NOTICE OF INTENT TO ADOPT A MITIGATED NEGATIVE DECLARATION

To: ☐ San Bernardino County
Clerk of the Board
385 North Arrowhead Avenue
San Bernardino, CA 92415

☐ Office of Planning and Research
1400 Tenth Street, Room 121
Sacramento, CA 95814

From: County of San Bernardino
Department of Public Works
Environmental Management Division
825 E. Third Street
San Bernardino, CA 92415-0835

Subject: Filing of Notice of Intent to Adopt a Mitigated Negative Declaration in compliance with Section 21092.3 of the Public Resources Code.

SANTA ANA RIVER TRAIL PHASE III PROJECT
Project Title

Not Assigned Yet	Nancy Sansonetti, AICP	(909) 387-7897
State Clearinghouse Number	**Lead Agency Contact Person**	**Telephone Number**

Project Location & Setting
The County of San Bernardino is responsible for the completion of 21.5 miles of the SART. Development of the current section of the trail has been divided into four phases. Completion of the proposed 3.8-mile segment of trail between the county line and a point approximately 50 feet westerly of La Cadena Drive (Phase I) in the City of Colton, provides the necessary link with the bikeway in Riverside County and the adjacent San Bernardino County segment. The Phase II segment links Phase I at La Cadena Drive to the current terminus at Waterman Avenue in San Bernardino. Phase III will construct an additional trail segment between Waterman Avenue east to California Street in the City of Redlands. The County Regional Parks Department and Department of Public Works are working with a separate project team on developing SART Phase IV, from California Street in Redlands east approximately 11-miles to Garnet Street in Mentone.

Project Description
The proposed project is the installation of a 3.8 mile segment of the Santa Ana River Trail (SART) in San Bernardino County on the south side of the Santa Ana River channel, between Waterman Avenue in the City of San Bernardino and California Avenue in the City of Redlands. The project is called the SART Phase III Project and it will extend the Santa Ana River Trail (a regional pedestrian and bicycle trail that is proposed to extend from the Pacific Ocean to the San Bernardino Mountains) through the City of San Bernardino to the City of Redlands. The federal Department of Transportation (Department), Federal Highway Administration (FHWA) is the lead agency for compliance with the National Environmental Policy Act (NEPA). FHWA has delegated NEPA compliance to the California Department of Transportation (Caltrans). The San Bernardino County, Department of Public Works is the lead agency for compliance with the California Environmental Quality Act (CEQA).

In general, the project consists of installing the regional trail that will consist of the trail, bridges, culverts, and access ramps. This will require the construction of these trail facilities and the construction activities include fill and embankment construction; relocating and/or adjusting surface features to grade; subsurface preparation for paving the trail with concrete, asphalt concrete, Portland cement concrete (PCC), and decomposed granite pavement; erosion control measures (best management practices (BMPs); reinforced concrete retaining walls; fencing and railing; access gates; protective screens under railroads; storm drain facilities; prefabricated steel, concrete slab bridge and its appurtenances; signage; pavement striping and markings; channelizer/delineator; and stormwater pollution prevention control.

Notice of Intent, page 2 of 2

During a period when regulatory permits are being required, a temporary bike path will be installed on local roadways to facility bike traffic around Mission-Zanja Creek which segregates SART III into an east-west segment. Once regulatory permits are acquired, a bridge will be installed across this creek to connect the two segments.

Proposed Review Process

A capital improvement project such as the proposed project is a discretionary decision or "project" that requires evaluation under the California Environmental Quality Act (CEQA). A Mitigated Negative Declaration is the proposed CEQA determination for this project. The County of San Bernardino, Department of Public Works, acting as the CEQA lead agency for this project, will consider adoption of the Mitigated Negative Declaration at a future scheduled public meeting. Anyone commenting on the project will be notified of the meeting date and location where adoption of the Mitigated Negative Declaration will be considered by the Board of Supervisors.

Copies of the Initial Study and/or project technical studies are available for public review at County of San Bernardino, Department of Public Works-EMD's office located at 825 E. Third Street, San Bernardino, CA 92415-0835. The 30-day public review period for the Initial Study begins on May 5, 2014 and will close on June 3, 2014. Any comments you have must be submitted in writing no later than the close of the comment period.

Signature	Title	Date
	DEPUTY DIRECTOR	4/29/2014

Exhibit 4: Initial Study and Mitigated Negative Declaration for the "Santa Ana River Trail, Phase III Project"

Notice of Completion & Environmental Document Transmittal

Mail to: State Clearinghouse, P.O. Box 3044, Sacramento, CA 95812-3044 (916) 445-0613
For Hand Delivery/Street Address: 1400 Tenth Street, Sacramento, CA 95814 — 916/445-0613

SCH #_____

Project Title: SANTA ANA RIVER TRAIL (SART) PHASE III PROJECT
Lead Agency County of San Bernardino Department of Public Works-EMD Contact Person Nancy Sansonetti
Mailing Address 825 E. Third Street Phone (909) 387-7897 Email: Nancy.Sansonetti@dpw.sbcounty.gov
City San Bernardino Zip 92415-0835 County San Bernardino County

Project Location: County San Bernardino City/Nearest Community San Bernardino / Redlands
Cross Streets Waterman Avenue / California Street Zip Code
Lat. / Long. 34° 04' 97" N / 117° 14' 70" W (general area) Total Acres ~20 acres
Assessor's Parcel No N/A Section T1S, R4W SBBM
Within 2 miles: State Hwy # Interstate 10 Waterways Santa Ana River
Airports San Bernardino International Airport Railways BNSF Schools none

Document Type:

CEQA: ☐ NOP ☐ Draft EIR
☐ Early Cons ☐ Supplement/Subsequent EIR
☐ Neg Dec (Prior SCH No.) _____
■ Mit Neg Dec Other _____

NEPA: ☐ NOI ☐ EA ☐ Draft EIS ☐ FONSI

Other: ☐ Joint Document ☐ Final Document ☐ Other _____

Local Action Type:

☐ General Plan Update ☐ Specific Plan ☐ Rezone ☐ Annexation
☐ General Plan Amendment ☐ Master Plan ☐ Prezone ☐ Redevelopment
☐ General Plan Element ☐ Planned Unit Development ☐ Use Permit ☐ Coastal Permit
☐ Community Plan ☐ Site Plan ☐ Land Division (Subdivision, etc.) ■ Other Regional pedestrian and bicycle trail

Development Type:

☐ Residential: Units _____ Acres _____
☐ Office: *Sq.ft.* _____ *Acres* _____ *Employees* _____
☐ Commercial: *Sq.ft.* _____ *Acres* _____ *Employees* _____
☐ Industrial: *Sq.ft.* _____ *Acres* _____ *Employees* _____
☐ Education _____
☐ Recreational _____

☐ Water Facilities: *Type* _____ *MGD* _____
☐ Transportation: *Type* _____
☐ Mining: *Mineral* _____
☐ Power: *Type* _____ *Watts* _____
☐ Waste Treatment: *Type* _____ *MGD* _____
☐ Hazardous Waste: *Type*
■ Other: Regional pedestrian and bicycle trail

Project Issues Discussed in Document:

■ Aesthetics / Visual
☐ Agricultural Land
■ Air Quality
■ Archaeological / Historical
■ Biological Resources
☐ Coastal Zone
■ Drainage / Absorption
☐ Economic / Jobs
☐ Other _____
☐ Fiscal
■ Floodplain / Flooding
☐ Forest Land / Fire Hazard
■ Geologic / Seismic
☐ Minerals
■ Noise
■ Population / Housing Balance
■ Public Services / Facilities
■ Recreation / Parks
☐ Schools / Universities
☐ Septic Systems
☐ Sewer Capacity
■ Soil Erosion / Compaction / Grading
■ Solid Waste
■ Toxic / Hazards
■ Traffic / Circulation
■ Vegetation
■ Water Quality
■ Water Supply / Groundwater
☐ Wetland/Riparian
■ Wildlife
■ Growth Inducing
■ Land Use
■ Cumulative Effects

Present Land Use / Zoning / General Plan Designation: Project Site: Flood Control Levee Floodway and Santa Ana River; Various Industrial and Commercial designations by the Cities of San Bernardino and Redlands

Project Description: The proposed project is the installation of a 3.8 mile segment of the Santa Ana River Trail (SART) in San Bernardino County on the south side of the Santa Ana River channel, between Waterman Avenue in the City of San Bernardino and California Avenue in the City of Redlands. The project is called the SART Phase III Project and it will extend the Santa Ana River Trail (a regional pedestrian and bicycle trail that is proposed to extend from the Pacific Ocean to the San Bernardino Mountains) through the City of San Bernardino to the City of Redlands. The federal Department of Transportation (Department), Federal Highway Administration (FHWA) is the lead agency for compliance with the National Environmental Policy Act (NEPA). FHWA has delegated NEPA compliance to the California Department of Transportation (Caltrans). The San Bernardino County, Department of Public Works is the lead agency for compliance with the California Environmental Quality Act (CEQA).

In general, the project consists of installing the regional trail that will consist of the trail, bridges, culverts, and access ramps. This will require the construction of these trail facilities and the construction activities include fill and embankment construction; relocating and/or adjusting surface features to grade; subsurface preparation for paving the trail with concrete, asphalt concrete, Portland cement concrete (PCC), and decomposed granite pavement; erosion control measures (best management practices (BMPs); reinforced concrete retaining walls; fencing and railing; access gates; protective screens under railroads; storm drain facilities; prefabricated steel, concrete slab bridge and its appurtenances; signage; pavement striping and markings; channelizer/delineator; and stormwater pollution prevention control. During a period when regulatory permits are being required, a temporary bike path will be installed on local roadways to facility bike traffic around Mission-Zanja Creek which segregates SART III into an east-west segment. Once regulatory permits are acquired, a bridge will be installed across this creek to connect the two segments.

Reviewing Agencies Checklist

Lead Agencies may recommend State Clearinghouse distribution by marking agencies below with an **"X"**.
If you have already sent your document to the agency please denote that with an **"S"**.

X	Air Resources Board		Office of Historic Preservation
	Boating / Waterways, Department of		Office of Public School Construction
	California Highway Patrol	X	Parks & Recreation
X	Caltrans District # 8		Pesticide Regulation, Department of
	Caltrans Division of Aeronautics		Public Utilities Commission
	Caltrans Planning (Headquarters)		Reclamation Board
	Coachella Valley Mountain Conservancy	X	Regional WQCB, # 8 (Santa Ana)
	Coastal Commission		Resources Agency
	Colorado River Board		S.F. Bay Conservation & Development Commission
	Conservation, Department of		San Gabriel & Lower L.A. Rivers & Mtns Conservancy
	Corrections, Department of		San Joaquin River Conservancy
	Delta Protection Commission		Santa Monica Mountains Conservancy
	Education, Department of		State Lands Commission
	Energy Commission		SWRCB: Clean Water Grants
X	Fish & Game, Region # 6		SWRCB: Water Quality
	Food & Agriculture, Department of		SWRCB: Water Rights
	Forestry & Fire Protection		Tahoe Regional Planning Agency
	General Services, Department of		Toxic Substances Control, Department of
	Health Services, Department of		Water Resources, Department of
	Housing & Community Development		
	Integrated Waste Management Board		
X	Native American Heritage Commission		
	Office of Emergency Services		Other _____
			Other _____

Local Public Review Period (to be filled in by lead agency)

Starting Date May 5, 2014 Ending Date June 3, 2014

Lead Agency (complete if applicable)

Consulting Firm: Tom Dodson &Associates
Address: 2150 N. Arrowhead Avenue
City/State/Zip: San Bernardino, CA 92405
Contact: Tom Dodson
Phone: (909) 882-3612

San Bernardino County
Applicant: Department of Public Works-EMD
Address: 825 E. Third Street
City/State/Zip: San Bernardino, CA 92415-0835
Contact: Nancy Sansonetti
Phone: (909) 387-7897
Email: Nancy.Sansonetti@dpw.sbcounty.gov

Signature of Lead Agency Representative:

Date: 4/29/2014

Authority cited: Section 21083, Public Resources Code. Reference: Section 21161, Public Resources Code.

Exhibit 4: Initial Study and Mitigated Negative Declaration for the "Santa Ana River Trail, Phase III Project"

SAN BERNARDINO COUNTY
DEPARTMENT OF PUBLIC WORKS
DRAFT MITIGATED NEGATIVE DECLARATION

Lead Agency: County of San Bernardino
Department of Public Works
Environmental Management Division
825 E. Third Street
San Bernardino, CA 92415-0835

Contact: Nancy Sansonetti, AICP
Phone: (909) 387-7897

Project Title: SANTA ANA RIVER TRAIL PHASE III PROJECT

SCH Number: Not assigned yet

Project Location: The County of San Bernardino is responsible for the completion of 21.5 miles of the SART. Development of the current section of the trail has been divided into four phases. Completion of the proposed 3.8-mile segment of trail between the county line and a point approximately 50 feet westerly of La Cadena Drive (Phase I) in the City of Colton, provides the necessary link with the bikeway in Riverside County and the adjacent San Bernardino County segment. The Phase II segment links Phase I at La Cadena Drive to the current terminus at Waterman Avenue in San Bernardino. Phase III will construct an additional trail segment between Waterman Avenue east to California Street in the City of Redlands. The County Regional Parks Department and Department of Public Works are working with a separate project team on developing SART Phase IV, from California Street in Redlands east approximately 11-miles to Garnet Street in Mentone.

Project Description: The proposed project is the installation of a 3.8 mile segment of the Santa Ana River Trail (SART) in San Bernardino County on the south side of the Santa Ana River channel, between Waterman Avenue in the City of San Bernardino and California Avenue in the City of Redlands. The project is called the SART Phase III Project and it will extend the Santa Ana River Trail (a regional pedestrian and bicycle trail that is proposed to extend from the Pacific Ocean to the San Bernardino Mountains) through the City of San Bernardino to the City of Redlands. The federal Department of Transportation (Department), Federal Highway Administration (FHWA) is the lead agency for compliance with the National Environmental Policy Act (NEPA). FHWA has delegated NEPA compliance to the California Department of Transportation (Caltrans). The San Bernardino County, Department of Public Works is the lead agency for compliance with the California Environmental Quality Act (CEQA).

In general, the project consists of installing the regional trail that will consist of the trail, bridges, culverts, and access ramps. This will require the construction of these trail facilities and the construction activities include fill and embankment construction; relocating and/or adjusting surface features to grade; subsurface preparation for paving the trail with concrete, asphalt concrete, Portland cement concrete (PCC), and decomposed granite

DRAFT

pavement; erosion control measures (best management practices (BMPs); reinforced concrete retaining walls; fencing and railing; access gates; protective screens under railroads; storm drain facilities; prefabricated steel, concrete slab bridge and its appurtenances; signage; pavement striping and markings; channelizer/delineator; and stormwater pollution prevention control. During a period when regulatory permits are being required, a temporary bike path will be installed on local roadways to facility bike traffic around Mission-Zanja Creek which segregates SART III into an east-west segment. Once regulatory permits are acquired, a bridge will be installed across this creek to connect the two segments.

Finding: The County of San Bernardino's decision to approve this project is a discretionary decision or "project" that requires evaluation under the California Environmental Quality Act (CEQA). Based on the information in the project Initial Study, the County of San Bernardino has made a determination that a Mitigated Negative Declaration will be the appropriate environmental determination for this project to comply with CEQA. Refer to the Initial Study for a list of the mitigation measures that will be implemented if the project is approved.

Initial Study: Copies of the Initial Study are available for public review at the County of San Bernardino, Department of Public Works-EMD's office at 825 E. Third Street, San Bernardino, CA 92415-0835. The public review period for the Initial Study begins on May 5, 2014 and closes on June 3, 2014.

Mitigation Measures: All mitigation measures identified in the MND-Initial Study are summarized on pages 75-77 and are proposed for adoption as conditions of the project. These measures will be implemented through a Mitigation Monitoring and Reporting Program if the Mitigated Negative Declaration is adopted.

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Signature (Public Agency) *Title* *Date*

INITIAL STUDY

SANTA ANA RIVER TRAIL PHASE III PROJECT

LEAD AGENCY:

COUNTY OF SAN BERNARDINO
Department of Public Works
Environmental Management Division
825 E. Third Street
San Bernardino, CA 92415-0835
Contact: **Nancy Sansonetti, AICP, Senior Planner**
909-387-7897

May 2014

Exhibit 4: Initial Study and Mitigated Negative Declaration for the "Santa Ana River Trail, Phase III Project"

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1.0 INTRODUCTION

Following preliminary review of the proposed Project, the County of San Bernardino (County) determined that the Santa Ana River Trail Phase III is a “project” subject to the guidelines and regulations of the California Environmental Quality Act (CEQA). This Initial Study has been prepared to address potential adverse environmental impacts associated with implementation of the Santa Ana River Trail Phase III Project, as described below. It addresses the direct, indirect, and cumulative environmental effects associated with implementation of the proposed Project.

1.1 Statutory Authority and Requirements

In accordance with CEQA (Public Resources Code, Section 21000 - 21178.1), this Initial Study has been prepared to analyze the Santa Ana River Trail Phase III Project (“Project”) in order to identify any potential adverse environmental impacts upon the environment that would result from implementation of the Project. The purpose of this Initial Study is to inform County of San Bernardino decision-makers, affected agencies, and the public of potential environmental impacts associated with implementation of the proposed Project.

