirements set forth in the City of Perris Municipal Code Chapter 7.34 and Riverside County Ordinance No. 847:

1. It is 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 Lmax in residential zones in the city.
2. Riverside County Ordinance No. 847 indicates that construction noise is exempt from the noise ordinance, provided any of the following are satisfied:
 - Private construction projects located one-quarter (1/4) of a mile or more from an inhabited dwelling
 - Private construction projects located within one-quarter (1/4) of a mile from an inhabited dwelling, provided that:
 - Construction does not occur between the hours of 6:00 PM and 6:00 AM during the months of June through September; and
 - Construction does not occur between the hours of 6:00 PM and 7:00 AM during the months of October through May.

DF-6 The project is not expected to require the use of substantial vibration inducing equipment or activities, such as pile drivers or blasting, during construction. If these activities end up being required, a follow-up noise and vibration assessment will be prepared prior to performing any such activities.

Exhibits







Appendices

Appendix A

City of Perris
Municipal Code Noise Control Ordinance

CHAPTER 7.34. - NOISE CONTROL

Sec. 7.34.010. - Declaration of policy.

Excessive noise levels are detrimental to the health and safety of individuals. Noise is considered a public nuisance, and the city discourages unnecessary, excessive or annoying noises from all sources. Creating, maintaining, causing, or allowing to be created, caused or maintained, any noise or vibration in a manner prohibited by the provisions of the ordinance codified in this chapter is a public nuisance and shall be punishable as a misdemeanor.

(Code 1972, § 7.34.010; Ord. No. 1082, § 2(part), 2000)

Sec. 7.34.020. - Definitions.

- (a) *General.* The following words, terms and phrases, when used in this chapter, shall have the meanings ascribed to them in this section, except where the context clearly indicates a different meaning:

Ambient noise means the all-encompassing noise associated with a given environment usually being composed of sounds from many sources near and far. For the purpose of this chapter, ambient noise level is the level obtained when the noise level is averaged over a period of five minutes without inclusion of noise from isolated identifiable sources at the location and time of day near that at which a comparison is to be made.

Decibel (dB) means an intensity unit which denotes the ratio between two quantities which are proportional to power; the number of decibels corresponding to the ratio is ten times the common logarithm of this ratio.

Sound amplifying equipment means any machine or device for the amplification of the human voice, music or any other sound. The term "sound amplifying equipment" does not include standard vehicle radios when used and heard only by the occupants of the vehicle in which the vehicle radio is installed. The term "sound amplifying equipment," as used in this chapter, does not include warning devices on any vehicle used only for traffic safety purposes and shall not include communications equipment used by public or private utilities when restoring utility service following a public emergency or when doing work required to protect person or property from an imminent exposure to danger.

Sound level (noise level) in decibels is the value of a sound measurement using the "A" weighting network of a sound level meter. Slow response of the sound level meter needle shall be used except where the sound is impulsive or rapidly varying in nature, in which case, fast response shall be used.

Sound level meter means an instrument, including a microphone, an amplifier, an output meter and frequency weighting networks, for the measurement of sound levels, which satisfies the pertinent requirements in American National Standards Institute's specification S1.4-1971 or the most recent revision for type S-2A general purpose sound level meters.

- (b) *Supplementary definitions of technical terms.* Definitions of technical terms not defined in this section shall be obtained from the American National Standards Institute's Acoustical Terminology S1-1971 or the most recent revision thereof.

(Code 1972, § 7.34.020; Ord. No. 1082, § 2(part), 2000)

Sec. 7.34.030. - Measurement methods.

- (a) Sound shall be measured with a sound level meter as defined in section 7.34.020.

- (b) Unless otherwise provided, outdoor measurements shall be taken with the microphone located at any point on the property line of the noise source but no closer than five feet from any wall or vertical obstruction and three to five feet above ground level whenever possible.
- (c) Unless otherwise provided, indoor measurements shall be taken inside the structure with the microphone located at any point as follows:
 - (1) No less than three feet above floor level;
 - (2) No less than five feet from any wall or vertical obstruction; and
 - (3) Not under common possession and control with the building or portion of the building from which the sound is emanating.

(Code 1972, § 7.34.030; Ord. No. 1082, § 2(part), 2000)

Sec. 7.34.040. - Sound amplification.

No person shall amplify sound using sound amplifying equipment contrary to any of the following:

- (1) The only amplified sound permitted shall be either music or the human voice, or both.
- (2) The volume of amplified sound shall not exceed the noise levels set forth in this subsection when measured outdoors at or beyond the property line of the property from which the sound emanates.

Time Period	Maximum Noise Level
10:01 p.m.—7:00 a.m.	60 dBA
7:01 a.m.—10:00 p.m.	80 dBA

(Code 1972, § 7.34.040; Ord. No. 1082, § 2(part), 2000)

Sec. 7.34.050. - General prohibition.

- (a) It unlawful for any person to willfully make, cause or suffer, or permit to be made or caused, any loud excessive or offensive noises or sounds which unreasonably disturb the peace and quiet of any residential neighborhood or which are physically annoying to persons of ordinary sensitivity or which are so harsh, prolonged or unnatural or unusual in their use, time or place as to occasion physical discomfort to the inhabitants of the city, or any section thereof. The standards for dBA noise level in section 7.34.040 shall apply to this section. To the extent that the noise created causes the noise level at the property line to exceed the ambient noise level by more than 1.0 decibels, it shall be presumed that the noise being created also is in violation of this section.
- (b) The characteristics and conditions which should be considered in determining whether a violation of the provisions of this section exists should include, but not be limited to, the following:
 - (1) The level of the noise;
 - (2) Whether the nature of the noise is usual or unusual;

- (3) Whether the origin of the noise is natural or unnatural;
- (4) The level of the ambient noise;
- (5) The proximity of the noise to sleeping facilities;
- (6) The nature and zoning of the area from which the noise emanates and the area where it is received;
- (7) The time of day or night the noise occurs;
- (8) The duration of the noise; and
- (9) Whether the noise is recurrent, intermittent or constant.

(Code 1972, § 7.34.050; Ord. No. 1082, § 2(part), 2000)

Sec. 7.34.060. - Construction noise.

It is 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 in residential zones in the city.

(Code 1972, § 7.34.060; Ord. No. 1082, § 2(part), 2000)

Sec. 7.34.070. - Refuse vehicles and parking lot sweepers.

No person shall operate or permit to be operated a refuse compacting, processing or collection vehicle or parking lot sweeper between the hours of 7:00 p.m. to 7:00 a.m. in any residential area unless a permit has been applied for and granted by the city.

(Code 1972, § 7.34.070; Ord. No. 1082, § 2(part), 2000)

Sec. 7.34.080. - Disturbing, excessive, offensive noises; declaration of certain acts constituting.

The following activities, among others, are declared to cause loud, disturbing, excessive or offensive noises in violation of this section and are unlawful, namely:

- (1) *Horns, signaling devices, etc.* Unnecessary use or operation of horns, signaling devices or other similar devices on automobiles, motorcycles or any other vehicle.
- (2) *Radios, television sets, phonographs, loud speaking amplifiers and similar devices.* The use or operation of any sound production or reproduction device, radio receiving set, musical instrument, drums, phonograph, television set, loudspeakers, sound amplifier, or other similar machine or device for the producing or reproducing of sound, in such a manner as to disturb the peace, quiet or comfort of any reasonable person of normal sensitivity in any area of the city is prohibited. This provision shall not apply to any participant in a licensed parade or to any person who has been otherwise duly authorized by the city to engage in such conduct.
- (3) *Animals.*
 - a. The keeping or maintenance, or the permitting to be kept or maintained, upon any premises owned, occupied or controlled by any person of any animal or animals which by any frequent or long-continued noise shall cause annoyance or discomfort to a reasonable person of normal sensitiveness

in the vicinity.

- b. The noise from any such animal or animals that disturbs two or more residents residing in separate residences adjacent to any part of the property on which the subject animal or animals are kept or maintained, or three or more residents residing in separate residences in close proximity to the property on which the subject animal or animals are kept or maintained, shall be prima facie evidence of a violation of this section.
- (4) *Hospitals, schools, libraries, rest homes, long-term medical or mental care facilities.* To make loud, disturbing, excessive noises adjacent to a hospital, school, library, rest home or long-term medical or mental care facility, which noise unreasonably interferes with the workings of such institutions or which disturbs or unduly annoys occupants in said institutions.
- (5) *Playing of radios on buses and trolleys.* The operation of any radio, phonograph or tape player on an urban transit bus or trolley so as to emit noise that is audible to any other person in the vehicle is prohibited.
- (6) *Playing of radios, phonographs and other sound production or reproduction devices in public parks and public parking lots and streets adjacent thereto.* The operation of any radio, phonograph, television set or any other sound production or reproduction device in any public park or any public parking lot, or street adjacent to such park or beach, without the prior written approval of the city manager or the administrator, in such a manner that such radio, phonograph, television set or sound production or reproduction device emits a sound level exceeding those found in the table in section 7.34.040.
- (7) *Leaf blowers.*
- a. The term "leaf blower" means any portable, hand-held or backpack, engine-powered device with a nozzle that creates a directable airstream which is capable of and intended for moving leaves and light materials.
 - b. No person shall operate a leaf blower in any residential zoned area between the hours of 7:00 p.m. and 8:00 a.m. on weekdays and 5:00 p.m. and 9:00 a.m. on weekends or on legal holidays.
 - c. No person may operate any leaf blower at a sound level in excess of 80 decibels measured at a distance of 50 feet or greater from the point of noise origin.
 - d. Leaf blowers shall be equipped with functional mufflers and an approved sound limiting device required to ensure that the leaf blower is not capable of generating a sound level exceeding any limit prescribed in this section.

(Code 1972, § 7.34.080; Ord. No. 1082, § 2(part), 2000)

Sec. 7.34.090. - Burglar alarms.

- (a) Audible burglar alarms for structures or motor vehicles are prohibited unless the operation of such burglar alarm can be terminated within 20 minutes of being activated.
- (b) Notwithstanding the requirements of this provision, any member of the county sheriff's department, Perris Division, shall have the right to take such steps as may be reasonable and necessary to disconnect any such alarm installed in any building, dwelling or motor vehicle at any time during the period of its activation. On or after 30 days from the effective date of the ordinance codified in this chapter, any building, dwelling or motor vehicle upon which a burglar alarm has been installed shall prominently display the telephone number at which communication may be made with the owner of such building, dwelling or motor vehicle.

(Code 1972, § 7.34.090; Ord. No. 1082, § 2(part), 2000)

Sec. 7.34.100. - Motor vehicles.

(a) Off-highway.

- (1) Except as otherwise provided for in this chapter, it shall be unlawful to operate any motor vehicle of any type on any site, other than on a public street or highway as defined in the California Vehicle Code, in any manner so as to cause noise in excess of those noise levels permitted for on-highway motor vehicles as specified in the table for "45-mile-per-hour or less speed limits" contained in section 23130 of the California Vehicle Code and as corrected for distances set forth in subsection (a)(2) of this section.
- (2) The maximum noise level as the on-highway vehicle passes may be measured at a distance of other than 50 feet from the centerline of travel, provided the measurement is further adjusted by adding algebraically the application correction as follows:

Distance (feet)	Correction (decibels)
25	-6
28	-5
32	-4
35	-3
40	-2
45	-1
50 (preferred distance)	0
56	+1
63	+2
70	+3
80	+4
90	+5

100	+6
-----	----

(b) Nothing in this section shall apply to authorized emergency vehicles when being used in emergency situations including the blowing of sirens and/or horns.

(Code 1972, § 7.34.100; Ord. No. 1082, § 2(part), 2000)

Appendix B

Field Data and Photos

Field Sheet

Project: Pacific Emerald Single Family Residential Noise Study		Engineer: D. Shivaiah		Date: 10/14/2020																									
				JN: 0888-2020-07																									
Measurement Address: Northeast corner of Mountain Ave and McPherson Road			City: Perris		Site No.: 1																								
Sound Level Meter: Piccolo II Serial # P0218042101 Serial # P0218092808		Calibration Record:			Notes: Temp: 84 Windspeed: 5 MPH Direction: ENE Skies: Clear Camera: Photo Nos.																								
Calibrator: CA114 Sound Calibrator Serial # 500732		<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Input, dB/</th> <th>Reading, dB/</th> <th>Offset, dB/</th> <th>Time</th> </tr> </thead> <tbody> <tr> <td>1</td> <td></td> <td></td> <td></td> </tr> <tr> <td>2</td> <td>94.0</td> <td>93.2</td> <td>0.8 10:17 AM</td> </tr> <tr> <td>3</td> <td></td> <td></td> <td></td> </tr> <tr> <td>4</td> <td></td> <td></td> <td></td> </tr> <tr> <td>5</td> <td></td> <td></td> <td></td> </tr> </tbody> </table>				Input, dB/	Reading, dB/	Offset, dB/	Time	1				2	94.0	93.2	0.8 10:17 AM	3				4				5			
Input, dB/	Reading, dB/	Offset, dB/	Time																										
1																													
2	94.0	93.2	0.8 10:17 AM																										
3																													
4																													
5																													
Meter Settings:																													
<input checked="" type="checkbox"/> A-WTD <input type="checkbox"/> LINEAR <input checked="" type="checkbox"/> SLOW <input type="checkbox"/> 1/1 OCT <input checked="" type="checkbox"/> INTERVALS <u>10</u> - MINUTE <input type="checkbox"/> C-WTD <input type="checkbox"/> IMPULSE <input type="checkbox"/> FAST <input type="checkbox"/> 1/3 OCT <input checked="" type="checkbox"/> L _N PERCENTILE VALUES																													

Notes:	Measurement Type:
	Long-term _____
	Short-term <u> X </u>

		Start Time	Stop Time	Leq	Lmax	Lmin	L2	L8	L25	L50	
Locations	1	10:18 AM	10:28 AM	42.7	63.0	32.6	50.9	47.6	42.0	37.9	
	Measurement taken at the intersection of the McPherson Rd and Gertrude Ave line and at approximately 660 feet from the Mountain Ave roadway. Ambient noise includes traffic noise from Mountain Ave and McPherson Rd.										
	2	10:35 AM	10:45 AM	43.4	60.9	31.9	50.8	46.9	42.7	39.7	
	Measurement taken along the David Jones Road and approximately 370 feet from the McPherson Road. Ambient noise includes traffic noise from McPherson Road and flight noise.										
3	10:51 AM	11:01 AM	40.0	61.1	35.8	44.3	41.9	40.2	39.0		
Measurement taken along the eastern property line (near the residential home) and approximately 865 feet from the centerline of the Mountain Avenue. Ambient noise includes traffic noise from Mountain Avenue.											
4	11:15 AM	11:25 AM	49.9	69.4	38.5	59.7	52.0	48.1	45.3		
Measurement taken along the Mountain Avenue roadway (near the driveway of Apostolic Church) and approximately 30 feet from the centerline of the Mountain Avenue. Ambient noise includes traffic noise from Mountain Avenue.											



Field Sheet - ST1 Location Photos

Project: Pacific Emerald Single Family Residential Noise Study	Engineer: D. Shivaiah	Date: 10/14/2020
		JN: 0888-2020-07
Measurement Address: Northeast corner of Mountain Ave and McPherson Road	City: Perris	Site No.: 1



Field Sheet - ST1 Location Photos

Project: Pacific Emerald Single Family Residential Noise Study	Engineer: D. Shivaiah	Date: 10/14/2020
		JN: 0888-2020-07
Measurement Address: Northeast corner of Mountain Ave and McPherson Road	City: Perris	Site No.: 2



Field Sheet - ST3 Location Photos

Project: Pacific Emerald Single Family Residential Noise Study	Engineer: D. Shivaiah	Date: 10/14/2020
		JN: 0888-2020-07
Measurement Address: Northeast corner of Mountain Ave and McPherson Road	City: Perris	Site No.: 3



Field Sheet - ST3 Location Photos

Project: Pacific Emerald Single Family Residential Noise Study	Engineer: D. Shivaiah	Date: 10/14/2020
		JN: 0888-2020-07
Measurement Address: Northeast corner of Mountain Ave and McPherson Road	City: Perris	Site No.: 4



Appendix C

Roadway Noise Calculation Results

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO)

PROJECT: Pacific Emerald Tract 37904
 ROADWAY: Mountain Avenue, McPherson Road to A Street
 SCENARIO: Existing Conditions

JOB #: 0888-2020-07
 DATE: 25-Aug-22
 ENGINEER: B. Estrada

NOISE INPUT DATA

ROADWAY CONDITIONS

ADT = 3,588
 SPEED = 25
 PK HR % = 10
 NEAR LANE/FAR LANE DIST = 15
 ROAD ELEVATION = 0.0
 GRADE = 0.4 %
 PK HR VOL = 359

RECEIVER INPUT DATA

RECEIVER DISTANCE = 50
 DIST C/L TO WALL = 0
 RECEIVER HEIGHT = 5.0
 WALL DISTANCE FROM RECEIVER = 50
 PAD ELEVATION = 0.0
 ROADWAY VIEW: LF ANGLE= -90
 RT ANGLE= 90
 DF ANGLE= 180

SITE CONDITIONS

AUTOMOBILES = 10
 MEDIUM TRUCKS = 10 (10 = HARD SITE, 15 = SOFT SITE)
 HEAVY TRUCKS = 10

WALL INFORMATION

HTH WALL= 0.0
 AMBIENT= 0.0
 BARRIER = 0 (0 = WALL, 1 = BERM)

VEHICLE MIX DATA

VEHICLE TYPE	DAY	EVENING	NIGHT	DAILY
AUTOMOBILES	0.695	0.129	0.096	0.9200
MEDIUM TRUCKS	0.014	0.001	0.015	0.0300
HEAVY TRUCKS	0.024	0.001	0.025	0.0500

MISC. VEHICLE INFO

VEHICLE TYPE	HEIGHT	SLE DISTANCE	GRADE ADJUSTMENT
AUTOMOBILES	2.0	49.53	--
MEDIUM TRUCKS	4.0	49.44	--
HEAVY TRUCKS	8.0	49.53	0.00

NOISE OUTPUT DATA

NOISE IMPACTS (WITHOUT TOPO OR BARRIER SHIELDING)

VEHICLE TYPE	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES	55.3	52.9	51.6	45.6	54.0	54.7
MEDIUM TRUCKS	52.1	32.9	25.1	34.3	40.5	40.5
HEAVY TRUCKS	60.5	43.5	35.7	44.9	51.1	51.1
NOISE LEVELS (dBA)	62.1	53.4	51.8	48.4	55.9	56.4

NOISE IMPACTS (WITH TOPO AND BARRIER SHIELDING)

VEHICLE TYPE	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES	55.3	52.9	51.6	45.6	54.0	54.7
MEDIUM TRUCKS	52.1	32.9	25.1	34.3	40.5	40.5
HEAVY TRUCKS	60.5	43.5	35.7	44.9	51.1	51.1
NOISE LEVELS (dBA)	62.1	53.4	51.8	48.4	55.9	56.4

NOISE CONTOUR (FT)

NOISE LEVELS	70 dBA	65 dBA	60 dBA	55 dBA
CNEL	2	7	22	68
LDN	2	6	20	62

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO)

PROJECT: Pacific Emerald Tract 37904
 ROADWAY: Mountain Avenue, McPherson Road to A Street
 SCENARIO: Existing Plus Project Conditions

JOB #: 0888-2020-07
 DATE: 25-Aug-22
 ENGINEER: B. Estrada

NOISE INPUT DATA

ROADWAY CONDITIONS

ADT = 4,233
 SPEED = 25
 PK HR % = 10
 NEAR LANE/FAR LANE DIST = 15
 ROAD ELEVATION = 0.0
 GRADE = 0.4 %
 PK HR VOL = 423

RECEIVER INPUT DATA

RECEIVER DISTANCE = 50
 DIST C/L TO WALL = 0
 RECEIVER HEIGHT = 5.0
 WALL DISTANCE FROM RECEIVER = 50
 PAD ELEVATION = 0.0
 ROADWAY VIEW: LF ANGLE= -90
 RT ANGLE= 90
 DF ANGLE= 180

SITE CONDITIONS

AUTOMOBILES = 10
 MEDIUM TRUCKS = 10
 HEAVY TRUCKS = 10
 (10 = HARD SITE, 15 = SOFT SITE)

WALL INFORMATION

HTH WALL= 0.0
 AMBIENT= 0.0
 BARRIER = 0 (0 = WALL, 1 = BERM)

VEHICLE MIX DATA

VEHICLE TYPE	DAY	EVENING	NIGHT	DAILY
AUTOMOBILES	0.695	0.129	0.096	0.9200
MEDIUM TRUCKS	0.014	0.001	0.015	0.0300
HEAVY TRUCKS	0.024	0.001	0.025	0.0500

MISC. VEHICLE INFO

VEHICLE TYPE	HEIGHT	SLE DISTANCE	GRADE ADJUSTMENT
AUTOMOBILES	2.0	49.53	--
MEDIUM TRUCKS	4.0	49.44	--
HEAVY TRUCKS	8.0	49.53	0.00

NOISE OUTPUT DATA

NOISE IMPACTS (WITHOUT TOPO OR BARRIER SHIELDING)

VEHICLE TYPE	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES	56.0	53.7	52.4	46.3	54.7	55.4
MEDIUM TRUCKS	52.8	33.6	25.8	35.0	41.2	41.2
HEAVY TRUCKS	61.2	44.2	36.4	45.6	51.8	51.8
NOISE LEVELS (dBA)	62.8	54.2	52.5	49.2	56.6	57.1

NOISE IMPACTS (WITH TOPO AND BARRIER SHIELDING)

VEHICLE TYPE	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES	56.0	53.7	52.4	46.3	54.7	55.4
MEDIUM TRUCKS	52.8	33.6	25.8	35.0	41.2	41.2
HEAVY TRUCKS	61.2	44.2	36.4	45.6	51.8	51.8
NOISE LEVELS (dBA)	62.8	54.2	52.5	49.2	56.6	57.1

NOISE CONTOUR (FT)

NOISE LEVELS	70 dBA	65 dBA	60 dBA	55 dBA
CNEL	3	8	25	81
LDN	2	7	23	73

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO)

PROJECT: Pacific Emerald Tract 37904
 ROADWAY: McPherson Road, David Jones to Mountain
 SCENARIO: Existing Conditions

JOB #: 0888-2020-07
 DATE: 25-Aug-22
 ENGINEER: B. Estrada

NOISE INPUT DATA

ROADWAY CONDITIONS

ADT = 204
 SPEED = 25
 PK HR % = 10
 NEAR LANE/FAR LANE DIST = 12
 ROAD ELEVATION = 0.0
 GRADE = 0.4 %
 PK HR VOL = 20

RECEIVER INPUT DATA

RECEIVER DISTANCE = 50
 DIST C/L TO WALL = 0
 RECEIVER HEIGHT = 5.0
 WALL DISTANCE FROM RECEIVER = 50
 PAD ELEVATION = 0.0
 ROADWAY VIEW: LF ANGLE= -90
 RT ANGLE= 90
 DF ANGLE= 180

SITE CONDITIONS

AUTOMOBILES = 10
 MEDIUM TRUCKS = 10
 HEAVY TRUCKS = 10
 (10 = HARD SITE, 15 = SOFT SITE)

WALL INFORMATION

HTH WALL= 0.0
 AMBIENT= 0.0
 BARRIER = 0 (0 = WALL, 1 = BERM)

VEHICLE MIX DATA

VEHICLE TYPE	DAY	EVENING	NIGHT	DAILY
AUTOMOBILES	0.736	0.136	0.102	0.9742
MEDIUM TRUCKS	0.009	0.000	0.009	0.0184
HEAVY TRUCKS	0.004	0.000	0.004	0.0074

MISC. VEHICLE INFO

VEHICLE TYPE	HEIGHT	SLE DISTANCE	GRADE ADJUSTMENT
AUTOMOBILES	2.0	49.73	--
MEDIUM TRUCKS	4.0	49.65	--
HEAVY TRUCKS	8.0	49.73	0.00

NOISE OUTPUT DATA

NOISE IMPACTS (WITHOUT TOPO OR BARRIER SHIELDING)

VEHICLE TYPE	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES	43.1	41.0	39.7	33.6	42.1	42.7
MEDIUM TRUCKS	37.5	16.3	8.8	17.5	23.7	23.7
HEAVY TRUCKS	39.7	14.3	10.9	15.6	21.8	21.9
NOISE LEVELS (dBA)	45.5	41.0	39.7	33.8	42.2	42.8

NOISE IMPACTS (WITH TOPO AND BARRIER SHIELDING)

VEHICLE TYPE	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES	43.1	41.0	39.7	33.6	42.1	42.7
MEDIUM TRUCKS	37.5	16.3	8.8	17.5	23.7	23.7
HEAVY TRUCKS	39.7	14.3	10.9	15.6	21.8	21.9
NOISE LEVELS (dBA)	45.5	41.0	39.7	33.8	42.2	42.8

NOISE CONTOUR (FT)

NOISE LEVELS	70 dBA	65 dBA	60 dBA	55 dBA
CNEL	0	0	1	3
LDN	0	0	1	3

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO)

PROJECT: Pacific Emerald Tract 37904
 ROADWAY: McPherson Road, David Jones to Mountain
 SCENARIO: Existing Plus Project Conditions

JOB #: 0888-2020-07
 DATE: 25-Aug-22
 ENGINEER: B. Estrada

NOISE INPUT DATA

ROADWAY CONDITIONS

ADT = 365
 SPEED = 25
 PK HR % = 10
 NEAR LANE/FAR LANE DIST = 12
 ROAD ELEVATION = 0.0
 GRADE = 0.4 %
 PK HR VOL = 37

RECEIVER INPUT DATA

RECEIVER DISTANCE = 50
 DIST C/L TO WALL = 0
 RECEIVER HEIGHT = 5.0
 WALL DISTANCE FROM RECEIVER = 50
 PAD ELEVATION = 0.0
 ROADWAY VIEW: LF ANGLE= -90
 RT ANGLE= 90
 DF ANGLE= 180

SITE CONDITIONS

AUTOMOBILES = 10
 MEDIUM TRUCKS = 10
 HEAVY TRUCKS = 10
 (10 = HARD SITE, 15 = SOFT SITE)

WALL INFORMATION

HTH WALL= 0.0
 AMBIENT= 0.0
 BARRIER = 0 (0 = WALL, 1 = BERM)

VEHICLE MIX DATA

VEHICLE TYPE	DAY	EVENING	NIGHT	DAILY
AUTOMOBILES	0.736	0.136	0.102	0.9742
MEDIUM TRUCKS	0.009	0.000	0.009	0.0184
HEAVY TRUCKS	0.004	0.000	0.004	0.0074

MISC. VEHICLE INFO

VEHICLE TYPE	HEIGHT	SLE DISTANCE	GRADE ADJUSTMENT
AUTOMOBILES	2.0	49.73	--
MEDIUM TRUCKS	4.0	49.65	--
HEAVY TRUCKS	8.0	49.73	0.00

NOISE OUTPUT DATA

NOISE IMPACTS (WITHOUT TOPO OR BARRIER SHIELDING)

VEHICLE TYPE	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES	45.6	43.5	42.2	36.2	44.6	45.2
MEDIUM TRUCKS	40.0	18.8	11.3	20.0	26.2	26.2
HEAVY TRUCKS	42.2	16.9	13.5	18.1	24.3	24.4
NOISE LEVELS (dBA)	48.0	43.5	42.2	36.3	44.7	45.3

NOISE IMPACTS (WITH TOPO AND BARRIER SHIELDING)

VEHICLE TYPE	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES	45.6	43.5	42.2	36.2	44.6	45.2
MEDIUM TRUCKS	40.0	18.8	11.3	20.0	26.2	26.2
HEAVY TRUCKS	42.2	16.9	13.5	18.1	24.3	24.4
NOISE LEVELS (dBA)	48.0	43.5	42.2	36.3	44.7	45.3

NOISE CONTOUR (FT)

NOISE LEVELS	70 dBA	65 dBA	60 dBA	55 dBA
CNEL	0	1	2	5
LDN	0	0	1	5

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO)

PROJECT: Pacific Emerald Tract 37904 SFR
 ROADWAY: Mountain Avenue
 LOCATION: Nearest Residential Building Property Line (Noise/Land Use Compatibility Analysis)

JOB #: 0888-2020-07
 DATE: 25-Aug-22
 ENGINEER: B. Estrada

NOISE INPUT DATA

ROADWAY CONDITIONS

ADT = 4,569
 SPEED = 25
 PK HR % = 10
 NEAR LANE/FAR LANE DIST = 56
 ROAD ELEVATION = 0.0
 GRADE = 0.4 %
 PK HR VOL = 457

RECEIVER INPUT DATA

RECEIVER DISTANCE = 60
 DIST C/L TO WALL = 50
 RECEIVER HEIGHT = 5.0
 WALL DISTANCE FROM RECEIVER = 10
 PAD ELEVATION = 0.0
 ROADWAY VIEW: LF ANGLE= -90
 RT ANGLE= 90
 DF ANGLE= 180

SITE CONDITIONS

AUTOMOBILES = 10
 MEDIUM TRUCKS = 10 (10 = HARD SITE, 15 = SOFT SITE)
 HEAVY TRUCKS = 10

WALL INFORMATION

HTH WALL= 6.0
 AMBIENT= 0.0
 BARRIER = 0 (0 = WALL, 1 = BERM)

VEHICLE MIX DATA

VEHICLE TYPE	DAY	EVENING	NIGHT	DAILY
AUTOMOBILES	0.695	0.129	0.096	0.9200
MEDIUM TRUCKS	0.014	0.001	0.015	0.0300
HEAVY TRUCKS	0.024	0.001	0.025	0.0500

MISC. VEHICLE INFO

VEHICLE TYPE	HEIGHT	SLE DISTANCE	GRADE ADJUSTMENT
AUTOMOBILES	2.0	51.67	--
MEDIUM TRUCKS	4.0	51.52	--
HEAVY TRUCKS	8.0	51.52	0.00

NOISE OUTPUT DATA

NOISE IMPACTS (WITHOUT TOPO OR BARRIER SHIELDING)

VEHICLE TYPE	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES	56.2	53.8	52.5	46.5	54.9	55.5
MEDIUM TRUCKS	53.0	33.8	26.0	35.2	41.3	41.4
HEAVY TRUCKS	61.3	44.4	36.6	45.8	51.9	52.0
NOISE LEVELS (dBA)	63.0	54.3	52.6	49.3	56.8	57.2

NOISE IMPACTS (WITH TOPO AND BARRIER SHIELDING)

VEHICLE TYPE	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES	49.9	47.6	46.3	40.2	48.7	49.3
MEDIUM TRUCKS	47.3	28.1	20.3	29.5	35.6	35.7
HEAVY TRUCKS	56.3	39.3	31.5	40.7	46.8	46.9
NOISE LEVELS (dBA)	57.1	48.5	46.8	43.5	50.9	51.4

NOISE CONTOUR (FT)

NOISE LEVELS	70 dBA	65 dBA	60 dBA	55 dBA
CNEL	3	10	32	100
LDN	3	9	29	91

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO)

PROJECT: Pacific Emerald Tract 37904 SFR
 ROADWAY: Mountain Avenue
 LOCATION: Nearest Residential Building First Floor Facade (Noise/Land Use Compatibility Analysis)

JOB #: 0888-2020-07
 DATE: 25-Aug-22
 ENGINEER: B. Estrada

NOISE INPUT DATA

ROADWAY CONDITIONS

ADT = 4,569
 SPEED = 25
 PK HR % = 10
 NEAR LANE/FAR LANE DIST = 56
 ROAD ELEVATION = 0.0
 GRADE = 0.4 %
 PK HR VOL = 5,390