Following completion of the Initial Study, the County of San Bernardino will make a formal determination as to whether the Project may have significant environmental impacts that cannot be mitigated or that will have less than significant effects. A determination that a project may have less than significant effects on the environment would result in the processing of a Negative Declaration. A determination that a project may have significant impacts that cannot be mitigated to less than significant levels would require the preparation and processing of an environmental impact report (EIR) to further evaluate issues identified in this Initial Study.

1.2 Purpose

The purpose of an Initial Study is to: (1) identify environmental impacts; (2) provide the Lead Agency with information to use as the basis for deciding whether to prepare an EIR or Negative Declaration; (3) enable an applicant or Lead Agency to modify the project, mitigating adverse impacts before an EIR is prepared; (4) facilitate environmental assessment early in the design of the project; (5) provide documentation of the factual basis for the findings in a Negative Declaration or other environmental determination, provided that entries on a checklist or other form are briefly and substantively explained to indicate that there is some evidence to support the entries; (6) a discussion of ways to mitigate potential significant effects identified, if any; (7) an examination of whether the Project is compatible with existing zoning, plans, and other applicable land use controls; and (8) the name of the person or persons who prepared or participated in the preparation of the Initial Study.

1.3 Consultation

As soon as the Lead Agency has determined that an Initial Study will be required for a Project, the Lead Agency begins informal consultation with all Responsible Agencies and Trustee Agencies that administer resources affected by the Project. Consultations are conducted to obtain recommendations from those Responsible Agencies prior to initiation of and subsequent permit acquisition process. The County would consider any recommendations from these agencies in the formulation of their preliminary findings.

1.4 Incorporation by Reference

Pertinent documents relating to this Initial Study have been cited and incorporated, in accordance with Sections 15148 and 15150 of the State CEQA Guidelines, to eliminate the need for inclusion of voluminous engineering and technical reports within the CEQA document. Of particular relevance are those previous EIR's that present information regarding descriptions of environmental settings, future development-related growth and cumulative impacts. This Initial Study has incorporated by reference the following documents, which are available for review at the following locations:

County of San Bernardino (County) General Plan (adopted March 13, 2007)

The County *General Plan* is a long-range policy-planning document that defines the framework by which the County's physical and economic resources are to be managed over time. The goals and policies contained in the *General Plan* are provided to guide the County's decision-makers. The seven State-mandated elements are included in the *General Plan*, including Land Use, Circulation, Housing, Conservation, Open Space, Safety, and Noise. In addition, the County of San Bernardino has chosen to address Economic Development, which is an optional element. Information contained within the *General Plan* was incorporated herein, because it is the primary source for County policies, objectives, and countywide planning analysis.

Location: County of San Bernardino, Land Use Services Department – 385 North Arrowhead Avenue, San Bernardino, CA 92415

County of San Bernardino General Plan Final EIR (SCH # 2005101038) (February 2007)

The *General Plan* EIR was prepared to assess the potential environmental impacts associated with the proposed *General Plan*. The EIR summarizes potential environmental impacts associated with implementation of the County's *General Plan*, including growth inducing and cumulative impacts. Information from the *General Plan* EIR is incorporated herein, since it contains intensive information pertaining to impacts associated with the implementation of County policies and objectives.

Location: County of San Bernardino, Land Use Services Department – 385 North Arrowhead Avenue, San Bernardino, CA 92415

City of San Bernardino General Plan (November 1, 2005)

The *City San Bernardino General Plan* is a policy-planning document that provides a long-term outlook for the future of the City of San Bernardino. The *City of San Bernardino General Plan* study area takes into consideration areas outside the City's current City limits and its Sphere of Influence (SOI), in recognition of the interrelationships between land use and other issues affecting the City and surrounding lands. Goals and objectives contained within the *City of San Bernardino General Plan* were developed to guide existing and future land use, circulation, and open space decisions within the City. This document is available online at http://www.ci.san-bernardino.ca.us/cityhall/community_development/planning/planning_documents.asp Information contained within the *General Plan* was incorporated herein, because it is the primary source for City policies, objectives, and citywide planning analysis.

Location: City of San Bernardino, Planning Department – 300 North "D" Street, 3rd Floor, San Bernardino, CA 92418

City of San Bernardino General Plan Environmental Impact Report (July 2005)

The *City of San Bernardino General Plan Environmental Impact Report* (EIR) summarizes potential environmental impacts associated with the implementation of the *City of San Bernardino General Plan*, including growth-inducing and cumulative impacts. Information from the *General Plan EIR* is incorporated herein, as it contains intensive information concerning impacts associated with the implementation of City policies and objectives. This impact analysis is pertinent to the SART Phase III Initial Study, because it includes impacts that will occur within the Project area due to the implementation of the *General Plan*. This document is available online at http://www.ci.san-bernardino.ca.us/cityhall/community_development/planning/planning_documents.asp

Location: City of San Bernardino, Planning Department – 300 North "D" Street, 3rd Floor, San Bernardino, CA 92418

City of Redlands General Plan (August 1995)

The *City of Redlands General Plan* serves as a tool for directing growth within the City and presents a comprehensive plan to accommodate the City's growth. The *General Plan* analysis includes existing conditions for the City, including physical, social, cultural, and environmental resources and opportunities. The *General Plan* looks at trends, issues, and concerns that affect the region, includes City goals and objectives, and provides policies to guide development.

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2.0 PROJECT DESCRIPTION

2.1 Introduction

The proposed project is the installation of a 3.8 mile segment of the Santa Ana River Trail (SART) in San Bernardino County on the south side of the Santa Ana River channel, between Waterman Avenue in the City of San Bernardino and California Avenue in the City of Redlands. The project is called the SART Phase III Project and it will extend the Santa Ana River Trail (a regional pedestrian and bicycle trail that is proposed to extend from the Pacific Ocean to the San Bernardino Mountains) through the City of San Bernardino to the City of Redlands. The Federal Department of Transportation (Department), Federal Highway Administration (FHWA) is the lead agency for compliance with the National Environmental Policy Act (NEPA). FHWA has delegated NEPA compliance to the California Department of Transportation (Caltrans). The San Bernardino County Public Works Department is the lead agency for compliance with the California Environmental Quality Act (CEQA).

In general, the SART Phase III Project consists of construction of this portion of the regional trail which will include the trail, bridges, culverts, and access ramps. The construction activities include fill and embankment construction; relocating and/or adjusting surface features to grade; subsurface preparation for paving the trail with concrete, asphalt concrete, Portland cement concrete (PCC), and decomposed granite pavement; erosion control measures (best management practices (BMPs); reinforced concrete retaining walls; fencing and railing; access gates; protective screens under railroads; storm drain facilities; prefabricated steel, concrete slab bridge and its appurtenances; signage; pavement striping and markings; channelizer/delineator; and stormwater pollution prevention control.

The regional location is shown on Figure 1. The existing SART (Phases 1 and 2) are shown on Figure 2. Figure 3 shows the proposed alignment of the proposed SART Phase III Project.

2.2 Purpose and Need

The Santa Ana River corridor extends over approximately 110 miles from the Pacific Ocean at Huntington Beach inland to the San Bernardino Mountains. Upon completion, the SART will be the “Crest to Coast” regional trail link connecting an area encompassing over four million residents in three counties (Orange, Riverside and San Bernardino). At the present time there are no other multi-jurisdictional trails in the three county areas, and this new segment will extend the SART 3.8 miles closer to the San Bernardino Mountain foothills. This project meets the identified need for a regional non-vehicular trail for the region’s residents. The trail will provide safe use and enjoyment of open space, environmental education, and an essential regional transportation trail system. Portions of the trail, particularly in Orange County, have been developed over the past 20 years; and it is now possible to travel from the City of San Bernardino through Riverside/Orange County to Huntington Beach (the Pacific Ocean) on the SART.

The urban southern California region is in need of a non-motorized system of trails to allow people to safely travel by foot, bicycle, or other non-motorized methods without competing for space on the roadways with motorized vehicles. Urban residential, commercial and industrial development has followed the path of the Santa Ana River over the years. Approximately four million people reside near the Santa Ana River corridor in Orange, Riverside and San Bernardino counties. The County of San Bernardino estimates that 500,000 Inland Valley

residents live in cities and unincorporated communities adjacent to the Santa Ana River corridor, from the San Bernardino National Forest to the San Bernardino/Riverside County line.

The County of San Bernardino is responsible for the completion of 21.5 miles of the SART. Development of the current section of the trail has been divided into four phases (see Figure 2 for the alignment of the first two phases). Completion of the proposed 3.8-mile segment of trail between the county line and a point approximately 50 feet westerly of La Cadena Drive (Phase I) in the City of Colton, provides the necessary link with the bikeway in Riverside County and the adjacent San Bernardino County segment. The Phase II segment links Phase I at La Cadena Drive to the current terminus at Waterman Avenue in San Bernardino. Phase III will construct an additional trail segment between Waterman Avenue east to California Street (in the City of Redlands). The County Regional Parks Department and Department of Public Works are working with a separate project team on developing SART Phase IV, from California Street in Redlands east approximately 11-miles to Garnet Street in Mentone.

This link will create a Class I Bikeway from California Street in the City of Redlands on the east, to Waterman Avenue, a distance of approximately 3.8-miles to the west. This Phase III segment when completed will allow trail use from California Street in Redlands to the San Bernardino County/Riverside County line on the west, totaling an approximate 10.6 miles. Ultimately, the bikeway will enhance access to recreational opportunities in the region by: (a) providing neighborhood links to green space and natural areas; (b) providing connections with city urban trails that provide safe travel to parks, community recreation facilities, fairgrounds, urban lakes, amphitheaters, historic neighborhoods, and tourist attractions; and (c) providing direct access to San Bernardino National Forest camping, and outdoor recreation areas.

In conjunction with fulfilling basic non-motorized transportation purposes, the proposed Project will also meet the needs of individuals with disabilities in an area with few trails the can fulfill the outdoor trail needs of these individuals. All of the access ramps to the SART will be designed to meet design requirements of the Americans with Disabilities Act. The SART facilities will incorporate Caltrans Highway Design Manual, Chapter 1000, “Bikeway Planning and Design” to ensure that individual with disabilities will have both access and effective use of the SART facilities.

Funding and construction of the SART has been incremental. This project consists of local grants from the San Bernardino Association of Governments (SANBAG) with a local matching amount of funds from the County and the Wildlands Conservancy. This project has been assigned project number STPLER-5954 083 by the State of California. Portions of the trail in Riverside County have been completed but there are still linkages in Riverside and San Bernardino counties that have not been developed. The Trail Master Plans for the counties of San Bernardino and Riverside and the cities of San Bernardino, Colton, Grand Terrace, Loma Linda, and Riverside all show trails that will join or are heavily dependent upon this segment of the SART within San Bernardino County.

2.3 Project Alternatives

This section describes the proposed action and the project alternatives that were developed to meet the identified need through accomplishing the project purposes outlined above, while avoiding or minimizing environmental impacts. The alternatives considered in this document consist of the “Preferred Alternative” and the “No-Build Alternative.” Because of the existing

SART Phase II alignment and the objective of keeping the trail adjacent to the Santa Ana River where feasible, there is no feasible or reasonable alternative alignment to the ultimate alignment of the proposed SART Phase III alignment. There are minor design alternatives, such as bridge designs or trail crossings at street level or beneath bridges. These alternatives are discussed internal to the description of the Preferred Alternative presented in the following text.

2.3.1 Preferred Alternative Project Characteristics

The Preferred Alternative consists of the design and construction of a 3.8-mile section of the Santa Ana River Trail (SART), in the County of San Bernardino. This segment of the SART is the third phase of this trail within San Bernardino County (Phase III). Phase III begins at Waterman Avenue in the City of San Bernardino and ultimately is proposed to continue easterly to California Street in the City of Redlands, along the southern bank/levee of the Santa Ana River (refer to Figure 3). The SART is a Class I Bikeway which is defined as a shared use path that is physically separated from any street or highway and may be used by pedestrians, skaters, wheelchair users, joggers and other non-motorized users. (Note that after considerable discussion, it was agreed the wheelchairs or other electric transportation used by individuals with disabilities will be permitted on the SART.)

During the review of the ultimate SART III alignment it was determined that the proposed project would have to be implemented in stages. This is because the difficult crossing of Mission-Zanja Creek within the main trail alignment will require regulatory permits that are expected to require several months to obtain. Therefore, the proposed project has been separated into three stages. The first stage will be the construction of the trail in the original alignment between Waterman and Mission-Zanja Creek and from Mission-Zanja Creek/railroad track alignment east to the California Street terminus. To facilitate biking during the period that the regulatory permits for the crossing are being processed, a second-stage temporary bike lane will be constructed along Waterman Avenue from the south side of the Waterman Avenue Bridge over Santa Ana River channel north to Orange Show Road; thence east along Orange Show Road to the south side of the Orange Show Road bridge. At this location, a temporary connection to the permanent SART Phase III bike lane will be installed (Figure 3). Once the final regulatory permits are obtained, the connection of the west and east segments of SART III will be completed with a bridge over Mission-Zanja Creek and then a bike path under the railroad bridge or a bike/pedestrian crossing over the SANBAG train tracks. Each of these different stages will be evaluated as part of this Initial Study. These stages are shown on Figure 13.

This project will be developed to California Department of Transportation (Caltrans) Highway Design Manual Chapter 1000 standards and will comply with the Americans with Disabilities Act (ADA) of 1990, as amended. The SART will be built as a 10-foot-wide asphalt trail with an adjacent 4-foot-wide unpaved shoulder to accommodate non-motorized modes of transportation and pedestrians. The majority of the trail will be 14-foot-wide with additional total width at turns as indicated on the plan**.** Refer to Figure 4, trail cross sections.

Figure 2 shows the existing alignment of the SART Phases I and II. The majority of Phase III (shown on Figure 3) will be constructed along an existing County of San Bernardino Flood Control bank/levee adjacent to the Santa Ana River corridor.

In one area of the alignment (approximately 2,500 linear feet easterly of Waterman Avenue), from the confluence of Mission-Zanja Creek and Santa Ana River east to Orange Show Road, no levee currently exists and, therefore, in this area of the trail will be developed on the

unimproved southern bank of the riverbed within the County Flood Control right-of-way. The remainder of the proposed 3.8-mile SART Phase III will be developed on the existing flood control levee maintenance road. The existing levee maintenance road will be improved and paved as a Class 1 Bikeway.

The proposed Project also consists of erecting a prefabricated, fully engineered clear span bridge of steel construction. This bridge will span Mission-Zanja Creek at one of two locations. The upper location for the bridge will extend across Mission-Zanja Creek and then the trail will cross the adjacent SANBAG Railroad track with the bridge being approximately 100 feet in length (Figure 5). The bridge will be 14-feet wide which is consistent with the rest of the SART Phase III Trail width (Figure 6). The second alternative crossing of the Mission-Zanja Creek would result in the trail switchbacking to a point below the railroad bridge and then crossing the Creek channel with a similar bridge approximately 100 feet in length. Once on the east side of the Creek channel, the trail would proceed east beneath the railroad bridge and then reconnect to the trail back at the top of the south levee of the Santa Ana River.

The County estimates that the construction of the entire SART Phase III would take approximately 6 to 9 months to complete. It is anticipated that construction will result in approximately 16.6 acres of land disturbance. Of the total area disturbed, 10.4 acres will be temporary construction and staging disturbance and 6.6 acres will be permanent trail facility disturbance (10-foot-wide trail plus 4-foot-wide shoulder 3.8-miles long). It is assumed that acquisition of the permits to cross the Mission-Zanja Creek channel (either regulatory permits and/or a permit from the Public Utilities Commission (PUC) to cross the railroad track) will require approximately six months and the new bridge would be installed to connect the trail at the end of the construction period.

Disturbance will consist of grading operations, asphalt and concrete installation, construction of ramps under Orange Show Road, Tippecanoe Avenue and the BNSF Railway Company/Metrolink rail line. Additional rip-rap or slope protection will be constructed in these areas as needed for slope protection. It is anticipated that the construction of the trail on top of the existing levee would take 2 to 3 months. The remaining 2 to 6 months would be for constructing the 100-foot clear span bridge crossing the Mission-Zanja Creek, the undercrossing where the trail crosses underneath the BNSF Rail Road, the trail where no levee currently exists, and undercrossings at the Orange Show Road and Tippecanoe Avenue bridges. California Street would be the end of the SART Phase III and would have a 100 by 30 foot, paved, turnaround area (Figure 7).

The proposed underpass at the BNSF railroad bridge coincides with an area along the proposed trail where no levee currently exists. It is estimated that construction of the Phase III underpasses and trail (between Waterman Avenue and Orange Show Road), will result in disturbance of approximately 3.5 acres. Refer to the aerial photos in Figures 8 through 8g.

The trail under each of the roads and railroad would consist of a ramp leading from the levee, under the road or railroad, then up the other side to the levee. A typical bikeway underpass is constructed by creating a berm of compacted fill material under the roadway or railroad bridge with a maximum slope of 2:1 (horizontal to vertical). The berm is then finished with grouted rip-rap and concrete. Figure 9 shows a photograph of a typical underpass. Construction of the underpasses may require engineered fill in the River channel.

If the trail can be installed across the railroad track, the bridge will cross the channel at about the same location as the proposed trail and there will be no need to install any of the ramps. This alignment substantially reduces the amount of riparian/wetland habitat that could be disturbed by the new trail.

During construction the proposed project will require temporary fencing to be installed in order to prevent the general public from trespassing onto any excavation, construction, or storage areas.

Photographs of miscellaneous portions of the current Santa Ana River and levee are provided, with the locations of photographs shown on Figure 10. Figures 11a through 11e show eleven photographs of the proposed SART III alignment.

Public access and trail users staging area for the SART Phase III on the west will be from the parking lot at the County of San Bernardino Hall of Records. This site is located on the north side of Hospitality Lane between South E Street and Waterman Avenue adjacent to a portion of SART Phase II that is already developed. The access ramp at the County of San Bernardino Hall of Records would be a logical entry point because: the site is easily accessible and is near the Waterman Avenue/I-10 freeway ramps; the parking lot is several hundred feet away from the road making it easy for trail patrons to unload their bicycles in safety or to stage with equipment used by individuals with disabilities; and the parking lot can accommodate cars, especially on weekends.

SART Phase III will ultimately include five trail access ramps from surface streets. These access ramps will be located along the south side of the Santa Ana River at the following locations: (1) east of Waterman Avenue; (2) west of Orange Show Road; (3) east of Orange Show Road; (4) west of Tippecanoe Avenue; and (5) east of Tippecanoe Avenue. Figure 12 shows the locations of these SART Phase III access routes.

SART Phase III will not have any street or night lighting. Fencing will be the minimum required for safety reasons. The existing fencing along adjoining private property will be maintained.

2.3.2 Preferred Alternative Implementation

Grading

Project construction is anticipated to commence in 2014 and be completed in 2015. The grading phase is expected to last approximately 4 months. Grading will generate approximately 30,200 cubic yards of cut and 40,200 cubic yards of fill. This requires a net import of fill material to support construction of approximately 10,000 cubic yards.

The grading process is anticipated to involve the following equipment: 1 scraper, 2 rubber-tired dozers with rippers and/or sheep foot compactor, 2 tractor/loader/backhoes, 1 roller compactor, 4 haul trucks, and 2 water trucks will be used during this phase and that this equipment will be operational for a maximum of 8 hours per day.

Paving

Paving activities are expected to last for a duration of approximately 4 weeks. Paving activities will likely include the following equipment: 1 grader, 1 paver, 1 paving equipment, and 2 rollers will be operational for a maximum of 8 hours per day.

Site Access and Staging

All existing street crossings, Waterman Ave, Orange Show Road, Tippecanoe Road, Mt. View Road, and California Street, are to be used for construction access.

Potential construction staging areas are located on the levee bank where the top of bank is wider. The potential areas are (1) from approximately 200 feet to 1,250 feet downstream of Mission-Zanja, (2) from approximately 350 feet to 1,100 feet downstream of Orange Show Road, (3) Downstream from Mtn. View, and (4) California Street. Construction staging areas will be east of Waterman and west of Mission-Zanja Creek on parcel APN 0281-021-16; west of Orange Show road on parcel APN 0281-031-38; west of Mtn. View on portions of the parcels APN 0280-251-23, 0280-301-12 and 0280-302-22; and west of California Street on parcels APN 0167-721-02 and 0292-011-42. All parcels listed for these four locations are owned by the San Bernardino County Flood Control District. Figures 13 through 13d shows the general location of these staging areas.

An onsite borrow area is not possible on Flood Control District property. The future construction contractor will be required to identify an offsite borrow area, which shall be surveyed by professionally qualified staff for historical and cultural resources prior to its use as a borrow site. The borrow areas are to be within 10 miles from the project site and will be specified by the contractor.

Temporary Bike Route

Preliminary review of the proposed temporary bike route indicates that it will require installing a second class bike path along Waterman Avenue and Orange Show Road. This will include installing the signage and the striping along the route to segregate the bike lane from the existing traffic lanes. No substantial construction will be required to complete the installation of this route. When the construction of the bridge that will link the west and east sides of the Mission-Zanja Creek channel is completed, the temporary bike lane striping and signage will be removed as part of the SART III trail. The City may wish to retain the striping for a future bike lane on Waterman Avenue.

Trail Maintenance

Maintenance of the SART includes inspection of the system in April and October of each year. The April inspection is to determine the need for repair due to the previous winter storms, if any. The October inspection is to ensure that all components of the system are in good operational conditions and ready for the winter rainy season. Any necessary repairs would be performed on an as needed basis.

Schedule

The proposed schedule for the 3.8 mile SART Phase III segment is as follows:

Milestones	Quarter/Year
Begin Design Engineering	Completed
Conduct Environmental Surveys / Prepare Reports	1st Quarter 2011-13
Prepare Initial Study / Environmental Checklist	1st Quarter 2014
Finalize Environmental Documentation	2nd Quarter 2014
Plans / Specifications / Cost Estimates Completed	2nd Quarter 2014
Start Right-of-Way Acquisition	3rd Quarter 2014
Right-of-Way Certification	3rd Quarter 2014
Construction Begins	3rd Quarter 2014
Construction Completed	2nd Quarter 2015

2.3.3 Environmental / Existing Site Conditions

As shown in the photographs (Figures 11 through 11e), the vicinity of the proposed SART Phase III trail is a relatively open area where the Santa Ana River channel widens to several hundred feet wide and the adjacent levee proposed as the SART Phase III alignment is up to 50 feet wide.

Adjacent land uses along the southerly boundary with the wash, where Phase III Preferred Alternative for the trail will be located, include (proceeding easterly of Waterman Avenue to California Street): a hotel, commercial/offices, vacant land, industrial uses, including self-storage and a Southern California Edison power plant. North of the levee is the Santa Ana River. Land uses on the north side of the River consist of commercial roofing and lumber yards, the BNSF Railroad (until it crosses the River), and the San Bernardino International Airport (formerly Norton Air Force Base) and vacant land.

2.3.4 Surrounding Land Uses

Surrounding current land uses include:

Existing Land Use / Official Land Use District	
Project Site:	Flood Control Levee Floodway (/ FW)
North:	Santa Ana River / FW
South:	Various Industrial/Commercial Office Uses / Various Industrial and Commercial designations by the Cities of San Bernardino and Redlands
East:	Santa Ana River / FW
West:	Santa Ana River / FW

2.3.5 No-Build Alternative

The proposed SART Phase III Project would complete the next segment of this important regional trail well shy of its objective of providing a non-motorized, maintained trail between the Pacific Ocean coast and the San Bernardino Mountains. A No-Build Alternative would terminate the SART at Waterman Avenue in the City of San Bernardino and fail to complete the project objective. Therefore, this alternative would not meet the long-term goal of facilitating non-motorized people movement for both recreation and work. However, a No-Build alternative for

SART Phase III would eliminate the short-term costs and adverse effects on the environment from constructing the facility and the long-term effects and costs of maintaining the trail. These short- and long-term changes in environmental effects compared to the Preferred Alternative will be fully described in this environmental document.

2.4 Agreements, Permits and Approvals

The County of San Bernardino is the Lead Agency for the proposed Project and has discretionary authority over the Project. To implement this Project, the following agreements, permits, and approvals are anticipated:

Agreements, Permits and Approvals	Granting Agency
■ 404 Permit	U.S. Army Corps of Engineers
■ 401 Certification	Regional Water Quality Control Board, Santa Ana Region
■ 1602 Streambed Alteration Agreement	California Department of Fish and Wildlife
■ Section 7 ITP	U.S. Fish and Wildlife Service

3.0 INITIAL STUDY CHECKLIST

3.1 Background

Project Title: Santa Ana River Trail (SART) Phase III Project
Lead Agency Name and Address: County of San Bernardino Department of Public Works Environmental Management Division 825 E. Third Street San Bernardino, CA 92415-0835
Contact Person and Phone Number: Nancy Sansonetti, AICP, Senior Planner, 909-387-7897
Project Location: Refer to Section 2.1, *Project Location & Setting*, above.
General Plan Designation: Various
Zoning Classification: Various
Description of the Project: (Describe the whole action involved, including but not limited to, later phases of the project, and any secondary, support or off-site features necessary for its implementation.) Refer to Section 2.3, *Project Alternatives*, above.
Surrounding Land Uses and Setting: Refer to Section 2.3, *Project Alternatives*, above.

3.2 Environmental Factors Potentially Affected

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

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

3.3 Evaluation of Environmental Impacts

This section analyzes the potential environmental impacts associated with the proposed Project. The issue areas evaluated in this Initial Study include:

- Aesthetics
- Agriculture and Forestry Resources
- Air Quality and Global Warming
- Biological Resources
- Cultural Resources
- 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/Traffic
- Utilities and Service Systems
- Mandatory Findings of Significance

The environmental analysis in this section is patterned after the Initial Study Checklist recommended by the County's CEQA Guidelines and used by the County in its environmental review process. For the preliminary environmental assessment undertaken as part of this Initial Study's preparation, a determination that there is a potential for significant effects indicates the need to more fully analyze the SART Phase III impacts and to identify mitigation.

For the evaluation of potential impacts, the questions in the Initial Study Checklist are stated and an answer is provided according to the analysis undertaken as part of the Initial Study. The analysis considers the long-term, direct, indirect, and cumulative impacts of the proposed Project. To each question, the following are the four possible responses:

- **No Impact.** The Project would not have any measurable environmental impact on the environment for the topic being considered.

- **Less Than Significant Impact.** For the topic being considered, the Project would have the potential for impacting the environment, although this impact will be below established thresholds that are considered to be significant.

- **Less Than Significant With Mitigation Incorporated.** For the topic being considered, the Project would have the potential to generate impacts which may be considered as a significant effect on the environment, although mitigation measures or changes to the Project's physical or operational characteristics can reduce these impacts to levels that are less than significant.

- **Potentially Significant Impact**. For the topic being considered, the Project would have impacts that are considered significant and unavoidable, and additional mitigation measures cannot reduce these impacts to less than significant levels.

Where potential impacts are anticipated to be significant, mitigation measures, where feasible, must be considered, so that impacts may be avoided or reduced to the extent feasible.

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4.0 ENVIRONMENTAL **ANALYSIS**

This section analyzes the potential environmental impacts that may result from the proposed Project. For the evaluation of potential impacts, the questions in the Initial Study Checklist (Section 3) are stated and answers are provided according to the analysis undertaken as part of the Initial Study. The analysis considers the Project's short-term impacts (construction-related), and long-term impacts (operational-related).

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
4.1 AESTHETICS – Would the project:				
a) Have a substantial adverse effect on a scenic vista?			X	
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?			X	
c) Substantially degrade the existing visual character or quality of the site and its surroundings?			X	
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?				X

SUBSTANTIATION:

a) Have a substantial adverse effect on a scenic vista? ***Determination: Less Than Significant Impact.***

The scenic vista of the Project area is characterized by existing levee flood control berms traversing along both sides of the Santa Ana River. The Project is proposed to be constructed on the southern levee road. There is a 750-foot to 1,200-foot wide river channel on the north side of the proposed SART III alignment. South of the existing levee are varying levels of urbanization which include commercial development, industrial and power plant facilities, and undeveloped parcels. With the exception of the approaches to the road ways and the areas of the trail that go under the bridges within the channel areas, the vast majority of the trail would be a maximum of 2-feet of base material placed on top of the existing levee. In some areas the trail would be lower than the existing levee level. There would be larger fill areas under the bridges, but these areas are below the line of sight on either side of the river.

No structures would be built that would result in a noticeable change in the physical characteristics of the existing visual setting, or that would obstruct views of the valuable scenic resources. New signage would be installed as part of the Project; however the signage would be consistent with, and similar to, the existing flood control signage and would not constitute a noticeable change in the scenic vista.

Construction equipment and activities would be visible during the construction period; however, these would be temporary and would cease once the Project is complete. Therefore, less than significant impacts would occur.

During the second stage of the proposed Project a temporary bike path would be installed on Waterman Avenue and Orange Show Road. This would include striping the bike lane and installing temporary directional signs. Both the Waterman Avenue and Orange Show roadway alignments are highly disturbed visual corridors. The installation of the striping and signage would not substantially alter the existing vistas along the two roadways and would not block any views to the San Bernardino Mountains to the north. Therefore, a less than significant change in the existing scenic vista along these roadways would result from implementing Stage 2 of the proposed Project.

b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway? ***Determination: Less Than Significant Impact.***

The Project site is not located adjacent to a designated state scenic highway. Further, the proposed Project does not conflict with any of the County's, City of San Bernardino's and the City of Redlands' applicable laws, ordinances, regulations, policies, or standards. The Project design features would not obstruct scenic views or damage scenic resources, and would be compatible with the area's Open Space Overlay and existing scenic resources. During Stage 3 one of two alternative trail alignments will be selected at the Mission-Zanja Creek/railroad track crossing. Of these two alternatives, the trail beneath the railroad bridge will require a path to be constructed from the top of the levee to an elevation beneath the railroad bridge, underneath the bridge, and then back to the top of the levee on the east side of the track. Although this location is below the view horizon and will not be visible to the general public, trees and vegetation will have to be removed along this path. Based on the lack of visibility and the future visual attenuation that will be provided by the adjacent vegetation, this impact vegetation is considered to be a less than substantial impact to the vegetative scenic resources along this alignment. Thus, overall scenic resource effects of SART III are considered to be a less than significant impact.

Neither Waterman Avenue nor Orange Show Road is designated as scenic roadways within the City of San Bernardino. Installation of the Stage 2 temporary bike path on Waterman Avenue and Orange Show Road will not alter any scenic resources, such as trees, rock outcrops or other natural visual feature. Therefore, this project component has no potential to substantially damage any scenic resources.

c) Substantially degrade the existing visual character or quality of the site and its surroundings? ***Determination: Less Than Significant Impact.***

The proposed trail construction on the existing levee road has been designed with consideration made for the existing visual character of the alignment and will comply with the County of San Bernardino's design guidelines. One of the goals of the SART III system is to provide the users with an opportunity to experience the rural character and qualities of the Santa Ana River corridor within an urban environment. Currently, there is no public access to this segment of the river. The trail has been designed so as not to detract from the view of the river because the trail facilities will be constructed at ground level or below the southern levee and will enhance the opportunity for enjoyment of the existing scenic view along the River corridor. Because the trail will be integrated into the existing visual setting, it is appropriate to consider the trail as a compliment to this setting, and therefore, less than significant impacts would occur. The current visual character of Waterman Avenue and Orange Show Road consists of a standard urban paved roadway setting with no particularly important visual qualities. Installation of the Stage 2 temporary bike path along Waterman and Orange Show roadways has no potential to substantially degrade the existing visual qualities of these two roadways as the bike path and signage will be consistent with the existing visual setting.

d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area? ***Determination: No Impact.***

The SART Phase III Project would not have any street or night lighting, and therefore, has no potential to create a new source of substantial light or glare. No impacts would occur in this regard.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
4.2 AGRICULTURE AND FORESTRY RESOURCES – In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to 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:				
a) Convert Prime Farmland, Unique Farmland or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?				X
b) Conflict with existing zoning for agricultural use or a Williamson Act contract?				X
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code 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))?				X
d) Result in the loss of forest land or conversion of forest land to non-forest use?				X
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?				X

SUBSTANTIATION:

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?* ***Determination: No Impact.***

According to the City of Redlands *General Plan* and the City of San Bernardino *General Plan,* the proposed SART Phase III alignment would not be located within areas identified as Prime Farmland, Unique Farmland, Farmland of Statewide Importance and Farmland of Local Importance. Visual inspection of the proposed trail alignment, including the Stage 2 temporary bike path alignment along Waterman Avenue and Orange Show Road, verifies that no agricultural activities or farmland occurs within the proposed Project alignment. Therefore, implementation of the proposed Project would not convert Prime Farmland, Unique Farmland, Farmland of Statewide Importance and Farmland of Local Importance to nonagricultural uses, and no impacts would occur.

b) *Conflict with existing zoning for agricultural use, or a Williamson Act contract?* ***Determination: No Impact.***

According to the City of Redlands *General Plan* and the City of San Bernardino *General Plan,* the proposed SART Phase III alignment would not be located within areas zoned for agricultural uses. Therefore, implementation of the proposed Project, including the Stage 2 temporary bike path alignment along Waterman Avenue and Orange Show Road, would not conflict with existing zoning for agricultural uses or Williamson Act contracts. No impacts would occur.

c) *Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?* ***Determination: No Impact.***

According to the City of Redlands *General Plan* and the City of San Bernardino *General Plan,* the proposed Project would not be located in areas zoned or designated as forest or timber land. Visual inspection of the proposed trail alignment verifies that no timber or forest resources occur within the proposed Project alignment. Therefore, implementation of the proposed Project, including the Stage 2 temporary bike path alignment along Waterman Avenue and Orange Show Road, would not conflict with existing zoning of forest land, timberland, or timberland production, and no impacts would occur.

d) *Result in the loss of forest land or conversion of forest land to non-forest use?* ***Determination: No Impact.***

Refer to Response 4.2 (c), above. No impacts would occur.

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?* ***Determination: No Impact.***

Refer to Response 4.2 (a), above. No impacts would occur.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
4.3 AIR QUALITY – Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?		X		
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?		X		
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?		X		
d) Expose sensitive receptors to substantial pollutant concentrations?				X
e) Create objectionable odors affecting a substantial number of people?			X	

SUBSTANTIATION:

a) Conflict with or obstruct implementation of the applicable air quality plan (South Coast Air Basin)?
Determination: Less Than Significant Impact with Mitigation Incorporated.

The South Coast Air Basin (SoCAB) includes the non-desert portions of Los Angeles, Riverside, and San Bernardino Counties, in addition to the San Gorgonio Pass area in Riverside County. The Basin is designated as nonattainment for ozone (O_3) and particulate matter (PM_{10}) under both Federal and State standards, and nonattainment for $PM_{2.5}$ Federal standards.