RECEIVER INPUT DATA

RECEIVER DISTANCE = 81
 DIST C/L TO WALL = 110
 RECEIVER HEIGHT = 5.0
 WALL DISTANCE FROM RECEIVER = 10
 PAD ELEVATION = 0.0
 ROADWAY VIEW: LF ANGLE= -90
 RT ANGLE= 90
 DF ANGLE= 180

SITE CONDITIONS

AUTOMOBILES = 10
 MEDIUM TRUCKS = 10 (10 = HARD SITE, 15 = SOFT SITE)
 HEAVY TRUCKS = 10

WALL INFORMATION

HTH WALL= 6.0
 AMBIENT= 0.0
 BARRIER = 0 (0 = WALL, 1 = BERM)

VEHICLE MIX DATA

VEHICLE TYPE	DAY	EVENING	NIGHT	DAILY
AUTOMOBILES	0.695	0.129	0.096	0.9200
MEDIUM TRUCKS	0.014	0.001	0.015	0.0300
HEAVY TRUCKS	0.024	0.001	0.025	0.0500

MISC. VEHICLE INFO

VEHICLE TYPE	HEIGHT	SLE DISTANCE	GRADE ADJUSTMENT
AUTOMOBILES	2.0	116.50	--
MEDIUM TRUCKS	4.0	116.45	--
HEAVY TRUCKS	8.0	116.45	0.00

NOISE OUTPUT DATA

NOISE IMPACTS (WITHOUT TOPO OR BARRIER SHIELDING)

VEHICLE TYPE	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES	63.4	50.3	49.0	42.9	51.4	52.0
MEDIUM TRUCKS	60.1	30.2	22.4	31.6	37.8	37.8
HEAVY TRUCKS	68.5	40.8	33.0	42.2	48.4	48.4
NOISE LEVELS (dBA)	70.1	50.8	49.1	45.8	53.3	53.7

NOISE IMPACTS (WITH TOPO AND BARRIER SHIELDING)

VEHICLE TYPE	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES	57.6	44.5	43.2	37.1	45.6	46.2
MEDIUM TRUCKS	54.5	24.6	16.8	26.0	32.2	32.2
HEAVY TRUCKS	63.3	35.6	27.8	37.0	43.2	43.2
NOISE LEVELS (dBA)	64.5	45.2	43.5	40.2	47.7	48.1

NOISE CONTOUR (FT)

NOISE LEVELS	70 dBA	65 dBA	60 dBA	55 dBA
CNEL	2	6	19	60
LDN	2	5	17	54

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO)

PROJECT: Pacific Emerald Tract 37904 SFR
 ROADWAY: McPherson Road
 LOCATION: Nearest Residential Building Property Line (Noise/Land Use Compatibility Analysis)

JOB #: 0888-2020-07
 DATE: 25-Aug-22
 ENGINEER: B. Estrada

NOISE INPUT DATA

ROADWAY CONDITIONS

ADT = 389
 SPEED = 25
 PK HR % = 10
 NEAR LANE/FAR LANE DIST = 28
 ROAD ELEVATION = 0.0
 GRADE = 0.4 %
 PK HR VOL = 39

RECEIVER INPUT DATA

RECEIVER DISTANCE = 50
 DIST C/L TO WALL = 40
 RECEIVER HEIGHT = 5.0
 WALL DISTANCE FROM RECEIVER = 10
 PAD ELEVATION = 0.0
 ROADWAY VIEW: LF ANGLE= -90
 RT ANGLE= 90
 DF ANGLE= 180

SITE CONDITIONS

AUTOMOBILES = 10
 MEDIUM TRUCKS = 10
 HEAVY TRUCKS = 10
 (10 = HARD SITE, 15 = SOFT SITE)

WALL INFORMATION

HTH WALL= 6.0
 AMBIENT= 0.0
 BARRIER = 0 (0 = WALL, 1 = BERM)

VEHICLE MIX DATA

VEHICLE TYPE	DAY	EVENING	NIGHT	DAILY
AUTOMOBILES	0.736	0.136	0.102	0.9742
MEDIUM TRUCKS	0.009	0.000	0.009	0.0184
HEAVY TRUCKS	0.004	0.000	0.004	0.0074

MISC. VEHICLE INFO

VEHICLE TYPE	HEIGHT	SLE DISTANCE	GRADE ADJUSTMENT
AUTOMOBILES	2.0	47.73	--
MEDIUM TRUCKS	4.0	47.57	--
HEAVY TRUCKS	8.0	47.57	0.00

NOISE OUTPUT DATA

NOISE IMPACTS (WITHOUT TOPO OR BARRIER SHIELDING)

VEHICLE TYPE	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES	46.1	44.0	42.6	36.6	45.0	45.7
MEDIUM TRUCKS	40.5	19.2	11.7	20.5	26.7	26.7
HEAVY TRUCKS	42.7	17.3	13.9	18.6	24.8	24.9
NOISE LEVELS (dBA)	48.5	44.0	42.6	36.8	45.1	45.8

NOISE IMPACTS (WITH TOPO AND BARRIER SHIELDING)

VEHICLE TYPE	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES	39.7	37.6	36.2	30.2	38.6	39.3
MEDIUM TRUCKS	34.7	13.4	5.9	14.7	20.9	20.9
HEAVY TRUCKS	37.7	12.4	9.0	13.6	19.8	19.9
NOISE LEVELS (dBA)	42.1	37.6	36.3	30.4	38.8	39.4

NOISE CONTOUR (FT)

NOISE LEVELS	70 dBA	65 dBA	60 dBA	55 dBA
CNEL	0	1	2	6
LDN	0	1	2	5

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO)

PROJECT: Pacific Emerald Tract 37904 SFR
 ROADWAY: McPherson Road
 LOCATION: Nearest Residential Building Property Line (Noise/Land Use Compatibility Analysis)

JOB #: 0888-2020-07
 DATE: 25-Aug-22
 ENGINEER: B. Estrada

NOISE INPUT DATA

ROADWAY CONDITIONS

ADT = 389
 SPEED = 25
 PK HR % = 10
 NEAR LANE/FAR LANE DIST = 28
 ROAD ELEVATION = 0.0
 GRADE = 0.4 %
 PK HR VOL = 39

RECEIVER INPUT DATA

RECEIVER DISTANCE = 73
 DIST C/L TO WALL = 40
 RECEIVER HEIGHT = 5.0
 WALL DISTANCE FROM RECEIVER = 33
 PAD ELEVATION = 0.0
 ROADWAY VIEW: LF ANGLE= -90
 RT ANGLE= 90
 DF ANGLE= 180

SITE CONDITIONS

AUTOMOBILES = 10
 MEDIUM TRUCKS = 10 (10 = HARD SITE, 15 = SOFT SITE)
 HEAVY TRUCKS = 10

WALL INFORMATION

HTH WALL= 6.0
 AMBIENT= 0.0
 BARRIER = 0 (0 = WALL, 1 = BERM)

VEHICLE MIX DATA

VEHICLE TYPE	DAY	EVENING	NIGHT	DAILY
AUTOMOBILES	0.736	0.136	0.102	0.9742
MEDIUM TRUCKS	0.009	0.000	0.009	0.0184
HEAVY TRUCKS	0.004	0.000	0.004	0.0074

MISC. VEHICLE INFO

VEHICLE TYPE	HEIGHT	SLE DISTANCE	GRADE ADJUSTMENT
AUTOMOBILES	2.0	70.70	--
MEDIUM TRUCKS	4.0	70.54	--
HEAVY TRUCKS	8.0	71.71	0.00

NOISE OUTPUT DATA

NOISE IMPACTS (WITHOUT TOPO OR BARRIER SHIELDING)

VEHICLE TYPE	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES	44.4	42.2	40.9	34.9	43.3	44.0
MEDIUM TRUCKS	38.8	17.5	10.0	18.8	25.0	25.0
HEAVY TRUCKS	40.9	15.6	12.2	16.8	23.0	23.1
NOISE LEVELS (dBA)	46.7	42.3	40.9	35.1	43.4	44.1

NOISE IMPACTS (WITH TOPO AND BARRIER SHIELDING)

VEHICLE TYPE	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES	38.0	35.9	34.6	28.6	37.0	37.6
MEDIUM TRUCKS	33.3	12.0	4.5	13.3	19.4	19.5
HEAVY TRUCKS	40.9	15.6	12.2	16.8	23.0	23.1
NOISE LEVELS (dBA)	40.5	36.1	34.7	28.9	37.2	37.9

NOISE CONTOUR (FT)

NOISE LEVELS	70 dBA	65 dBA	60 dBA	55 dBA
CNEL	0	1	2	6
LDN	0	1	2	5

Appendix D

Construction and Vibration Calculation Results

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 10/19/2020
 Case Description: Pacific Emerald Tract 37904 SFR

---- Receptor #1 ----

Baselines (dBA)
 Description Land Use Daytime
 Site Preparation Residential 80

Description	Impact Device	Usage(%)	Equipment		Receptor Distance (feet)	Estimated Shielding (dBA)
			Spec Lmax (dBA)	Actual Lmax (dBA)		
Dozer	No	40		81.7	100	0
Tractor	No	40	84		100	0
Dozer	No	40		81.7	100	0
Dozer	No	40		81.7	100	0
Tractor	No	40	84		100	0
Tractor	No	40	84		100	0
Tractor	No	40	84		100	0

Calculated (dBA)

Equipment	*Lmax	Leq
Dozer	75.6	71.7
Tractor	78	74
Dozer	75.6	71.7
Dozer	75.6	71.7
Tractor	78	74
Tractor	78	74
Tractor	78	74
Total	78	81.6

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 10/19/2020
 Case Description: Pacific Emerald Tract 37904 SFR

---- Receptor #1 ----

Description	Land Use	Baselines (dBA)	
		Daytime	
Grading	Residential	80	

Description	Impact Device	Usage(%)	Equipment			
			Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Excavator	No	40		80.7	100	0
Grader	No	40	85		100	0
Dozer	No	40		81.7	100	0
Scraper	No	40		83.6	100	0
Tractor	No	40	84		100	0
Excavator	No	40		80.7	100	0
Scraper	No	40		83.6	100	0
Tractor	No	40	84		100	0

Calculated (dBA)

Equipment	*Lmax	Leq
Excavator	74.7	70.7
Grader	79	75
Dozer	75.6	71.7
Scraper	77.6	73.6
Tractor	78	74
Excavator	74.7	70.7
Scraper	77.6	73.6
Tractor	78	74
Total	79	82.2

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 10/19/2020
 Case Description: Pacific Emerald Tract 37904 SFR

---- Receptor #1 ----

Baselines (dBA)		
Description	Land Use	Daytime
Building Construction	Residential	80

Description	Impact Device	Usage(%)	Equipment			
			Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
			Crane	No	16	
Pickup Truck	No	40		75	100	0
Generator	No	50		80.6	100	0
Tractor	No	40	84		100	0
Welder / Torch	No	40		74	100	0
Pickup Truck	No	40		75	100	0
Pickup Truck	No	40		75	100	0
Tractor	No	40	84		100	0
Tractor	No	40	84		100	0

Calculated (dBA)

Equipment	*Lmax	Leq
Crane	74.5	66.6
Pickup Truck	69	65
Generator	74.6	71.6
Tractor	78	74
Welder / Torch	68	64
Pickup Truck	69	65
Pickup Truck	69	65
Tractor	78	74
Tractor	78	74
Total	78	80.3

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 10/19/2020
 Case Description: Pacific Emerald Tract 37904 SFR

---- Receptor #1 ----

		Baselines (dBA)
Description	Land Use	Daytime
Paving	Residential	80

Description	Impact Device	Usage(%)	Equipment			
			Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Paver	No	50		77.2	100	0
Roller	No	20		80	100	0
Tractor	No	40	84		100	0
Paver	No	50		77.2	100	0
Roller	No	20		80	100	0
Tractor	No	40	84		100	0

Calculated (dBA)

Equipment	*Lmax	Leq
Paver	71.2	68.2
Roller	74	67
Tractor	78	74
Paver	71.2	68.2
Roller	74	67
Tractor	78	74
Total	78	78.7

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 10/16/2020
 Case Description: Pacific Emerald Noise Impact Study

---- Receptor #1 ----

		Baselines (dBA)	
Description	Land Use	Daytime	
Architectural Coating	Residential	80	

			Equipment			
			Spec	Actual	Receptor	Estimated
Description	Impact	Usage(%)	Lmax	Lmax	Distance	Shielding
Compressor (air)	Device		(dBA)	(dBA)	(feet)	(dBA)
	No	40		77.7	100	0

Calculated (dBA)

Equipment	*Lmax	Leq
Compressor (air)	71.6	67.7
Total	71.6	67.7

*Calculated Lmax is the Loudest value.

NOISE INTERVAL AVERAGER (2.0)

PROJECT: Pacific Emerald Tract 37904		JOB #: 0888-2020-07					
LOCATION: 100-feet		DATE: 27-Aug-22					
SOURCE: Site Prep - Combined Loudest Two (2) Pieces of Equipment		BY: B. Estrada					
<i>NOISE LEVEL MEASUREMENTS (dBA)</i>							
	NOISE SOURCE	LEQ	L(MAX)	L(2)	L(8)	L(25)	L(50)
1	Tractor		78.0				
2	Tractor		78.0				
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
TOTAL		#NUM!	81.0	#NUM!	#NUM!	#NUM!	#NUM!

NOISE INTERVAL AVERAGER (2.0)

PROJECT: Pacific Emerald Tract 37904		JOB #: 0888-2020-07					
LOCATION: 100-feet		DATE: 27-Aug-22					
SOURCE: Grading - Combined Loudest Two (2) Pieces of Equipment		BY: B. Estrada					
<i>NOISE LEVEL MEASUREMENTS (dBA)</i>							
	NOISE SOURCE	LEQ	L(MAX)	L(2)	L(8)	L(25)	L(50)
1	Grader		79.0				
2	Tractor		78.0				
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
TOTAL		#NUM!	81.5	#NUM!	#NUM!	#NUM!	#NUM!

NOISE INTERVAL AVERAGER (2.0)

PROJECT: Pacific Emerald Tract 37904		JOB #: 0888-2020-07					
LOCATION: 100-feet		DATE: 27-Aug-22					
SOURCE: Building - Combined Loudest Two (2) Pieces of Equipment		BY: B. Estrada					
<i>NOISE LEVEL MEASUREMENTS (dBA)</i>							
	NOISE SOURCE	LEQ	L(MAX)	L(2)	L(8)	L(25)	L(50)
1	Tractor		78.0				
2	Tractor		78.0				
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
TOTAL		#NUM!	81.0	#NUM!	#NUM!	#NUM!	#NUM!

NOISE INTERVAL AVERAGER (2.0)

PROJECT: Pacific Emerald Tract 37904		JOB #: 0888-2020-07					
LOCATION: 100-feet		DATE: 27-Aug-22					
SOURCE: Paving - Combined Loudest Two (2) Pieces of Equipment		BY: B. Estrada					
<i>NOISE LEVEL MEASUREMENTS (dBA)</i>							
	NOISE SOURCE	LEQ	L(MAX)	L(2)	L(8)	L(25)	L(50)
1	Tractor		78.0				
2	Tractor		78.0				
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
TOTAL		#NUM!	81.0	#NUM!	#NUM!	#NUM!	#NUM!

NOISE BARRIER CALCULATIONS - BASED UPON FHWA - RD-77-108

PROJECT:	PACIFIC EMERALD TRACT 37940	JOB #:	0888-2020-07
SOURCE:	GRADING PHASE	DATE:	27-Aug-22
LOCATION:	RESIDENTIAL (100-FT)	BY:	B. ESTRADA

NOISE INPUT DATA

OBS DIST=	100.0		
DT WALL=	50.0		
DT W/OB=	50.0		BARRIER+
HTH WALL=	6.0	*****	TOPO SHIELDING = -4.96
BARRIER =	0.0	(0=WALL,1=BERM)	NOISE HTH EL= 8.0
OBS HTH=	3.0		
NOISE HTH=	8.0		
OBS EL =	0.0		
NOISE EL =	0.0		
DROP-OFF=	20.0		

DROP OFF COEFFICENTS
(10 = 3.0 dBA PER DOUBLING OF DISTANCE)
(15 = 4.5 dBA PER DOUBLING OF DISTANCE)
(20 = 6.0 dBA PER DOUBLING OF DISTANCE)

NOISE OUTPUT DATA (dBA)

	DIST (FT)	Leq	Lmax	L2	L8	L25	L50
REF LEVEL	100	0.0	81.5	0.0	0.0	0.0	0.0
PROJ LEVEL	100	0.0	81.5	0.0	0.0	0.0	0.0
SHIELDING	100	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
ADJ PROJ LEVEL	100	-5.0	76.5	-5.0	-5.0	-5.0	-5.0

NOISE LEVEL REDUCTION DUE TO DISTANCE = 0

TOTAL NOISE LEVEL (dBA)

	Leq	Lmax	L2	L8	L25	L50
AMBIENT LEVEL	0.0	0.0	0.0	0.0	0.0	0.0
ADJ PROJ LEVELS	-5.0	76.5	-5.0	-5.0	-5.0	-5.0
TOTAL NOISE LEVEL W/ PROJECT	1.2	76.5	1.2	1.2	1.2	1.2

VIBRATION IMPACTS FROM CONSTRUCTION AND OPERATIONS

PROJECT:	Pacific Emerald Tract 37904	JOB #:	0888-2020-07
ACTIVITY:	Vibratory Roller	DATE:	20-Oct-20
LOCATION:	Nearest Structure	ENGINEER:	D. Shivaiah

VIBRATION INPUT/OUTPUT DATA

OTHER CONSTRUCTION EQUIPMENT

$$PPV = PPV_{ref}(25/D)^n \text{ (in/sec)}$$

PPV =	0.098 in/sec
-------	---------------------

Equipment Type =	1 Vibratory Roller
PPV _{ref} =	0.210 Reference PPV at 25 ft.
D =	50.00 Distance from Equipment to receiver in ft.
n =	1.10 Vibration attenuation rate through the ground

EQUIPMENT PPV REFERENCE LEVELS		
Type	Equipment	Reference PPV
1	Vibratory Roller	0.210
2	Large Bulldozer	0.089
3	Caisson Drilling	0.089
4	Loaded Trucks	0.076
5	Jackhammer	0.035
6	Small Bulldozer	0.003
7	Crack and Seat	2.400

VIBRATION IMPACTS FROM CONSTRUCTION AND OPERATIONS

PROJECT:	Pacific Emerald Tract 37904	JOB #:	0888-2020-07
ACTIVITY:	Vibratory Roller	DATE:	20-Oct-20
LOCATION:	Nearest Structure	ENGINEER:	D. Shivaiah

VIBRATION INPUT/OUTPUT DATA

OTHER CONSTRUCTION EQUIPMENT

$$PPV = PPV_{ref}(25/D)^n \text{ (in/sec)}$$

PPV =	0.098 in/sec
-------	---------------------

Equipment Type =	1 Vibratory Roller
PPV _{ref} =	0.210 Reference PPV at 25 ft.
D =	50.00 Distance from Equipment to receiver in ft.
n =	1.10 Vibration attenuation rate through the ground

EQUIPMENT PPV REFERENCE LEVELS		
Type	Equipment	Reference PPV
1	Vibratory Roller	0.210
2	Large Bulldozer	0.089
3	Caisson Drilling	0.089
4	Loaded Trucks	0.076
5	Jackhammer	0.035
6	Small Bulldozer	0.003
7	Crack and Seat	2.400

VIBRATION IMPACTS FROM CONSTRUCTION AND OPERATIONS

PROJECT:	Pacific Emerald Tract 37904	JOB #:	0888-2020-07
ACTIVITY:	Loaded Trucks	DATE:	20-Oct-20
LOCATION:	Nearest Structure	ENGINEER:	D. Shivaiah

VIBRATION INPUT/OUTPUT DATA

OTHER CONSTRUCTION EQUIPMENT

$$PPV = PPV_{ref}(25/D)^n \text{ (in/sec)}$$

PPV =	0.035 in/sec
-------	---------------------

Equipment Type =	4 Loaded Trucks
PPV _{ref} =	0.076 Reference PPV at 25 ft.
D =	50.00 Distance from Equipment to receiver in ft.
n =	1.10 Vibration attenuation rate through the ground

EQUIPMENT PPV REFERENCE LEVELS		
Type	Equipment	Reference PPV
1	Vibratory Roller	0.210
2	Large Bulldozer	0.089
3	Caisson Drilling	0.089
4	Loaded Trucks	0.076
5	Jackhammer	0.035
6	Small Bulldozer	0.003
7	Crack and Seat	2.400

Suggested "n" Values Based on Soil Classes		
Soil Class	Description of Soil Material	Suggested Value of "n"
I	Weak or soft soils: loose soils, dry or partially saturated peat and muck, mud, loose beach sand, and dune sand.	1.4
II	Most sands, sandy clays, silty clays, gravel, silts, weathered rock.	1.3
III	Hard soils: dense compacted sand, dry consolidated clay, consolidated glacial till, some exposed rock.	1.1
IV	Hard, component rock: bedrock, freshly exposed hard rock.	1.0

Guideline Vibration Damage Potential Threshold Criteria		
Structure and Condition	Maximum PPV (in/sec)	
	Transient Sources	Continuous/Frequent Intermittent Sources
Extremely fragile historic buildings, ruins ancient monuments	0.12	0.08
Fragile buildings	0.20	0.10
Historic and some old buildings	0.50	0.25
Older residential structures	0.50	0.30
New residential structures	1.00	0.50
Modern industrial/commercial buildings	2.00	0.50

Guideline Vibration Annoyance Potential Criteria		
Human Response	Maximum PPV (in/sec)	
	Transient Sources	Continuous/Frequent Intermittent Sources
Barely perceptible	0.04	0.01
Distinctly perceptible	0.25	0.04
Strongly perceptible	0.90	0.10
Severe	2.00	0.40

Note: Transient sources create a single isolated vibration event, such as blasting or drop balls. Continuous/frequent intermittent sources include impact pile drivers, pogo-stick compactors, crack-and-seat equipment, vibratory pile drivers, and vibratory compaction equipment.

Source: Caltrans Transportation and Construction-Induced Vibration Guidance Manual, June 2004

Pacific Emerald 55+ Housing

March 2022

Prepared for
Pacific Communities

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Traffic Impact Analysis



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March 2, 2022

Tony Arnest
Pacific Communities
764 W. Ramona Expy #C
Perris, CA 92571

RE: Traffic Impact Analysis report for proposed Pacific Emerald 55+ housing development in the City of Perris

Dear Sir,

We are pleased to submit herewith our Traffic Impact Analysis (TIA) report for the proposed project, which we have prepared at your request.

If you have any questions regarding this report, please call the undersigned for clarification.

Sincerely,

ALBERT A. WEBB ASSOCIATES



Nicholas Lowe, PE
Senior Engineer

Kawai Mang, EIT
Assistant Engineer

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I. EXECUTIVE SUMMARY

Study Objectives

This study evaluates potential effects on traffic circulation from a proposed senior housing development on the northeast corner of Mountain Avenue and McPherson Road in the City of Perris. The study objectives are:

- Document existing traffic conditions (2021) in the vicinity of the proposed development (study area);
- Determine the expected project traffic generation;
- Evaluate opening-day traffic scenarios for intersection levels of service (LOS), including ambient growth and cumulative projects;
- Determine if the LOS required by the City of Perris will be maintained within the study area—
 - if not, determine the necessary improvements to maintain the required LOS;
- Evaluate expected queue lengths at the project driveways, including gate queuing; and
- Evaluate unsignalized study intersections for the peak-hour volume traffic signal warrant.

Prior to conducting this study, the City of Perris approved the scope of study (**Appendix A**).

Project Description

The proposed project site is located on the northeast corner of Mountain Avenue and McPherson Road in the City of Perris, east of State Route 74 (SR-74). The project proposes to construct a 187-unit, single-story, age-restricted housing development, with required improvements to the project frontage. Project access is proposed via two new full-access driveways: one each on Mountain Avenue and McPherson Road.

Project Trip Generation

Based on the proposed site plan and trip generation rates from the Institute of Transportation Engineers (ITE), the project is expected to generate approximately 806 daily vehicle trips, with 45 trips in the AM peak hour and 56 trips in the PM peak hour. See **Section 3** for details.

Analysis and Findings

Acceptable Level of Service Standards

Per the City of Perris General Plan, the minimum acceptable LOS at intersections is LOS D.

Level of Service Findings

All study intersections are expected to operate above the minimum acceptable LOS standard in all study scenarios. See **Sections 4-5** or **Appendix D** for details.

Proposed Improvements

Project Design Features

- Construct project access driveways with associated curb and sidewalk improvements.

- Construct partial-width improvements on north side of Mountain Avenue adjacent to project site, including sidewalks and curb fronts as necessary.
- Signing/striping should be implemented along with detailed construction plans for the project site.
- Sight distance at the project driveways will be reviewed with respect to City of Perris standards at the time of preparation of final grading, landscape, site development, and street improvement plans.

II. INTRODUCTION

Study Objectives

This study evaluates potential effects on traffic circulation from a proposed senior housing development on the northeast corner of Mountain Avenue and McPherson Road in the City of Perris. The study objectives are:

- Document existing traffic conditions (2021) in the vicinity of the proposed development (study area);
- Determine the expected project traffic generation;
- Evaluate opening-day traffic scenarios for intersection levels of service (LOS), including ambient growth and cumulative projects;
- Determine if the LOS required by the City of Perris will be maintained within the study area—
 - if not, determine the necessary improvements to maintain the required LOS;
- Evaluate expected queue lengths at the project driveways, including gate queuing; and
- Evaluate unsignalized study intersections for the peak-hour volume traffic signal warrant.

Prior to conducting this study, the City of Perris approved the scope of study (**Appendix A**).

Project Location and Description

The proposed project site is a currently-vacant site on the northeast corner of Mountain Avenue and McPherson Road in the City of Perris, east of State Route 74 (SR-74).

The project proposes to construct 187 single-story housing units, to be age-restricted to residents age 55 and older, with required improvements to the project frontage. Project access is proposed via two new full-access driveways: one each on Mountain Avenue (opposite Sunpark Drive) and McPherson Road. This study assumes that the project would be developed in a single phase, to be completed and fully occupied in 2024.

Study Intersections

Based on a review of the existing roadway network and anticipated project traffic, this study analyzes the following intersections (**Figure 2**):

1. Mountain Ave @ McPherson Road
2. Mountain Ave @ Sunpark Dr / project driveway 1
3. McPherson Road @ project driveway 2

Figure 1: Proposed Project Site Plan

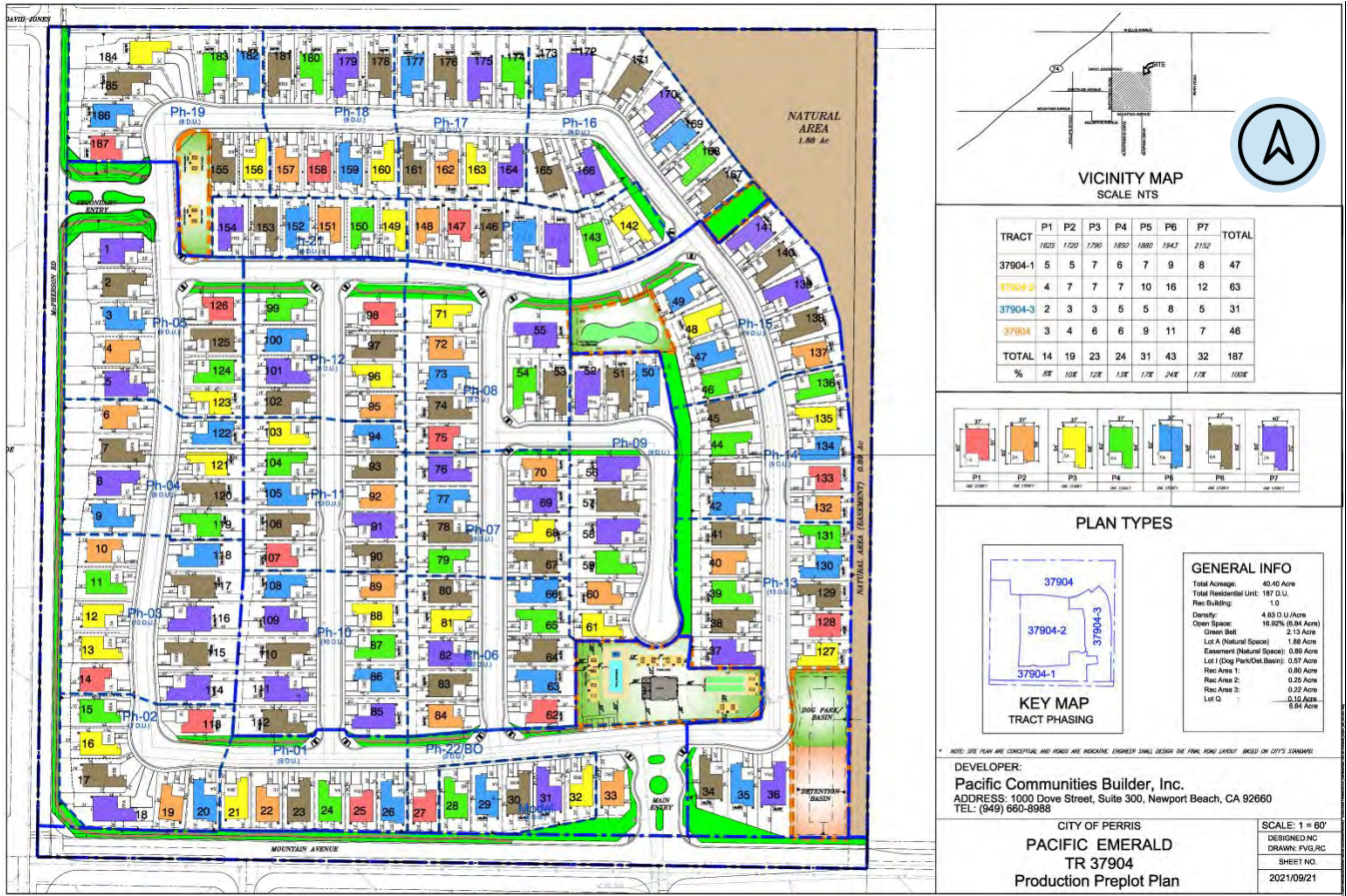
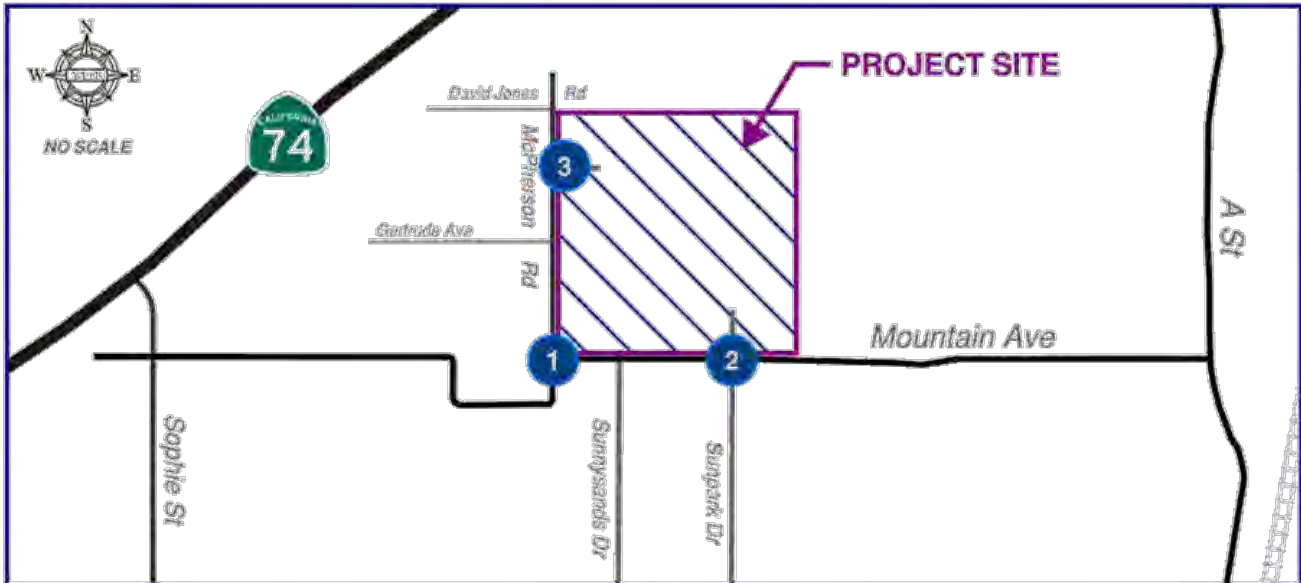


Figure 2: Study Area



Analysis Methodology

Per Riverside County guidelines, this study uses methodology from the most recent Transportation Research Board *Highway Capacity Manual* to analyze traffic operations via Level of Service (LOS) rankings. Accordingly, the *Highway Capacity Manual* 6th Edition (HCM6, 2016) was used to perform intersection LOS analysis for the following scenarios:

- Existing conditions (2021)
- Existing conditions plus project
- Opening Day conditions (existing traffic + ambient growth + cumulative projects, 2024)
- Opening Day conditions plus project

LOS measures transportation quality of service from the traveler's perspective. Per the HCM6, LOS rankings at intersections use a letter-grade scale ranging from LOS A (optimal conditions) to LOS F (congested or overcrowded conditions) based on average control delay in seconds per vehicle, or how long a vehicle typically waits before proceeding through the intersection. This delay is compared with free-flow conditions, and includes slowing before an intersection, waiting in queues, and stopping at the intersection. This study uses Vistro traffic modeling software to evaluate LOS at both signalized and unsignalized intersections.

For signalized and all-way stop-controlled intersections, LOS rankings are based on the average control delay of all vehicles passing through the intersection. For two-way or side-street stop-controlled intersections, LOS rankings are based on the highest average control delay of all controlled movements. **Table 1 and 2** show the LOS delay thresholds for signalized and unsignalized intersections, respectively.

Table 1: Level of Service at Signalized Intersections

Control Delay (sec/vehicle)	Level of Service	Description
0 - 10	A	Minimal delay and primarily free-flow operation. Most vehicles do not stop or only stop for a brief amount of time.
10 - 20	B	Short delay and reasonably unimpeded operation. Many vehicles do not stop or only stop for a short time. More vehicles stop than with LOS A.
20 - 35	C	Moderate delay and stable operation. Individual cycle failures may begin to appear. The number of vehicles stopping is significant.
35 - 55	D	Less stable operation; small increases in vehicles may cause substantial increases in delay. Many vehicles stop, individual cycle failures noticeable.
55 - 80	E	Significant delay and unstable operation. Most vehicles stop and individual cycle failures are frequent.
80 +	F	Considerable delay and extensive queuing. Almost all vehicles stop and most cycles fail to clear the queue.

Source: Transportation Research Board, Highway Capacity Manual 6 (2016)

Table 2: Level of Service at Unsignalized Intersections

Control Delay (sec/vehicle)	Level of Service	Description
0 - 10	A	Minimal delay. Usually no conflicting traffic.
10 - 15	B	Short delay. Occasionally some conflicting traffic.
15 - 25	C	Noticeable delay, but not inconveniencing. Usually some conflicting traffic.
25 - 35	D	Noticeable delay and irritating. A significant amount of conflicting traffic. Increased likelihood of risk taking.
35 - 50	E	Significant delay approaching tolerance level. Lots of conflicting traffic, with some gaps of suitable size. Risk taking behavior likely.
50 +	F	Considerable delay exceeding tolerance level. Lots of conflicting traffic, with not enough gaps of suitable size. High likelihood of risk taking.

Source: Transportation Research Board, Highway Capacity Manual 6 (2016)

Level of Service Standards

The City's traffic operations standards are to maintain the following levels of service:

- 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.
- 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.

Per the City of Perris General Plan, PVCC Specific Plan, and City LOS standards, the minimum acceptable LOS at the study intersections is **LOS D**.

LOS Deficiency and Improvement Criteria

To determine whether the addition of project-generated trips results in a significant impact, and thus requires mitigation, the analysis evaluates significant impacts based on the following criteria:

- A project-related impact 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 a.m. or p.m. peak hour project trips causes the intersection to operate at an unacceptable LOS for existing plus project conditions.
- A project-related impact 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 a.m. or p.m. peak hour project trips causes the intersection delay to increase by 2 seconds or more.
- A cumulative impact 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 a.m. or p.m. peak hour project trips.

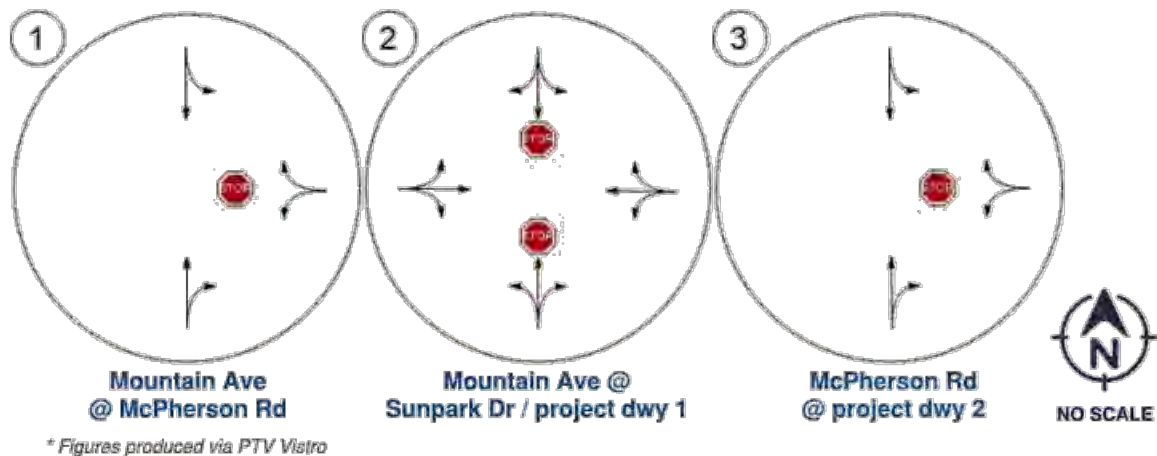
III. PROPOSED PROJECT TRAFFIC

This study uses a multi-step process to estimate project traffic. First, project trip generation estimates the total arriving and departing traffic during a typical weekday and the weekday peak hours by applying the appropriate vehicle trip generation rates to the project development tabulation. Next, trip distribution identifies the origins and destinations of project traffic based on existing and expected future travel patterns. Finally, traffic assignment allocates the distributed project traffic to specific roadways and intersections.

Proposed Project Driveways

The project is proposing to construct two new full-access driveways: one each on Mountain Avenue (opposite Sunpark Drive) and McPherson Road. **Figure 3** shows the proposed intersection geometrics.

Figure 3: Proposed Intersection Geometrics



Project Trip Generation

Trip Generation Rates

Trip generation represents the amount of traffic accessing a site, differentiated by inbound and outbound vehicle trip ends. The Institute of Transportation Engineers (ITE) *Trip Generation Manual* 11th Edition (2021) uses thousands of studies across the nation to determine common trip generation characteristics by land use. Using the *Manual*, the anticipated project trip generation was determined using trip generation rates given by ITE Land Use Code 251: Senior Adult Housing, Detached (**Table 3**).

Trip Credit Rates

Trip generation characteristics may include trip credits such as internal capture from mixed-use developments or pass-by trips, typically for commercial land uses. Due to the project's land use, no trip credits are included in this analysis.

It is also common to deduct the trips from existing land uses at the project site to calculate net new project traffic. However, as the project site is currently vacant, no existing trip credits were deducted for this study.

Trip Generation

The trip generation volumes are developed by multiplying the trip generation rates by the square footage of the project. Accordingly, the proposed project is expected to generate approximately **806 daily trips**, with **45 trips in the AM peak hour** and **56 trips in the PM peak hour** (Table 3).

Table 3: Project Trip Generation

ITE Land Use Code		Units ¹	Daily	AM Peak Hour			PM Peak Hour			
				In	Out	Total	In	Out	Total	
251	Senior Adult Housing - Detached	ITE Trip Generation Rates ²								
		1	DU	4.31	0.079	0.161	0.24	0.183	0.117	0.3
		Project Trip Generation (vehicles)								
		187	DU	806	15	30	45	34	22	56

¹ DU = dwelling unit(s)

² ITE Trip Generation Manual 11th Ed, 2021

Project Trip Distribution and Assignment

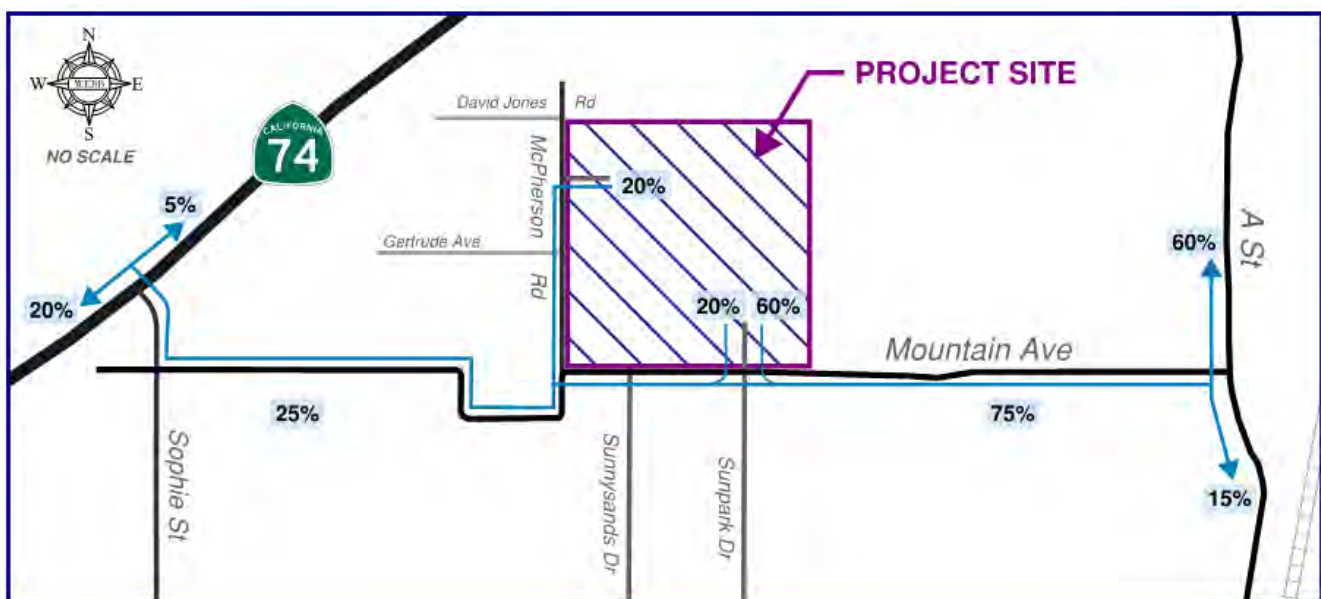
Modal Split

Based on the project’s distance from existing transit stops, no project traffic reductions from public transit or active transportation (bicycling or walking) are considered in this study.

Trip Distribution

Trip distribution, or the directional orientation of project traffic, is based on the project driveways, project location, nearby land uses, and proximity to the regional freeway system (**Figure 4**).

Figure 4: Directional Distribution of Project Traffic



Trip Assignment

Based on expected project trip generation, the trips are assigned to specific roadways and intersections according to the trip distribution model. **Figures 5 and 6** show the project trips at the study intersections for the AM and PM peak hours, respectively.

Figure 5: Project Traffic Volumes – AM Peak Hour

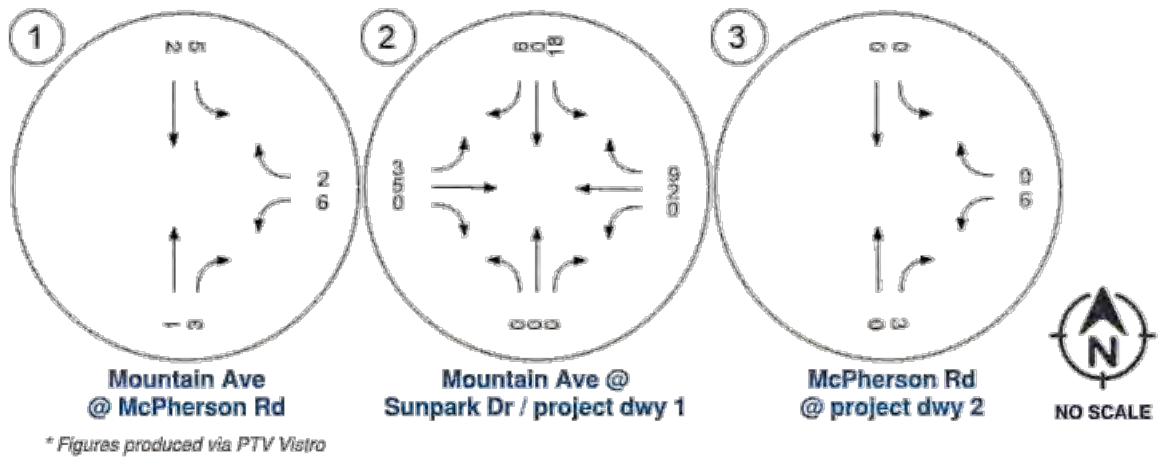
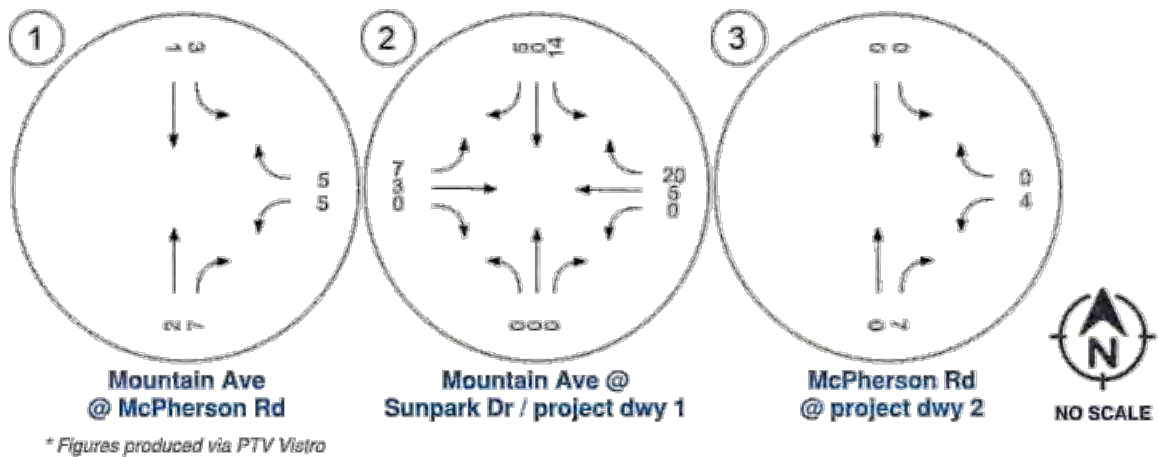


Figure 6: Project Traffic Volumes – PM Peak Hour



IV. EXISTING CONDITIONS (2021)

The proposed project site is located in southwest City of Perris, on the northeast corner of Mountain Avenue and McPherson Road, east of State Route 74 (SR-74).

Existing Roadway Network

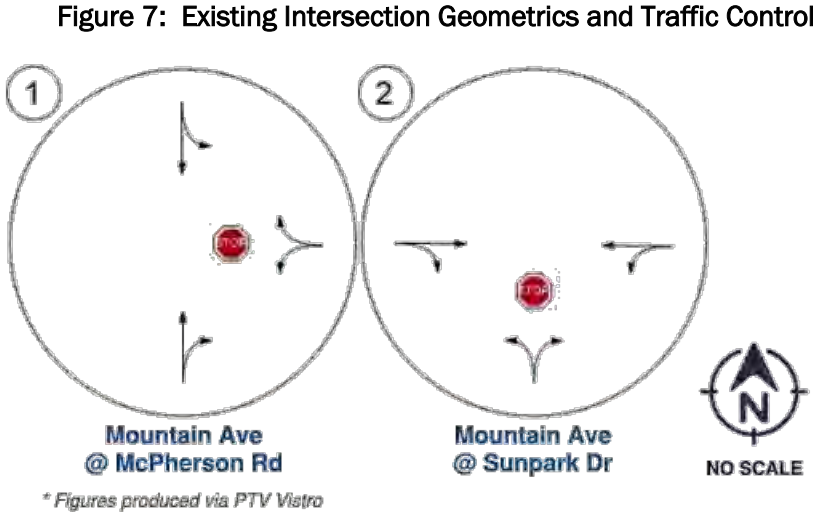
Mountain Avenue is a two-lane undivided roadway designated as a Secondary Arterial in the City’s General Plan.

McPherson Road is a two-lane undivided roadway designated as a Collector in the City’s General Plan. It is currently unpaved north of Mountain Avenue.

Sunpark Drive is a two-lane undivided roadway classified as a local street in the City’s General Plan. It terminates to the north at Mountain Avenue and to the south at Mapes Road.

Existing Intersection Geometrics and Traffic Control

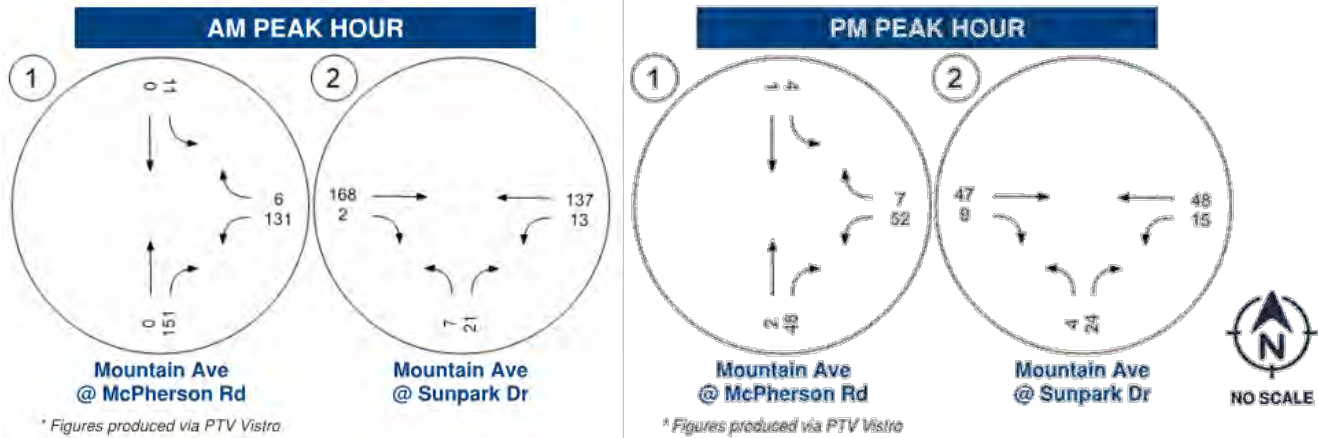
Figure 7 identifies the existing intersection traffic controls, intersection geometrics, and the number of vehicle lanes for each existing study intersection.



Existing Traffic Volumes

To establish a baseline analysis for existing conditions, intersection turning movement counts were conducted at the existing study intersections on Tuesday, October 5, 2021, for the AM and PM peak periods (**Appendix C**). The AM and PM peak-hour traffic volumes are shown on **Figures 8**.

Figure 8: Existing Peak-Hour Traffic Volumes



Levels of Service – Existing Conditions (2021)

Based on the existing intersection geometrics and peak-hour traffic volumes, intersection LOS was analyzed for the AM and PM peak hours (Table 4, see Appendix D for details). Under existing conditions, all study intersections currently operate above the minimum acceptable LOS standard.

Table 4: Intersection LOS – Existing Conditions (2021)

Intersection	Traffic Control ¹	AM Peak Hr		PM Peak Hr	
		Delay	LOS ²	Delay	LOS ²
1 Mountain Ave @ McPherson Rd	TWSC	11.6	B	9	A
2 Mountain Ave @ Sunpark Dr / project dwy 1	TWSC	13.2	B	9.6	A
3 McPherson Rd @ project dwy 2	TWSC	DOES NOT EXIST			

¹ TWSC = two-way stop control

² Level of service (LOS) rankings based on average control delay (sec/veh) per Highway Control Manual.

Levels of Service – Existing Conditions Plus Project

The expected project trips are then added to the existing traffic volumes for the AM and PM peak periods to estimate traffic conditions for the “existing plus project” scenario (Figures 9 and 10, respectively).

Figure 9: Existing Plus Project Traffic Volumes – AM Peak Hour

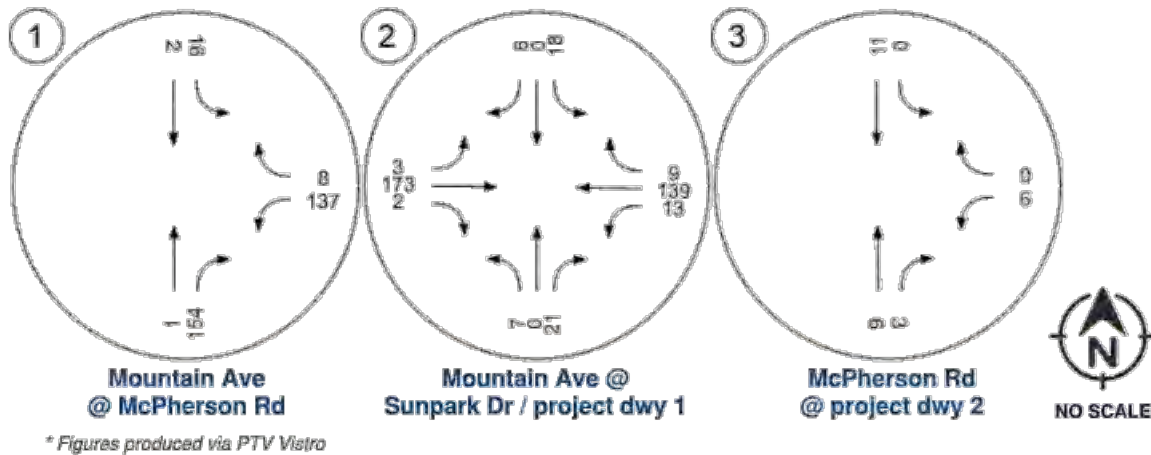
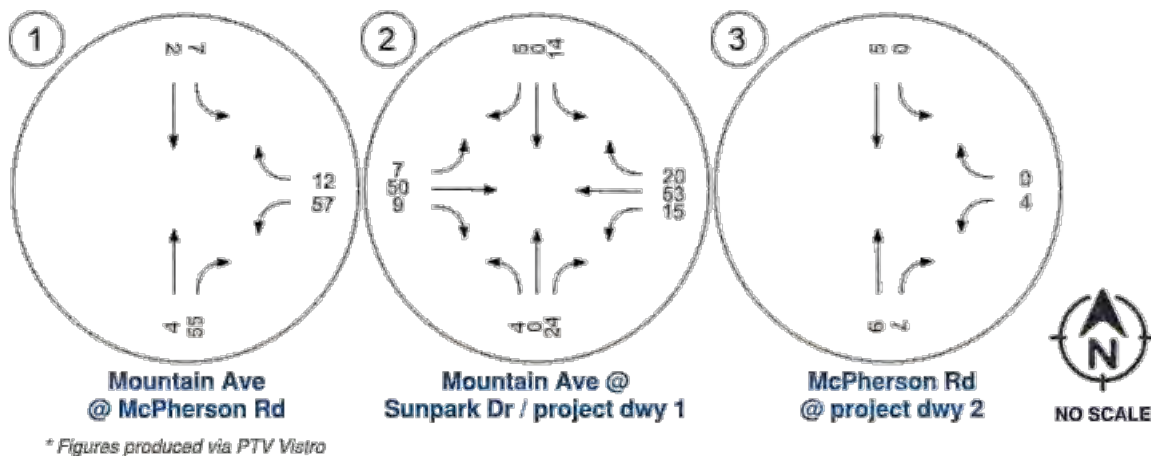


Figure 10: Existing Plus Project Traffic Volumes – PM Peak Hour



Based on the existing intersection geometrics and peak-hour traffic volumes, intersection LOS was analyzed for the AM and PM peak hours (Table 5, see Appendix D for details). Under existing conditions with the completion of the proposed project, all study intersections are expected to continue operating above the minimum acceptable LOS standard.

Table 5: Intersection LOS – Existing Conditions Plus Project (2021)

Intersection	Traffic Control ¹	AM Peak Hr		PM Peak Hr	
		Delay	LOS ²	Delay	LOS ²
1 Mountain Ave @ McPherson Rd	TWSC	12.3	B	9.2	A
2 Mountain Ave @ Sunpark Dr / project dwy 1	TWSC	15.9	C	10.3	B
3 McPherson Rd @ project dwy 2	TWSC	8.6	A	8.6	A

¹ TWSC = two-way stop control

² Level of service (LOS) rankings based on average control delay (sec/veh) per Highway Control Manual.

V. OPENING DAY CONDITIONS (2024) ---

Ambient Area Growth

An ambient traffic growth factor is used in future traffic models to account for regular growth in traffic volumes due to the developments within the region. Per the approved scoping agreement (Appendix A), this study uses a 3 percent annual ambient growth rate, for a total ambient growth of 9% from 2021 to 2024.

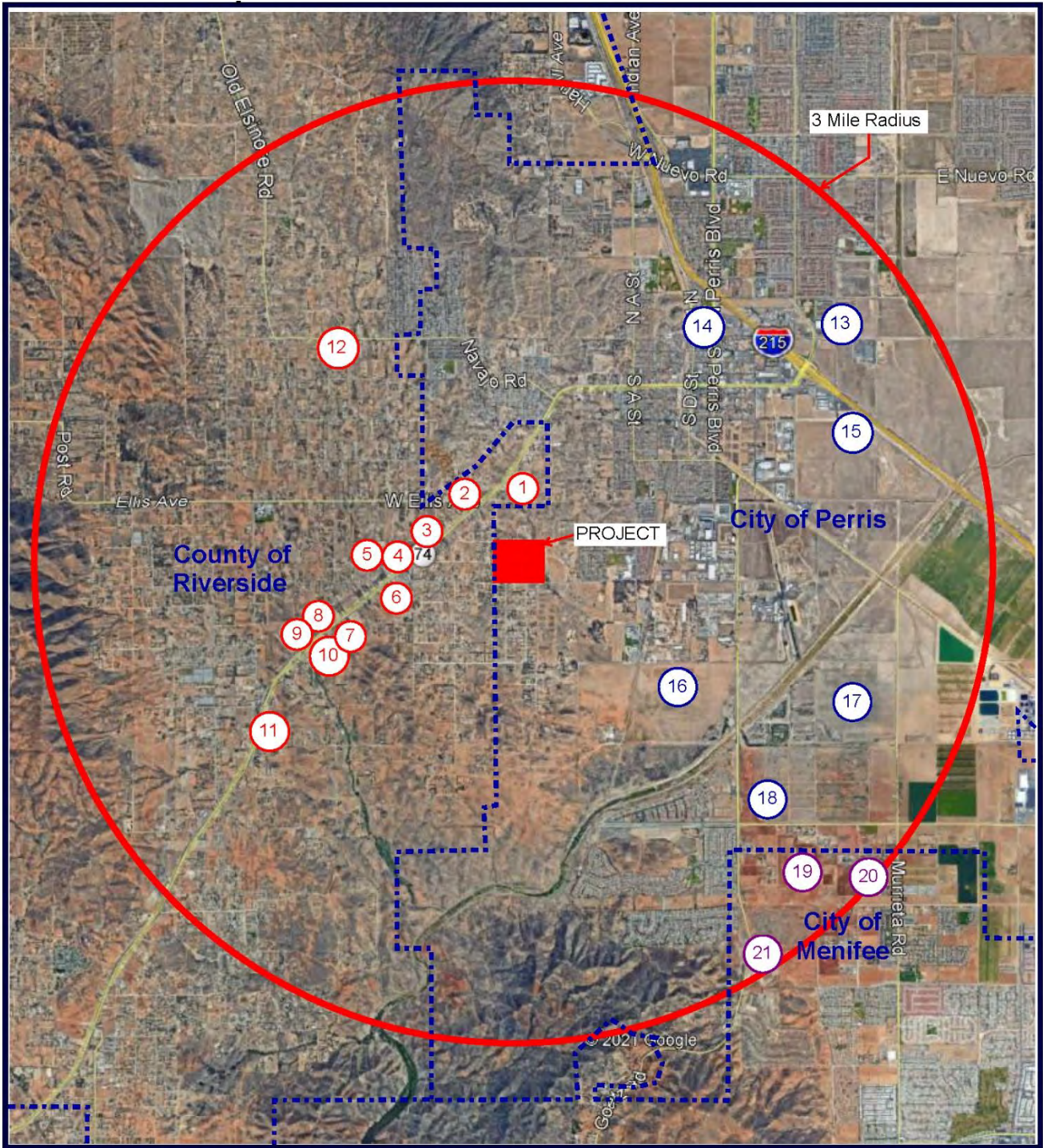
Cumulative Projects Analysis

Cumulative projects are planned and approved developments within the surrounding area of the proposed project that are anticipated to be completed and contribute vehicle trips to the roadway network by the project's opening year. Compiled from a list provided by the City of Perris and the County of Riverside, the cumulative projects used in this study are given in **Table 6** and shown geographically in **Figure 11**.