The SoCAB is presently managed under the 2012 Air Quality Management Plan (AQMP). Project emissions that could conflict with implementation of the AQMP, such as delay in meeting attainment deadlines or worsening ambient air quality would be considered significantly adverse. Consistency with the AQMP is based on achieving emissions below established thresholds or achieving consistency with growth assumptions established in the 2012 Regional Transportation Plan/Sustainable Communities Strategy, which was compiled by the Southern California Association of Governments (SCAG). Projects not directly related to growth (jobs, housing, etc.) are not easily categorized within growth assumptions for the region because they do not directly contribute to growth. Regardless, as the data in the following section indicate, the proposed Project will not exceed the construction emissions thresholds and operational emissions will be *de minimis* because they would consist of a few daily vehicle trips of a few miles to access or maintain the new trail. The SART III project is consistent with the AQMP and regional growth plans because it will not generate significant construction emissions (documented below) nor will it cause in substantial growth in regional population or vehicle trips. Based on this demonstrated consistency, the proposed Project is not forecast to conflict with regional air plans and it may be beneficial because it could offer an alternative mode of transportation for hardy individuals to travel to work.

b) *Violate any air quality standard or contribute substantially to an existing or projected air quality violation?* ***Determination: Less Than Significant With Mitigation Incorporated.***

c) *Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?* ***Determination: Less Than Significant with Mitigation Incorporated.***

The South Coast Air Quality Management District (SCAQMD) has designated significant emissions levels as surrogates for evaluating regional air quality impact significance independent of chemical transformation processes. A recreational roadway project has minimal direct adverse operational air quality impacts. Project specific impacts would only result from construction activities. Projects with daily emissions that exceed any of the following emission thresholds shown in Table 4.3-1 are recommended by the SCAQMD to be considered significant under CEQA guidelines.

Table 4.3-1
SCAQMD EMISSIONS SIGNIFICANCE THRESHOLDS (pounds/day)

Pollutant	Emissions (Construction)
ROG	75
NOx	100
CO	550
PM-10	150
PM-2.5	55
Sox	150
Lead	3

Source: SCAQMD CEQA Air Quality Handbook, November, 1993 Rev

SCAQMD also states that additional indicators should be used as screening criteria to determine the need for further analysis with respect to air quality. The additional indicators are as follows:

- Project could interfere with the attainment of the federal or state ambient air quality standards by either violating or contributing to an existing or projected air quality violation;
- Project could result in population increases within the regional statistical area which would be in excess of that projected in the AQMP and in other than planned locations for the project's build-out year; and
- Project could generate vehicle trips that cause a CO hot spot.

Construction-Related Impacts
The SCAQMD CEQA Air Quality Handbook also identifies various secondary significance criteria related to toxic, hazardous or odorous air contaminants. Hazardous air contaminants are also contained within the small diameter particulate matter ("PM-2.5") fraction of diesel exhaust. Such exhaust will be temporarily generated by heavy construction equipment used to support the proposed Project.

Dust is typically the primary concern during construction of new infrastructure. Because such emissions are not amenable to collection and discharge through a controlled source, they are called "fugitive emissions." Emission rates vary as a function of many parameters (soil silt, soil moisture, wind speed, area disturbed, number of vehicles, depth of disturbance or excavation, etc.). These parameters are not

known with any reasonable certainty prior to Project development and may change from day to day. Any assignment of specific parameters to an unknown future date is speculative.

Because of the inherent uncertainty in the predictive factors for estimating fugitive dust generation, regulatory agencies typically use one universal "default" factor based on the area disturbed assuming that all other input parameters into emission rate prediction fall into midrange average values. This assumption may or may not be totally applicable to site-specific conditions on the proposed Project site. As noted previously, emissions estimation for Project-specific fugitive dust sources is therefore characterized by a considerable degree of imprecision.

Average daily PM-10 emissions during site grading and other disturbance are stated in the SCAQMD Handbook to be 26.4 pounds/acre. This estimate is based upon required dust control measures in effect in 1993 when the AQMD CEQA Air Quality Handbook was prepared. Rule 403 was subsequently strengthened to require use of a greater array of fugitive dust control on construction projects. All construction projects in the SCAQMD are required to use strongly enhanced control procedures. Use of enhanced dust control procedures such as continual soil wetting, use of supplemental binders, early paving, etc. can achieve a substantially higher PM-10 control efficiency. Daily emissions with use of reasonably available control measures (RACMs) for PM-10 can reduce emission levels to around ten (10) pounds per acre per day. With the use of best available control measures (BACMs) the California Air Resources Board predicts that emissions can be reduced to 1-2 pounds per acre per day. Because of the PM-10 non-attainment status of the air basin, construction activity dust emissions are considered to have a cumulatively significant impact. Use of BACMs is thus required even if SCAQMD individual CEQA thresholds are not exceeded by use of RACMs.

Current research in particulate-exposure health suggests that the most adverse effects derive from ultra-small diameter particulate matter comprised of chemically reactive pollutants such as sulfates, nitrates or organic material. A national clean air standard for particulate matter of 2.5 microns or smaller in diameter (called "PM-2.5") was adopted in 1997. A limited amount of construction activity particulate matter is in the PM-2.5 range. PM-2.5 emissions are estimated by the SCAQMD to comprise 20.8 percent of PM-10. Other studies have shown that the fugitive dust fraction of PM-2.5 is closer to 10 percent.

In addition to fine particles that remain suspended in the atmosphere semi-indefinitely, construction activities generate many larger particles with shorter atmospheric residence times. This dust is comprised mainly of large diameter inert silicates that are chemically non-reactive and are further readily filtered out by human breathing passages. These fugitive dust particles are therefore more of a potential soiling nuisance as they settle out on parked cars, outdoor furniture or landscape foliage rather than any adverse health hazard. The deposition distance of most soiling nuisance particulates is less than 100 feet from the source (EPA, 1995). There are no sensitive receptors within 100 feet from the primary construction site. The Project site is mostly surrounded by commercial or industrial uses. The nearest residential use is more than 900 feet from the site boundary.

Exhaust emissions will result from on and off-site heavy equipment. The types and numbers of equipment will vary among contractors such that exhaust emissions cannot be quantified with certainty. For the proposed Project, the following schedule and grading quantities were assumed:

- Grading 30 days 16.6 total acres disturbed
  30,200 CY cut, 40,200 CY fill, 10,000 CY import

- Excavation 30 days (includes under crossings)

- Paving 20 days (includes asphalt trails, shoulders and ramps)

- Bridge Construction 65 days (installation of pre-fabricated clear span bridge for Mission-Zanja Creek)

The construction scenario outlined above included the installation of the trail beneath the railroad bridge. Since this is considered the alternative that disturbs the greatest amount of area, the following emission forecast is considered a conservative emission estimate for the installation of a crossing of the railroad track located immediately east of the Mission-Zanja Creek channel. However, the installation of the temporary bike path over a distance of about two miles (Waterman Avenue and Orange Show Road) was not included in the above estimate. Regardless, this temporary bike path construction is considered to be a *de minimis* construction activity because the stripes and signs can be installed in one day using a pick-up truck or equivalent small vehicle covering a total distance of about two miles.

Utilizing the above equipment fleet and provided grading quantities the maximum daily emissions are calculated by CalEEMod.2011.1.1 as shown in Table 4.3-2:

Table 4.3-2
MAXIMUM DAILY CONSTRUCTION ACTIVITY EMISSIONS (lbs/day)

Maximum Daily Emissions	ROG	NOx	CO	SO_2	PM-10	PM-2.5	CO_2
Unmitigated	8.9	78.6	43.4	0.1	40.1	7.5	8,401.2
With PM Mitigation	8.9	78.6	43.4	0.1	36.1	5.5	8,401.2

Peak daily construction activity emissions will be below SCAQMD CEQA thresholds. Nevertheless, because of non-attainment SCAQMD recommends use of enhanced fugitive dust control mitigation measures for any project in the region. These recommended dust emissions mitigation measures are detailed in the “Mitigation” section of this section.

As previously noted, construction equipment exhaust contains carcinogenic compounds within the diesel exhaust particulates. The toxicity of diesel exhaust is evaluated relative to a 24-hour per day, 365 days per year, 70-year lifetime exposure. Public exposure to heavy equipment emissions will be an extremely small fraction quantify about 9 months and no nearby residences or other sensitive receptors will be exposed over this small period of time of the above dosage assumption. Diesel equipment is also becoming progressively "cleaner" in response to air quality rules on new off-road equipment.

The SCAQMD does not generally require the analysis of construction related diesel emissions relative to health risk due to the short period for which the majority of diesel exhaust would occur. For roadwork projects, heavy equipment will operate near any single receptor for only a small number of days. The majority of diesel exhaust would occur during the paving phase, which would be approximately 9 month period. Health risk analyses are typically assessed over a 9, 30 or 70 year time frame and not over a period of months due to the lack of health risk associated with such a brief exposure.

SCAQMD has developed analysis parameters to evaluate ambient air quality on a local level in addition to the more regional emissions-based thresholds of significance. These analysis elements are called Localized Significance Thresholds (LSTs). LSTs were developed in response to Governing Board’s Environmental Justice Enhancement Initiative 1-4 and the LST methodology was provisionally adopted in October 2003 and formally approved by SCAQMD’s Mobile Source Committee in February 2005.

Use of an LST analysis for a project is optional. For recreational improvement projects, the only source of LST impact would be during construction. LSTs are only applicable to the following criteria pollutants: oxides of nitrogen (NOx), carbon monoxide (CO), and particulate matter (PM-10 and PM-2.5). 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, and are developed based on the ambient concentrations of that pollutant for each source receptor area and distance to the nearest sensitive receptor.

LST analysis thresholds are based on one-site construction activity emissions (off-road emissions). A portion of the total construction activity for any project would include vehicular emissions from vendor trips; construction worker trips as well as on-road truck haul of grading earthworks. Such emissions are excluded from the LST analysis. The CalEEMod on-site construction equipment emissions by phase are as shown in Table 4.3-3.

Table 4.3-3
ON-SITE CONSTRUCTION ACTIVITY EMISSIONS (pounds/day)

Activity	ROG	NOx	CO	SO_2	PM-10	PM-2.5	CO_2
Site Prep							
Unmitigated	3.4	28.5	15.9	0.0	7.4	4.7	2,534.7
With PM Mitigation	3.4	28.5	15.9	0.0	3.7	2.7	2,534.7
Grading							
Unmitigated	6.5	51.2	30.0	0.1	9.5	6.2	4,839.3
With PM Mitigation	6.5	51.2	30.0	0.1	5.5	4.2	4,839.3
Excavation							
Unmitigated	7.6	59.4	35.3	0.1	10.0	6.7	5,737.5
Paving							
Unmitigated	6.2	37.5	21.3	0.0	3.3	3.3	2,929.3
Construction							
Unmitigated	4.5	28.4	16.3	0.0	2.0	2.0	2,792.3
SCAQMD Threshold	75	100	550	150	150	55	-

Source: CalEEMod.2011.1.1 Model, Output in Appendix

LST pollutant concentration data is currently published for 1, 2 and 5 acre sites for varying distances. Although the screening tables are valid for construction projects of five acres and less, they can be used as screening criteria for larger projects. If emissions exceed the LST for a five-acre site, then dispersion modeling needs to be conducted. If the daily disturbed footprint is greater than 5 acres but project construction emissions meet LST thresholds for a 5 acre site, then the threshold for a larger site will be met with a larger margin of safety and no additional analysis is required. The Project area encompasses 16.6 acres. If LST thresholds for a 5-acre Project site are not exceeded during construction, LST impacts are considered less-than-significant under CEQA.

LST screening tables are only available for 25, 50, 100, 200 and 500 meter source-receptor distances. For the proposed Project, the closest residential use is more than 900 feet from the site. Therefore, utilizing data for a 5 acre site and a source receptor distance of 200 meters, the following thresholds and emissions are determined (pounds per day):

Table 4.3-4
LST AND PROJECT EMISSIONS (lbs/day)

Central San Bernardino	CO	NOx	PM-10	PM-2.5
LST Thresholds	8,532	486	106	35
On-Site Construction Emissions				
Max Emissions	35	59	10	7

As identified in Table 4.3-4, above, all emissions are below the LST for on-site construction. Construction activities are not anticipated to cause dust emissions to exceed SCAQMD CEQA thresholds. Based on the analysis presented above, the following mitigation measure would further reduce potential dust related emissions:

4.3-1 Prior to issuance of grading permits, a Dust Control Plan shall be submitted to the County that demonstrates how construction activities would comply with the following dust control measures:

- ***Apply soil stabilizers or moisten inactive areas.***
- ***Prepare a high wind dust control plan.***
- ***Address previously disturbed areas if subsequent construction is delayed.***
- ***Water exposed surfaces as needed to avoid visible dust leaving the construction site (typically 3 times/day).***
- ***Cover all stock piles with tarps at the end of each day or as needed.***
- ***Provide water spray during loading and unloading of earthen materials.***
- ***Minimize in-out traffic from construction zone***

Emissions associated with construction of the proposed Project would fall below all applicable federal and state ambient air quality standards. Impacts would be further reduced to a level of less than significant with mitigation incorporated.

Operational Related Impacts
Powered vehicles will be prohibited on SART III except for an occasional maintenance vehicle. No routine operational air pollutants will be generated by the Project. A small long term benefit through fugitive dust reduction may result through replacement of a currently unpaved river bank with a paved and landscaped trail.

As identified above, implementation of the proposed Project would not conflict with or obstruct implementation of the applicable air quality plan because all emissions levels would fall below applicable air quality plan standards. Less than significant impacts would occur with the implementation of Mitigation Measure III-1.

d) Expose sensitive receptors to substantial pollutant concentrations? ***Determination: No Impact.***

Sensitive receptors (i.e., children, senior citizens, and acutely or chronically ill people) are more susceptible to the effects of air pollution than the general population. Land uses that are considered sensitive receptors typically include residences, schools, playgrounds, childcare centers, hospitals, convalescent homes, and retirement homes. Development of the proposed facilities could result in pollutant emissions from short-term construction activities. However, the closest pollution sensitive receptors are located approximately 900 feet away from any trail construction activities. LST thresholds would not be exceeded at the nearest homes during construction. Therefore, implementation of the proposed Project would not expose sensitive receptors to substantial pollutant concentrations, and no impacts would occur.

e) Create objectionable odors affecting a substantial number of people? ***Determination: Less Than Significant Impact.***

Construction activities may generate detectable odors from heavy-duty diesel equipment exhaust. Odors associated with diesel and gasoline fumes would occur during the construction phase and may affect residents in the vicinity of the Project. However, these odors are considered temporary in nature and would cease upon the completion of construction. As stated in Response III (d), the closest sensitive receptors are located approximately 900 feet away from any trail construction activities, and it is not anticipated that odors generated by construction of the Project would affect these homes. Therefore,

implementation of the proposed Project would not create objectionable odors that would affect a substantial number of people, and less than significant impacts would occur.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
4.4 BIOLOGICAL RESOURCES – Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?		X		
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?		X		
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?		X		
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?		X		
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?			X	
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?			X	

SUBSTANTIATION:

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

The Project area contains several species identified as a candidate, sensitive, or special status species. Therefore, to address the sensitive biology issues, two technical studies were compiled: “Natural Environment Study” (NES) (Appendix 2A) and “Jurisdictional Delineation Report” (Appendix 2B). These studies were prepared for Caltrans District 8 and the County of San Bernardino by Tom Dodson & Associates biologists and copies of these reports are provided as appendices to this document. The following text includes a discussion of habitat and species known to occur in the Project area. Most of the following text is abstracted from the NES.

The Biological Study Area (BSA) encompasses all areas of disturbance within the Project area, including temporary and permanent disturbance. The BSA supports a myriad of habitat types, including but not limited to riparian (Holland community code 61330), Riversidean alluvial fan sage scrub (RAFSS) (Holland community code 32720), sandy river wash (Holland community code 11730), bare areas (Holland community code 11760), disturbed ground urban or built-up land (Holland community code 11100) and non-native grassland (Holland community code 42200). Refer to Figure 4 in the NES.

Dense stands of riparian habitat that are modest in size are found scattered along the BSA within SAR from Waterman Avenue to Tippecanoe Avenue. The riparian habitat within the BSA is in various seral stages and generally consists of tall, multilayered, open canopy riparian woodland. The characteristic vegetative species within this riparian habitat include; Freemont cottonwood (*Populus fremontii),* black willow (*Salix goodingii*), sandbar willow (*S. hindsiana*), mule fat (*Baccharis salicifolia*), and sycamore (*Platanus recemosa).* In the absence of flooding, this riparian woodland has emerged with a complex canopy structure of varying layers of trees, shrubs, herbs and vines. The overstory averages over 35 feet in height.

RAFSS occurs within the BSA, outside of but adjacent to the Project alignment, between California Street and Orange Show Road. The RAFSS found in the BSA is characterized by buckwheat (*Eriogonum fasciculatum*), deerweed (*Lotus scoparus*) yerba santa (*Eriodictyon trichocalyx* var *trichocalyx*), scale broom (*Lepidospartum squamatum*), brittlebrush (*Encelia farinosa*), California sagebrush (*Artemisia Californica*), golden currant (*Ribes aureum*), California croton (*Croton californica*), and black sage (*Salvia melifera*).

In addition to the rich RAFSS and riparian habitat communities found within the BSA, there are small pockets where non-native exotic species have colonized. The dominant non-native invasive plants found in the riparian areas include arundo *(Arundo donax)*, tree tobacco (*Nicotiana glauca*), castor bean (*Ricinus communis*), and salt cedar (*Tamarix ramosissima*). At this point, none of these species are well established and/or are out-competing the native species. In contrast, non-native mustard (*Brassica incanca*) has become well-established in non-native grassland habitat within the BSA.

The BSA contains habitat of varying quality and value. The riparian habitat within the BSA is important because it provides shelter and forage to neo-tropical migratory birds, many of which are rare or are declining species. Neotropical migrants such as the yellow-rumped warbler *(Dendroica coronata),* orange-crowned warbler *(Vermivora celata),* blackthroated gray warbler *(Dendroica nigrescens),* MacGillivray's warbler *(Oporornis tolmiet),*white-crowned sparrow *(Zonotrichia leucophrys),* golden-crowned sparrow *(Zonotrichia atricapilla),* song sparrow *(Melospiza melodia),* common yellowthroat *(Geothlypis trichas),* yellow warbler *(Dendroica petechia),* yellow-breasted chat *(Icteria virens),* and ruby-crowned kinglet *(Regulus calendula)* depend on the deciduous trees and shrubs for foraging during migration. The mature riparian trees provide numerous cavities for cavity-dependent wildlife and the tall trees are used by nesting raptors. Raptors such as Cooper's hawk *(Accipiter cooperii),* red-tailed hawk, red-shouldered hawk *(Buteo lineatus),* white-tailed kite *(Elanus caeruleus)*, and American kestrel *(Falco sparvarious)* have a wealth of resources to draw on for foraging and nesting within the BSA.

The reptiles known to occur in the vicinity of the BSA are the western fence lizard *(Sceloporus occidentalis)*and San Diego alligator lizard *(Gerrhonotus multicarinatus webbi),* red coachwhip *(Masticophis flagellum piceus),* side-blotched lizard *(Uta stansburiana),* western skink *(Eumeces*

sldltoniansus), San Diego gopher snake *(Pituophis melanoleucus annectens),* and California kingsnake *(Lampropeltis getulus californiae).*

Fish known to occur in the SAR and Mission-Zanja Creek within the BSA include the introduced mosquito fish (Gambusia affinis), fathead minnow (Pimephales promelas), and bluegill (Lepomis macrochirus). Amphibians include the Pacific chorus frog (*Pseudacris regila*), western toad (*Bufo boreus*) and the non-native bullfrog (*Rana catesbeiana*), and African clawed frog (*Xenopus laevis*).

The habitat within the BSA serves is favorable for foraging, nesting, burrowing, and wildlife movement. The most common mammals occurring or expected to occur in the BSA include small mammals such as ornate shrew *(Sorex omatus),* broadfooted mole *(Scapanus latimanus),* California vole *(Microtus micrtous),* Botta's pocket gopher *(Thomomys bottae),* deer mouse *(Peromyscus maniculatus),* dusky-footed woodrats *(Neotoma fuscipes),* raccoon *(Procyon lotor),* long-tailed weasel *(Mustela frenata),* and striped skunk *(Mephitis mephitis).* Larger mammals would include mule deer *(Odocoileus hemionus),* and coyote *(Canis latrans).*

Despite its location in the middle of a dense urban area, the SAR floodplain maintains considerable habitat value. In addition to the fundamental flood control and water-related functions of the SAR, this watercourse serves as a wildlife habitat linkage, corridor, and buffer in an urban context, linking habitats that are separated by development and providing wildlife dispersal and migration pathways. The floodplain also buffers plants and wildlife from surrounding human disturbance. For these and other reasons the habitats in SAR floodplain, and by default the BSA, support a high level of natural resource diversity and richness. Within the BSA, the SAR supports riparian and RAFSS habitats which are two habitat types of concern and are known to support several sensitive species.

Table 1 of the NES provides a list of sensitive species with a potential to occur in the vicinity of the BSA and information as to the presence of suitable habitat and/or CH. Information relative to the federally-listed (threatened or endangered) species likely to occur in the Project area was furnished by the USFWS and a list of all sensitive species documented to occur in the USGS – Redlands and San Bernardino South quadrangles was generated by the CNDDB.

<u>Habitat Impacts</u>
RAFSS occurs within the BSA but not within the Project construction area. RAFSS is found north of the Project alignment between Orange Show Road and California Street and south of the Project alignment between Mountain View Avenue and California Street. The trail was specifically sited along the top of the southern flood control levee to avoid impacts to the native habitat and open space adjacent to both sides of the levee. The construction staging locations where also chosen in previously disturbed areas where no sensitive resources exists such as on the levee bank where the top of the bank is wider. This project avoids impacts to RAFSS. No further action is warranted, recommended, or required.

Riparian habitat is dependent upon a dynamic hydrologic regime. Periodic flooding contributes to the habitat's structural diversity and sediment deposition contributes to the topographical diversity thereby increasing species diversity in the floodplain community. Dense stands of riparian habitat that are modest in size are found scattered along the BSA within SAR from Waterman Avenue to Tippecanoe Avenue with narrower strips occurring between Tippecanoe Avenue and California Avenue. An additional riparian forest patch occurs south of the levee between Mountain View and California. This has been isolated from the river and there is substantial die-back and accumulation of potential fuels.

The Waterman Avenue, Orange Show Road and Tippecanoe Avenue underpasses were designed to minimize impacts to riparian habitat to the maximum extent possible. Rip-rap or slope protection is proposed in these areas to keep the width of disturbance to a minimum. Segments of the trail alignment were re-adjusted to the south to avoid and/or minimize temporary impacts related to construction. The engineering details for the drainage structures required for this project have been reduced to the greatest extent possible in order to minimize effects to riparian habitat.

It is estimated that construction of the Phase III underpasses will result in a total disturbance to riparian of approximately 0.9 acre of impact all of which will be permanent. This unavoidable impact will occur at the Waterman underpass. Tree trimming will be the only impact at the Orange Show Road and Tippecanoe Avenue underpasses (Table 4.4-1).

Table 4.4-1
PROJECT RELATED IMPACTS TO RIPARIAN HABITAT

Location	Temporary Impacts	Permanent Impacts
Waterman Avenue	None	0.3 acre
Mission/Zanja	0.6 acre	0.6 acre
Orange Show Road	Tree limb trimming only	None
Tippecanoe Avenue	Tree limb trimming only	None
Out-Fall 1	0.1 acre	500 sq ft
Out-Fall 2	1500 sq ft	100 sq ft

The largest area of impact to riparian habitat will occur east of the Mission-Zanja Creek. This is the only unimproved area where the trail will be constructed. The engineering design in this area includes the installation of a retaining wall to minimize and avoid impacts to jurisdictional waters, decrease future maintenance requirements, and increase user safety.

Impacts associated with the trail construction east of the Mission-Zanja Creek encompass approximately 1.2 acres of riparian habitat. Of the 1.2 acres of impact to riparian habitat, 0.6 acre will be permanent and 0.6 will be temporary.

There is no specific mitigation for impacts to riparian habitat because these impacts also fall within the impacts to southwestern willow flycatcher (SWWF) critical habitat (CH) and jurisdictional waters. To avoid duplicative mitigation, impacts to riparian habitat, as well as impacts to SWWF CH, are accounted for and will be offset by the mitigation proposed for impacts to California Department of Fish and Wildlife (CDFW) CDFW jurisdictional streambed. The reason being is that the extent of the CDFW jurisdiction encompasses the project-related impacts to riparian habitat and SWWF CH.

There are no known proposed developments in the general vicinity of this Project that will result in the loss or fragmentation of riparian habitat. Other future projects including the SART Phase IV and Greenspot Realignment and Bridge Replacement Projects will not result in appreciable loss or degradation to riparian habitat.

SPECIAL STATUS ANIMAL SPECIES

<u>San Bernardino Kangaroo Rat Critical Habitat</u>
The USFWS is the principal Federal agency responsible for conserving, protecting and enhancing fish, wildlife and plants and their habitats by enforcing Federal wildlife laws, administering the ESA, managing migratory bird populations, restoring nationally significant fisheries, and conserving wildlife habitat. The USFWS listed the SBKR as endangered on September 24, 1998 (63 FR 51005) and designated CH for this species on April 23, 2002 (67 FR 19812). On January 10, 2011 the Court rejected the USFWS's 2008 revised SBKR CH designation (FR 73, No. 202). As a result of this decision, this project is subject to the SBKR CH that was designated by the USFWS in 2002 (67 FR 19812). The 2002 CH designation for the SBKR encompasses 33,295 acres of land in Riverside and San Bernardino counties, California.

CH is defined in section 3(5)(A)(i) of the ESA, in part, as "*areas occupied by the species at the time of listing and containing those physical and biological features (Primary Constituent Elements or PCEs) that are essential to the conservation of the species, and that may require special management considera-*

tions or protection. General requirements include, but are not limited to: space for individual and population growth and for normal behavior; food, water, air, light, minerals, or other nutritional or physiological requirements; cover or shelter; sites for breeding, reproduction, and rearing of offspring; and habitats that are protected from disturbance or are representative of the historic geographical and ecological distributions of a species".

The areas designated as CH for SBKR are identified in four separate units. The four units are within the geographical range of the SBKR and support the habitat the species requires for foraging, sheltering, reproduction, rearing of young, dispersal, and genetic exchange.

This project falls within the Santa Ana River CH Unit (Unit 1), located in San Bernardino County. Unit 1 encompasses approximately 8,935 ac, and includes the SAR and portions of City, Plunge, and Mill Creeks. It is bounded by Seven Oaks Dam to the northeast. Although Seven Oaks Dam impedes sediment transport and reduces the magnitude, frequency, and extent of flood events, the system still retains partial fluvial dynamics because contributions from Mill Creek are not impeded by a dam or debris basin. This unit contains upland refugia and tributaries that are occupied by the species, active hydrological channels, floodplain terraces, and areas of habitat immediately adjacent to floodplain terraces. The functions and values of the SBKR CH within Unit 1 include: (1) Soil series consisting predominantly of sand, loamy sand, sandy loam, or loam; (2) Alluvial fan sage scrub and associated vegetation, such as coastal sage scrub and chamise chaparral, with a moderately open canopy; (3) River, creek, stream, and wash channels; alluvial fans; floodplains; floodplain benches and terraces; and historic braided channels that are subject to dynamic geomorphological and hydrological processes typical of fluvial systems within the historical range of the San Bernardino kangaroo rat; and (4) Upland areas proximal to floodplains with suitable habitat.

The entire BSA is mapped within Unit 1 of designated SBKR CH. The CH within the BSA between Orange Show Road and California Street contains the PCEs for SBKR, is suitable for SBKR and is connected to a large block of occupied habitat. In contrast, the CH within the BSA between Waterman Avenue and Orange Show Road does not contain any PCEs for SBKR, is not suitable for SBKR and does not provide connectivity to large blocks of occupied habitat. It is not likely that this area will be re-colonized by SBKR because it supports primarily riparian habitat.

Although the entire BSA is mapped within SBKR CH, the project alignment and construction footprint do not contain any PCEs required by SBKR.

The project was specifically designed to avoid impacts to habitat suitable for or occupied by SBKR. The majority of the trail will be constructed on the existing flood control levee and maintenance road. All suitable SBKR habitat areas will be avoided.

The Project will result in approximately 16.6 acres of land disturbance all of which is within designated SBKR CH. None of the 17.5 acres contains PCE for SBKR. As such, the permanent loss of 5.9 acres of the 8,935 acres of CH designated within Unit 1 that does not contain PCEs for SBKR will not result in an adverse modification of the CH designated in this unit. Furthermore, this Project will not change the hydrologic processes in any way that will contribute to further loss of PCEs elements identified for SBKR within the SAR.

SBKR are known to occur in areas containing suitable habitat between Tippecanoe Avenue and California Street. Two SBKR individuals were also found within suitable habitat between Orange Show Road and Tippecanoe Avenue during a focused trapping survey conducted in December 2010. Downstream of Orange Show Road, the habitat quickly transitions from RAFSS habitat to Riparian forest. SBKR are not associated with riparian habitat and do not occur between Orange Show Road and Waterman Avenue.

Although, all project-related impacts to SBKR CH will occur in low quality and, unsuitable habitat devoid of PCEs, losses of CH must be fully accounted for to ensure that adequate amounts of suitable habitat

remain available for the long-term survival of the affected species. Therefore, the following mitigation measures will be implemented by County Regional Parks.

4.4-1 ***A qualified biologist shall provide an environmental awareness class to all persons who will work on-site during construction. The class will consist of a presentation about the biology of the surrounding area and any natural resource laws pertaining to the project. A fact sheet containing this information shall also be prepared and distributed. Upon completion of the class, the attendees will sign a form stating that they understand all protection measures. These forms will be filed with the County and will be made available to the regulatory resource agencies upon request.***

4.4-2 ***The Project applicant shall provide compensatory mitigation for Project-related permanent impacts in a 2:1 impact area to mitigation area ratio by rehabilitating approximately 0.2 acre of degraded habitat located adjacent the north and south sides of trail alignment between Tippecanoe Avenue and California Street. The rehabilitated habitat shall be protected in perpetuity through an approved Conservations Easement (CE) mechanism that allows the County of San Bernardino Flood Control District to maintain access and operations and maintenance activities. The CE will be managed by an approved County District. To cover the cost of maintaining the rehabilitated CE lands, the County of San Bernardino Regional Parks Department will coordinate with County Counsel to set up a non-wasting endowment fund.***

For temporary construction-related impacts to SBKR critical habitat, the County of San Bernardino Regional Parks Department will restore the habitat to its pre-project native condition, through the development and implementation of a HMMRP per Corps, USFWS, RWQCB, and CDFW requirements and standards.

4.4-3 ***Under the supervision of a biologist, bright orange plastic construction fencing, stakes, flags, or markers that are clearly visible to construction personnel on foot and in heavy equipment will be used to delimit areas of grading, staging, and avoidance for the proposed project. These markers will be in place prior to Project initiation (that includes any clearing, grubbing, grading, or staging of equipment or vehicles) and will remain in place until all construction activities are finished. Intrusion by construction personnel into adjacent land, outside of the delineated construction envelope, will not be permitted. All construction personnel and equipment will operate only within the clearly delineated limits of grading and construction activities.***

4.4-4 ***Unauthorized, public off-road use of the Project area shall be discouraged by posting of signs and by monitoring by the construction crew.***

4.4-5 ***Existing routes of travel and approved access roads will be used to and from construction areas. Cross-country travel by vehicles and equipment will be prohibited.***

4.4-6 ***Trash from construction personnel, especially food items or packaging, will be disposed of in covered containers and removed daily.***

4.4-7 ***Avoid the creation of berms, which may attract SBKR, to minimize potential future impacts to SBKR during maintenance activities.***

4.4-8 A qualified biologist will perform a visual pre-construction survey for SBKR within the construction footprint immediately prior to ground disturbing activities. Any small mammal burrows within the construction zone that cannot be avoided will be excavated by hand during the visual survey. This will allow the occupant, if any, to run out of harm's way.

4.4-9 The biologist will inspect the sites periodically and will remain on-call for the duration of the Project. The biologist will oversee the implementation of minimization and/or avoidance measures during Project set up and construction.

4.4-10 During construction, if a situation is encountered that could affect a listed species (i.e., SBKR) for which a contingency plan of avoidance, removal, relocation or transplant has not been approved by the USFWS, then all activities will cease and the biologist will be notified. The biologist will then contact the appropriate regulatory authority within 24 hours. The biologist will have the authority to stop immediately any activity that is not in compliance with the natural resource regulatory laws or permits secured for the projects. She/he will have the authority to order any reasonable measure to avoid the take of SBKR.

4.4-11 If, in any event, SBKR is injured as a result of Project related activities during construction, construction will be halted, the USFWS will be notified and the injured animal will be taken to an approved veterinarian clinic. Construction activities will remain halted until the authority to resume is provided by the County in coordination with USFWS.

CH was designated for SBKR as a result of this species trend towards extinction. Since the designation of CH in 2002 a number of permitted and authorized residential, commercial, and industrial development projects in the San Bernardino Valley have resulted in the fragmentation and loss of CH. The SART Phase IV, Mountain View Avenue Bridge, and Greenspot Realignment and Bridge Replacement Projects are future projects that will result in cumulative (approximately 36 acres), direct, permanent and temporary loss of SBKR CH. Because the proposed Project's impacts will be fully mitigated, its contribution to cumulative impact does not rise to a level of cumulatively considerable or cumulatively significant impact.

<u>Santa Ana Sucker Critical Habitat</u>

Santa Ana sucker (*Catostomus santaannae*) [SASU] is a sucker fish found only in a handful of rivers in southern California. The SASU's range is extremely restricted; they are native only to the Los Angeles, San Gabriel, Santa Ana, and Santa Clara River systems in Southern California. Populations have been lost from several parts of the rivers, so that they now only live in the upper portion of the Los Angeles and San Gabriel drainages, and the lower part of the SAR in Reaches 4-2, especially in areas with additional treated wastewater effluent from sewage treatment plants. Limiting factors for the SASU are hydrology and sediment. The USFWS listed the SASU as threatened on April 12, 2000 (65 FR 19686) and designated CH for this species on February 26, 2004 (69 FR 8839) which was revised on January 4, 2005 (70 FR 425). On December 9, 2009, the USFWS proposed another revised CH designation for the SASU (74 FR 65056), which was finalized December 14, 2010 (75 FR 77962).