Table 6: Cumulative Projects Within and Surrounding the Study Area

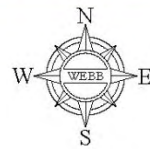
Agency	Project	Location	Description	
County of Riverside	1	CUP 02734	23900 Highway 74	Auto Towing, Storage & Dismantling
	2	PP 24776	23230 Ellis Ave	Church w Sanctuary, Office, Classrooms
	3	PP17435	24185 Highway 74	Auto Sales / Smog Check Station
	4	PAR 01087	24245 Highway 74	Recycling Center
	5	PP26117	24280 Hernandez Rd	Gravel & Hardscape Material Yard
	6	PAR01295	22876 Mountain Ave	Church w Office, Restrooms, Parking
	7	CUP02481	24712 Highway 74	Used Car Sales & Equipment Retail
	8	PP12904	24755 Highway 74	Truck Repair Shop & Truck Sales
	9	CUP03541	24803 Highway 74	Trailer & Boat Storage Facility
	10	PPT180027	South side of Highway 74, north of Mapes Rd	Contractor Storage Yard
	11	PP18499	25218 Highway 74	Service Garage & Office
	12	CUP03751	22711 San Jacinto Ave	ABC Licensing and Convenience Store
City of Perris	13	Lewis Retail Center	SE corner, E San Jacinto Ave and Redlands Ave	Retail Shopping Center
	14	Downtown Metrolink Station	11 S C St	Light Rail Station
	15	PM35877	NE corner, Redlands Ave and E Ellis Ave	Perris Logistics Center (North)
	16	PM35886	SW corner, Mapes Rd and Goetz Rd	South Perris Distribution Center
	17	Green Valley Specific Plan	NW corner, I-215 and Ethanac Rd	Single-Family and Multifamily Residential
	18	Cabrillo	NE corner, Redlands Ave and E Ellis Ave	184-unit Single-Family Residential
City of Menifee	19	TTM 34037 (Capstone)	South of Ethanac, east on Wheat St	Residential
	20	TTM 31856 (Sunwood)	NW corner, Murrieta Rd and Elm St	Residential
	21	TTM 36657 / PM 36658 (Cimarron Ridge)	SE corner, McLaughlin Rd and Goetz Rd	765-unit Single-Family Residential

Figure 11: Cumulative Projects



LEGEND

- County of Riverside Projects
- City of Perris Projects
- City of Menifee



Levels of Service – Opening Day Conditions (2024)

Traffic from the ambient area growth and cumulative projects is added to the existing traffic volumes to estimate opening day traffic volumes for the AM and PM peak hours (Figure 12). Table 7 gives the LOS analysis results for the “opening day” scenario, with detailed worksheets in Appendix D. With the addition of ambient area growth and nearby cumulative projects, all study intersections are expected to continue operating above the minimum acceptable LOS standard:

Figure 12: Opening Day Conditions Peak-Hour Traffic Volumes

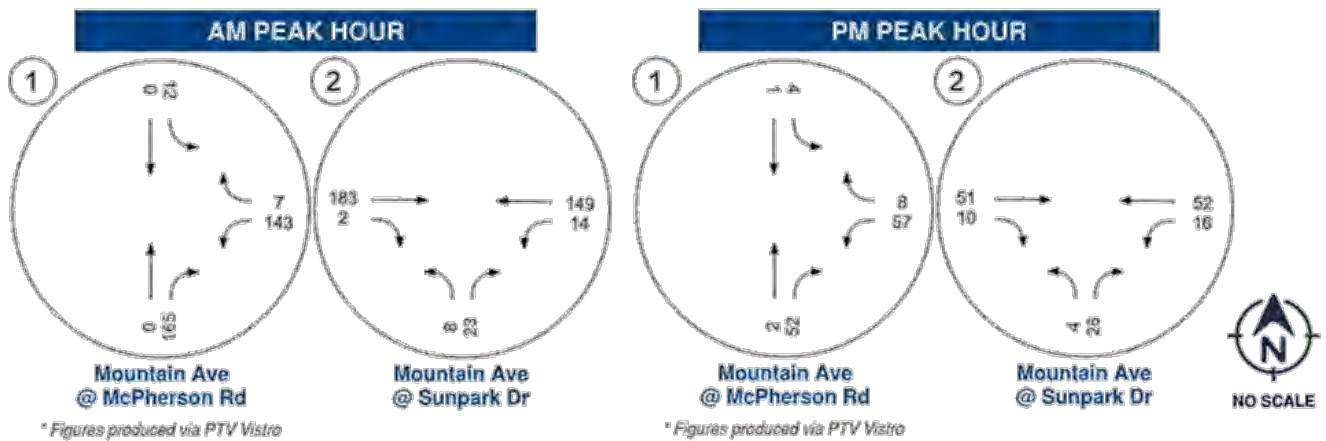


Table 7: Intersection LOS – Opening Day Conditions (2024)

Intersection	Traffic Control ¹	AM Peak Hr		PM Peak Hr	
		Delay	LOS ²	Delay	LOS ²
1 Mountain Ave @ McPherson Rd	TWSC	12.2	B	9.1	A
2 Mountain Ave @ Sunpark Dr / project dwy 1	TWSC	14	B	9.7	A
3 McPherson Rd @ project dwy 2	TWSC	DOES NOT EXIST			

¹ TWSC = two-way stop control

² Level of service (LOS) rankings based on average control delay (sec/veh) per Highway Control Manual.

Levels of Service – Opening Day Plus Project (2024)

The expected project traffic is added to the opening day traffic volumes to estimate opening day traffic conditions with the completion of the proposed project. The AM and PM peak-hour traffic volumes for the “opening day plus project” scenario are shown on Figures 13 and 14, respectively.

Figure 13: Opening Day Plus Project Traffic Volumes – AM Peak Hour

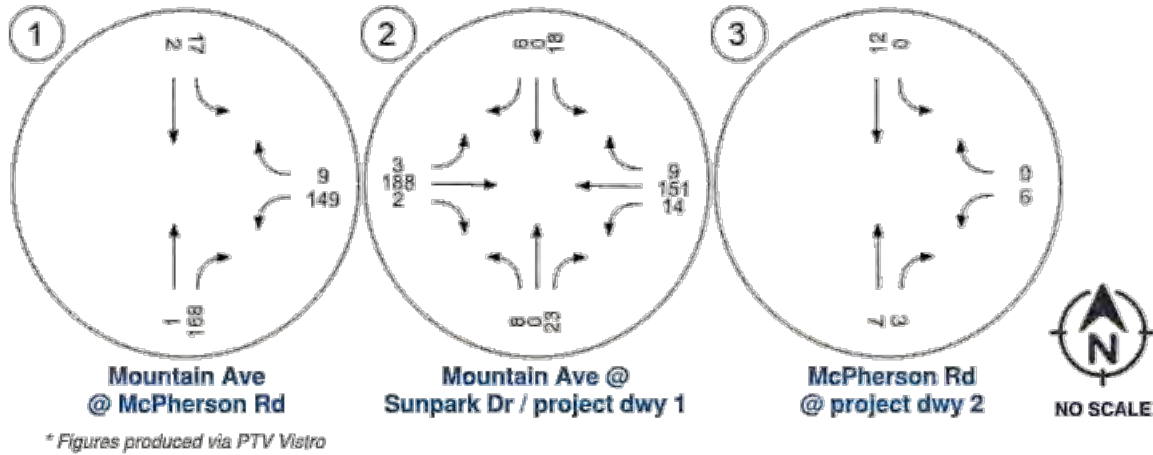


Figure 14: Opening Day Plus Project Traffic Volumes – PM Peak Hour

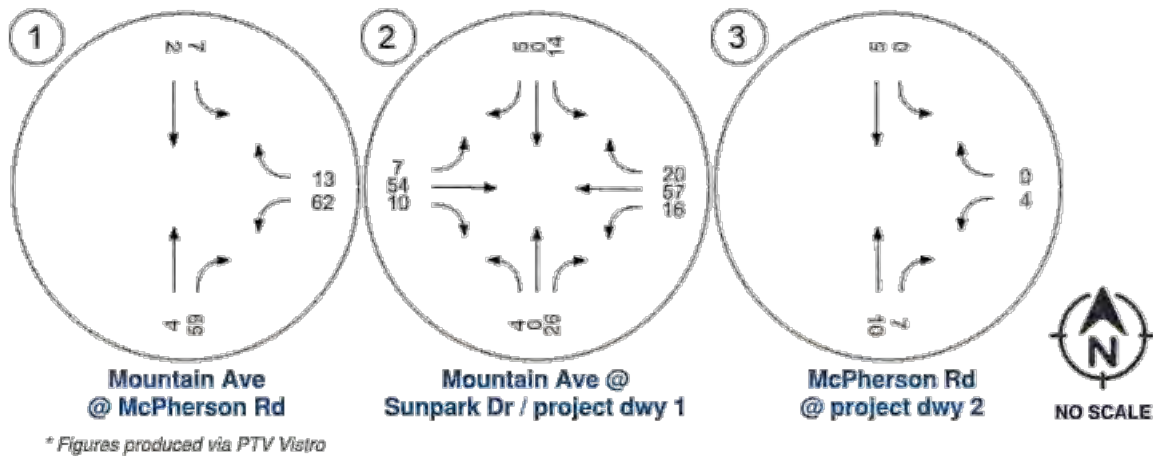


Table 8 summarizes the “opening day plus project” LOS analysis, with detailed worksheets in Appendix D. With the addition of ambient traffic growth, nearby cumulative projects, and the proposed project, all study intersections are expected to continue operating above the minimum acceptable LOS standard.

Table 8: Intersection LOS – Opening Day Plus Project Conditions (2024)

Intersection	Traffic Control ¹	AM Peak Hr		PM Peak Hr	
		Delay	LOS ²	Delay	LOS ²
1 Mountain Ave @ McPherson Rd	TWSC	12.9	B	9.3	A
2 Mountain Ave @ Sunpark Dr / project dwy 1	TWSC	17	C	10.5	B
3 McPherson Rd @ project dwy 2	TWSC	8.6	A	8.6	A

¹ TWSC = two-way stop control

² Level of service (LOS) rankings based on average control delay (sec/veh) per Highway Control Manual.

VI. OTHER PROJECT CONSIDERATIONS

Queuing Analysis

The proposed project site plan uses two new full-access driveways for project access: one on Mountain Avenue and one on McPherson Road. Accordingly, a queuing analysis was conducted to determine the expected maximum queue lengths at the proposed project driveways (**Table 9**). The longest maximum queue length is expected to be **10 feet**, for the outbound left-turn movement in the PM peak hour, with the project fully built out. Per the proposed project site plan, the proposed driveway and roadway geometrics are expected to be adequate for the maximum peak-hour queues.

Table 9: Maximum Queue Lengths

Location	Scenario	AM Peak Hour		PM Peak Hour	
		Inbound (left turn)	Outbound	Inbound (left turn)	Outbound
Mountain Ave 2 @ Sunpark Dr / project dwy 1	Existing plus Project	1	9	1	3
	Opening Day plus Project	1	10	1	3
McPherson 3 Rd @ project dwy 2	Existing plus Project	0	1	0	1
	Opening Day plus Project	0	1	0	1

Note: 95th-percentile queue lengths calculated via Vistro, estimated by rounding up to the nearest foot.

Inbound traffic to the project is proposed to be controlled by entry gates at both project driveways. Accordingly, a gate queuing analysis was conducted for inbound vehicles at the project driveways via the Crommelin method (1972, **Appendix G**), which calculates the required queuing reservoir size based on vehicle demand and average service rate. The vehicle demand (v) and average service rate (s) are both expressed in vehicles per hour (vph), and their quotient v/s is expressed as traffic intensity (i). The required queuing reservoir (q), expressed in vehicles, is then calculated as follows:

$$q = i^2 / (1 - i) = \left(\frac{v}{s}\right)^2 / \left(1 - \frac{v}{s}\right)$$

For this study, a conservative gate queuing analysis was conducted for the maximum entry vehicle demand in the peak hour. Per the expected project trip generation, 34 vehicles are expected to enter the project in the PM peak hour (v). The conservative analysis also assumes a maximum gate entry time of 20.4 seconds per vehicle, for an average service rate of 175 vehicles per hour (s). Therefore, the maximum traffic intensity (i) is approximately 0.19. As a result, the required queuing reservoir is calculated to be 0.05 vehicles. In addition to the vehicle at the service position, this would require driveway storage space of two vehicles prior to the access gate.

The project is proposing to accommodate at least two vehicles in both driveways prior to each access gate. Therefore, it is expected that the proposed project site plan has adequate queuing reservoir space for the expected gate queues at each project driveway.

Signal Warrant Analysis

The California Manual on Uniform Control Devices (MUTCD) provides a set of nine warrant guidelines for the installation of a traffic signal. These traffic signal warrants include volume thresholds as well as other considerations such as proximity to railroad grade crossings or existing traffic signals. Per the MUTCD, the satisfaction of any single warrant shall not require the installation of a traffic signal. The peak-hour traffic signal warrant analysis should only be considered an indicator that an unsignalized intersection is likely to meet one or more of the other volume-based signal warrants. The MUTCD further advises that an engineering study should be conducted to determine that installing a traffic control signal will improve the overall safety and/or operation of the intersection and not seriously disrupt progressive traffic flow.

Accordingly, as a preliminary step in assessing the need for and feasibility of new traffic signals, this study analyzed whether the unsignalized study intersections meet the peak-hour traffic signal warrant as outlined in the MUTCD. Based on the traffic volume data, ambient area growth, nearby cumulative projects, and proposed project traffic, no study intersection is expected to meet the peak-hour signal warrant threshold in any study scenario (see **Appendix F** for details).



Corporate Headquarters

3788 McCray Street
Riverside, CA 92506
T: 951.686.1070

Palm Desert Office

74967 Sheryl Avenue
Palm Desert, CA 92211
T: 951.686.1070

Murrieta Office

41870 Kalmia Street #160
Murrieta, CA 92562
T: 951.686.1070



www.webbassociates.com

Appendix A

Scoping Agreement



**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.

Project Name:

Project Location:

Project Description:
(Please attach a copy of the project Site Plan)

Current GP Land Use: Proposed GP Land Use:

Current Zoning: Proposed Zoning:

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	X	NO	
-----	---	----	--

 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	
3756	14.74	VMT/Capita	Residential:	X
	13.73	VMT/Employee	Non-Residential:	

¹ Base year (2012) projections from RIVTAM.

Trip Generation Evaluation:

Source of Trip Generation:

Project Trip Generation:	798	Average Daily Trips (ADT)	
---------------------------------	------------	----------------------------------	--

Internal Trip Credit:	YES	<input type="text"/>	NO	X	% Trip Credit:	<input type="text"/>
Pass-By Trip Credit:	YES	<input type="text"/>	NO	X	% Trip Credit:	<input type="text"/>
Affordable Housing Credit:	YES	<input type="text"/>	NO	X	% Trip Credit:	<input type="text"/>
Existing Land Use Trip Credit:	YES	<input type="text"/>	NO	X	Trip Credit:	<input type="text"/>

Net Project Daily Trips:	798	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:	
------------------------------------	--

Project Location Setting	
--------------------------	--

	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 presumed 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:	Albert A Webb Associates	Company:	Pacific Communities
Contact:	Nicholas Lowe, PE	Contact:	Anthony Arnest
Address:	3788 McCray St, Riverside, CA 92506	Address:	1000 Dove Street, Suite 300, Newport Beach
Phone:	951-686-1070	Phone:	949-610-5654
Email:	nick.lowe@webbassociates.com	Email:	anthony@pcbinc.com
Date:	11/05/21	Date:	11/05/21
Approved by:			
Perris Development Services Dept.	Date	Perris Public Works Dept.	Date

SCOPING AGREEMENT FOR TRAFFIC IMPACT STUDY

This letter acknowledges the City of Perris requirements for traffic impact analysis of the following project.

Case No. 37904

Related Cases

SP No. DPR 21-00002

EIR No. TTM 37904 (PLN 21-05037)

GPA No. _____

CZ No. PDO 21-05038

Project Name Pacific Emerald 55+ Community

Project Address Northeast corner of Mountain Ave @ McPherson Rd, south of David Jones Rd

Project Description 187-unit single-story detached homes for independent senior adults age 55+, gated

	Consultant	Developer
Name	<u>Albert A. Webb Associates</u>	<u>Tony Arnest, Pacific Communities</u>
Address	<u>3788 McCray St Riverside, CA 92506</u>	<u>1000 Dove Street #300 Newport Beach, CA 92660</u>
Telephone	<u>951-686-1070</u>	<u>949-660-8988 x108</u>

A. Trip Generation Source: ITE 10th Edition

Current Land Use <u>Vacant</u>	Proposed Land Use <u>Residential</u>
Current Zoning <u>R-6000</u>	Proposed Zoning <u>R-6000 - PD</u>

	Current Trip Generation			Proposed Trip Generation (not PCE)		
Passenger Car	<i>In</i>	<i>Out</i>	<i>Total</i>	<i>In</i>	<i>Out</i>	<i>Total</i>
AM Trips	<u>0</u>	<u>0</u>	<u>0</u>	<u>15</u>	<u>30</u>	<u>45</u>
PM Trips	<u>0</u>	<u>0</u>	<u>0</u>	<u>34</u>	<u>22</u>	<u>56</u>

Internal Trip Allowance Yes No (0% trip discount)
 Pass-By Trip Allowance Yes No (_____)

B. Trip Geographic Distribution

N 70 % S 15 % E % W 15 %

C. Background Traffic

Project Opening Year: 2024 Ambient Annual Growth Rate: 3 %
 Phase Year(s): N/A

Other area projects to be analyzed: To be provided by City of Perris & County of Riverside

Model/Forecast methodology: Build-Up Method

D. Study Intersections:

- 1 Mountain Ave @ McPherson Rd
- 2 Mountain Ave @ Sunpark Dr / project dwy
- 3 McPherson Rd @ project dwy

E. Other Jurisdictional Impacts:

Is project within another agency's sphere of influence or one mile of city boundaries? Yes No

If so, name of City / Jurisdiction: County of Riverside

F. Site Plan (see attached figure)

G. Specific issues to be addressed (in addition to standard analysis described in the Guidelines)

- Traffic signal warrants will be analyzed at unsignalized intersections.
- Concept striping plan will be prepared for Mountain Avenue adjacent to the project.
- Inbound queuing at project driveways will be analyzed.

H. Existing Conditions

Traffic Count Data: New Recent If recent, provide counts date: _____

I. Analysis Scenarios

- 1 Existing Conditions
- 2 Existing Conditions + Project
- 3 Opening Year Conditions (Existing + Ambient Growth) with Cumulative Projects
- 4 Opening Year Conditions with Cumulative Projects + Project

J. Peak Hour Factor (PHF)

For Existing Conditions: Existing PHF

For Opening Year Conditions: 0.95 if large number of cumulative projects; otherwise, existing PHF

Recommended by:



Nicholas Lowe, PE
Consultant Engineer

04-12-2021
Date

Revised: 08-18-2021
Date

Revised: 11-05-2021
Date

Approved by:

City of Perris

Date

Table 1: Proposed Project Trip Generation

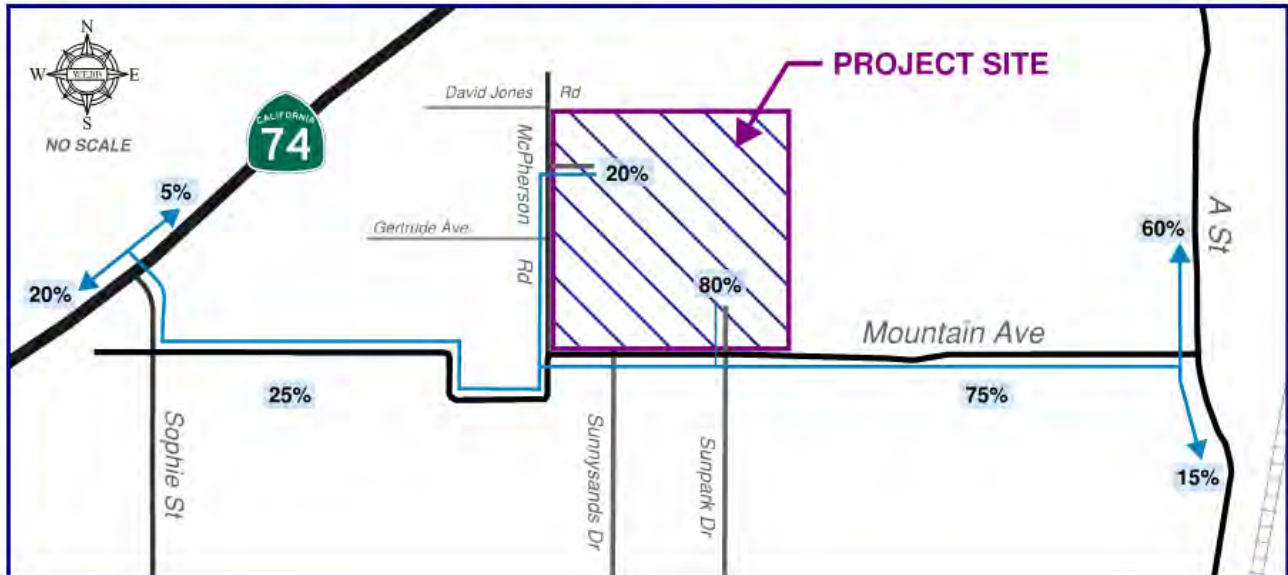
Pacific Emerald 55+ Community

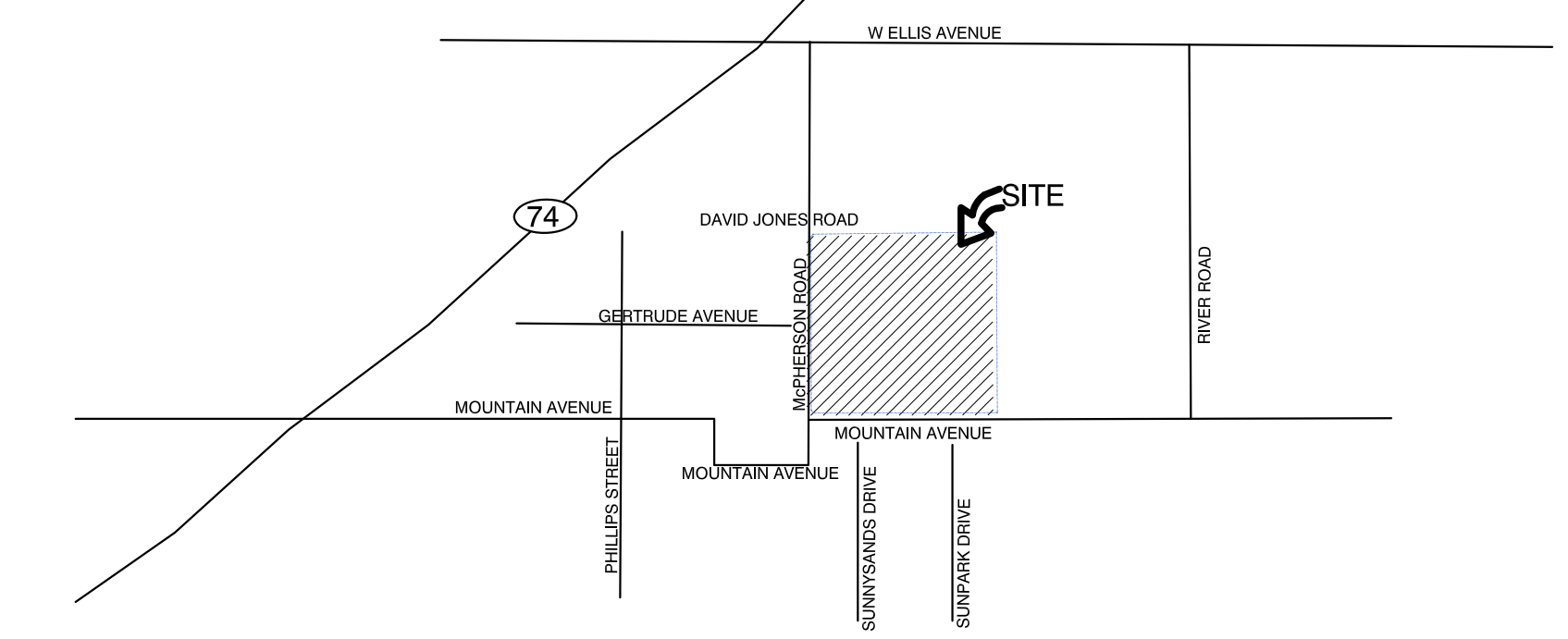
ITE Land Use Code		Units ¹	Daily	AM Peak Hour			PM Peak Hour			
				In	Out	Total	In	Out	Total	
251	Senior Adult Housing - Detached	ITE Trip Generation Rates ²								
		1	DU	4.27	0.079	0.161	0.24	0.183	0.117	0.3
		Project Trip Generation (vehicles)								
		187	DU	798	15	30	45	34	22	56

¹ DU = dwelling unit(s)

² ITE Trip Generation Manual 10th Ed, 2017

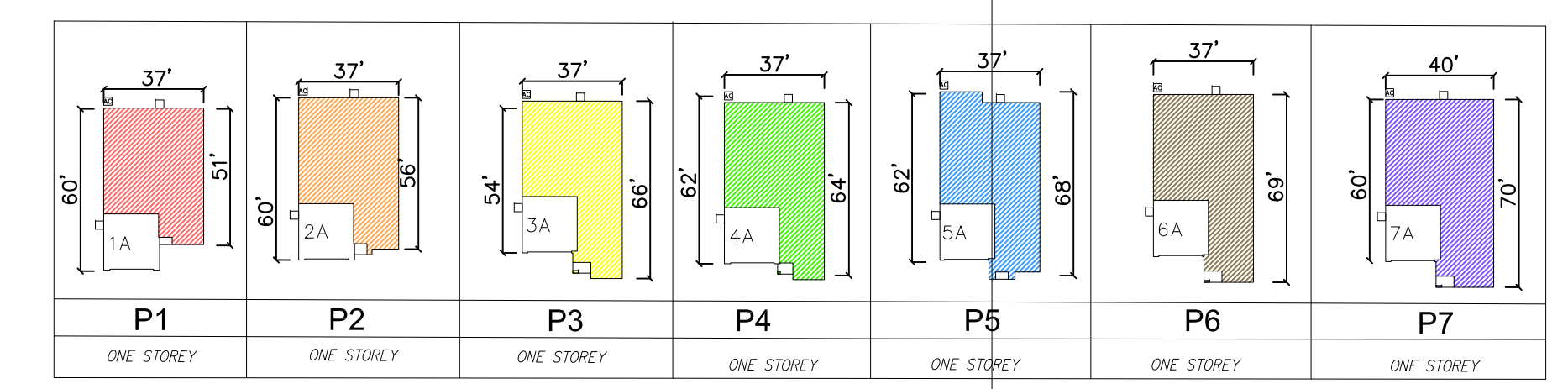
Figure 1: Project Trip Distribution - Residential



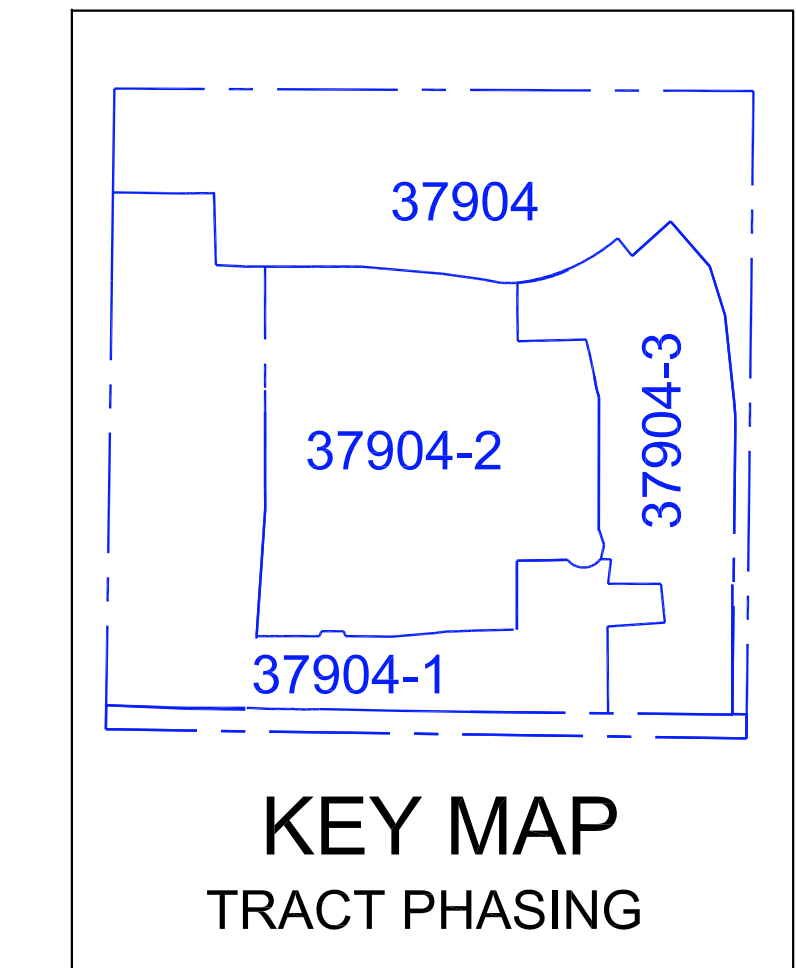


VICINITY MAP
SCALE NTS

TRACT	P1	P2	P3	P4	P5	P6	P7	TOTAL
	1625	1720	1790	1850	1880	1943	2152	
37904-1	5	5	7	6	7	9	8	47
37904-2	4	7	7	7	10	16	12	63
37904-3	2	3	3	5	5	8	5	31
37904	3	4	6	6	9	11	7	46
TOTAL	14	19	23	24	31	43	32	187
%	8%	10%	12%	13%	17%	24%	17%	100%



PLAN TYPES



KEY MAP
TRACT PHASING

GENERAL INFO

Total Acreage: 40.40 Acre
 Total Residential Unit: 187 D.U.
 Rec Building: 1.0
 Density: 4.63 D.U./Acre
 Open Space: 16.92% (6.84 Acre)
 Green Belt: 2.13 Acre
 Lot A (Natural Space): 1.88 Acre
 Easement (Natural Space): 0.89 Acre
 Lot I (Dog Park/Det.Basin): 0.57 Acre
 Rec Area 1: 0.80 Acre
 Rec Area 2: 0.25 Acre
 Rec Area 3: 0.22 Acre
 Lot Q: 0.10 Acre
 6.84 Acre

* NOTE: SITE PLAN ARE CONCEPTUAL AND ROADS ARE INDICATIVE. ENGINEER SHALL DESIGN THE FINAL ROAD LAYOUT BASED ON CITY'S STANDARD.