One of the key issues identified in earlier rules of the USFWS to designate CH for the SASU was sediment load and sediment transport. According to the sediment transport analysis prepared by EIP Associates in their evaluation of the final rule to designate CH for the SASU, the primary sediment sources for Reaches 3 and 4 of the Santa Ana River originate from Mill Creek, Plunge Creek, City Creek Lytle /Cajon Creek and Reche Canyon Channel (April 26, 2004 Comments to USFWS submitted by SBVMWD, Western Municipal Water District of Riverside County, San Bernardino County Flood Control District). As sediments travel down the SAR, much of the sediment load falls out at the I-10 freeway

overcrossing. The Corps installed dissipation structures to protect the I-10 freeway overcrossing of the SAR. As designed, the dissipaters slow the surface flow velocities down. The results are sediment deposition at the dissipaters and downstream channel bed degradation.

In 2004, EIP Associates evaluated the Final Rule to designate CH for the SASU (69 FR 8839). In this evaluation EIP showed that the channel degradation in a 10-mile stretch downstream of the dissipaters currently averages 0.6 inches of degradation per year. The EIP evaluation also showed that even with the 40% reduction in sediment load caused by the Seven Oaks Dam, the remaining sediment sources were substantial. The conclusion of EIP's evaluation was that substantial sediment sources exist in the tributaries identified above and that transport of those sediments into occupied SASU habitat in the SAR is sufficient to sustain their populations.

The December 14, 2010 (75 FR 77962) final rule on the revised CH for SASU defines seven primary constituent elements that are essential to the conservation of SASU. These primary constituent elements are as follows: (1) A functioning hydrological system within the historical geographic range of Santa Ana sucker that experiences peaks and ebbs in the water volume (either naturally or regulated) that encompasses areas that provide or contain sources of water and coarse sediment necessary to maintain all life stages of the species, including adults, juveniles, larvae, and eggs, in the riverine environment; (2) Stream channel substrate consisting of a mosaic of loose sand, gravel, cobble, and boulder substrates in a series of riffles, runs, pools, and shallow sandy stream margins necessary to maintain various life stages of the species, including adults, juveniles, larvae, and eggs, in the riverine environment; (3) Water depths greater than 1.2 in (3 cm) and bottom water velocities greater than 0.01 ft per second (0.03 m per second); (4) Clear or only occasionally turbid water; (5) Water temperatures less than 30°C (86°F); (6) In-stream habitat that includes food sources (such as zooplankton, phytoplankton, and aquatic invertebrates), and associated vegetation such as aquatic emergent vegetation and adjacent riparian vegetation to provide: (a) Shading to reduce water temperature when ambient temperatures are high, (b) shelter during periods of high water velocity, and (c) protective cover from predators; and (7) Areas within perennial stream courses that may be periodically dewatered, but that serve as connective corridors between occupied or seasonally occupied habitat and through which the species may move when the habitat is wetted.

The December 2010 final rule designated a total of 9,331 acres as SASU CH within portions of creeks and rivers in San Bernardino, Los Angeles, and Riverside counties, California. Unit 1 encompasses portions of the SAR in San Bernardino, Riverside, and Orange Counties including upper, mainstem and lower portions of the SAR as well as portions of the Rialto Drain and Sunnyslope Creek. Unit 1 is divided into three subunits 1A, 1B and 1C.

The SART Phase III Project falls within Subunit 1A which is not occupied by the SASU but is essential to its conservation. 1,559 acres of CH have been designated as part of Subunit 1A. Subunit 1A provides essential sources of water and coarse sediment to occupied portions of the unit downstream. Upper Santa Ana River Subunit 1A is located near the Cities of Highland, Mentone, and Redlands in San Bernardino County, California. This subunit includes: 7 mi (12 km) of City Creek (measured from its confluence with the SAR), 12 mi (19 km) of Mill Creek (measured from its confluence with the SAR), and 10 mi (17 km) of the SAR from below the Seven Oaks Dam to near Tippecanoe Avenue.

While City Creek and the SAR above Tippecanoe Avenue are not currently occupied, these areas were historically occupied. The SAR above Tippecanoe Avenue, Mill Creek, and City Creek has been determined to be essential for the conservation of SASU because it provides stream and storm waters which are necessary to transport coarse sediments necessary to maintain preferred substrate conditions in downstream occupied portions in the SAR. According to the USFWS, the section of the SAR from above Tippecanoe Avenue in San Bernardino, City Creek, and Mill Creek are particularly essential for the conservation of the SASU since the Seven Oaks Dam has reduced the transport of coarse sediment and altered the natural flow in the downstream, occupied areas of the SAR. The SAR and its unconfined tributaries are the primary sources of coarse sediment in the upper SAR watershed and are also part of

the SAR hydrologic system, and assist in maintaining suitable water quality and temperature to occupied reaches of the SAR.

The Project will implement stringent stormwater pollution prevention measures during construction and then will implement water quality management of runoff from the trail. All impacts to SASU CH will be avoided.

The trail alignment and construction footprint does not encroach into designated SASU CH. Therefore, the Project will not result in impacts or adverse modification to SASU CH. Furthermore, installation of the trail will not change the hydrologic processes in any way that will contribute to the loss of primary constituent elements identified for SASU. According to the US Army Corps of Engineers the hydrology for the SAR from the Seven Oaks Dam outflow is as follows. The 100-year discharge from Seven Oaks Dam is 5,000 cfs and the maximum controlled outflow from the Dam is 8,000 cfs before the spillway starts to overflow. The trail is proposed to be installed where bank improvements already exist. The Project does not change the width of channel or the ability for the watercourse to meander back and forth during low flow storm events. The watercourse's ability to transport of coarse sediment from upstream to downstream is not altered with the construction of the SART Phase III. The watercourse within the Project area is dry during the summer months and only carries storm flow in the winter time during the rainy season and these flows will not be altered by Project implementation.

Since impacts to SASU CH will be avoided and no cumulative impacts can be identified, no mitigation is required.

Southwestern Willow Flycatcher Critical Habitat

Revised CH for the SWWF was issued October 19, 2005 (70 FR 60885 61009). The Santa Ana Management Unit includes large portions of the SAR including a 25.3-mile segment beginning at the headwaters and an 8.5-mile segment beginning just upstream of Waterman Avenue. The physical and biological features or PCEs that are essential to the conservation of the SWWF include but are not limited to: space for individual and population growth and for normal behavior; food, water, air, light, minerals or other nutritional or physiological requirements; cover or shelter; sites for propagation and dispersal; and habitats that are protected from disturbance or are representative of the historical, geographical, and ecological distributions of the SWWF.

It is important to recognize the combined nature of the relationships between river function, water, hydrology, floodplains, soils, aquifers, and plant growth as together they form and support the vegetation and insect populations essential for the conservation of the SWWF. All the PCEs of CH for the SWWF are found in the riparian ecosystem within the 100-year floodplain or flood prone area. SWWF use riparian habitat for nesting, feeding, and sheltering while breeding, migrating, and dispersing. Because riparian vegetation is prone to periodic disturbance, flycatcher habitat is ephemeral and its distribution is dynamic in nature. Therefore, the riparian vegetation used by SWWFs is part of a gradually changing system, not only in its rapid growth due to its proximity to water, but its location within the floodplain due to the dynamic riverine environment.

The purpose of the CH is to sustain SWWFs across their range by providing a sufficient amount of riparian habitat. The CH designated in the SAR channel provides riparian habitat for breeding, migrating, dispersing, non-breeding and territorial SWWFs, metapopulation stability, gene flow, connectivity, population growth, and prevention against catastrophic loss. There are seven breeding sites known along the SAR.

A total of 5.1 acres of SWWF CH is mapped within the Project area between Waterman Avenue and Tippecanoe Avenue. Of these 5.1 acres, 1.5 acres contain PCEs identified for SWWF including but not exclusive to woody, riparian vegetation supporting a mosaic of cottonwood, willow and other riparian vegetative associations in stands larger than 0.5 acres in size, with over 50 percent cover, densely structured in a two- or three-story canopy. The riparian habitat in the BSA between Waterman Avenue and Orange Show Road is considered suitable for SWWF. A focused survey for SWWF was conducted

in spring 2013 as part of this project, and no SWWF were identified within the project area during this survey. However, SWWF have been documented in the riparian habitat near Waterman Avenue. Therefore, this species has a high potential for occurrence and as such is assumed present.

The Project was designed so that the vast majority of the trail alignment will not result in permanent impacts to sensitive habitat, such as riparian, due to its location on an existing flood control levee and maintenance road. The underpasses were designed to minimize impacts to the maximum extent possible. Rip-rap or slope protection is proposed in these areas to keep the width of disturbance to a minimum.

As stated in the results, a total of 5.1 acres of SWWF CH is mapped within the Project area between Waterman Avenue and Tippecanoe Avenue. However, of those 5.1 acres, only 1.5 acres contain PCEs for SWWF. Within the 1.5 acres of CH where PCEs occur for SWWF, 0.9 acre will be permanently impacted and 0.6 acre will be temporarily impacted. The permanent loss of 0.9 acre within Santa Ana Management Unit will not result in an adverse modification of the CH designated in this unit. Furthermore, this Project will not change the hydrologic processes in any way that will contribute to further loss of PCEs elements identified for SWWF within the SAR.

Any cumulative loss of SWWF CH habitat must be fully accounted for and the SWWF assured adequate habitat to protect long-term survival. A permanent impact of 0.9 acre will occur in SWWF CH between Waterman Avenue and Orange Show Road.

Regional Parks will restore temporarily disturbed areas to a pre-construction native condition at a 1:1 ratio. Please refer to the mitigation proposed for permanent impacts to streambed and water of the United States. Timing of construction will avoid all impacts to this species. Construction of the trail between Waterman Avenue and Tippecanoe Avenue will not occur between April 15 and September 1 which is the timeframe when SWWF migrate into the area, establish territories and potentially breed. Since impacts to this species will be avoided no mitigation is required.

4.4-12 Construction of SART III shall not occur between April 15 and September 1 which is the timeframe when SWWF migrate into the area, establish territories and potentially breed.

<u>Least Bells Vireo</u>
The LBVI is a small, olive-gray migratory songbird that nests and forages almost exclusively in riparian woodland habitats. Bell's vireos as a group are highly territorial and are almost exclusively insectivorous. LBVI nesting habitat typically consists of well developed overstory, understory, and low densities of aquatic and herbaceous cover. The understory frequently contains dense sub-shrub or shrub thickets. These thickets are often dominated by plants such as narrow-leaf willow, mulefat, young individuals of other willow species such as arroyo willow or black willow, and one or more herbaceous species. LBVI generally begin to arrive from their wintering range in southern California and establish breeding territories by mid-April. A large majority of breeding vireos depart their breeding grounds by the September.

LBVI was first proposed for listing as endangered by the USFWS on May 3, 1985, (50 FR 18968) and was subsequently listed as federally endangered on May 2, 1986 (60 FR 10694). CH units were designated by the USFWS on February 2, 1994 (59 FR 4845) and included reaches of ten streams in six counties in southern California and the surrounding approximately 38,000 acres. The CH units exist in the Santa Ynez River, Santa Clara River, SAR, Santa Margarita River, San Luis Rey River, Sweetwater River, San Diego River, Tijuana River, Coyote Creek, and Jumul-Dulzura Creek.

Although LBVI use a variety of riparian plant species for nesting, it appears that the structure of the vegetation is more important than other factors such as species composition or the age of the stand. Upon arrival, males establish breeding territories that range in size from 0.5 to 7.4 acres, with an average size of approximately 2 acres. After pair formation, vireos construct a hanging cup nest made up of dried

plant material. Nests are usually placed in forks of branches between 2 and 5 feet from the ground. Females lay two to five eggs with both parents incubating the clutch for approximately 14 days and the young fledging after 10 to 12 days. The fledglings will remain in the parental territory for up to a month.

The riparian habitat in the BSA between Waterman Avenue and Tippecanoe Avenue is highly suitable for LBVI. Breeding LBVI pairs have been documented annually in the riparian habitat near Waterman Avenue since the early 1990's. In April 2011, Biologist Shay Lawrey casually observed five territorial LBVI vocalizing in the riparian habitat between Waterman Avenue and Orange Show Road during a field meeting with the County of San Bernardino County Regional Parks Department and Flood Control District Engineers. This species is present.

Timing of construction will avoid all impacts to this species. Construction of the trail between Waterman Avenue and Tippecanoe Avenue will not occur between April 15 and September 1 which is the timeframe when LBVI migrate into the area, establish territories and potentially breed. Since impacts to this species will be avoided no further mitigation is required.

4.4-13 Construction of SART III shall not occur between April 15 and September 1 which is the timeframe when LBVI migrate into the area, establish territories and potentially breed.

SENSITIVE PLANT SPECIES

Santa Ana River Woollystar

Santa Ana River woollystar is State and federally-listed as Endangered. It is a shrubby perennial which can grow to one meter (3.3 feet) tall. This species blooms from June to August and produces bright blue flowers. This species is associated with early- to moderate-successional alluvial scrub, and thus requires periodic flooding and silting for the creation of new habitats and colonization. Suitable habitat is comprised of a patchy distribution of gravelly soils, sandy soils, rock mounds and boulder fields, with low amounts of clay and silt (USFWS 1986). These areas typically maintain a perennial plant cover of less than 50%. Associated perennial plants include California buckwheat (*Eriogonum fasciculatum*), California croton (*Croton californicus*), yerba santa (*Eriodictyon trichocalyx*) and scale-broom (*Lepidospartum squamatum*). The Santa Ana River woolly-star occurs along the SAR and Lytle and Cajon Creek flood plains from the base of the San Bernardino Mountains in San Bernardino County southwest along the SAR through Riverside County into the Santa Ana Canyon of northeastern Orange County from about 150 to 580 meters (Munz 1974).

Santa Ana woollystar occurs on the north side of the SAR including near Mountain View Avenue and in conservation management areas, south of the San Bernardino International Airport. A number of large rainfall events and flooding from landscape scale burns in the adjacent mountains have led to wash-out of some populations and dispersal of soil seed banks downstream. Isolated individuals have been seen in somewhat atypical settings in the Project vicinity in recent years. However, it does not appear that new populations have established from these waifs and no individuals were found in the 2010 or 2011 focused surveys conducted for this project.

The proposed Project will not result in direct, indirect, or cumulative impacts to Santa Ana River woollystar because this plant species is absent from the Project footprint, construction zone, staging and access areas and from adjacent areas. No further action is required.

Slender-horned spineflower

The slender-horned spineflower is a small annual flower that is found in sandy soil in association with mature alluvial scrub. The ideal habitat for this species appears to be a terrace or bench that receives over-bank deposits every 50 to 100 years. This flower is endemic to southwestern California, ranging from central Los Angeles County east to San Bernardino County, and south to southwestern Riverside County in the foothills of the Transverse and Peninsular Ranges, at 200 to 700 meters elevation (Hickman 1993). Only eight areas are still known to support slender-horned spineflower populations,

including two in San Bernardino County (SAR floodplain and Cajon Wash) (CNDDB 2008). Individuals are small and difficult to locate. This species is only readily detectable in the spring between April and June when in bloom. The Slender-horned spineflower was listed as endangered in January 1982 by the California Fish and Game Commission. On September 28, 1987, it was federally listed as endangered. This species occurs in Los Angeles, San Bernardino and Riverside Counties.

Experienced botanists conducted focused surveys for this species according to an established protocol in appropriate habitat in 2010 and 2011. No spineflowers were found during the course of the surveys.

The proposed Project will not result in direct, indirect, or cumulative impacts to slender-horned spineflower because this plant species is absent from the Project footprint, construction zone, staging and access areas and from adjacent areas. No further action is required.

As identified above, with the implementation of mitigation measures, less than significant impacts would occur to species identified as a candidate, sensitive, or special status species.

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?* ***Determination: Less Than Significant Impact with Mitigation Incorporated.***

c) *Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?* ***Determination: Less Than Significant Impact with Mitigation Incorporated.***

Riparian habitat is dependent upon a dynamic hydrologic regime. Periodic flooding contributes to the habitat's structural diversity and sediment deposition contributes to the topographical diversity thereby increases species diversity in the floodplain community.

A healthy riparian habitat community occurs throughout the SAR floodplain along the valley floor, where the water table is high and/or there is periodic water flow.

In addition to the fundamental water-related functions, this watercourse provides a corridor through developed land and links open spaces together. The riparian habitat within the SAR between Waterman Avenue and Orange Show Road functions as a regional habitat linkage, corridor and buffer for wildlife. Habitat linkages provide links between larger habitat areas and are often critical to the long-term health of connected habitats. Linkages may be very small or quite large. Habitat corridors are similar to linkages, but provide specific opportunities for animals to disperse or migrate between areas. Adequate cover is essential for a corridor to function as a wildlife movement area. In addition to linkage and corridor values, open space can provide a buffer against both human disturbance and natural fluctuations in resources. Examples of human-based disturbance include noise, direct human intrusion, trash dumping, increased fire ignition risk, access by non-native predators, and invasion and establishment by non-native species. Natural variations in availability of biological resources which can potentially be buffered by adjacent habitat include fire, extremes of weather, and fluctuations in prey and predator populations. The riparian habitat in the Project area provides buffering for the plants and wildlife in the vicinity from human disturbance.

Dense stands of riparian habitat that are modest in size are found scattered along the Project area within the SAR from Waterman Avenue to Tippecanoe Avenue with narrower strips occurring between Tippecanoe Avenue and California Avenue. An additional riparian forest patch occurs south of the levee between Mountainview and California. This has been isolated from the river and there is substantial die-back and accumulation of potential fuels. The riparian habitat within the Project area is in various seral stages and generally consists of tall, multilayered, open, canopy riparian woodland. The characteristic vegetative species within this riparian habitat include: Freemont cottonwood (*Populus fremontii),* black

willow (*Salix goodingii*) narrow-leaved willow (*S. exigua*), mule fat (*Baccharis salicifolia*), and sycamore (*Platanus recemosa).*

Construction will result in approximately 16.6 acres of land disturbance of which 6.6 acres will be permanent disturbance and 10.4 acres will be temporary construction and staging disturbance. The trail alignment was specifically sited along the top of the southern flood control levee to avoid impacts to the native habitat and open space adjacent to both sides of the levee. The Project was designed so that the vast majority of the trail alignment will not result in permanent impacts to sensitive habitat, such as riparian, due to its location on an existing flood control levee and maintenance road.