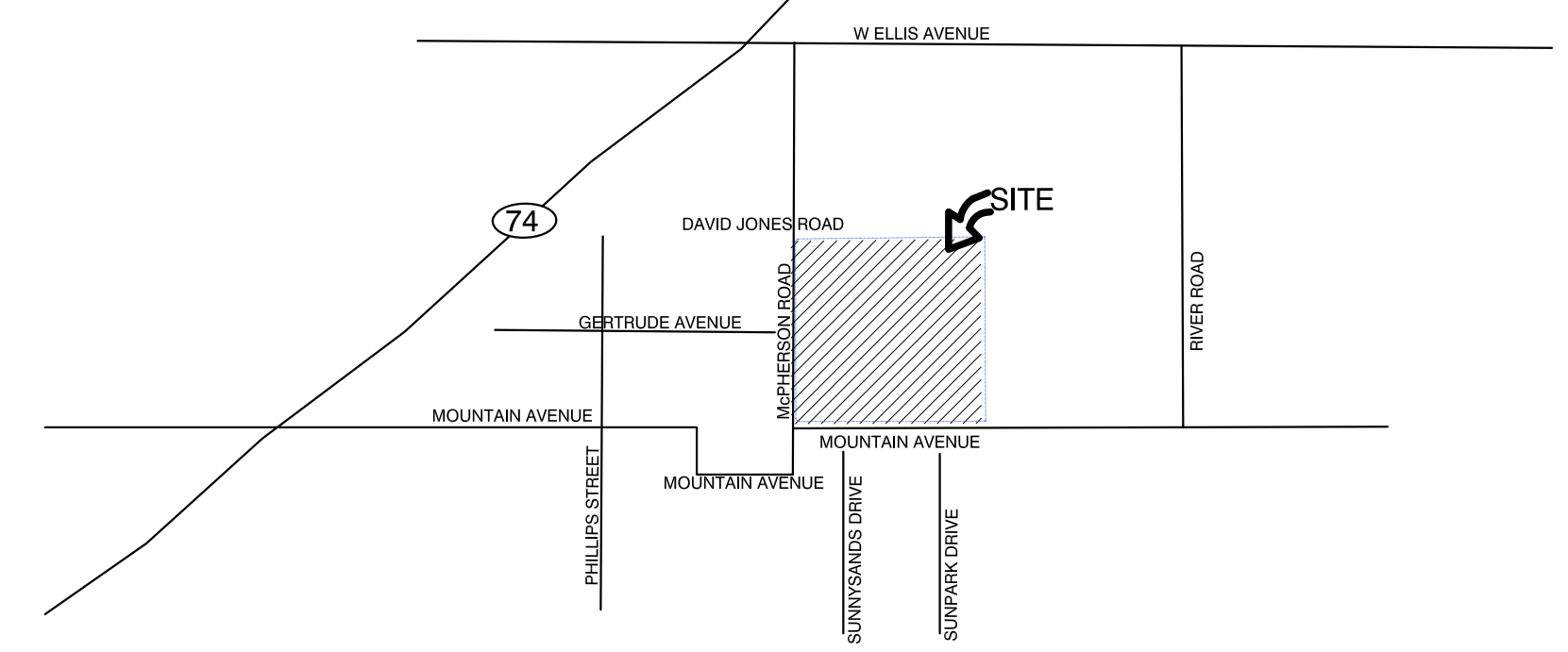
DEVELOPER:
Pacific Communities Builder, Inc.
 ADDRESS: 1000 Dove Street, Suite 300, Newport Beach, CA 92660
 TEL: (949) 660-8988

CITY OF PERRIS
PACIFIC EMERALD
TR 37904
 Production Preplot Plan

SCALE: 1 = 60'
DESIGNED: NC
DRAWN: FVG, RC
SHEET NO.
2021/09/21

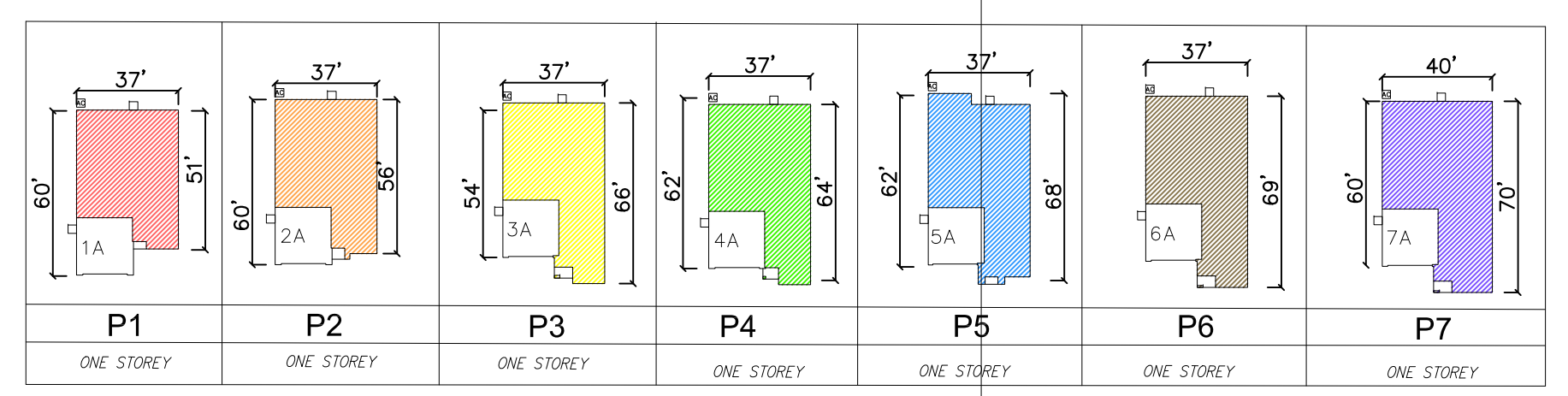
Appendix B

Proposed Project Site Plan

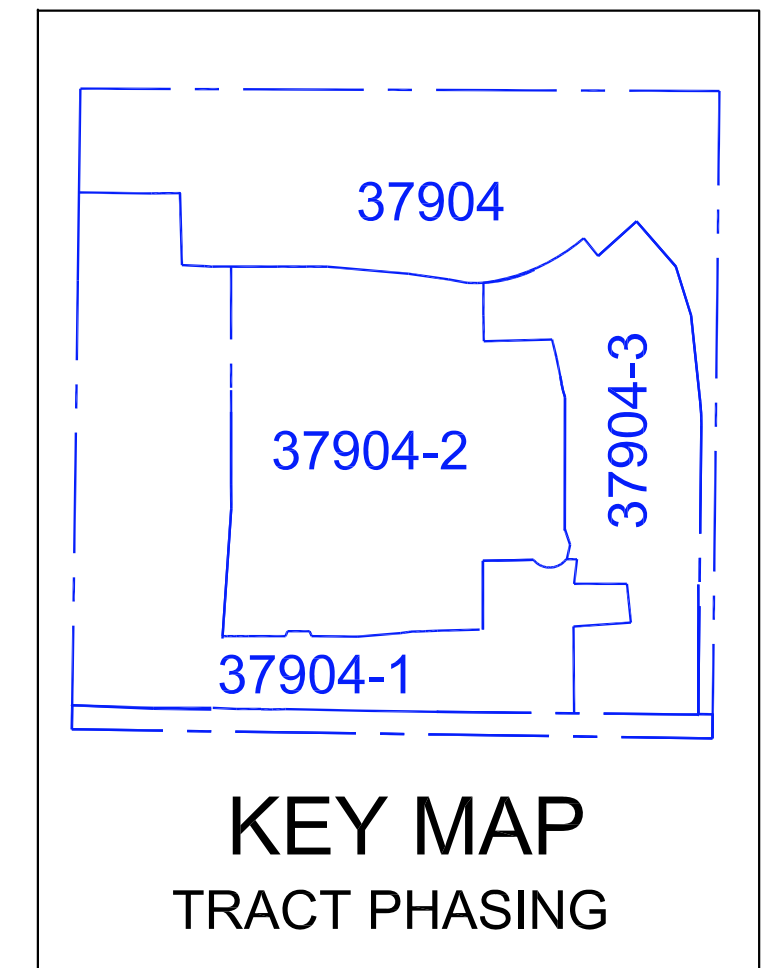


VICINITY MAP
SCALE NTS

TRACT	P1	P2	P3	P4	P5	P6	P7	TOTAL
	1625	1720	1790	1850	1880	1943	2152	
37904-1	5	5	7	6	7	9	8	47
37904-2	4	7	7	7	10	16	12	63
37904-3	2	3	3	5	5	8	5	31
37904	3	4	6	6	9	11	7	46
TOTAL	14	19	23	24	31	43	32	187
%	8%	10%	12%	13%	17%	24%	17%	100%



PLAN TYPES



KEY MAP
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* NOTE: SITE PLAN ARE CONCEPTUAL AND ROADS ARE INDICATIVE. ENGINEER SHALL DESIGN THE FINAL ROAD LAYOUT BASED ON CITY'S STANDARD.

DEVELOPER:
Pacific Communities Builder, Inc.
 ADDRESS: 1000 Dove Street, Suite 300, Newport Beach, CA 92660
 TEL: (949) 660-8988

CITY OF PERRIS
PACIFIC EMERALD
TR 37904
 Production Preplot Plan

SCALE: 1 = 60'
DESIGNED: NC
DRAWN: FVG, RC
SHEET NO.
2021/09/21

Appendix C

Traffic Volume Data

City of Perris
 N/S: McPherson Road
 E/W: Mountain Avenue
 Weather: Clear

File Name : 01_PER_McPherson_Mtn AM
 Site Code : 06721583
 Start Date : 10/5/2021
 Page No : 1

Groups Printed- Total Volume

Start Time	McPherson Road Southbound			Mountain Avenue Westbound			McPherson Road Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
07:00 AM	3	0	3	4	0	4	0	6	6	13
07:15 AM	4	0	4	9	0	9	0	17	17	30
07:30 AM	1	0	1	20	0	20	0	41	41	62
07:45 AM	3	0	3	63	2	65	0	71	71	139
Total	11	0	11	96	2	98	0	135	135	244
08:00 AM	3	0	3	39	4	43	0	22	22	68
08:15 AM	2	0	2	14	1	15	0	7	7	24
08:30 AM	1	0	1	11	0	11	0	4	4	16
08:45 AM	0	0	0	6	0	6	0	6	6	12
Total	6	0	6	70	5	75	0	39	39	120
Grand Total	17	0	17	166	7	173	0	174	174	364
Apprch %	100	0		96	4		0	100		
Total %	4.7	0	4.7	45.6	1.9	47.5	0	47.8	47.8	

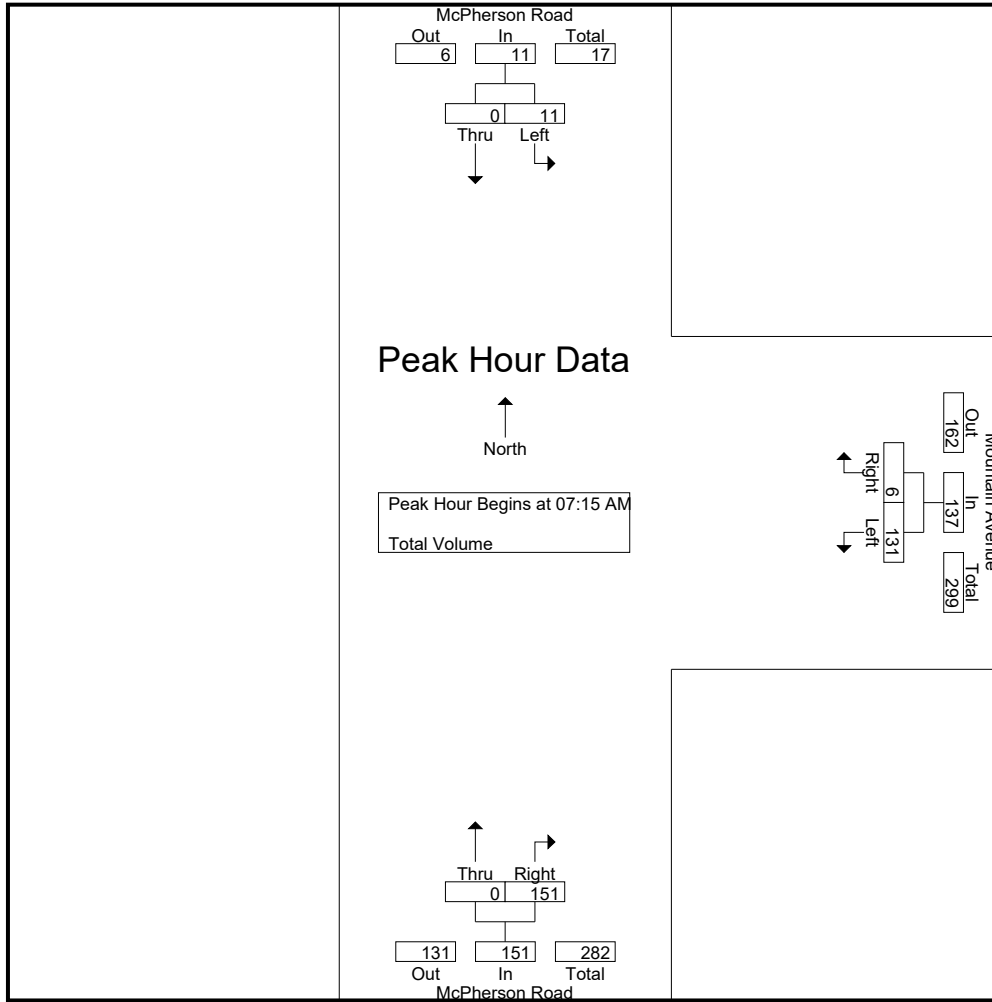
Start Time	McPherson Road Southbound			Mountain Avenue Westbound			McPherson Road Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
07:15 AM	4	0	4	9	0	9	0	17	17	30
07:30 AM	1	0	1	20	0	20	0	41	41	62
07:45 AM	3	0	3	63	2	65	0	71	71	139
08:00 AM	3	0	3	39	4	43	0	22	22	68
Total Volume	11	0	11	131	6	137	0	151	151	299
% App. Total	100	0		95.6	4.4		0	100		
PHF	.688	.000	.688	.520	.375	.527	.000	.532	.532	.538

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 07:15 AM

City of Perris
 N/S: McPherson Road
 E/W: Mountain Avenue
 Weather: Clear

File Name : 01_PER_McPherson_Mtn AM
 Site Code : 06721583
 Start Date : 10/5/2021
 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:

	07:00 AM			07:30 AM			07:15 AM		
+0 mins.	3	0	3	20	0	20	0	17	17
+15 mins.	4	0	4	63	2	65	0	41	41
+30 mins.	1	0	1	39	4	43	0	71	71
+45 mins.	3	0	3	14	1	15	0	22	22
Total Volume	11	0	11	136	7	143	0	151	151
% App. Total	100	0		95.1	4.9		0	100	
PHF	.688	.000	.688	.540	.438	.550	.000	.532	.532

City of Perris
 N/S: McPherson Road
 E/W: Mountain Avenue
 Weather: Clear

File Name : 01_PER_McPherson_Mtn PM
 Site Code : 06721583
 Start Date : 10/5/2021
 Page No : 1

Groups Printed- Total Volume

Start Time	McPherson Road Southbound			Mountain Avenue Westbound			McPherson Road Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
04:00 PM	1	0	1	19	2	21	0	14	14	36
04:15 PM	1	0	1	8	2	10	0	9	9	20
04:30 PM	1	0	1	9	3	12	2	8	10	23
04:45 PM	1	1	2	16	0	16	0	17	17	35
Total	4	1	5	52	7	59	2	48	50	114
05:00 PM	1	1	2	8	0	8	0	7	7	17
05:15 PM	3	1	4	11	1	12	0	18	18	34
05:30 PM	1	0	1	12	2	14	0	9	9	24
05:45 PM	0	0	0	11	0	11	0	15	15	26
Total	5	2	7	42	3	45	0	49	49	101
Grand Total	9	3	12	94	10	104	2	97	99	215
Apprch %	75	25		90.4	9.6		2	98		
Total %	4.2	1.4	5.6	43.7	4.7	48.4	0.9	45.1	46	

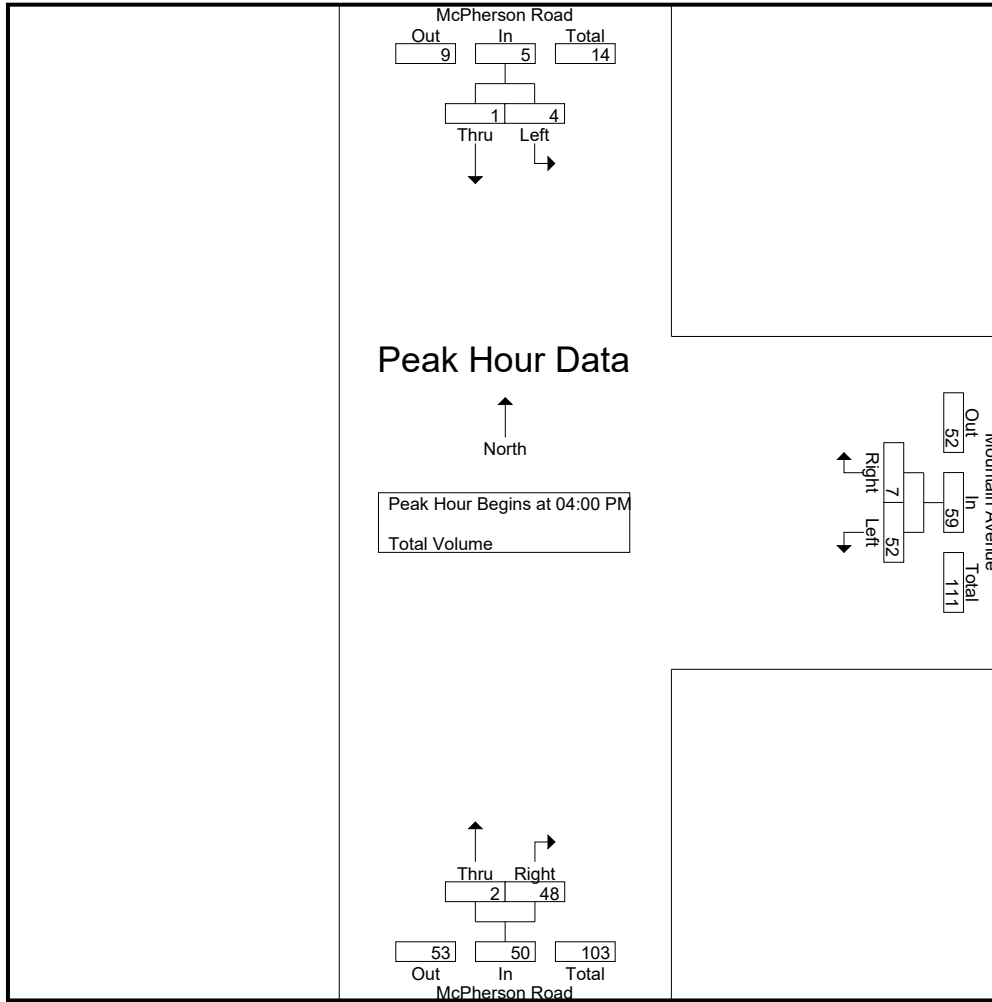
Start Time	McPherson Road Southbound			Mountain Avenue Westbound			McPherson Road Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
04:00 PM	1	0	1	19	2	21	0	14	14	36
04:15 PM	1	0	1	8	2	10	0	9	9	20
04:30 PM	1	0	1	9	3	12	2	8	10	23
04:45 PM	1	1	2	16	0	16	0	17	17	35
Total Volume	4	1	5	52	7	59	2	48	50	114
% App. Total	80	20		88.1	11.9		4	96		
PHF	1.00	.250	.625	.684	.583	.702	.250	.706	.735	.792

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

City of Perris
 N/S: McPherson Road
 E/W: Mountain Avenue
 Weather: Clear

File Name : 01_PER_McPherson_Mtn PM
 Site Code : 06721583
 Start Date : 10/5/2021
 Page No : 2



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			04:00 PM			04:30 PM		
+0 mins.	1	0	1	19	2	21	2	8	10
+15 mins.	1	1	2	8	2	10	0	17	17
+30 mins.	1	1	2	9	3	12	0	7	7
+45 mins.	3	1	4	16	0	16	0	18	18
Total Volume	6	3	9	52	7	59	2	50	52
% App. Total	66.7	33.3		88.1	11.9		3.8	96.2	
PHF	.500	.750	.563	.684	.583	.702	.250	.694	.722

City of Perris
 N/S: Sunpark Drive
 E/W: Mountain Avenue
 Weather: Clear

File Name : 02_PER_Sunpark_Mtn AM
 Site Code : 06721583
 Start Date : 10/5/2021
 Page No : 1

Groups Printed- Total Volume

Start Time	Mountain Avenue Westbound			Sunpark Drive Northbound			Mountain Avenue Eastbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
07:00 AM	1	2	3	1	3	4	7	1	8	15
07:15 AM	2	9	11	0	1	1	20	1	21	33
07:30 AM	0	20	20	2	10	12	43	0	43	75
07:45 AM	2	64	66	4	5	9	79	0	79	154
Total	5	95	100	7	19	26	149	2	151	277
08:00 AM	9	44	53	1	5	6	26	1	27	86
08:15 AM	2	13	15	2	2	4	9	0	9	28
08:30 AM	1	12	13	0	0	0	5	0	5	18
08:45 AM	0	8	8	1	3	4	5	3	8	20
Total	12	77	89	4	10	14	45	4	49	152
Grand Total	17	172	189	11	29	40	194	6	200	429
Apprch %	9	91		27.5	72.5		97	3		
Total %	4	40.1	44.1	2.6	6.8	9.3	45.2	1.4	46.6	

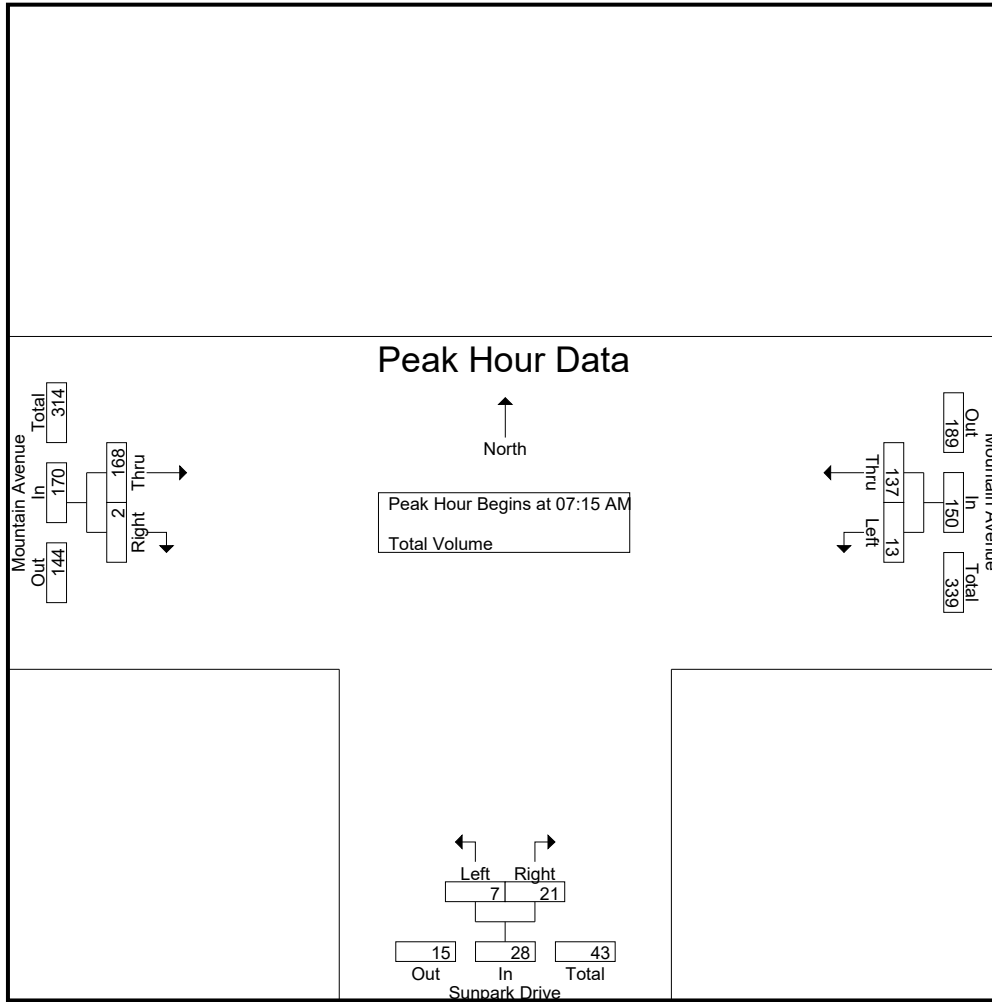
Start Time	Mountain Avenue Westbound			Sunpark Drive Northbound			Mountain Avenue Eastbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
07:15 AM	2	9	11	0	1	1	20	1	21	33
07:30 AM	0	20	20	2	10	12	43	0	43	75
07:45 AM	2	64	66	4	5	9	79	0	79	154
08:00 AM	9	44	53	1	5	6	26	1	27	86
Total Volume	13	137	150	7	21	28	168	2	170	348
% App. Total	8.7	91.3		25	75		98.8	1.2		
PHF	.361	.535	.568	.438	.525	.583	.532	.500	.538	.565

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 07:15 AM

City of Perris
 N/S: Sunpark Drive
 E/W: Mountain Avenue
 Weather: Clear

File Name : 02_PER_Sunpark_Mtn AM
 Site Code : 06721583
 Start Date : 10/5/2021
 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:

	07:30 AM			07:30 AM			07:15 AM		
+0 mins.	0	20	20	2	10	12	20	1	21
+15 mins.	2	64	66	4	5	9	43	0	43
+30 mins.	9	44	53	1	5	6	79	0	79
+45 mins.	2	13	15	2	2	4	26	1	27
Total Volume	13	141	154	9	22	31	168	2	170
% App. Total	8.4	91.6		29	71		98.8	1.2	
PHF	.361	.551	.583	.563	.550	.646	.532	.500	.538

City of Perris
 N/S: Sunpark Drive
 E/W: Mountain Avenue
 Weather: Clear

File Name : 02_PER_Sunpark_Mtn PM
 Site Code : 06721583
 Start Date : 10/5/2021
 Page No : 1

Groups Printed- Total Volume

Start Time	Mountain Avenue Westbound			Sunpark Drive Northbound			Mountain Avenue Eastbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
04:00 PM	2	21	23	1	5	6	13	2	15	44
04:15 PM	0	8	8	3	0	3	8	2	10	21
04:30 PM	6	14	20	0	0	0	10	0	10	30
04:45 PM	4	15	19	1	3	4	16	3	19	42
Total	12	58	70	5	8	13	47	7	54	137
05:00 PM	6	11	17	0	8	8	6	2	8	33
05:15 PM	1	11	12	1	0	1	16	3	19	32
05:30 PM	3	12	15	0	7	7	9	3	12	34
05:45 PM	5	14	19	3	9	12	16	1	17	48
Total	15	48	63	4	24	28	47	9	56	147
Grand Total	27	106	133	9	32	41	94	16	110	284
Apprch %	20.3	79.7		22	78		85.5	14.5		
Total %	9.5	37.3	46.8	3.2	11.3	14.4	33.1	5.6	38.7	

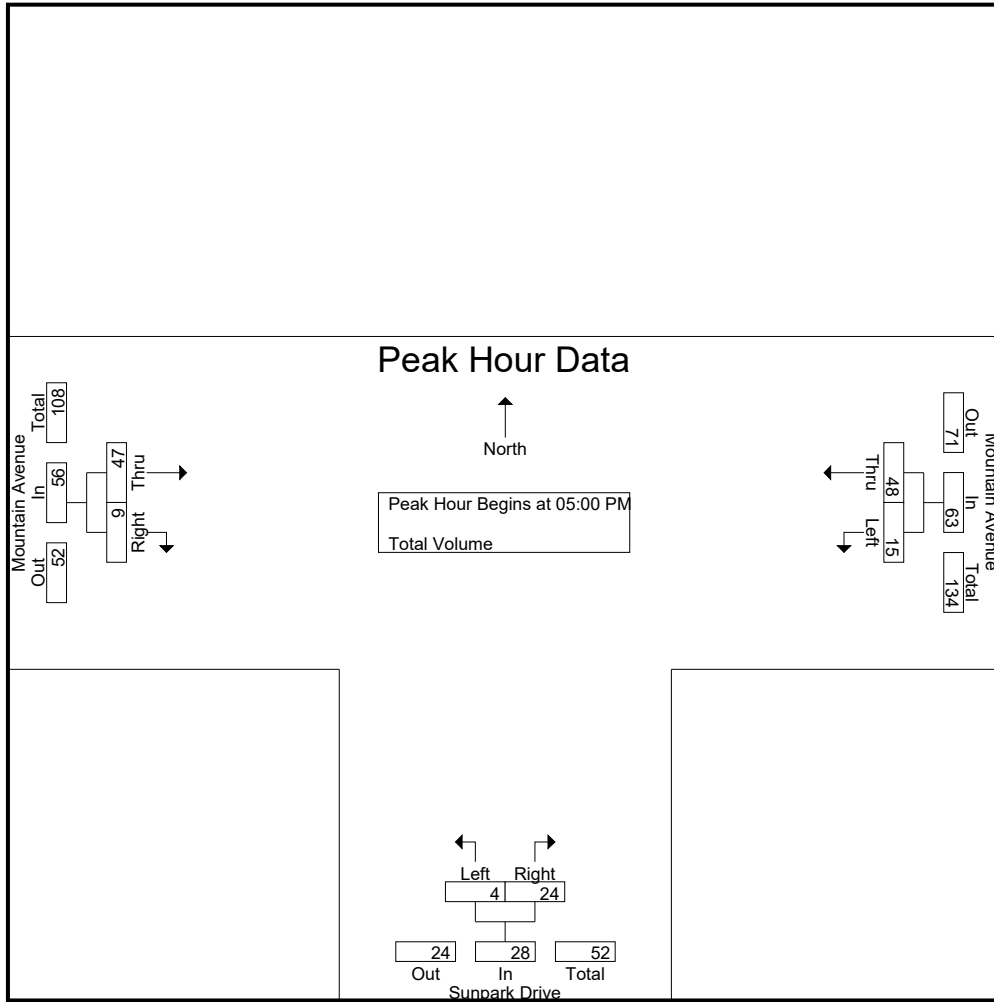
Start Time	Mountain Avenue Westbound			Sunpark Drive Northbound			Mountain Avenue Eastbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
05:00 PM	6	11	17	0	8	8	6	2	8	33
05:15 PM	1	11	12	1	0	1	16	3	19	32
05:30 PM	3	12	15	0	7	7	9	3	12	34
05:45 PM	5	14	19	3	9	12	16	1	17	48
Total Volume	15	48	63	4	24	28	47	9	56	147
% App. Total	23.8	76.2		14.3	85.7		83.9	16.1		
PHF	.625	.857	.829	.333	.667	.583	.734	.750	.737	.766

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

City of Perris
 N/S: Sunpark Drive
 E/W: Mountain Avenue
 Weather: Clear

File Name : 02_PER_Sunpark_Mtn PM
 Site Code : 06721583
 Start Date : 10/5/2021
 Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	04:00 PM			05:00 PM			04:45 PM		
+0 mins.	2	21	23	0	8	8	16	3	19
+15 mins.	0	8	8	1	0	1	6	2	8
+30 mins.	6	14	20	0	7	7	16	3	19
+45 mins.	4	15	19	3	9	12	9	3	12
Total Volume	12	58	70	4	24	28	47	11	58
% App. Total	17.1	82.9		14.3	85.7		81	19	
PHF	.500	.690	.761	.333	.667	.583	.734	.917	.763

Appendix D

Level of Service Analysis Worksheets

Appendix D-1

Existing Conditions Analysis (2021)

Pacific Emerald 55+ Housing

Vistro File: H:\...\20-038 Pacific Emerald Sr Housing.vistro

Scenario 1 Existing AM

Report File: H:\...\LOS - 1 Existing AM.pdf

2022-01-07

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Mountain Ave @ McPherson Rd	Two-way stop	HCM 6th Edition	WB Left	0.305	11.6	B
2	Mountain Ave @ Sunpark Dr / project dwy	Two-way stop	HCM 6th Edition	NB Left	0.026	13.2	B

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Mountain Ave @ McPherson Rd

Control Type:	Two-way stop	Delay (sec / veh):	11.6
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.305

Intersection Setup

Name	Northbound		Southbound		Westbound	
Approach						
Lane Configuration	↬		↵		↶	
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Northbound		Southbound		Westbound	
Base Volume Input [veh/h]	0	151	11	0	131	6
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	151	11	0	131	6
Peak Hour Factor	0.5380	0.5380	0.5380	0.5380	0.5380	0.5380
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	70	5	0	61	3
Total Analysis Volume [veh/h]	0	281	20	0	243	11
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.02	0.00	0.31	0.01
d_M, Delay for Movement [s/veh]	0.00	0.00	7.85	0.00	11.60	11.04
Movement LOS	A	A	A	A	B	B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.05	0.05	1.37	1.37
95th-Percentile Queue Length [ft/ln]	0.00	0.00	1.19	1.19	34.17	34.17
d_A, Approach Delay [s/veh]	0.00		7.85		11.57	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	5.58					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 2: Mountain Ave @ Sunpark Dr / project dwy

Control Type:	Two-way stop	Delay (sec / veh):	13.2
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.026

Intersection Setup

Name	Northbound		Eastbound		Westbound	
Approach						
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Northbound		Eastbound		Westbound	
Base Volume Input [veh/h]	7	21	168	2	13	137
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	7	21	168	2	13	137
Peak Hour Factor	0.5650	0.5650	0.5650	0.5650	0.5650	0.5650
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	9	74	1	6	61
Total Analysis Volume [veh/h]	12	37	297	4	23	242
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.03	0.05	0.00	0.00	0.02	0.00
d_M, Delay for Movement [s/veh]	13.25	10.32	0.00	0.00	7.91	0.00
Movement LOS	B	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.25	0.25	0.00	0.00	0.06	0.06
95th-Percentile Queue Length [ft/ln]	6.14	6.14	0.00	0.00	1.39	1.39
d_A, Approach Delay [s/veh]	11.04		0.00		0.69	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	1.18					
Intersection LOS	B					