The Waterman Avenue, Orange Show Road and Tippecanoe Avenue underpasses were designed to minimize impacts to the maximum extent possible. Rip-rap or slope protection is proposed in these areas to keep the width of disturbance to a minimum. It is estimated that construction of the Phase III underpasses will result in a total disturbance of approximately 3.5 acres.

Approximately 1.1 acres of riparian habitat exists in the approximate 2,500 lineal foot stretch of the alignment where the southern bank is unimproved, easterly of Waterman Avenue from the confluence of Mission-Zanja Creek east to Orange Show Road.

The construction staging locations where chosen in previously disturbed areas where no sensitive resources exist such as on the levee bank where the top of bank is wider. Small segments of the trail alignment were slightly re-adjusted to the south to avoid and/or minimize temporary impacts related to construction.

The loss of and degradation of riparian habitats in San Bernardino County have both occurred due to urban and agricultural development, fire, water diversion and impoundment, channelization, livestock grazing, off-road vehicle use and recreation, replacement of native habitats by introduced plant species, and hydrological changes resulting from these and other land uses. The Project area contains healthy stands of riparian habitat that is dense, with an intricate structure and considered suitable for LBVI or SWWF.

This section presents the delineation results of USACE jurisdiction pursuant to Section 404 of the CWA; RWQCB legal authority in accordance with CWA Section 401 and as defined within Section 13050(e) et seq. of the CWC; and CDFW jurisdiction pursuant to Section 1600 et seq. of the CFG Code. Six aquatic features were identified within the Project study area (Figure 5-1) and are described in detail in Section 5.5. Features that have similar characteristics are assessed collectively; similarly, the regional watershed context and hydrological discussions associated with Features 1-6 are evaluated collectively.

Feature 1 is an emergent, riparian-vegetated portion of the Santa Ana River that possesses attributes of a natural waterway (see Figure 5-2 and Photograph 1 of Appendix 2B). This feature is located where the proposed SART III trail crosses under the Waterman Avenue bridge over the Santa Ana River. The Santa Ana River collects ephemeral flows and directs them west to the Pacific Ocean. This drainage has an approximately 400-feet wide at this crossing, and the dominant vegetation consisting of moderate to low-density riparian species. The riparian habitat associated with this feature is in various seral stages and generally consists of tall, multilayered, open canopy riparian woodland. The characteristic vegetative species within this riparian habitat include; Freemont cottonwood (*Populus fremontii),* black willow (*Salix goodingii*), sandbar willow (*S. hindsiana*), mule fat (*Baccharis salicifolia*), and sycamore (*Platanus racemosa).* In the absence of flooding, this riparian woodland has emerged with a complex canopy structure of varying layers of trees, shrubs, herbs and vines. The overstory averages over 35 feet in height. This feature is a TNW, and is therefore a WoUS, a WoS, and a Streambed. This feature is subject to jurisdiction of the USACE and RWQCB pursuant to Section 404 and 401 of the CWA, and to CDFW jurisdiction pursuant to Section 1600 et seq. of the CFG Code. This feature will have both permanent and temporary impacts associated with the project (Tables 4.4-2 and 4.4-3).

Feature 2 is an emergent, riparian-vegetated portion of the Santa Ana River that possesses attributes of a natural waterway (see Figure 5-3 and Photograph 2 of Appendix 2B). This feature is located where the proposed SART III trail alignment runs parallel to the Santa Ana River just east of the Mission-Zanja Creek and the Metrolink Bridge. In this area the upper bench of the Santa Ana River Floodplain is characterized by riparian vegetation. The Santa Ana River has intermittent flows and collects intermittent/ephemeral flows from tributary sources, and directs them west to the Pacific Ocean. This Feature is characterized by the SART III trail running parallel to the river in a section where there is no San Bernardino County Flood Control Levee bank road already established. Portions of this Feature will be impacted within the OHWM for both permanent and temporary impacts; however there is also a narrow section that is outside the OHWM, but is still within the bed and bank. The vegetation within this Feature is in various seral stages and generally consists of tall, multilayered, open canopy riparian woodland. The characteristic vegetative species within this riparian habitat include; Freemont cottonwood (*Populus fremontii),* black willow (*Salix goodingii*), sandbar willow (*S. hindsiana*), mule fat (*Baccharis salicifolia*), and sycamore (*Platanus racemosa).* In the absence of flooding, this riparian woodland has emerged with a complex canopy structure of varying layers of trees, shrubs, herbs and vines. The overstory averages over 35 feet in height. This feature is a TNW, and is therefore a WoUS, a WoS, and a Streambed. This feature is subject to jurisdiction or the USACE and RWQCB pursuant to Section 404 and 401 of the CWA, and to CDFW jurisdiction pursuant to Section 1600 et seq. of the CFG Code. This feature will have both permanent and temporary impacts associated with the project (Tables 4.4-2 and 4.4-3).

Feature 3 is an unvegetated portion of the Santa Ana River. This Feature is located where the SART III trail goes under the Orange Show Road bridge which spans the Santa Ana River. The SART III trail has been designed to avoid the area of the Santa Ana River that is within OHWM. The trail will be cut into the hard-sided and rock-slope protected upper bank of the channel. The feature is completely unvegetated (see Figure 5-4 and Photograph 3 of Appendix 2B). Although the Santa Ana River is a TNW, the impacts associated with this Feature are outside the OWHM. Therefore they are not subject to jurisdiction of the USACE and RWQCB pursuant to Section 404 and 401 of the CWA. This feature is within the discernible bed and bank of the river channel, and therefore subject to CDFW jurisdiction pursuant to Section 1600 et seq. of the CFG Code. This feature will have both permanent and temporary impacts associated with the project (Tables 4.4-2 and 4.4-3).

Feature 4 is an unvegetated portion of the Santa Ana River. This Feature is located where the SART III trail goes under the Tippecanoe Avenue bridge which spans the Santa Ana River. The SART III trail has been designed to avoid the area of the Santa Ana River that is within OHWM. The trail will be cut into the hard-sided and rock-slope protected upper bank of the channel. The feature is completely unvegetated (see Figure 5-5 and Photograph 4 of Appendix 2B). Although the Santa Ana River is a TNW, the impacts associated with this Feature are outside the OWHM. Therefore they are not subject to jurisdiction or the USACE and RWQCB pursuant to Section 404 and 401 of the CWA. This feature is within the discernible bed and bank of the river channel, and therefore subject to CDFW jurisdiction pursuant to Section 1600 et seq. of the CFG Code. This feature will have both permanent and temporary impacts associated with the project (Tables 4.4-2 and 4.4-3).

Feature 5 is an emergent, riparian-vegetated portion of the Santa Ana River that possesses attributes of a natural waterway (see Figure 5-6 and Photograph 5 of Appendix 2B). This Feature is located just east of the Tippecanoe Avenue Bridge, where the existing San Bernardino Flood Control levee road crosses a culvert that is conveying flows into the Santa Ana River. These flows appear to be conveying urban runoff from a developed area to the south. The Santa Ana River collects the ephemeral flows from this Feature. The dominant vegetation consists of low-density riparian species. The riparian habitat associated with this feature is sparse and relatively low growing. Characteristic vegetative species within this Feature include; Freemont cottonwood (*Populus fremontii),* black willow (*Salix goodingii*), sandbar willow (*S. hindsiana*), and mule fat (*Baccharis salicifolia*). This feature is a tributary to a TNW, and is therefore a WoUS, a WoS, and a Stream-bed. This feature is subject to jurisdiction of the USACE and RWQCB pursuant to Section 404 and 401

of the CWA, and to CDFW jurisdiction pursuant to Section 1600 et seq. of the CFG Code. This feature will have temporary impacts only associated with the project (Tables 4.4-2 and 4.4-3).

Feature 6 is an emergent, riparian-vegetated portion of the Santa Ana River that possesses attributes of a natural waterway (see Figure 5-7 and Photograph 6 of Appendix 2B). This Feature is located just east of the Tippecanoe Avenue Bridge, where the existing San Bernardino Flood Control levee road crosses a culvert that is conveying flows into the Santa Ana River. These flows appear to be conveying urban runoff from a developed are to the south. The Santa Ana River collects the ephemeral flows from this Feature. The dominant vegetation consists of low-density riparian species. The riparian habitat associated with this Feature is sparse and relatively low growing, characteristic vegetative species within this Feature include; Freemont cottonwood (*Populus fremontii),* black willow (*Salix goodingii*), sandbar willow (*S. hindsiana*), and mule fat (*Baccharis salicifolia*). This Feature is a tributary to a TNW, and is therefore a WoUS, a WoS, and a Streambed. This Feature is subject to jurisdiction or the USACE and RWQCB pursuant to Section 404 and 401 of the CWA, and to CDFW jurisdiction pursuant to Section 1600 et seq. of the CFG Code. This Feature will have temporary impacts only associated with the project (Tables 4.4-2 and 4.4-3).

IMPACTS TO USACE, RWQCB AND CDFW JURISDICTION

Of the six features that exist in the study area, four of them are subject to USACE jurisdiction, and all six are subject to RWQCB and CDFW jurisdiction. The four features will result in 0.30 acre of permanent impacts to USACE jurisdiction and 1.58 acres of permanent impacts to RWQCB and CDFW jurisdiction, of which 1.04 acres consist of riparian habitat (Table 4.4-2). In addition, the Project will result in 1.39 acres of temporary impacts to USACE jurisdiction and 2.48 acres of temporary impacts to RWQCB and CDFW jurisdiction, 0.47 acres of which consist of riparian habitat (Table 4.4-3).

TABLE 4.4-2
IMPACTS TO CDFW AND RWQCB JURISDICTION

Feature Name	Total Non-Riparian Bed and Bank (acres)	Total Native Riparian Vegetation (acres)	Total CDFW and RWQCB Jurisdiction (acres)			
			Permanent (Vegetated)	Permanent (Unvegetated)	Temporary (Vegetated)	Temporary (Unvegetated)
Feature 1	0.04	0.59	0.10	0.04	0.97	0.00
Feature 2	0.00	1.29	0.94	0.00	0.35	0.00
Feature 3	0.50	0.00	0.00	0.27	0.00	0.23
Feature 4	0.47	0.00	0.00	0.23	0.00	0.24
Feature 5	0.00	0.12	0.00	0.00	0.12	0.00
Feature 6	0.00	0.02	0.00	0.00	0.02	0.00
TOTAL	**1.01**	**2.02**	**1.04**	**0.54**	**1.46**	**0.47**

Table 4.4-3
IMPACTS TO USACE JURISDICTION

Feature Name	*Total Native Riparian Vegetation (acres)*	*Total USACE/RWQCB (acres)*	
		Permanent	*Temporary*
Feature 1	*0.59*	*0.10*	*0.49*
Feature 2	*0.96*	*0.20*	*0.76*
Feature 3	*0.00*	*0.00*	*0.00*
Feature 4	*0.00*	*0.00*	*0.00*
Feature 5	*0.12*	*0.00*	*0.12*
Feature 6	*0.02*	*0.00*	*0.02*
TOTAL	***1.60***	***0.30***	***1.39***

4.4-14 Prior to discharge of fill or streambed alteration of jurisdictional areas, the project proponent shall obtain regulatory permits from the U.S. Army Corps of Engineers, Regional Water Quality Control Board and the California Department of Fish and Wildlife. Mitigation can be provided by purchasing into any authorized mitigation bank; by selecting a site of comparable acreage near the site and enhancing it with a native riparian habitat or invasive species removal in accordance with a habitat mitigation plan approved by regulatory agencies; or by acquiring sufficient compensating habitat to meet regulatory agency requirements. Typically, regulatory agencies require mitigation for jurisdictional waters without any riparian or wetland habitat to be mitigated at a 1:1 ratio. For loss of any riparian or other wetland areas or habitat that supports listed species, the mitigation ratio shall be at a 2:1 ratio. A revegetation plan using native riparian vegetation common to the project area where riparian or wetland habitat will be affected shall be prepared and reviewed and approved by the appropriate regulatory agencies. The regulatory agencies can impose greater mitigation requirements in their permits, but County Regional Parks will utilize the ratios outlined above as the minimum required to offset or compensate for impacts to jurisdictional waters, riparian areas or other wetlands.

The preceding evaluation of jurisdictional water impacts focused on the alternative alignment that goes beneath the railroad bridge. For the at-grade crossing over the Mission-Zanja (clear span bridge) and a public crossing of the railroad tracks the following acreage of impacts was estimated:

- USACOE: 0.30 acre of permanent impacts, and 2.0 acres of temporary impact due to construction
- CDFW: 0.47 acre of permanent impacts, and 2.48 acres of temporary impacts due to construction

Mitigation measure 4.4-14 would be applicable to this alternative route.

The installation of the temporary bike path on Waterman and Orange Show road has no potential to impact any riparian habitat or sensitive species and no mitigation is required for this Stage 2 project.

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? ***Determination: Less Than Significant Impact with Mitigation Incorporated.***

In addition to the fundamental water-related functions, the Santa Ana River provides a corridor through developed land and links open spaces together. The riparian habitat within the SAR between Waterman Avenue and Orange Show Road functions as a regional habitat linkage, corridor and buffer for wildlife. Habitat linkages provide links between larger habitat areas and are often critical to the long-term health of connected habitats. Linkages may be very small or quite large. Habitat corridors are similar to linkages, but provide specific opportunities for animals to disperse or migrate between areas. Adequate cover is essential for a corridor to function as a wildlife movement area.

As identified in 4.4 (a), above, implementation of Mitigation Measures 4.4-1 through 4.14-13 would reduce potential impacts to sensitive species, including their habitats and linkages, to a level of less than significant. As previously stated, the project does not specifically disturb the SAR channel which presently functions as a wildlife movement corridor and will continue to serve this function. However, of the two alternative crossings of Mission-Zanja Creek and the railroad, the trail alignment underneath the railroad bridge has a greater conflict with the wildlife movement corridor than the at-grade alignment and track crossing.

e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance? ***Determination: Less Than Significant Impact.***

According to the City of San Bernardino *General Plan,* the portions of the Project site are located within a Biological Resource Management (BRM) Area. All development within BRM areas are subject to review by the City Environmental Review Committee. As required, all Project plans would be reviewed by the Environmental Review Committee for all potential biological impacts. No other local policies or ordinances apply to the proposed Project. Therefore, impacts would be less than significant.

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? ***Determination: Less Than Significant with Mitigation Incorporated.***

The Project site is not currently located within a habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan. However, the project area encompasses two critical habitat areas (SBKR and SASU) which are discussed in the preceding sections. With mitigation no significant adverse impact to critical habitat of either species will result from project implementation. Therefore, less than significant impacts would occur in this regard.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
4.5 CULTURAL RESOURCES – Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in '15064.5?			X	
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to '15064.5?		X		
c) Directly or indirectly destroy a unique paleon-tological resource or site or unique geologic feature?		X		
d) Disturb any human remains, including those interred outside of formal cemeteries?			X	

SUBSTANTIATION:

a) Cause a substantial adverse change in the significance of a historical resource as defined in CEQA Guidelines § 15064.5? ***Determination: Less Than Significant Impact.***

Historic resources generally consist of buildings, structures, improvements, and remnants associated with a significant historic event or person(s) and/or have a historically significant style, design, or achievement. Damage to or demolition of such resources is typically considered to be a significant impact. Impacts to historic resources can occur through direct impacts, such as destruction or removal, and through indirect impacts, such as a change in the setting of a historic resource.

A Historic Property Survey Report dated March 21, 2011 was prepared by CRM Tech for the proposed Project. The results of the records search indicate that four historic period built-environment sites were previously recorded as lying partially within or in close vicinity to the Project alignment: the BNSF Railway, the Santa Fe Railway Bridge across the Santa Ana River, the Marigold Farms, and the Camp Carlton Ditch.

During the field survey, no features or artifacts associated with the Marigold Farms and the Camp Carlton Ditch were observed. The Santa Fe Railway, which was subsequently determined not to constitute a historic property or a historic resource due to the lack of historic integrity, was observed crossing the Project site on the Santa Fe Railway Bridge, with no physical components of either resource located directly within the Project boundaries. Because the proposed Project has no potential to affect the existing character of the rail line or the bridge, it was determined that the two sites lie beyond the horizontal and vertical extents of the Project boundaries.

It was determined that the Project site does not contain any known historic resources, and therefore, implementation of the Project would not cause a substantial adverse change in the significance of a historic resource. The Area of Potential Effect (APE) in the cultural report encompassed both of the alternative alignments over Mission-Zanja Creek and railroad. However, it did not encompass the temporary bike path on Waterman and Orange Show Road. Given the limited disturbance of these paved roadways, no adverse effect to any cultural resources would be anticipated along these two linear features. Less than significant impacts would occur.

b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines § 15064.5? ***Determination: Less Than Significant with Mitigation.***

Archaeological sites are locations that contain resources associated with former human activities, and may contain such resources as human skeletal remains, waste from tool manufacture, tool concentrations, and/or discoloration or accumulation of soil or food remains. An Archaeological Survey Report dated March 21, 2011 was prepared by CRM Tech for the proposed Project. During the field survey, no archaeological facts or features, either prehistoric or historic in origin, were observed within the Project boundaries. This finding includes both alternative crossings of the Mission-Zanja Creek and railroad. However, it did not encompass the temporary bike path on Waterman and Orange Show Road. Given the limited disturbance of these paved roadways, no adverse effect to any cultural resources would be anticipated along these two linear features.