Pacific Emerald 55+ Housing

Vistro File: H:\...\20-038 Pacific Emerald Sr Housing.vistro

Scenario 2 Existing PM

Report File: H:\...\LOS - 1 Existing PM.pdf

2022-01-07

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Mountain Ave @ McPherson Rd	Two-way stop	HCM 6th Edition	WB Left	0.069	9.0	A
2	Mountain Ave @ Sunpark Dr / project dwy	Two-way stop	HCM 6th Edition	NB Left	0.006	9.6	A

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Mountain Ave @ McPherson Rd

Control Type:	Two-way stop	Delay (sec / veh):	9.0
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.069

Intersection Setup

Name	Northbound		Southbound		Westbound	
Approach						
Lane Configuration	↶		↷		↵	
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Northbound		Southbound		Westbound	
Base Volume Input [veh/h]	2	48	4	1	52	7
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	2	48	4	1	52	7
Peak Hour Factor	0.7920	0.7920	0.7920	0.7920	0.7920	0.7920
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	15	1	0	16	2
Total Analysis Volume [veh/h]	3	61	5	1	66	9
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.07	0.01
d_M, Delay for Movement [s/veh]	0.00	0.00	7.35	0.00	9.05	8.77
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.01	0.01	0.25	0.25
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.24	0.24	6.26	6.26
d_A, Approach Delay [s/veh]	0.00		6.12		9.02	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	4.92					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 2: Mountain Ave @ Sunpark Dr / project dwy

Control Type:	Two-way stop	Delay (sec / veh):	9.6
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.006

Intersection Setup

Name	Northbound		Eastbound		Westbound	
Approach						
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Northbound		Eastbound		Westbound	
Base Volume Input [veh/h]	4	24	47	9	15	48
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	4	24	47	9	15	48
Peak Hour Factor	0.7660	0.7660	0.7660	0.7660	0.7660	0.7660
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	8	15	3	5	16
Total Analysis Volume [veh/h]	5	31	61	12	20	63
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.03	0.00	0.00	0.01	0.00
d_M, Delay for Movement [s/veh]	9.59	8.76	0.00	0.00	7.39	0.00
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.12	0.12	0.00	0.00	0.04	0.04
95th-Percentile Queue Length [ft/ln]	2.90	2.90	0.00	0.00	1.00	1.00
d_A, Approach Delay [s/veh]	8.87		0.00		1.78	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	2.43					
Intersection LOS	A					

Appendix D-2

Existing Conditions plus Project Analysis

Pacific Emerald 55+ Housing

Vistro File: H:\...\20-038 Pacific Emerald Sr Housing.vistro

Scenario 3 Ex + P AM

Report File: H:\...\LOS - 2 Ex + P AM.pdf

2022-01-07

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Mountain Ave @ McPherson Rd	Two-way stop	HCM 6th Edition	WB Left	0.335	12.3	B
2	Mountain Ave @ Sunpark Dr / project dwy	Two-way stop	HCM 6th Edition	SB Left	0.088	15.9	C
3	McPherson Rd @ project dwy	Two-way stop	HCM 6th Edition	WB Left	0.006	8.6	A

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Mountain Ave @ McPherson Rd

Control Type:	Two-way stop	Delay (sec / veh):	12.3
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.335

Intersection Setup

Name	Northbound		Southbound		Westbound	
Approach						
Lane Configuration	↬		↵		↶	
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Northbound		Southbound		Westbound	
Base Volume Input [veh/h]	0	151	11	0	131	6
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	1	3	5	2	6	2
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1	154	16	2	137	8
Peak Hour Factor	0.5380	0.5380	0.5380	0.5380	0.5380	0.5380
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	72	7	1	64	4
Total Analysis Volume [veh/h]	2	286	30	4	255	15
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.02	0.00	0.34	0.02
d_M, Delay for Movement [s/veh]	0.00	0.00	7.89	0.00	12.25	11.51
Movement LOS	A	A	A	A	B	B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.07	0.07	1.59	1.59
95th-Percentile Queue Length [ft/ln]	0.00	0.00	1.81	1.81	39.68	39.68
d_A, Approach Delay [s/veh]	0.00		6.97		12.21	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	5.97					
Intersection LOS	B					

Intersection Level Of Service Report

Intersection 2: Mountain Ave @ Sunpark Dr / project dwy

Control Type:	Two-way stop	Delay (sec / veh):	15.9
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.088

Intersection Setup

Name	Northbound			Southbound			Eastbound			Westbound		
Approach												
Lane Configuration	+			+			+			+		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Northbound			Southbound			Eastbound			Westbound		
Base Volume Input [veh/h]	7	0	21	0	0	0	0	168	2	13	137	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	18	0	6	3	5	0	0	2	9
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	7	0	21	18	0	6	3	173	2	13	139	9
Peak Hour Factor	0.5650	0.5650	0.5650	0.5650	0.5650	0.5650	0.5650	0.5650	0.5650	0.5650	0.5650	0.5650
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	0	9	8	0	3	1	77	1	6	62	4
Total Analysis Volume [veh/h]	12	0	37	32	0	11	5	306	4	23	246	16
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.03	0.00	0.05	0.09	0.00	0.01	0.00	0.00	0.00	0.02	0.00	0.00
d_M, Delay for Movement [s/veh]	14.89	14.76	10.45	15.88	15.12	10.56	7.78	0.00	0.00	7.93	0.00	0.00
Movement LOS	B	B	B	C	C	B	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.27	0.27	0.27	0.34	0.34	0.34	0.01	0.01	0.01	0.06	0.06	0.06
95th-Percentile Queue Length [ft/ln]	6.65	6.65	6.65	8.47	8.47	8.47	0.29	0.29	0.29	1.40	1.40	1.40
d_A, Approach Delay [s/veh]	11.54			14.52			0.12			0.64		
Approach LOS	B			B			A			A		
d_I, Intersection Delay [s/veh]	2.04											
Intersection LOS	C											

Intersection Level Of Service Report
Intersection 3: McPherson Rd @ project dwy

Control Type:	Two-way stop	Delay (sec / veh):	8.6
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.006

Intersection Setup

Name	Northbound		Southbound		Westbound	
Approach						
Lane Configuration	└─▶		└─▶		└─▶	
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Northbound		Southbound		Westbound	
Base Volume Input [veh/h]	6	0	0	11	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	3	0	0	6	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	6	3	0	11	6	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	1	0	3	2	0
Total Analysis Volume [veh/h]	6	3	0	12	6	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.01	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	7.23	0.00	8.63	8.37
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.02	0.02
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.45	0.45
d_A, Approach Delay [s/veh]	0.00		0.00		8.63	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	1.92					
Intersection LOS	A					

Pacific Emerald 55+ Housing

Vistro File: H:\...\20-038 Pacific Emerald Sr Housing.vistro

Scenario 4 Ex + P PM

Report File: H:\...\LOS - 2 Ex + P PM.pdf

2022-01-07

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Mountain Ave @ McPherson Rd	Two-way stop	HCM 6th Edition	WB Left	0.077	9.2	A
2	Mountain Ave @ Sunpark Dr / project dwy	Two-way stop	HCM 6th Edition	SB Left	0.026	10.3	B
3	McPherson Rd @ project dwy	Two-way stop	HCM 6th Edition	WB Left	0.004	8.6	A

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Mountain Ave @ McPherson Rd

Control Type:	Two-way stop	Delay (sec / veh):	9.2
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.077

Intersection Setup

Name	Northbound		Southbound		Westbound	
Approach						
Lane Configuration	↬		↵		↶	
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Northbound		Southbound		Westbound	
Base Volume Input [veh/h]	2	48	4	1	52	7
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	2	7	3	1	5	5
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	4	55	7	2	57	12
Peak Hour Factor	0.7920	0.7920	0.7920	0.7920	0.7920	0.7920
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	17	2	1	18	4
Total Analysis Volume [veh/h]	5	69	9	3	72	15
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.01	0.00	0.08	0.01
d_M, Delay for Movement [s/veh]	0.00	0.00	7.37	0.00	9.21	8.87
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.02	0.02	0.30	0.30
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.45	0.45	7.50	7.50
d_A, Approach Delay [s/veh]	0.00		5.53		9.15	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	4.98					
Intersection LOS	A					

Intersection Level Of Service Report

Intersection 2: Mountain Ave @ Sunpark Dr / project dwy

Control Type:	Two-way stop	Delay (sec / veh):	10.3
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.026

Intersection Setup

Name	Northbound			Southbound			Eastbound			Westbound		
Approach	+			+			+			+		
Lane Configuration	+			+			+			+		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Northbound			Southbound			Eastbound			Westbound		
Base Volume Input [veh/h]	4	0	24	0	0	0	0	47	9	15	48	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	14	0	5	7	3	0	0	5	20
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	4	0	24	14	0	5	7	50	9	15	53	20
Peak Hour Factor	0.7660	0.7660	0.7660	0.7660	0.7660	0.7660	0.7660	0.7660	0.7660	0.7660	0.7660	0.7660
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	0	8	5	0	2	2	16	3	5	17	7
Total Analysis Volume [veh/h]	5	0	31	18	0	7	9	65	12	20	69	26
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.03	0.03	0.00	0.01	0.01	0.00	0.00	0.01	0.00	0.00
d_M, Delay for Movement [s/veh]	10.11	10.59	8.78	10.34	10.56	8.84	7.42	0.00	0.00	7.40	0.00	0.00
Movement LOS	B	B	A	B	B	A	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.12	0.12	0.12	0.10	0.10	0.10	0.02	0.02	0.02	0.04	0.04	0.04
95th-Percentile Queue Length [ft/ln]	2.97	2.97	2.97	2.56	2.56	2.56	0.45	0.45	0.45	1.00	1.00	1.00
d_A, Approach Delay [s/veh]	8.97			9.92			0.78			1.29		
Approach LOS	A			A			A			A		
d_I, Intersection Delay [s/veh]	3.00											
Intersection LOS	B											

Intersection Level Of Service Report
Intersection 3: McPherson Rd @ project dwy

Control Type:	Two-way stop	Delay (sec / veh):	8.6
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.004

Intersection Setup

Name	Northbound		Southbound		Westbound	
Approach						
Lane Configuration	└─▶		└─▶		└─▶	
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Northbound		Southbound		Westbound	
Base Volume Input [veh/h]	9	0	0	5	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	7	0	0	4	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	9	7	0	5	4	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	2	0	1	1	0
Total Analysis Volume [veh/h]	9	7	0	5	4	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	7.25	0.00	8.61	8.39
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.01	0.01
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.30	0.30
d_A, Approach Delay [s/veh]	0.00		0.00		8.61	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	1.38					
Intersection LOS	A					

Appendix D-3

Opening Day Conditions Analysis (2024)

Pacific Emerald 55+ Housing

Vistro File: H:\...\20-038 Pacific Emerald Sr Housing.vistro

Scenario 5 Opening Day AM

Report File: H:\...\LOS - 3 Opening Day AM.pdf

2022-01-03

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Mountain Ave @ McPherson Rd	Two-way stop	HCM 6th Edition	WB Left	0.342	12.2	B
2	Mountain Ave @ Sunpark Dr / project dwy	Two-way stop	HCM 6th Edition	NB Left	0.033	14.0	B

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Mountain Ave @ McPherson Rd

Control Type:	Two-way stop	Delay (sec / veh):	12.2
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.342

Intersection Setup

Name	Northbound		Southbound		Westbound	
Approach						
Lane Configuration	↬		↵		↶	
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Northbound		Southbound		Westbound	
Base Volume Input [veh/h]	0	151	11	0	131	6
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0900	1.0900	1.0900	1.0900	1.0900	1.0900
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	165	12	0	143	7
Peak Hour Factor	0.5380	0.5380	0.5380	0.5380	0.5380	0.5380
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	77	6	0	66	3
Total Analysis Volume [veh/h]	0	307	22	0	266	13
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.02	0.00	0.34	0.01
d_M, Delay for Movement [s/veh]	0.00	0.00	7.92	0.00	12.16	11.56
Movement LOS	A	A	A	A	B	B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.05	0.05	1.62	1.62
95th-Percentile Queue Length [ft/ln]	0.00	0.00	1.34	1.34	40.55	40.55
d_A, Approach Delay [s/veh]	0.00		7.92		12.13	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	5.86					
Intersection LOS	B					

Intersection Level Of Service Report

Intersection 2: Mountain Ave @ Sunpark Dr / project dwy

Control Type:	Two-way stop	Delay (sec / veh):	14.0
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.033

Intersection Setup

Name	Northbound		Eastbound		Westbound	
Approach						
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	7	21	168	2	13	137
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0900	1.0900	1.0900	1.0900	1.0900	1.0900
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	8	23	183	2	14	149
Peak Hour Factor	0.5650	0.5650	0.5650	0.5650	0.5650	0.5650
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	10	81	1	6	66
Total Analysis Volume [veh/h]	14	41	324	4	25	264
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.03	0.06	0.00	0.00	0.02	0.00
d_M, Delay for Movement [s/veh]	13.97	10.61	0.00	0.00	7.98	0.00
Movement LOS	B	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.30	0.30	0.00	0.00	0.06	0.06
95th-Percentile Queue Length [ft/ln]	7.38	7.38	0.00	0.00	1.55	1.55
d_A, Approach Delay [s/veh]	11.47		0.00		0.69	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	1.24					
Intersection LOS	B					

Pacific Emerald 55+ Housing

Vistro File: H:\...\20-038 Pacific Emerald Sr Housing.vistro

Scenario 6 Opening Day PM

Report File: H:\...\LOS - 3 Opening Day PM.pdf

2022-01-03

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Mountain Ave @ McPherson Rd	Two-way stop	HCM 6th Edition	WB Left	0.075	9.1	A
2	Mountain Ave @ Sunpark Dr / project dwy	Two-way stop	HCM 6th Edition	NB Left	0.006	9.7	A

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Mountain Ave @ McPherson Rd

Control Type:	Two-way stop	Delay (sec / veh):	9.1
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.075

Intersection Setup

Name	Northbound		Southbound		Westbound	
Approach						
Lane Configuration	↬		↵		↶	
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Northbound		Southbound		Westbound	
Base Volume Input [veh/h]	2	48	4	1	52	7
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0900	1.0900	1.0900	1.0900	1.0900	1.0900
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	2	52	4	1	57	8
Peak Hour Factor	0.7920	0.7920	0.7920	0.7920	0.7920	0.7920
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	16	1	0	18	3
Total Analysis Volume [veh/h]	3	66	5	1	72	10
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.08	0.01
d_M, Delay for Movement [s/veh]	0.00	0.00	7.36	0.00	9.09	8.82
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.01	0.01	0.28	0.28
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.25	0.25	6.92	6.92
d_A, Approach Delay [s/veh]	0.00		6.13		9.06	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	4.97					
Intersection LOS	A					

Intersection Level Of Service Report

Intersection 2: Mountain Ave @ Sunpark Dr / project dwy

Control Type:	Two-way stop	Delay (sec / veh):	9.7
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.006

Intersection Setup

Name	Northbound		Eastbound		Westbound	
Approach						
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Northbound		Eastbound		Westbound	
Base Volume Input [veh/h]	4	24	47	9	15	48
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0900	1.0900	1.0900	1.0900	1.0900	1.0900
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	4	26	51	10	16	52
Peak Hour Factor	0.7660	0.7660	0.7660	0.7660	0.7660	0.7660
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	8	17	3	5	17
Total Analysis Volume [veh/h]	5	34	67	13	21	68
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.03	0.00	0.00	0.01	0.00
d_M, Delay for Movement [s/veh]	9.69	8.80	0.00	0.00	7.40	0.00
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.13	0.13	0.00	0.00	0.04	0.04
95th-Percentile Queue Length [ft/ln]	3.18	3.18	0.00	0.00	1.05	1.05
d_A, Approach Delay [s/veh]	8.92		0.00		1.75	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	2.42					
Intersection LOS	A					

Appendix D-4

Opening Day plus Project Analysis (2024)

Pacific Emerald 55+ Housing

Vistro File: H:\...\20-038 Pacific Emerald Sr Housing.vistro

Scenario 7 OD + P AM

Report File: H:\...\LOS - 4 OD+P AM.pdf

2022-01-07

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Mountain Ave @ McPherson Rd	Two-way stop	HCM 6th Edition	WB Left	0.373	12.9	B
2	Mountain Ave @ Sunpark Dr / project dwy	Two-way stop	HCM 6th Edition	SB Left	0.097	17.0	C
3	McPherson Rd @ project dwy	Two-way stop	HCM 6th Edition	WB Left	0.006	8.6	A

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Mountain Ave @ McPherson Rd

Control Type:	Two-way stop	Delay (sec / veh):	12.9
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.373

Intersection Setup

Name	Northbound		Southbound		Westbound	
Approach						
Lane Configuration	↬		↵		↶	
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Northbound		Southbound		Westbound	
Base Volume Input [veh/h]	0	151	11	0	131	6
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0900	1.0900	1.0900	1.0900	1.0900	1.0900
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	1	3	5	2	6	2
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1	168	17	2	149	9
Peak Hour Factor	0.5380	0.5380	0.5380	0.5380	0.5380	0.5380
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	78	8	1	69	4
Total Analysis Volume [veh/h]	2	312	32	4	277	17
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.03	0.00	0.37	0.02
d_M, Delay for Movement [s/veh]	0.00	0.00	7.96	0.00	12.91	12.12
Movement LOS	A	A	A	A	B	B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.08	0.08	1.87	1.87
95th-Percentile Queue Length [ft/ln]	0.00	0.00	1.98	1.98	46.85	46.85
d_A, Approach Delay [s/veh]	0.00		7.08		12.87	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	6.27					
Intersection LOS	B					

Intersection Level Of Service Report

Intersection 2: Mountain Ave @ Sunpark Dr / project dwy

Control Type:	Two-way stop	Delay (sec / veh):	17.0
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.097

Intersection Setup

Name	Northbound			Southbound			Eastbound			Westbound		
Approach												
Lane Configuration	+			+			+			+		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	7	0	21	0	0	0	0	168	2	13	137	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0900	1.0900	1.0900	1.0900	1.0900	1.0900	1.0900	1.0900	1.0900	1.0900	1.0900	1.0900
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	18	0	6	3	5	0	0	2	9
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	8	0	23	18	0	6	3	188	2	14	151	9
Peak Hour Factor	0.5650	0.5650	0.5650	0.5650	0.5650	0.5650	0.5650	0.5650	0.5650	0.5650	0.5650	0.5650
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	0	10	8	0	3	1	83	1	6	67	4
Total Analysis Volume [veh/h]	14	0	41	32	0	11	5	333	4	25	267	16
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.04	0.00	0.06	0.10	0.00	0.01	0.00	0.00	0.00	0.02	0.00	0.00
d_M, Delay for Movement [s/veh]	15.85	15.60	10.78	17.04	15.99	10.87	7.82	0.00	0.00	8.01	0.00	0.00
Movement LOS	C	C	B	C	C	B	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.32	0.32	0.32	0.37	0.37	0.37	0.01	0.01	0.01	0.06	0.06	0.06
95th-Percentile Queue Length [ft/ln]	8.06	8.06	8.06	9.30	9.30	9.30	0.29	0.29	0.29	1.57	1.57	1.57
d_A, Approach Delay [s/veh]	12.07			15.46			0.11			0.65		
Approach LOS	B			C			A			A		
d_I, Intersection Delay [s/veh]	2.10											
Intersection LOS	C											

Intersection Level Of Service Report
Intersection 3: McPherson Rd @ project dwy

Control Type:	Two-way stop	Delay (sec / veh):	8.6
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.006

Intersection Setup

Name	Northbound		Southbound		Westbound	
Approach						
Lane Configuration	└─▶		└─▶		└─▶	
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Northbound		Southbound		Westbound	
Base Volume Input [veh/h]	6	0	0	11	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0900	1.0900	1.0900	1.0900	1.0900	1.0900
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	3	0	0	6	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	7	3	0	12	6	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	1	0	3	2	0
Total Analysis Volume [veh/h]	7	3	0	13	6	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.01	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	7.24	0.00	8.64	8.38
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.02	0.02
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.45	0.45
d_A, Approach Delay [s/veh]	0.00		0.00		8.64	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	1.79					
Intersection LOS	A					

Pacific Emerald 55+ Housing

Vistro File: H:\...\20-038 Pacific Emerald Sr Housing.vistro

Scenario 8 OD + P PM

Report File: H:\...\LOS - 4 OD+P PM.pdf

2022-01-07

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Mountain Ave @ McPherson Rd	Two-way stop	HCM 6th Edition	WB Left	0.083	9.3	A
2	Mountain Ave @ Sunpark Dr / project dwy	Two-way stop	HCM 6th Edition	SB Left	0.027	10.5	B
3	McPherson Rd @ project dwy	Two-way stop	HCM 6th Edition	WB Left	0.004	8.6	A

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Mountain Ave @ McPherson Rd

Control Type:	Two-way stop	Delay (sec / veh):	9.3
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.083

Intersection Setup

Name	Northbound		Southbound		Westbound	
Approach						
Lane Configuration	↷		↶		↵	
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Northbound		Southbound		Westbound	
Base Volume Input [veh/h]	2	48	4	1	52	7
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0900	1.0900	1.0900	1.0900	1.0900	1.0900
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	2	7	3	1	5	5
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	4	59	7	2	62	13
Peak Hour Factor	0.7920	0.7920	0.7920	0.7920	0.7920	0.7920
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	19	2	1	20	4
Total Analysis Volume [veh/h]	5	74	9	3	78	16
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.01	0.00	0.08	0.02
d_M, Delay for Movement [s/veh]	0.00	0.00	7.38	0.00	9.25	8.91
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.02	0.02	0.33	0.33
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.45	0.45	8.19	8.19
d_A, Approach Delay [s/veh]	0.00		5.54		9.20	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	5.03					
Intersection LOS	A					

Intersection Level Of Service Report

Intersection 2: Mountain Ave @ Sunpark Dr / project dwy

Control Type:	Two-way stop	Delay (sec / veh):	10.5
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.027

Intersection Setup

Name	Northbound			Southbound			Eastbound			Westbound		
Approach												
Lane Configuration	+			+			+			+		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	4	0	24	0	0	0	0	47	9	15	48	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0900	1.0900	1.0900	1.0900	1.0900	1.0900	1.0900	1.0900	1.0900	1.0900	1.0900	1.0900
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	14	0	5	7	3	0	0	5	20
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	4	0	26	14	0	5	7	54	10	16	57	20
Peak Hour Factor	0.7660	0.7660	0.7660	0.7660	0.7660	0.7660	0.7660	0.7660	0.7660	0.7660	0.7660	0.7660
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	0	8	5	0	2	2	18	3	5	19	7
Total Analysis Volume [veh/h]	5	0	34	18	0	7	9	70	13	21	74	26
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.03	0.03	0.00	0.01	0.01	0.00	0.00	0.01	0.00	0.00
d_M, Delay for Movement [s/veh]	10.23	10.70	8.82	10.48	10.66	8.88	7.43	0.00	0.00	7.41	0.00	0.00
Movement LOS	B	B	A	B	B	A	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.13	0.13	0.13	0.10	0.10	0.10	0.02	0.02	0.02	0.04	0.04	0.04
95th-Percentile Queue Length [ft/ln]	3.25	3.25	3.25	2.62	2.62	2.62	0.45	0.45	0.45	1.05	1.05	1.05
d_A, Approach Delay [s/veh]	9.00			10.03			0.73			1.29		
Approach LOS	A			B			A			A		
d_I, Intersection Delay [s/veh]	2.98											
Intersection LOS	B											

Intersection Level Of Service Report
Intersection 3: McPherson Rd @ project dwy

Control Type:	Two-way stop	Delay (sec / veh):	8.6
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.004

Intersection Setup

Name	Northbound		Southbound		Westbound	
Approach						
Lane Configuration	└─▶		└─▶		└─▶	
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Northbound		Southbound		Westbound	
Base Volume Input [veh/h]	9	0	0	5	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0900	1.0900	1.0900	1.0900	1.0900	1.0900
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	7	0	0	4	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	10	7	0	5	4	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	2	0	1	1	0
Total Analysis Volume [veh/h]	11	7	0	5	4	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0


Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	7.25	0.00	8.62	8.39
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.01	0.01
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.30	0.30
d_A, Approach Delay [s/veh]	0.00		0.00		8.62	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	1.28					
Intersection LOS	A					

Appendix E

Cumulative Projects Information

North Perris Development Projects



Optimus Building Corporation II
1 million square feet industrial warehouse



Integrus Perris
864,000 square feet industrial warehouse



Optimus Building Corporation
1.4 million square feet industrial warehouse



International Development Industrial
1.7 million square feet industrial warehouse



Richmond American Homes
37 Single Family Residential Homes



Rados Distribution
1.2 million square feet industrial warehouse



Ridge Commerce Center II
2.1 million square feet Industrial warehouse




Oakmont Industrial
1.6 million square feet industrial ware-



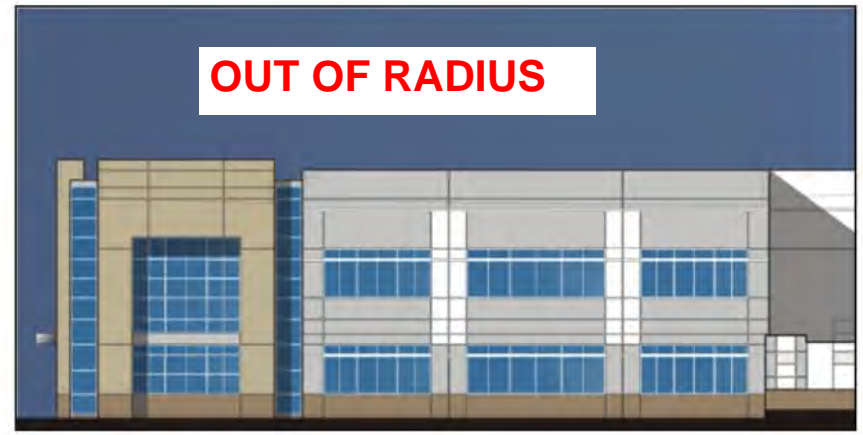
Stratford Ranch Industrial
1.7 million square feet industrial warehouse



Ridge Commerce Center I
1.9 million square feet



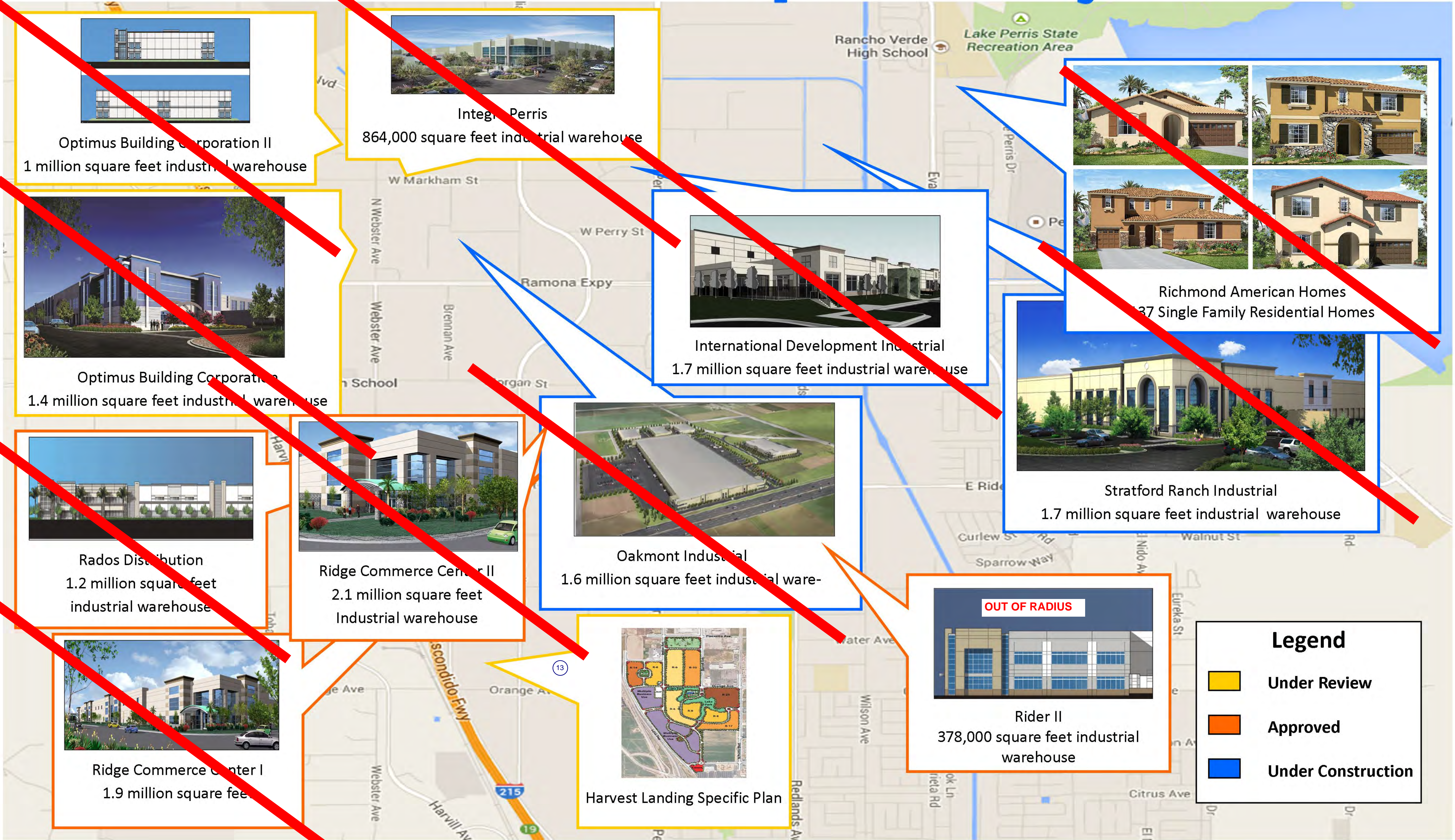
Harvest Landing Specific Plan



OUT OF RADIUS
Rider II
378,000 square feet industrial warehouse

Legend

- Under Review
- Approved
- Under Construction



South Perris Development Projects



Perris Market Place
520,000 square feet retail shopping center



Downtown Metrolink Station



Verano Apartments
40 unit apartment complex



Green Valley Specific Plan



Sequoia
223 Single Family Homes



Cabrillo
184 Single Family Homes



Perris Family Apartments
75 Unit apartment complex





Avelina
492 Single Family Homes



Lewis Retail Center
643,000 square feet retail shopping center



South Perris Metrolink Station

Legend	
	Under Review
	Approved
	Under Construction

OUT OF RADIUS

0 1,000 2,000 4,000 Feet

CUP200018

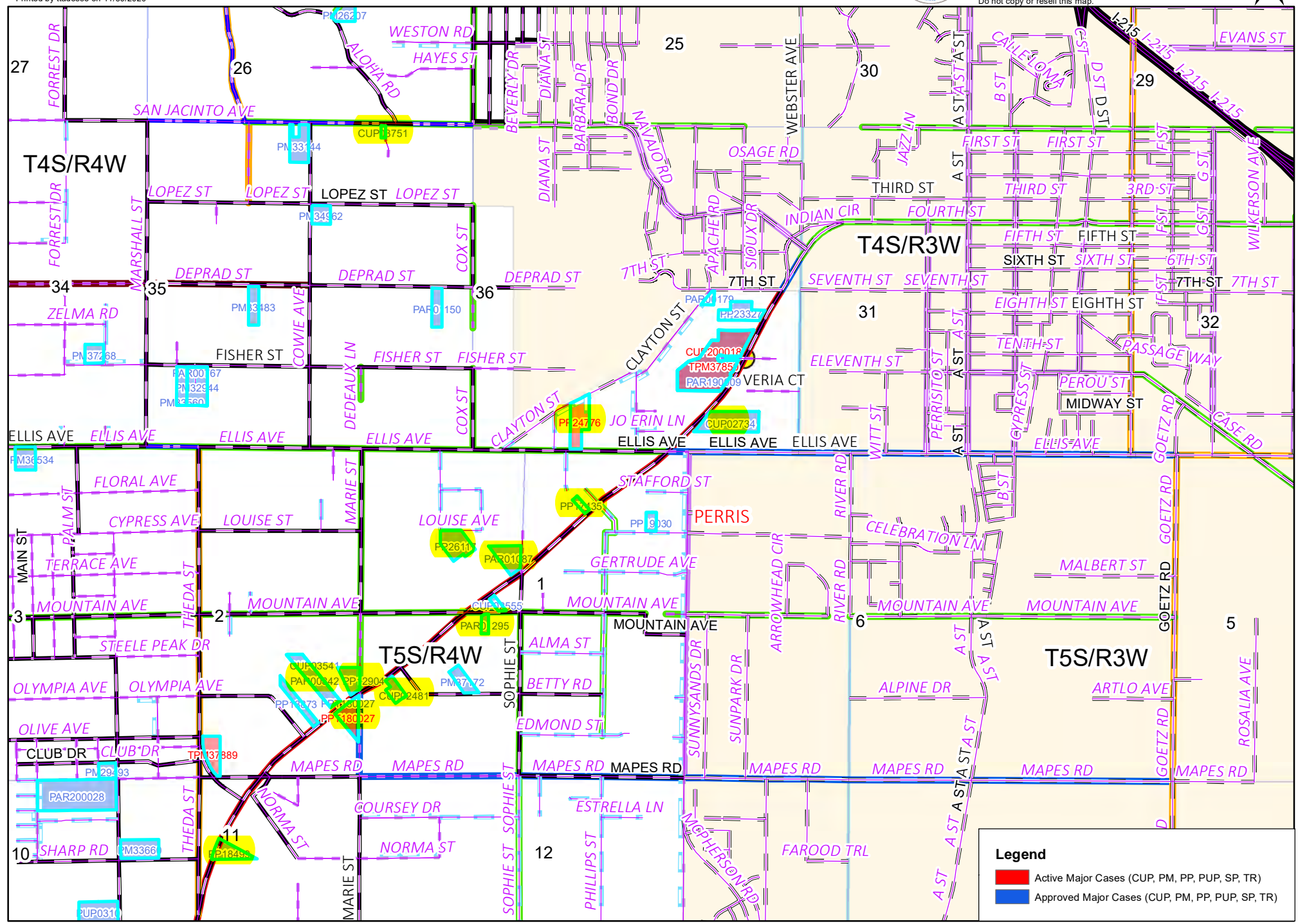
INTERSECTION OF DOCKERY LN AND HIGHWAY 74



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Legend

- Active Major Cases (CUP, PM, PP, PUP, SP, TR)
- Approved Major Cases (CUP, PM, PP, PUP, SP, TR)

Active Cases as of 11/30/2020

<u>CASE NAME</u>	<u>STATUS</u>	<u>APPLIED DATE</u>	<u>APPROVAL DATE</u>	<u>EXPIRED DATE</u>
CUP200018	ASSIGNED	7/20/2020		
REF. CASE NO. PAR190009 - DEVELOP GAS STATION, 3 RESTAURANT SPACES, CARWASH AND 2 RETAIL Project Site				
PP24776	LDC REVIEW	11/15/2010		
CHURCH WITH TWO 3,200 SF BLDGS W/SANCTUARY/OFFICE AND CLASSROOMS 2				
PPT180027	PEND CORRECT	10/26/2018		
CONTRACTOR STORAGE YARD				
TPM37850	ASSIGNED	7/20/2020		
REF. CASE NO. PAR190009 - DEVELOP GAS STATION, 3 RESTAURANT SPACES, CARWASH AND 2 RETAIL Project Site				
TPM37889	ASSIGNED	10/13/2020		
PARCEL MAP SUBDIVISION INTO 3 LOTS				

Approved Cases as of 11/30/2020

CASE NAME	STATUS	APPLIED DATE	APPROVAL DATE	EXPIRED DATE
CUP02481	APPROVED	12/26/2000		5/31/2086 7
USED CAR SALES AND EQUIPMENT RENTAL				
CUP02555	APPROVED	12/26/2000		
CUP02734	APPROVED	12/22/2000		10/29/2018 1
AUTOMOBILE TOWING, STORAGE AND DISMANTLING YARD				
CUP03541	APPROVED	12/15/2006		3/4/2012 9
CONSTRUCT TRAILER AND BOAT STORAGE FACILITY				
CUP03751	APPROVED	7/6/2016		12
CUP FOR ABC LICENSING AND CONVENIENCE STORE				
PAR00179	APPROVED	10/28/1996		1/17/1999
ESTABLISH CHURCH IN EXISTING COMMERCIAL BUILDING				
PAR00767	APPROVED	8/22/2005		
EPD REVIEW FOR BURROWING OWL (PM32944)				
PAR00842	APPROVED	1/12/2006		9
RV & BOAT STORAGE FACILITY				
PAR01087	APPROVED	4/13/2007		11/16/2009 4
RECYCLING CENTER WITH COVERED STORAGE AREA				
PAR01150	APPROVED	8/21/2007		11/2/2010
DIVIDE LOT INTO 3 PARCELS				
PAR01295	APPROVED	11/8/2010		12/23/2012 6
PRE APPLICATION REVIEW TO IDENTIFY THE REQUIRED STUDIES, IMPROVEMENTS, MITIGATION, AND POTENTIAL COSTS OF ESTABLISHING AN 11,040 SQUARE FOOT CHURCH WITH ASSOCIATED OFFICES, RESTROOMS AND PARKING.				
PAR190009	APPROVED	3/6/2019		
<p>PRE-APPLICATION REVIEW (PAR) OF A HORIZONTAL MIXED-USE DEVELOPMENT ON A 15.6 ACRE SITE. THE DEVELOPMENT HAS BEEN DESIGNED WITH THE COMMERCIAL/RETAIL COMPONENT FRONTING HIGHWAY 74, AND A GATED, MULTI-FAMILY COMPONENT, DIRECTLY WEST OF THE COMMERCIAL/RETAIL, AT THE TERMINUS OF DOCKERY LANE. THE PROPOSED COMMERCIAL/RETAIL PORTION INCLUDES: 19,638 SQUARE FEET OF RETAIL (TWO BUILDINGS), 14,200 SQUARE FEET OF DRIVE-THRU RESTAURANTS (THREE BUILDINGS), AND A 5,775 SQUARE FOOT CONVENIENCE STORE WITH A DRIVE-THRU CAR WASH AND A GAS STATION CANOPY WITH 20 VEHICLE FUELING STALLS. THE PROPOSED RESIDENTIAL PORTION CONSIST OF A 153 UNIT (1-3 BEDROOM UNITS) MULTI-FAMILY RESIDENTIAL DEVELOPMENT CONSISTING OF 14, 2-STORY BUILDINGS. THE MULTI-FAMILY RESIDENTIAL DEVELOPMENT ALSO INCLUDES A PROPOSAL FOR A SWIMMING POOL AND A 3,600 SQUARE FOOT RECREATION BUILDING. PARKING PROVIDED FOR THE PROPOSED DEVELOPMENT TOTALS 518 PARKING SPACES, INCLUDING PRIVATE PARKING STALLS/GARAGES FOR THE PROPOSED RESIDENCE.</p>				
PAR200028	APPROVED	6/12/2020		
PAR FOR A PROPOSED CZ FROM RR TO A-1				
PM26207	APPROVED	7/24/1990		10/29/1997
DIVIDE APPROX 3.3 ACRES INTO 4 LOTS DIVIDE 3.3 ACRES INTO 4 LOTS EA 35367				
PM29493	APPROVED	10/11/2001		5/18/2007
SUBDIVIDE 1.51 ACRES INTO 2 PARCELS.				
PM32944	APPROVED	10/25/2005		5/1/2010
SCHD H DIVISION OF 5.0 AC 4 1-AC PARCELS.				
PM33144	APPROVED	6/19/2006		12/1/2015
DIVIDE 5AC INTO 4 ONE ACRE LOTS				

Project Site

Approved Cases as of 11/30/2020

<u>CASE NAME</u>	<u>STATUS</u>	<u>APPLIED DATE</u>	<u>APPROVAL DATE</u>	<u>EXPIRED DATE</u>
PM33483	APPROVED	11/28/2005		8/27/2013
CASE DESCRIPTION SCH H DIVISION OF 2.5 AC. PARCEL INTO TWO PARCEL				
PM33560	APPROVED	5/10/2007		3/24/2015
SCH E DIVISION OF 2.49 A INTO 2 LOTS.				
PM33660	APPROVED	7/26/2006		3/25/2013
4 PARCEL SUBDIVION SCHEDULE H				
PM34962	APPROVED	10/16/2007		3/22/2015
SCH H PM 2.05 AC INTO 2 RES LOTS				
PM36534	APPROVED	2/13/2013		7/22/2016
SCHEDULE H SUBDIVISION OF 2.9 GROSS ACRES INTO 2 R ESIDENTIAL PARCELS WITH EACH PARCEL BEING 1.3 ACRE S, AND WITH ONE PROPOSED PARCEL ENCOMPASSING AN EX ISTING SINGLE FAMILY RESIDENCE AND THE OTHER PROPO SED PARCEL ENCOMPASSING AN EXISTING GUEST DWELLING UNIT				
PM37172	APPROVED	3/24/2017		
SCHEDULE "H" SUBDIVISION OF 2.23 ACRES INTO 2 PARCELS				
PM37268	APPROVED	11/30/2016		8/20/2021
TENTATIVE PARCEL MAP NO. 37268 IS A SCHEDULE H SUBDIVISION OF 2.06 ACRES INTO TWO (2) RESIDENTIAL PARCELS WITH PARCEL 1 BEING 1.0 ACRES AND PARCEL 2 BEING 1.06 ACRES (?PROJECT?).				
PP12904	APPROVED	7/23/1991		6/4/1998
TRUCK REPAIR SHOP & TRUCK SALES TRUCK REPAIR SHOP AND TRUCK SALES EA 35994, CZ 6067 N/A				
PP17435	APPROVED	10/25/2001		3
PLOT PLAN FOR AUTO SALES/SMOG CHECK STATION				
PP18499	APPROVED	3/11/2003		11
PROPOSED 4800 SF SERVICE GARAGE & OFFICE				
PP18873	APPROVED	9/10/2003		12/1/2005
RELOCATE EXST. MARKET DUE TO HWY 74 EXPANSION				
PP19030	APPROVED	11/26/2003		7/21/2006
ADD 10 FT TO EXISTING CELL TOWER AND CO-LOCATION				
PP23327	APPROVED	3/5/2008		
TO LEGALIZE FEED AND GRAIN SALES				
PP26117	APPROVED	10/6/2016		5
GRAVEL AND HARDSCAPE MATERIAL STORAGE YARD				
PPT180027	PEND CORRECT	10/26/2018		10
CONTRACTOR STORAGE YARD				
PUP0310	APPROVED	8/7/2000		

Appendix F

Traffic Signal Warrants Worksheets

Signal Warrants Report For Intersection 1: Mountain Ave @ McPherson Rd

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	S, N
Minor Approaches	E
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	S	N	E
1	155	18	145
2	150	17	141
3	147	17	138
4	138	16	129
5	122	14	115
6	121	14	113
7	119	14	112
8	109	13	102
9	107	12	100
10	105	12	99
11	91	11	86
12	85	10	80
13	84	10	78
14	62	7	58
15	62	7	58
16	43	5	41
17	25	3	23
18	25	3	23
19	14	2	13
20	8	1	7
21	5	1	4
22	2	0	1
23	2	0	1
24	2	0	1

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3 Condition B
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		
1	1	173	1	145	No	No	No	No	No	No	No	No	No	No
2	1	167	1	141	No	No	No	No	No	No	No	No	No	No
3	1	164	1	138	No	No	No	No	No	No	No	No	No	No
4	1	154	1	129	No	No	No	No	No	No	No	No	No	No
5	1	136	1	115	No	No	No	No	No	No	No	No	No	No
6	1	135	1	113	No	No	No	No	No	No	No	No	No	No
7	1	133	1	112	No	No	No	No	No	No	No	No	No	No
8	1	122	1	102	No	No	No	No	No	No	No	No	No	No
9	1	119	1	100	No	No	No	No	No	No	No	No	No	No
10	1	117	1	99	No	No	No	No	No	No	No	No	No	No
11	1	102	1	86	No	No	No	No	No	No	No	No	No	No
12	1	95	1	80	No	No	No	No	No	No	No	No	No	No
13	1	94	1	78	No	No	No	No	No	No	No	No	No	No
14	1	69	1	58	No	No	No	No	No	No	No	No	No	No
15	1	69	1	58	No	No	No	No	No	No	No	No	No	No
16	1	48	1	41	No	No	No	No	No	No	No	No	No	No
17	1	28	1	23	No	No	No	No	No	No	No	No	No	No
18	1	28	1	23	No	No	No	No	No	No	No	No	No	No
19	1	16	1	13	No	No	No	No	No	No	No	No	No	No
20	1	9	1	7	No	No	No	No	No	No	No	No	No	No
21	1	6	1	4	No	No	No	No	No	No	No	No	No	No
22	1	2	1	1	No	No	No	No	No	No	No	No	No	No
23	1	2	1	1	No	No	No	No	No	No	No	No	No	No
24	1	2	1	1	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	0	0	0

Warrant 3 Condition A

Orientation	E
Total Stopped Delay Per Vehicle on Minor Approach (s)	12.2
Number of Lanes on Minor Street Approach	1
VehicleHours of Stopped Delay on Minor Approach ([h]:mm)	0:29
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	145
High Minor Volume Condition Met	Yes
Total Entering Volume on All Approaches During Same Hour	318
Number of Approaches on Intersection	3
Total Volume Condition Met	No
Warrant Met for Approach	No
Warrant Met for Intersection	No

Signal Warrants Report For Intersection 2: Mountain Ave @ Sunpark Dr / project dwy

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	E, W
Minor Approaches	S, N
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets	
	E	W	S	N
1	161	178	28	24
2	156	173	27	23
3	153	169	27	23
4	143	158	25	21
5	127	141	22	19
6	126	139	22	19
7	124	137	22	18
8	113	125	20	17
9	111	123	19	17
10	109	121	19	16
11	95	105	17	14
12	89	98	15	13
13	87	96	15	13
14	64	71	11	10
15	64	71	11	10
16	45	50	8	7
17	26	28	4	4
18	26	28	4	4
19	14	16	3	2
20	8	9	1	1
21	5	5	1	1
22	2	2	0	0
23	2	2	0	0
24	2	2	0	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3 Condition B
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		
1	1	339	1	28	No	No	No	No	No	No	No	No	No	No
2	1	329	1	27	No	No	No	No	No	No	No	No	No	No
3	1	322	1	27	No	No	No	No	No	No	No	No	No	No
4	1	301	1	25	No	No	No	No	No	No	No	No	No	No
5	1	268	1	22	No	No	No	No	No	No	No	No	No	No
6	1	265	1	22	No	No	No	No	No	No	No	No	No	No
7	1	261	1	22	No	No	No	No	No	No	No	No	No	No
8	1	238	1	20	No	No	No	No	No	No	No	No	No	No
9	1	234	1	19	No	No	No	No	No	No	No	No	No	No
10	1	230	1	19	No	No	No	No	No	No	No	No	No	No
11	1	200	1	17	No	No	No	No	No	No	No	No	No	No
12	1	187	1	15	No	No	No	No	No	No	No	No	No	No
13	1	183	1	15	No	No	No	No	No	No	No	No	No	No
14	1	135	1	11	No	No	No	No	No	No	No	No	No	No
15	1	135	1	11	No	No	No	No	No	No	No	No	No	No
16	1	95	1	8	No	No	No	No	No	No	No	No	No	No
17	1	54	1	4	No	No	No	No	No	No	No	No	No	No
18	1	54	1	4	No	No	No	No	No	No	No	No	No	No
19	1	30	1	3	No	No	No	No	No	No	No	No	No	No
20	1	17	1	1	No	No	No	No	No	No	No	No	No	No
21	1	10	1	1	No	No	No	No	No	No	No	No	No	No
22	1	4	1	0	No	No	No	No	No	No	No	No	No	No
23	1	4	1	0	No	No	No	No	No	No	No	No	No	No
24	1	4	1	0	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	0	0	0

Warrant 3 Condition A

Orientation	S	N
Total Stopped Delay Per Vehicle on Minor Approach (s)	11.5	14.5
Number of Lanes on Minor Street Approach	1	1
VehicleHours of Stopped Delay on Minor Approach ([h]:mm)	0:05	0:05
Delay Condition Met	No	No
Volume on Minor Street Approach During Same Hour	28	24
High Minor Volume Condition Met	No	No
Total Entering Volume on All Approaches During Same Hour	391	391
Number of Approaches on Intersection	4	4
Total Volume Condition Met	No	No
Warrant Met for Approach	No	No
Warrant Met for Intersection	No	

Signal Warrants Report For Intersection 3: McPherson Rd @ project dwy

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	S, N
Minor Approaches	E
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	S	N	E
1	9	11	6
2	9	11	6
3	9	10	6
4	8	10	5
5	7	9	5
6	7	9	5
7	7	8	5
8	6	8	4
9	6	8	4
10	6	7	4
11	5	6	4
12	5	6	3
13	5	6	3
14	4	4	2
15	4	4	2
16	3	3	2
17	1	2	1
18	1	2	1
19	1	1	1
20	0	1	0
21	0	0	0
22	0	0	0
23	0	0	0
24	0	0	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3 Condition B
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		
1	1	20	1	6	No	No	No	No	No	No	No	No	No	No
2	1	20	1	6	No	No	No	No	No	No	No	No	No	No
3	1	19	1	6	No	No	No	No	No	No	No	No	No	No
4	1	18	1	5	No	No	No	No	No	No	No	No	No	No
5	1	16	1	5	No	No	No	No	No	No	No	No	No	No
6	1	16	1	5	No	No	No	No	No	No	No	No	No	No
7	1	15	1	5	No	No	No	No	No	No	No	No	No	No
8	1	14	1	4	No	No	No	No	No	No	No	No	No	No
9	1	14	1	4	No	No	No	No	No	No	No	No	No	No
10	1	13	1	4	No	No	No	No	No	No	No	No	No	No
11	1	11	1	4	No	No	No	No	No	No	No	No	No	No
12	1	11	1	3	No	No	No	No	No	No	No	No	No	No
13	1	11	1	3	No	No	No	No	No	No	No	No	No	No
14	1	8	1	2	No	No	No	No	No	No	No	No	No	No
15	1	8	1	2	No	No	No	No	No	No	No	No	No	No
16	1	6	1	2	No	No	No	No	No	No	No	No	No	No
17	1	3	1	1	No	No	No	No	No	No	No	No	No	No
18	1	3	1	1	No	No	No	No	No	No	No	No	No	No
19	1	2	1	1	No	No	No	No	No	No	No	No	No	No
20	1	1	1	0	No	No	No	No	No	No	No	No	No	No
21	1	0	1	0	No	No	No	No	No	No	No	No	No	No
22	1	0	1	0	No	No	No	No	No	No	No	No	No	No
23	1	0	1	0	No	No	No	No	No	No	No	No	No	No
24	1	0	1	0	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	0	0	0

Warrant 3 Condition A

Orientation	E
Total Stopped Delay Per Vehicle on Minor Approach (s)	8.6
Number of Lanes on Minor Street Approach	1
VehicleHours of Stopped Delay on Minor Approach ([h]:mm)	0:00
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	6
High Minor Volume Condition Met	No
Total Entering Volume on All Approaches During Same Hour	26
Number of Approaches on Intersection	3
Total Volume Condition Met	No
Warrant Met for Approach	No
Warrant Met for Intersection	No

Signal Warrants Report For Intersection 1: Mountain Ave @ McPherson Rd

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	S, N
Minor Approaches	E
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	S	N	E
1	59	9	69
2	57	9	67
3	56	9	66
4	53	8	61
5	47	7	55
6	46	7	54
7	45	7	53
8	41	6	48
9	41	6	48
10	40	6	47
11	35	5	41
12	32	5	38
13	32	5	37
14	24	4	28
15	24	4	28
16	17	3	19
17	9	1	11
18	9	1	11
19	5	1	6
20	3	0	3
21	2	0	2
22	1	0	1
23	1	0	1
24	1	0	1

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3 Condition B
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		
1	1	68	1	69	No	No	No	No	No	No	No	No	No	No
2	1	66	1	67	No	No	No	No	No	No	No	No	No	No
3	1	65	1	66	No	No	No	No	No	No	No	No	No	No
4	1	61	1	61	No	No	No	No	No	No	No	No	No	No
5	1	54	1	55	No	No	No	No	No	No	No	No	No	No
6	1	53	1	54	No	No	No	No	No	No	No	No	No	No
7	1	52	1	53	No	No	No	No	No	No	No	No	No	No
8	1	47	1	48	No	No	No	No	No	No	No	No	No	No
9	1	47	1	48	No	No	No	No	No	No	No	No	No	No
10	1	46	1	47	No	No	No	No	No	No	No	No	No	No
11	1	40	1	41	No	No	No	No	No	No	No	No	No	No
12	1	37	1	38	No	No	No	No	No	No	No	No	No	No
13	1	37	1	37	No	No	No	No	No	No	No	No	No	No
14	1	28	1	28	No	No	No	No	No	No	No	No	No	No
15	1	28	1	28	No	No	No	No	No	No	No	No	No	No
16	1	20	1	19	No	No	No	No	No	No	No	No	No	No
17	1	10	1	11	No	No	No	No	No	No	No	No	No	No
18	1	10	1	11	No	No	No	No	No	No	No	No	No	No
19	1	6	1	6	No	No	No	No	No	No	No	No	No	No
20	1	3	1	3	No	No	No	No	No	No	No	No	No	No
21	1	2	1	2	No	No	No	No	No	No	No	No	No	No
22	1	1	1	1	No	No	No	No	No	No	No	No	No	No
23	1	1	1	1	No	No	No	No	No	No	No	No	No	No
24	1	1	1	1	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	0	0	0

Warrant 3 Condition A

Orientation	E
Total Stopped Delay Per Vehicle on Minor Approach (s)	9.1
Number of Lanes on Minor Street Approach	1
VehicleHours of Stopped Delay on Minor Approach ([h]:mm)	0:10
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	69
High Minor Volume Condition Met	No
Total Entering Volume on All Approaches During Same Hour	137
Number of Approaches on Intersection	3
Total Volume Condition Met	No
Warrant Met for Approach	No
Warrant Met for Intersection	No

Signal Warrants Report For Intersection 2: Mountain Ave @ Sunpark Dr / project dwy

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	E, W
Minor Approaches	S, N
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets	
	E	W	S	N
1	88	66	28	19
2	85	64	27	18
3	84	63	27	18
4	78	59	25	17
5	70	52	22	15
6	69	51	22	15
7	68	51	22	15
8	62	46	20	13
9	61	46	19	13
10	60	45	19	13
11	52	39	17	11
12	48	36	15	10
13	48	36	15	10
14	35	26	11	8
15	35	26	11	8
16	25	18	8	5
17	14	11	4	3
18	14	11	4	3
19	8	6	3	2
20	4	3	1	1
21	3	2	1	1
22	1	1	0	0
23	1	1	0	0
24	1	1	0	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3 Condition B
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		
1	1	154	1	28	No	No	No	No	No	No	No	No	No	No
2	1	149	1	27	No	No	No	No	No	No	No	No	No	No
3	1	147	1	27	No	No	No	No	No	No	No	No	No	No
4	1	137	1	25	No	No	No	No	No	No	No	No	No	No
5	1	122	1	22	No	No	No	No	No	No	No	No	No	No
6	1	120	1	22	No	No	No	No	No	No	No	No	No	No
7	1	119	1	22	No	No	No	No	No	No	No	No	No	No
8	1	108	1	20	No	No	No	No	No	No	No	No	No	No
9	1	107	1	19	No	No	No	No	No	No	No	No	No	No
10	1	105	1	19	No	No	No	No	No	No	No	No	No	No
11	1	91	1	17	No	No	No	No	No	No	No	No	No	No
12	1	84	1	15	No	No	No	No	No	No	No	No	No	No
13	1	84	1	15	No	No	No	No	No	No	No	No	No	No
14	1	61	1	11	No	No	No	No	No	No	No	No	No	No
15	1	61	1	11	No	No	No	No	No	No	No	No	No	No
16	1	43	1	8	No	No	No	No	No	No	No	No	No	No
17	1	25	1	4	No	No	No	No	No	No	No	No	No	No
18	1	25	1	4	No	No	No	No	No	No	No	No	No	No
19	1	14	1	3	No	No	No	No	No	No	No	No	No	No
20	1	7	1	1	No	No	No	No	No	No	No	No	No	No
21	1	5	1	1	No	No	No	No	No	No	No	No	No	No
22	1	2	1	0	No	No	No	No	No	No	No	No	No	No
23	1	2	1	0	No	No	No	No	No	No	No	No	No	No
24	1	2	1	0	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	0	0	0

Warrant 3 Condition A

Orientation	S	N
Total Stopped Delay Per Vehicle on Minor Approach (s)	9	9.9
Number of Lanes on Minor Street Approach	1	1
VehicleHours of Stopped Delay on Minor Approach ([h]:mm)	0:04	0:03
Delay Condition Met	No	No
Volume on Minor Street Approach During Same Hour	28	19
High Minor Volume Condition Met	No	No
Total Entering Volume on All Approaches During Same Hour	201	201
Number of Approaches on Intersection	4	4
Total Volume Condition Met	No	No
Warrant Met for Approach	No	No
Warrant Met for Intersection	No	

Signal Warrants Report For Intersection 3: McPherson Rd @ project dwy

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	S, N
Minor Approaches	E
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	S	N	E
1	16	5	4
2	16	5	4
3	15	5	4
4	14	4	4
5	13	4	3
6	12	4	3
7	12	4	3
8	11	4	3
9	11	3	3
10	11	3	3
11	9	3	2
12	9	3	2
13	9	3	2
14	6	2	2
15	6	2	2
16	4	1	1
17	3	1	1
18	3	1	1
19	1	0	0
20	1	0	0
21	0	0	0
22	0	0	0
23	0	0	0
24	0	0	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3 Condition B
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		
1	1	21	1	4	No	No	No	No	No	No	No	No	No	No
2	1	21	1	4	No	No	No	No	No	No	No	No	No	No
3	1	20	1	4	No	No	No	No	No	No	No	No	No	No
4	1	18	1	4	No	No	No	No	No	No	No	No	No	No
5	1	17	1	3	No	No	No	No	No	No	No	No	No	No
6	1	16	1	3	No	No	No	No	No	No	No	No	No	No
7	1	16	1	3	No	No	No	No	No	No	No	No	No	No
8	1	15	1	3	No	No	No	No	No	No	No	No	No	No
9	1	14	1	3	No	No	No	No	No	No	No	No	No	No
10	1	14	1	3	No	No	No	No	No	No	No	No	No	No
11	1	12	1	2	No	No	No	No	No	No	No	No	No	No
12	1	12	1	2	No	No	No	No	No	No	No	No	No	No
13	1	12	1	2	No	No	No	No	No	No	No	No	No	No
14	1	8	1	2	No	No	No	No	No	No	No	No	No	No
15	1	8	1	2	No	No	No	No	No	No	No	No	No	No
16	1	5	1	1	No	No	No	No	No	No	No	No	No	No
17	1	4	1	1	No	No	No	No	No	No	No	No	No	No
18	1	4	1	1	No	No	No	No	No	No	No	No	No	No
19	1	1	1	0	No	No	No	No	No	No	No	No	No	No
20	1	1	1	0	No	No	No	No	No	No	No	No	No	No
21	1	0	1	0	No	No	No	No	No	No	No	No	No	No
22	1	0	1	0	No	No	No	No	No	No	No	No	No	No
23	1	0	1	0	No	No	No	No	No	No	No	No	No	No
24	1	0	1	0	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	0	0	0

Warrant 3 Condition A

Orientation	E
Total Stopped Delay Per Vehicle on Minor Approach (s)	8.6
Number of Lanes on Minor Street Approach	1
VehicleHours of Stopped Delay on Minor Approach ([h]:mm)	0:00
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	4
High Minor Volume Condition Met	No
Total Entering Volume on All Approaches During Same Hour	25
Number of Approaches on Intersection	3
Total Volume Condition Met	No
Warrant Met for Approach	No
Warrant Met for Intersection	No

Signal Warrants Report For Intersection 1: Mountain Ave @ McPherson Rd

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	S, N
Minor Approaches	E
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	S	N	E
1	169	19	158
2	164	18	153
3	161	18	150
4	150	17	141
5	134	15	125
6	132	15	123
7	130	15	122
8	118	13	111
9	117	13	109
10	115	13	107
11	100	11	93
12	93	10	87
13	91	10	85
14	68	8	63
15	68	8	63
16	47	5	44
17	27	3	25
18	27	3	25
19	15	2	14
20	8	1	8
21	5	1	5
22	2	0	2
23	2	0	2
24	2	0	2

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3 Condition B
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		
1	1	188	1	158	No	No	No	No	No	No	No	No	No	No
2	1	182	1	153	No	No	No	No	No	No	No	No	No	No
3	1	179	1	150	No	No	No	No	No	No	No	No	No	No
4	1	167	1	141	No	No	No	No	No	No	No	No	No	No
5	1	149	1	125	No	No	No	No	No	No	No	No	No	No
6	1	147	1	123	No	No	No	No	No	No	No	No	No	No
7	1	145	1	122	No	No	No	No	No	No	No	No	No	No
8	1	131	1	111	No	No	No	No	No	No	No	No	No	No
9	1	130	1	109	No	No	No	No	No	No	No	No	No	No
10	1	128	1	107	No	No	No	No	No	No	No	No	No	No
11	1	111	1	93	No	No	No	No	No	No	No	No	No	No
12	1	103	1	87	No	No	No	No	No	No	No	No	No	No
13	1	101	1	85	No	No	No	No	No	No	No	No	No	No
14	1	76	1	63	No	No	No	No	No	No	No	No	No	No
15	1	76	1	63	No	No	No	No	No	No	No	No	No	No
16	1	52	1	44	No	No	No	No	No	No	No	No	No	No
17	1	30	1	25	No	No	No	No	No	No	No	No	No	No
18	1	30	1	25	No	No	No	No	No	No	No	No	No	No
19	1	17	1	14	No	No	No	No	No	No	No	No	No	No
20	1	9	1	8	No	No	No	No	No	No	No	No	No	No
21	1	6	1	5	No	No	No	No	No	No	No	No	No	No
22	1	2	1	2	No	No	No	No	No	No	No	No	No	No
23	1	2	1	2	No	No	No	No	No	No	No	No	No	No
24	1	2	1	2	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	0	0	0

Warrant 3 Condition A

Orientation	E
Total Stopped Delay Per Vehicle on Minor Approach (s)	12.9
Number of Lanes on Minor Street Approach	1
VehicleHours of Stopped Delay on Minor Approach ([h]:mm)	0:33
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	158
High Minor Volume Condition Met	Yes
Total Entering Volume on All Approaches During Same Hour	346
Number of Approaches on Intersection	3
Total Volume Condition Met	No
Warrant Met for Approach	No
Warrant Met for Intersection	No

Signal Warrants Report For Intersection 2: Mountain Ave @ Sunpark Dr / project dwy

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	S, N
Minor Approaches	E, W
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets	
	S	N	E	W
1	31	24	174	193
2	30	23	169	187
3	29	23	165	183
4	28	21	155	172
5	24	19	137	152
6	24	19	136	151
7	24	18	134	149
8	22	17	122	135
9	21	17	120	133
10	21	16	118	131
11	18	14	103	114
12	17	13	96	106
13	17	13	94	104
14	12	10	70	77
15	12	10	70	77
16	9	7	49	54
17	5	4	28	31
18	5	4	28	31
19	3	2	16	17
20	2	1	9	10
21	1	1	5	6
22	0	0	2	2
23	0	0	2	2
24	0	0	2	2

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3 Condition B
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		
1	1	55	1	193	No	No	No	No	No	No	No	No	No	No
2	1	53	1	187	No	No	No	No	No	No	No	No	No	No
3	1	52	1	183	No	No	No	No	No	No	No	No	No	No
4	1	49	1	172	No	No	No	No	No	No	No	No	No	No
5	1	43	1	152	No	No	No	No	No	No	No	No	No	No
6	1	43	1	151	No	No	No	No	No	No	No	No	No	No
7	1	42	1	149	No	No	No	No	No	No	No	No	No	No
8	1	39	1	135	No	No	No	No	No	No	No	No	No	No
9	1	38	1	133	No	No	No	No	No	No	No	No	No	No
10	1	37	1	131	No	No	No	No	No	No	No	No	No	No
11	1	32	1	114	No	No	No	No	No	No	No	No	No	No
12	1	30	1	106	No	No	No	No	No	No	No	No	No	No
13	1	30	1	104	No	No	No	No	No	No	No	No	No	No
14	1	22	1	77	No	No	No	No	No	No	No	No	No	No
15	1	22	1	77	No	No	No	No	No	No	No	No	No	No
16	1	16	1	54	No	No	No	No	No	No	No	No	No	No
17	1	9	1	31	No	No	No	No	No	No	No	No	No	No
18	1	9	1	31	No	No	No	No	No	No	No	No	No	No
19	1	5	1	17	No	No	No	No	No	No	No	No	No	No
20	1	3	1	10	No	No	No	No	No	No	No	No	No	No
21	1	2	1	6	No	No	No	No	No	No	No	No	No	No
22	1	0	1	2	No	No	No	No	No	No	No	No	No	No
23	1	0	1	2	No	No	No	No	No	No	No	No	No	No
24	1	0	1	2	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	0	0	0

Warrant 3 Condition A

Orientation	E	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	13.9	14.3
Number of Lanes on Minor Street Approach	1	1
VehicleHours of Stopped Delay on Minor Approach ([h]:mm)	0:40	0:45
Delay Condition Met	No	No
Volume on Minor Street Approach During Same Hour	174	193
High Minor Volume Condition Met	Yes	Yes
Total Entering Volume on All Approaches During Same Hour	422	422
Number of Approaches on Intersection	4	4
Total Volume Condition Met	No	No
Warrant Met for Approach	No	No
Warrant Met for Intersection	No	

Signal Warrants Report For Intersection 3: McPherson Rd @ project dwy

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	S, N
Minor Approaches	E
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	S	N	E
1	10	12	6
2	10	12	6
3	10	11	6
4	9	11	5
5	8	9	5
6	8	9	5
7	8	9	5
8	7	8	4
9	7	8	4
10	7	8	4
11	6	7	4
12	6	7	3
13	5	6	3
14	4	5	2
15	4	5	2
16	3	3	2
17	2	2	1
18	2	2	1
19	1	1	1
20	1	1	0
21	0	0	0
22	0	0	0
23	0	0	0
24	0	0	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3 Condition B
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		
1	1	22	1	6	No	No	No	No	No	No	No	No	No	No
2	1	22	1	6	No	No	No	No	No	No	No	No	No	No
3	1	21	1	6	No	No	No	No	No	No	No	No	No	No
4	1	20	1	5	No	No	No	No	No	No	No	No	No	No
5	1	17	1	5	No	No	No	No	No	No	No	No	No	No
6	1	17	1	5	No	No	No	No	No	No	No	No	No	No
7	1	17	1	5	No	No	No	No	No	No	No	No	No	No
8	1	15	1	4	No	No	No	No	No	No	No	No	No	No
9	1	15	1	4	No	No	No	No	No	No	No	No	No	No
10	1	15	1	4	No	No	No	No	No	No	No	No	No	No
11	1	13	1	4	No	No	No	No	No	No	No	No	No	No
12	1	13	1	3	No	No	No	No	No	No	No	No	No	No
13	1	11	1	3	No	No	No	No	No	No	No	No	No	No
14	1	9	1	2	No	No	No	No	No	No	No	No	No	No
15	1	9	1	2	No	No	No	No	No	No	No	No	No	No
16	1	6	1	2	No	No	No	No	No	No	No	No	No	No
17	1	4	1	1	No	No	No	No	No	No	No	No	No	No
18	1	4	1	1	No	No	No	No	No	No	No	No	No	No
19	1	2	1	1	No	No	No	No	No	No	No	No	No	No
20	1	2	1	0	No	No	No	No	No	No	No	No	No	No
21	1	0	1	0	No	No	No	No	No	No	No	No	No	No
22	1	0	1	0	No	No	No	No	No	No	No	No	No	No
23	1	0	1	0	No	No	No	No	No	No	No	No	No	No
24	1	0	1	0	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	0	0	0

Warrant 3 Condition A

Orientation	E
Total Stopped Delay Per Vehicle on Minor Approach (s)	8.6
Number of Lanes on Minor Street Approach	1
VehicleHours of Stopped Delay on Minor Approach ([h]:mm)	0:00
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	6
High Minor Volume Condition Met	No
Total Entering Volume on All Approaches During Same Hour	28
Number of Approaches on Intersection	3
Total Volume Condition Met	No
Warrant Met for Approach	No
Warrant Met for Intersection	No

Signal Warrants Report For Intersection 1: Mountain Ave @ McPherson Rd

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	S, N
Minor Approaches	E
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	S	N	E
1	63	9	75
2	61	9	73
3	60	9	71
4	56	8	67
5	50	7	59
6	49	7	59
7	49	7	58
8	44	6	53
9	43	6	52
10	43	6	51
11	37	5	44
12	35	5	41
13	34	5	41
14	25	4	30
15	25	4	30
16	18	3	21
17	10	1	12
18	10	1	12
19	6	1	7
20	3	0	4
21	2	0	2
22	1	0	1
23	1	0	1
24	1	0	1

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3 Condition B
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		
1	1	72	1	75	No	No	No	No	No	No	No	No	No	No
2	1	70	1	73	No	No	No	No	No	No	No	No	No	No
3	1	69	1	71	No	No	No	No	No	No	No	No	No	No
4	1	64	1	67	No	No	No	No	No	No	No	No	No	No
5	1	57	1	59	No	No	No	No	No	No	No	No	No	No
6	1	56	1	59	No	No	No	No	No	No	No	No	No	No
7	1	56	1	58	No	No	No	No	No	No	No	No	No	No
8	1	50	1	53	No	No	No	No	No	No	No	No	No	No
9	1	49	1	52	No	No	No	No	No	No	No	No	No	No
10	1	49	1	51	No	No	No	No	No	No	No	No	No	No
11	1	42	1	44	No	No	No	No	No	No	No	No	No	No
12	1	40	1	41	No	No	No	No	No	No	No	No	No	No
13	1	39	1	41	No	No	No	No	No	No	No	No	No	No
14	1	29	1	30	No	No	No	No	No	No	No	No	No	No
15	1	29	1	30	No	No	No	No	No	No	No	No	No	No
16	1	21	1	21	No	No	No	No	No	No	No	No	No	No
17	1	11	1	12	No	No	No	No	No	No	No	No	No	No
18	1	11	1	12	No	No	No	No	No	No	No	No	No	No
19	1	7	1	7	No	No	No	No	No	No	No	No	No	No
20	1	3	1	4	No	No	No	No	No	No	No	No	No	No
21	1	2	1	2	No	No	No	No	No	No	No	No	No	No
22	1	1	1	1	No	No	No	No	No	No	No	No	No	No
23	1	1	1	1	No	No	No	No	No	No	No	No	No	No
24	1	1	1	1	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	0	0	0

Warrant 3 Condition A

Orientation	E
Total Stopped Delay Per Vehicle on Minor Approach (s)	9.2
Number of Lanes on Minor Street Approach	1
VehicleHours of Stopped Delay on Minor Approach ([h]:mm)	0:11
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	75
High Minor Volume Condition Met	No
Total Entering Volume on All Approaches During Same Hour	147
Number of Approaches on Intersection	3
Total Volume Condition Met	No
Warrant Met for Approach	No
Warrant Met for Intersection	No

Signal Warrants Report For Intersection 2: Mountain Ave @ Sunpark Dr / project dwy

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	E, W
Minor Approaches	S, N
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets	
	E	W	S	N
1	93	71	30	19
2	90	69	29	18
3	88	67	29	18
4	83	63	27	17
5	73	56	24	15
6	73	55	23	15
7	72	55	23	15
8	65	50	21	13
9	64	49	21	13
10	63	48	20	13
11	55	42	18	11
12	51	39	17	10
13	50	38	16	10
14	37	28	12	8
15	37	28	12	8
16	26	20	8	5
17	15	11	5	3
18	15	11	5	3
19	8	6	3	2
20	5	4	2	1
21	3	2	1	1
22	1	1	0	0
23	1	1	0	0
24	1	1	0	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3 Condition B
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		
1	1	164	1	30	No	No	No	No	No	No	No	No	No	No
2	1	159	1	29	No	No	No	No	No	No	No	No	No	No
3	1	155	1	29	No	No	No	No	No	No	No	No	No	No
4	1	146	1	27	No	No	No	No	No	No	No	No	No	No
5	1	129	1	24	No	No	No	No	No	No	No	No	No	No
6	1	128	1	23	No	No	No	No	No	No	No	No	No	No
7	1	127	1	23	No	No	No	No	No	No	No	No	No	No
8	1	115	1	21	No	No	No	No	No	No	No	No	No	No
9	1	113	1	21	No	No	No	No	No	No	No	No	No	No
10	1	111	1	20	No	No	No	No	No	No	No	No	No	No
11	1	97	1	18	No	No	No	No	No	No	No	No	No	No
12	1	90	1	17	No	No	No	No	No	No	No	No	No	No
13	1	88	1	16	No	No	No	No	No	No	No	No	No	No
14	1	65	1	12	No	No	No	No	No	No	No	No	No	No
15	1	65	1	12	No	No	No	No	No	No	No	No	No	No
16	1	46	1	8	No	No	No	No	No	No	No	No	No	No
17	1	26	1	5	No	No	No	No	No	No	No	No	No	No
18	1	26	1	5	No	No	No	No	No	No	No	No	No	No
19	1	14	1	3	No	No	No	No	No	No	No	No	No	No
20	1	9	1	2	No	No	No	No	No	No	No	No	No	No
21	1	5	1	1	No	No	No	No	No	No	No	No	No	No
22	1	2	1	0	No	No	No	No	No	No	No	No	No	No
23	1	2	1	0	No	No	No	No	No	No	No	No	No	No
24	1	2	1	0	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	0	0	0

Warrant 3 Condition A

Orientation	S	N
Total Stopped Delay Per Vehicle on Minor Approach (s)	9	10
Number of Lanes on Minor Street Approach	1	1
VehicleHours of Stopped Delay on Minor Approach ([h]:mm)	0:04	0:03
Delay Condition Met	No	No
Volume on Minor Street Approach During Same Hour	30	19
High Minor Volume Condition Met	No	No
Total Entering Volume on All Approaches During Same Hour	213	213
Number of Approaches on Intersection	4	4
Total Volume Condition Met	No	No
Warrant Met for Approach	No	No
Warrant Met for Intersection	No	

Signal Warrants Report For Intersection 3: McPherson Rd @ project dwy

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	S, N
Minor Approaches	E
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	S	N	E
1	17	5	4
2	16	5	4
3	16	5	4
4	15	4	4
5	13	4	3
6	13	4	3
7	13	4	3
8	12	4	3
9	12	3	3
10	12	3	3
11	10	3	2
12	9	3	2
13	9	3	2
14	7	2	2
15	7	2	2
16	5	1	1
17	3	1	1
18	3	1	1
19	2	0	0
20	1	0	0
21	1	0	0
22	0	0	0
23	0	0	0
24	0	0	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3 Condition B
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		
1	1	22	1	4	No	No	No	No	No	No	No	No	No	No
2	1	21	1	4	No	No	No	No	No	No	No	No	No	No
3	1	21	1	4	No	No	No	No	No	No	No	No	No	No
4	1	19	1	4	No	No	No	No	No	No	No	No	No	No
5	1	17	1	3	No	No	No	No	No	No	No	No	No	No
6	1	17	1	3	No	No	No	No	No	No	No	No	No	No
7	1	17	1	3	No	No	No	No	No	No	No	No	No	No
8	1	16	1	3	No	No	No	No	No	No	No	No	No	No
9	1	15	1	3	No	No	No	No	No	No	No	No	No	No
10	1	15	1	3	No	No	No	No	No	No	No	No	No	No
11	1	13	1	2	No	No	No	No	No	No	No	No	No	No
12	1	12	1	2	No	No	No	No	No	No	No	No	No	No
13	1	12	1	2	No	No	No	No	No	No	No	No	No	No
14	1	9	1	2	No	No	No	No	No	No	No	No	No	No
15	1	9	1	2	No	No	No	No	No	No	No	No	No	No
16	1	6	1	1	No	No	No	No	No	No	No	No	No	No
17	1	4	1	1	No	No	No	No	No	No	No	No	No	No
18	1	4	1	1	No	No	No	No	No	No	No	No	No	No
19	1	2	1	0	No	No	No	No	No	No	No	No	No	No
20	1	1	1	0	No	No	No	No	No	No	No	No	No	No
21	1	1	1	0	No	No	No	No	No	No	No	No	No	No
22	1	0	1	0	No	No	No	No	No	No	No	No	No	No
23	1	0	1	0	No	No	No	No	No	No	No	No	No	No
24	1	0	1	0	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	0	0	0

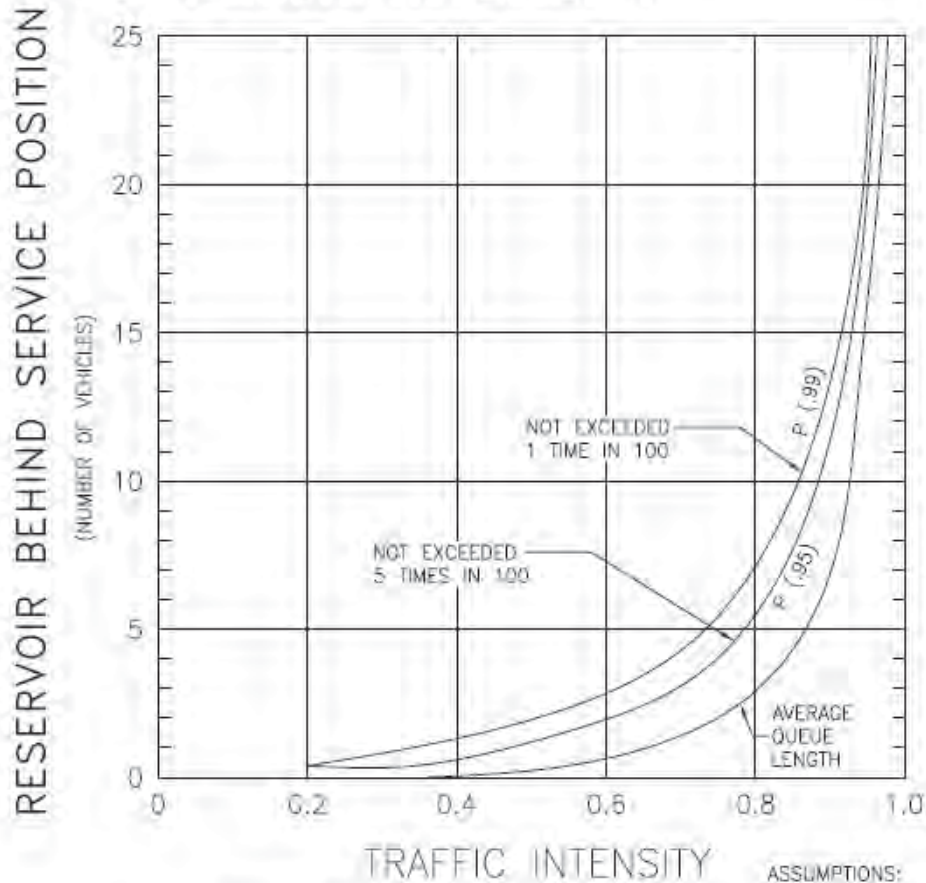
Warrant 3 Condition A

Orientation	E
Total Stopped Delay Per Vehicle on Minor Approach (s)	8.6
Number of Lanes on Minor Street Approach	1
VehicleHours of Stopped Delay on Minor Approach ([h]:mm)	0:00
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	4
High Minor Volume Condition Met	No
Total Entering Volume on All Approaches During Same Hour	26
Number of Approaches on Intersection	3
Total Volume Condition Met	No
Warrant Met for Approach	No
Warrant Met for Intersection	No

Appendix G

Crommelin Method Queuing Graph

RESERVOIR NEEDS VS TRAFFIC INTENSITY



(AVERAGE ARRIVAL RATE / AVERAGE SERVICE RATE)

ASSUMPTIONS:

1. ARRIVALS FOLLOW A POISSON DISTRIBUTION
2. SERVICE RATE CAN BE REPRESENTED BY AN EXPONENTIAL PROBABILITY FUNCTION.
3. FLOW IS EQUALLY DIVIDED BETWEEN EACH LANE IF MORE THAN ONE IS AVAILABLE.

1



Memorandum

To: Tony Arnest
Pacific Communities

From: Nicholas Lowe, PE; Kawai Mang, EIT
Albert A. Webb Associates

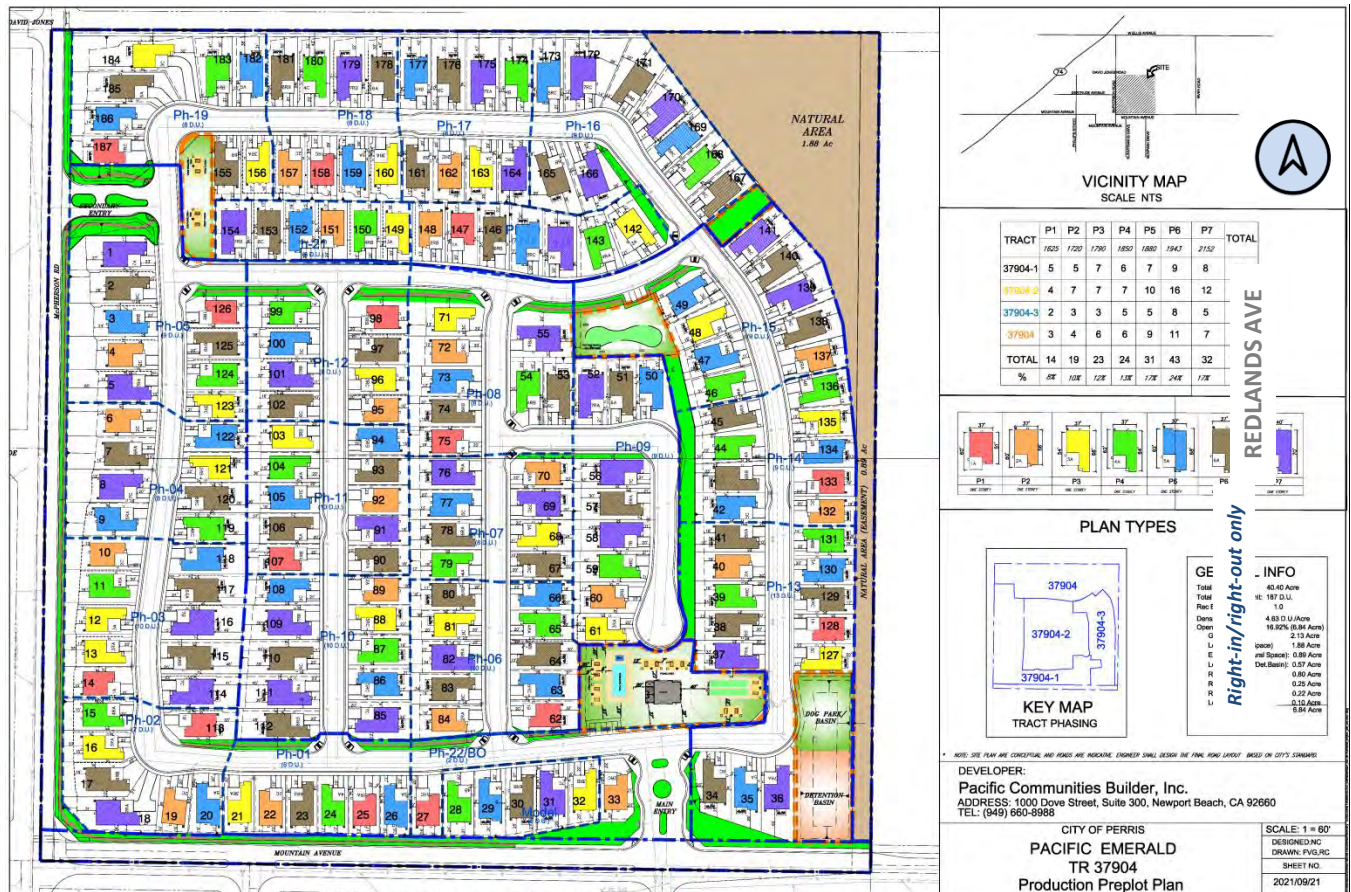
Date: December 17, 2021

Subject: Vehicle miles traveled (VMT) screening analysis for proposed housing development at Mountain Avenue and McPherson Road, City of Perris, California



Albert A. Webb Associates (Webb) has prepared this vehicle miles traveled (VMT) screening analysis to determine if a full VMT analysis will be required for the proposed 187-unit, age-restricted housing development (Project, **Figure 1**) on the northeast corner of Mountain Avenue and McPherson Road in the City of Perris (City).

Figure 1: Proposed Project Site Plan



A. Proposed Project Description and Trip Generation

The proposed project site is a currently-vacant site located on the northeast corner of Mountain Avenue and McPherson Road in the City of Perris, east of State Route 74 (SR-74).

The project proposes to construct 187 single-story housing units, to be age-restricted to residents age 55 and older, with required improvements to the project frontage. Project access is proposed via two new full-access driveways: one each on Mountain Avenue and McPherson Road. This study assumes that the project would be developed in a single phase, to be completed and fully occupied in 2024.

The expected project trip generation is based on the Institute of Transportation Engineers (ITE) *Trip Generation Manual* (10th Ed, 2017) land use 251: Senior Adult Housing – Detached. The project is expected to generate approximately **798 trips daily** (Table 1).

Table 1: Project Trip Generation

ITE Land Use Code		Units ¹		Daily	AM Peak Hour			PM Peak Hour		
					In	Out	Total	In	Out	Total
251	Senior Adult Housing - Detached	ITE Trip Generation Rates ²								
		1	DU	4.27	0.079	0.161	0.24	0.183	0.117	0.3
		Project Trip Generation (vehicles)								
		187	DU	798	15	30	45	34	22	56

¹ DU = dwelling unit(s)

² ITE Trip Generation Manual 10th Ed, 2017

B. Vehicle Miles Traveled (VMT) Screening Criteria

VMT screening and/or analysis is required for environmental analysis in California as of July 1, 2020 per the California Environmental Quality Act (CEQA) and Senate Bill 743. The City adopted its own Transportation Impact Analysis Guidelines on June 9, 2020, including VMT screening methodologies, thresholds, and mitigation measures based on the California Office of Planning and Research (OPR) *Technical Advisory on Evaluating Transportation Impacts in CEQA* and the Western Riverside Council of Government (WRCOG) guidelines. The following screening criteria are based on recommendations from OPR and WRCOG for land use projects:

1. The project is 100% affordable housing.
2. The project is within one half (1/2) mile of qualifying transit.
3. The project is a local serving land use.
4. The project is in a low VMT area.
5. The project’s net daily trips are less than 500 average daily trips.

C. Vehicle Miles Traveled (VMT) Screening Analysis

Initial project screening used the WRCOG VMT screening tool (Tool)¹ – an online, map-based application that provides parcel-level VMT data for western Riverside County based on geographic information system (GIS) mapping and the Riverside Transportation Analysis Model (RivTAM). The following information was gathered from the Tool for the Project parcel, which is located within traffic analysis zone (TAZ) 3756 (**Figure 2**):

- The Project is **not** within a Transit Priority Area (TPA).
- The jurisdictional average daily residential home-based VMT per capita is **15.05**. The Project TAZ daily residential home-based VMT per capita is **14.74**, which is **lower** than the jurisdictional average.
- The jurisdictional average daily home-based work VMT per worker is **11.62**. The Project TAZ daily home-based work VMT per worker is **13.73**, which is **higher** than the jurisdictional average.

In addition,

- The Project is **not** 100% affordable housing.
- The Project is **not** within one half-mile of qualifying transit.
- The Project is **not** a local serving land use.
- The Project would generate 798 daily trips which is **more than** 500 threshold average daily trips.

The VMT screening analysis indicates that the Project should be screened from conducting a full VMT analysis as the project is located in a low VMT-generating area.

If you have any questions about this analysis, please contact us at (951) 248-4289.

¹ WRCOG VMT Screening Tool
<https://gis.fehrandpeers.com/WRCOGVMT/>

Figure 2: WRCOG VMT Impact Screening Tool Output for Project APN 342080041

APN:342080041; TAZ:3,756
<p>Within a Transit Priority Area (TPA)? No (Fail)</p>
<p>Within a low VMT generating TAZ based on Total VMT? No (Fail) Jurisdictional average 2012 daily total VMT per service population = 27.59 Project TAZ 2012 daily total VMT per service population = 32.92</p>
<p>Within a low VMT generating TAZ based on Residential Home-Based VMT? Yes (Pass) Jurisdictional average 2012 daily residential home-based VMT per capita = 15.05 Project TAZ 2012 daily residential home-based VMT per capita = 14.74</p>
<p>Within a low VMT generating TAZ based on Home-Based Work VMT? No (Fail) Jurisdictional average 2012 daily home-based work VMT per worker = 11.62 Project TAZ 2012 daily home-based work VMT per worker = 13.73</p>
<p>Notes:</p> <ul style="list-style-type: none"> • TPA designation is based on October 2018 conditions. • Screening results are based on location of parcel centroids. If results are desired considering the full parcel, please refer to the associated map layers to visually review parcel and TAZ boundary relationship. • If VMT screening is desired for current baseline conditions, contact WRCOG for 2012 and 2040 VMT data. Interpolated VMT results can be obtained using the complete data set. • VMT results do not account for full length of trips that occur beyond the SCAG region.



February 11, 2021

Attn: Becky Johnson – KWC Engineers
Pacific Communities
1000 Dove St. Suite 300
Newport Beach, CA 92660

Subject: SAN 53 – Will Serve – WS 20210000124 – TTM 37904 - APN: 342-080-039 THRU -042

Eastern Municipal Water District (EMWD) is willing to provide water and sewer services to the subject project; however currently the nearest Eastern Municipal Water District sewer system is located approximately one-mile northeast of the subject property at the intersection of W Ellis Avenue and S B Street. Sewer system improvements would need to be constructed by the property owner/developer in accordance to EMWD's standards, specifications, and master plan.

Currently, the District has no plans to construct sewer system improvements in the vicinity of the subject parcel, and they would need to be sponsored by the property owner/developer. Other more feasible alternatives might be considered. The cost of these improvements is unknown and would need to be determined by the contractor/owner. Further arrangements for service from EMWD may also include plan check, facility construction, inspection, jurisdictional annexation, and payment of financial participation charges. The developer is advised to contact EMWD's Development Services Department early in the entitlement process to determine the necessary arrangements for service, and to receive direction on the preparation of facility Design Conditions, which is required prior to final engineering.

Should you have any questions or need additional information, please feel free to contact me at (951) 928-3777, extension 4472.

Sincerely,

Rafael Resendiz, MS, PE
Associate Civil Engineer II
Development Services Department
Eastern Municipal Water District
RR:lm

Board of Directors
Philip E. Paule, Vice President | Jeff Armstrong | Stephen J. Corona | Randy A. Record | David J. Slawson

2270 Trumble Road • P.O. Box 8300 • Perris, CA 92572-8300
T 951.928.3777 • F 951.928.6177 | www.emwd.org



Southern California Gas Company
1981 West Lugonia Avenue
Redlands, CA 92374
Mailing Address:
PO Box 3003
Redlands, CA 92373-0306



2/16/2021

KWC ENGINEERING

Attn: Becky Johnson
1880 Compton Ave., Suite 100
Corona, CA 92562

RE: Will Serve Letter Request for Job I.D.#41-2021-02-00033

Location: AREA ON EAST SIDE OF MC PHERSON RD FROM MOUNTAIN AVE NORTH TO DAVID JONES RD, CITY OF PERRIS

Dear *Becky Johnson*:

Thank you for inquiring about the availability of natural gas service for your project. We are pleased to inform you that Southern California Gas Company (SoCalGas) has facilities in the area where the above named project is being proposed. The service would be in accordance with SoCalGas' policies and extension rules on file with the California Public Utilities Commission (Commission) at the time contractual arrangements are made.

This letter should not be considered a contractual commitment to serve the proposed project, and is only provided for informational purposes only. The availability of natural gas service is based upon natural gas supply conditions and is subject to changes in law or regulation. As a public utility, SoCalGas is under the jurisdiction of the Commission and certain federal regulatory agencies, and gas service will be provided in accordance with the rules and regulations in effect at the time service is provided. Natural gas service is also subject to environmental regulations, which could affect the construction of a main or service line extension (for example, if hazardous wastes were encountered in the process of installing the line). Applicable regulations will be determined once a contract with SoCalGas is executed.

If you need assistance choosing the appropriate gas equipment for your project, or would like to discuss the most effective applications of energy efficiency techniques, please contact our area Service Center at 800-427-2200.

Thank you again for choosing clean, reliable, and safe natural gas, your best energy value.

Sincerely,

Maria S. Robles

Maria S. Robles
Technical GIS Supervisor

MR/AC
enc.

Appendix A

Will Serve Letter Only



DATE: February 3, 2021

COMPANY:

SUBJECT: Pacific Emerald TR 37904 Perris, CA

Your project is located in Southern California Edison (SCE) service territory. SCE will serve the above subject project's electrical requirements per the California Public Utilities Commission and Federal Energy Regulatory Commission tariffs.

SCE may need to conduct utility studies, where applicable, to assess whether additions or modifications to the existing electric infrastructure are required to serve this project. Where applicable, SCE has attached Appendix (B) which not only describes the study, and permitting, but includes a Project Information Sheet that will need to be completed by you and submitted to SCE if your project is at a point where SCE has to determine the required electrical utility work. This Will-Serve letter does not imply that either: (i) these studies have been completed, or (ii) that any required California Environmental Quality Act (CEQA) analysis of project-related electric utility impacts has been conducted.

I am the SCE Design Representative currently assigned to this project. SCE or Applicant will design and construct all required electrical infrastructure to serve this project provided you enter into the applicable contractual agreements with SCE identify scope of electrical utility work required, and supply the following information:

- Site plans as required
- Required contracts and agreements (fully executed)
- Applicable fees
- Local permits
- Required easement documents

Your project will be scheduled for construction once SCE has all the necessary information for your project and you have submitted or agreed to the applicable requirements as stated above, and paid any necessary fees.

If your project will not require SCE services, please notify us so that we can update our records.

SCE appreciates your business. If you have any questions, please feel free to call me at 951-249-8409.

Sincerely, Jerry Chamberlain

SCE Design Representative

Enclosure: Appendix B, where applicable