If previously unidentified cultural materials are unearthed during construction, Mitigation Measure 4.5-1 would be required to reduce potential impacts to a level of less than significant:

4.5-1 If during ground-disturbance activities, unique archaeological resources are discovered the following procedures shall be followed. Unique archaeological resources are defined, for this condition, as being multiple artifacts in close association with each other, but may include fewer artifacts if the area of the find is determined to be of significance due to its sacred or cultural importance.

1. ***All ground disturbance activities within 100 feet of the discovered archaeological resource shall be halted until a meeting is convened between the County and a qualified archaeologist to discuss the significance of the find.***
2. ***The archaeologist shall recommend appropriate actions, in cooperation with the County and Contractor.***
3. ***Grading or further ground disturbance shall not resume within the area of the discovery until a determination has been reached by the County as to the appropriate mitigation.***

Implementation of Mitigation Measure 4.5-1 would reduce potential archaeological impacts to a level of less than significant. Therefore, implementation of the proposed Project would not cause a substantial adverse change in the significance of an archaeological resource. Less than significant impacts with the implementation of mitigation would occur.

c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature? ***Determination: Less Than Significant with Mitigation.***

Paleontological resources are the preserved fossilized remains of plants and animals. Fossils and traces of fossils are preserved in sedimentary rock units, particularly fine- to medium-grained marine, lake, and stream deposits, such as limestone, siltstone, sandstone, or shale, and in ancient soils (paleosols). They are also found in coarse-grained sediments, such as conglomerates or coarse alluvium sediments. Fossils are rarely preserved in igneous or metamorphic rock units. Fossils may occur throughout a sedimentary unit and, in fact, are more likely to be preserved subsurface, where they have not been damaged or destroyed by previous ground disturbance, amateur collecting, or natural causes such as erosion. In contrast, archaeological and historic resources are often recognized by surface evidence of their presence. Construction activities associated with implementation of the proposed Project may result in adverse effects on known or currently unknown paleontological resources. Implementation of Mitigation Measure 4.5-2 would reduce potential impacts to a level of less than significant.

4.5-2 A trained paleontological monitor shall be present during individual Project excavation activities greater than 5.0 feet in depth. Excavations below 5.0 feet have a high likelihood of encountering older alluvial wash deposits, which may

contain paleontological resources. The monitoring for paleontological resources shall be conducted on a half-time basis and on a full-time basis during excavation greater than 5.0 feet in depth. If paleontological resources are located during excavation, the monitoring program would change to full-time. The monitor shall be empowered to temporarily halt or redirect construction activities to ensure avoidance of adverse impacts to paleontological resources. The monitor shall be equipped to rapidly remove any large fossil specimens encountered during excavation. During monitoring, samples shall be collected and processed to recover micro-vertebrate fossils. Processing shall include wet-screen washing and microscopic examination of the residual materials to identify small vertebrate remains.

d) Disturb any human remains, including those interred outside of formal cemeteries? ***Determination: Less Than Significant Impact.***

Ground-disturbing activities, such as grading or excavation, have the potential to disturb human remains. If human remains are found, those remains would require proper treatment, in accordance with applicable laws. The Native American Graves Protection and Repatriation Act (NAGPRA) includes provisions for unclaimed and culturally unidentifiable Native American cultural items, intentional and inadvertent discovery of Native American cultural items on federal and tribal lands, and penalties for noncompliance and illegal trafficking. State of California Public Resources Health and Safety Code Section 7050.5-7055 describes the general provisions regarding human remains, including the requirements if any human remains are accidentally discovered during excavation of a site.

As required by state law, the requirements and procedures set forth in Section 5097.98 of the California Public Resources Code would be implemented, including notification of the County Coroner, notification of the Native American Heritage Commission and consultation with the individual identified by the Native American Heritage Commission to be the “most likely descendant.” If human remains are found during excavation, excavation must stop in the vicinity of the find and any area that is reasonably suspected to overlie adjacent remains until the County Coroner has been called out, and the remains have been investigated and appropriate recommendations have been made for the treatment and disposition of the remains. Following compliance with federal and state regulations, which detail the appropriate actions necessary in the event human remains are encountered, impacts in this regard, would be considered less than significant. The preceding evaluation did not encompass the temporary bike path on Waterman and Orange Show Road. Given the limited disturbance of these paved roadways, no adverse effect to any buried human remains would be anticipated along these two linear features.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
4.6 GEOLOGY AND SOILS – Would the project:				
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
• Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.			X	
• Strong seismic ground shaking?			X	
• Seismic-related ground failure, including liquefaction?			X	
• Landslides?			X	
b) Result in substantial soil erosion or the loss of topsoil?		X		
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in onsite or offsite landslide, lateral spreading, subsidence, liquefaction or collapse?			X	
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?		X		
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?				X

SUBSTANTIATION:

a) Expose people or structures to 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. ***Determination: Less Than Significant Impact.***

The Project site is located within a seismically active region near the active North American and Pacific tectonic plates. Faults within this region experience a significant amount of seismic activity. The San

Andreas Fault, San Jacinto Fault, and the Glen Helen Fault are classified as Alquist-Priolo Special Study Fault Zones, and are located in the vicinity of the proposed Project.

The proposed Project would include the development of a regional trail that would consist of the trail, bridges, culverts, and access ramps. No habitable structures would be built as part of the proposed Project. The Uniform Building Code (UBC) establishes the Design Basis Ground Motion (often accepted as the minimum standard) as the maximum probable event that could potentially affect a particular site along the closest active fault. To reduce the potential effects of damage caused by ground motion, all development proposed would be required to be designed in accordance with the current measures of the California Building Code, including seismic safety, excavation, foundations, retaining walls and site demolition, as well as, seismic design parameters established by the Structural Engineers Association of California, and related applicable ordinances and policies. Therefore, less than significant impacts would occur.

ii) Strong seismic ground shaking? ***Determination: Less Than Significant Impact.***

According to the City of San Bernardino *General Plan* and the City of Redlands *General Plan,* there are several faults within the Project area that have the potential to create strong seismic ground shaking. The major active faults that are closest to the Project site include Devil Canyon Fault, Mill Creek Fault, Rialto-Colton Fault, Redlands Fault, and the Loma Linda Fault. The Project area has an active seismic ground shaking history. Therefore, people utilizing the SART Phase III would be exposed to seismic ground shaking. To minimize potential damage to the proposed trail and associated facilities caused by groundshaking, all construction would comply with the latest California Building Code standards, as required by the City Municipal Code 9.04.030. In addition, no habitable structures would be built as part of the proposed Project. Implementation of the California Building Code standards, which include provisions for seismic structure designs, would ensure that impacts associated with groundshaking would be less than significant.

iii) Seismic-related ground failure, including liquefaction? ***Determination: Less Than Significant Impact.***

Liquefaction is a process whereby strong earthquake shaking causes sediment layers that are saturated with groundwater to lose strength and behave as a fluid. According to the City of San Bernardino *General Plan,* portions of the Project site are located within areas designated as having Moderate High to High liquefaction susceptibility potential. According to the San Bernardino County Geologic Hazard Overlay Map, the Santa Ana River Wash and portions of adjacent areas have a high susceptibility to liquefaction. The only structures proposed by the Project that have the potential to be exposed by liquefaction would include bridges, culverts, and access ramps. All construction would be required to comply with the latest California Building Code standards, as required by the City Municipal Code 9.04.030. In addition, no habitable structures would be built as part of the proposed Project. Implementation of the California Building Code standards, which include provisions for seismic structure designs, would ensure that impacts associated with groundshaking would be less than significant.

iv) Landslides? ***Determination: Less than Significant.***

According to the City of San Bernardino *General Plan* and the City of Redlands *General Plan,* the proposed Project is not located within an area that is prone to landslides. This general finding was verified for the SART Phase III alignment during several field surveys of the Project area. Therefore, less than significant impacts would occur.

b) Result in substantial soil erosion or the loss of topsoil? ***Determination: Less Than Significant with Mitigation Incorporated.***

High wind conditions and stormwater runoff can cause significant soil erosion. Soil erosion is most prevalent in unconsolidated alluvium and surficial soils and in areas that have slopes. Erosion is

generally limited to the vicinity of the existing smaller active drainages originating from the surrounding mountains. There is a potential for erosion to occur during the grading process during periods of heavy rainfall. According to the Phase I Initial Site Assessment prepared by LOR Engineering for the proposed Project (Appendix 3), the Project area is underlain by Pleistocene and Holocene alluvial sediments. These alluvial sediments consist mainly of sand, gravel, cobbles, and boulders interspersed with layers of silts and clays. Therefore, the Project site may be prone to soil erosion. The Project Applicant would be required to meet City and County grading standards, and as required has prepared a Water Quality Management Plan and Storm Water Pollution Prevention Plan for approval by the County. These plans identify the specific Best Management Practices (BMPs) that will be implemented by the Project Applicant to prevent erosion, minimize siltation from impacting downstream water bodies, and protect water quality. Implementation of the following mitigation measure will ensure that water quality will be protected during construction and over long-term operation of the SART III.

4.6-1 The County shall finalize the Storm Water Pollution Prevention Plan (SWPPP) and Water Quality Management Plan and implement the Best Management Practices to minimize erosion, siltation and overall water quality during construction and over the long-term operation of SART III.

c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on-or off-site landslide, lateral spreading, subsidence, liquefaction or collapse? ***Determination: Less Than Significant Impact.***

Refer to Responses 4.6*(a)(ii) through 4.6(a)(iv).* Less than significant impacts would occur.

d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (2004), creating substantial risks to life or property? ***Determination: Less than Significant with Mitigation.***

Expansive soils are those that undergo volume changes as moisture content fluctuates; swelling substantially when wet or shrinking when dry. According to the Phase I Initial Site Assessment prepared by LOR Engineering for the proposed Project, the Project area is underlain by Pleistocene and Holocene alluvial sediments. These alluvial sediments consist mainly of sand, gravel, cobbles, and boulders interspersed with layers of silts and clays. Specific soils present in the project area are defined in Appendix 3. Soil expansion can damage structures by cracking foundations, causing settlement and distorting structural elements. Based on the type of parent material underlying the area soils and the type of soils that occur in the project area, the potential for locating the proposed trail on expansive soils is considered to be less than significant.

e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater? ***Determination: No Impact.***

The proposed Project does not include the use of septic tanks or alternative wastewater disposal systems. The need for wastewater disposal would not be required. Therefore, no impacts would occur in this regard.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
4.7. GREENHOUSE GAS EMISSIONS: Would the project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?			**X**	
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?			**X**	

SUBSTANTIATION:

a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment? ***Determination: Less Than Significant Impact.***

In response to the requirements of SB97, the State Resources Agency developed guidelines for the treatment of Greenhouse Gas (GHG) emissions under CEQA. These new guidelines became state laws as part of Title 14 of the California Code of Regulations in March, 2010. The CEQA Appendix G guidelines were modified to include GHG as a required analysis element. A Project would have a potentially significant impact if it:

- Generates GHG emissions, directly or indirectly, that may have a significant impact on the environment, or,
- Conflicts with an applicable plan, policy or regulation adopted to reduce GHG emissions.

Section 15064.4 of the Code specifies how significance of GHG emissions is to be evaluated. The process is broken down into quantification of Project-related GHG emissions, making a determination of significance, and specification of any appropriate mitigation if impacts are found to be potentially significant. At each of these steps, the new GHG guidelines afford the lead agency with substantial flexibility.

Emissions identification may be quantitative, qualitative or based on performance standards. CEQA guidelines allow the lead agency to “select the model or methodology it considers most appropriate”. The most common practice for transportation/combustion GHG emissions quantification is to use a computer model such as URBEMIS2007, as was used in the ensuing analysis.

The significance of those emissions then must be evaluated; the selection of a threshold of significance must take into consideration what level of GHG emissions would be cumulatively considerable. The guidelines are clear that they do not support a zero net emissions threshold. If the lead agency does not have sufficient expertise in evaluating GHG impacts, it may rely on thresholds adopted by an agency with greater expertise.

On December 5, 2008 the SCAQMD Governing Board adopted an Interim quantitative GHG Significance Threshold for industrial projects where the SCAQMD is the lead agency (e.g., stationary source permit projects, rules, plans, etc.) of 10,000 Metric Tons CO_2 equivalent/year. As part of the Interim GHG Significance Threshold development process for industrial projects, the SCAQMD established a working group of stakeholders that also considered thresholds for commercial or residential projects. As discussed in the Interim GHG Significance Threshold guidance document, the focus for commercial projects is on performance standards and a screening level threshold. For discussion purposes, the SCAQMD’s working group considered performance standards primarily focused on energy efficiency

measures beyond Title 24 and a screening level of 3,000 metric tons (MT) CO_2 equivalent/year based on the relative GHG emissions contribution between non-industrial sectors versus stationary source (industrial) sectors. The working group and staff ultimately decided that additional analysis was needed to further define the performance standards and to coordinate with CARB staff's interim GHG proposal. Staff, therefore, did not recommend action for adopting an interim threshold for non-industrial projects but rather recommended bringing this item back to the Board for discussion and possible action. As of this date, no final action on a quantitative significance threshold has been taken, but 3,000 MT per year has become a *de facto* screening threshold for non-industrial projects.

The build-out timetable for this Project is estimated to require approximately 155 work days. During Project construction, the CalEEMod computer model predicts that the indicated activities will generate the following annual CO_2-equivalent (CO_2(e) emissions, as shown in Table 4.7-1:

Table 4.7-1
CONSTRUCTION EMISSIONS

Year 2011	8,401 "metric" tons CO_2(e)

SCAQMD GHG emissions policy from construction activities is to amortize these emissions over a 30-year lifetime. The amortized level from 8,401 metric tons CO_2(e) is 280 metric tons per year. The screening level threshold is 3,000 metric tons (MT) of CO_2(e) per year. Construction activities associated with implementation of the proposed Project would be well below this threshold. Therefore, GHG-related impacts are considered less than significant.

b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases? ***Determination: Less Than Significant Impact.***

Refer to Response 4.7 (a), above. The County adopted a Greenhouse Gas Emissions Reduction Plan (GHG) Plan) in December 2011. The Plan is consistent with AB 32 and sets the County on a path to achieve substantial reductions in GHG emissions. Demonstrating consistency with the GHG Plan ensures that a project contribution to GHG will not be cumulatively considerable. All new development is required to quantify GHG emissions and adopt feasible mitigation to reduce potential project emissions below a level of significance. If the review indicates that emission are below 3,000 MTC2e per year, the project will not contribute cumulatively considerable GHG emissions. The proposed project amortized emissions is 280 metric tons per year. Therefore, the proposed Project would not conflict with applicable plans or policies regulating greenhouse gas emissions, as defined above. Therefore, less than cumulatively considerable GHG emissions would result from the proposed Project.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
4.8. HAZARDS AND HAZARDOUS MATERIALS – Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?			X	
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environ-ment?			X	
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?			X	
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?				X
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?			X	
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?			X	
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?			X	
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?			X	

SUBSTANTIATION:

a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials? ***Determination: Less Than Significant Impact.***

The routine transport, use, and disposal of hazardous materials can result in hazards to the public through the potential for accidental release. Such hazards are typically associated with certain types of land uses, such as chemical manufacturing facilities, industrial processes, waste disposal, and storage and distribution facilities. At full buildout, the proposed Project would consist of a multi-use, non-

motorized trail. This type of land use is expected to use minimal quantities of hazardous materials (pesticides) and is anticipated to generate no hazardous wastes. Therefore, less than significant impacts would occur.

Due to the nature of the proposed SART Phase III, it is not anticipated that adverse operational impacts would occur. The proposed Project would include the development of a non-motorized trail that would not include the routine transport, dispose, or utilize hazardous materials. Therefore, less than significant impacts would occur.

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? ***Determination: Less Than Significant Impact.***

Refer to Response 4.8 (a), above.

In addition, a Phase I Initial Site Assessment was prepared for the proposed Project by LOR Geotechnical Group on February 25, 2011. LOR Geotechnical Group contracted with Environmental Data Resources (EDR) to provide an environmental database search for the SART Phase III alignment. According to the report, no listed hazardous sites were identified along the proposed Project alignment. Several hazardous sites were identified either adjoining or within a few hundred feet of the proposed alignment. However, it was determined that these sites include either regional groundwater issues or are currently undergoing remediation/cleanup. Based on the review of regulatory information for the sites with contamination of soil and/or groundwater, it is not anticipated that any of the sites would have an adverse environmental impact to the proposed Project. During construction of the proposed Project, contractors would be required to use standard construction controls and safety procedures that would avoid and minimize the potential for accidental release of hazardous substances into the environment. Standard construction practices must be observed such that any hazardous materials released are appropriately contained and remediated as required by local, State, and Federal law. Conformance with these standards would reduce impacts to less than significant levels. Therefore, implementation of the proposed Project would not create a significant hazard to the public or the environment through upset or accident conditions involving the release of hazardous materials. Less than significant impacts would occur. This includes the Stage 2 temporary bike lane project that would potentially paint a stripe along Waterman and Orange Show roadways. The paint used for striping is non-toxic and would not pose any hazards due to an accidental spill during application.

c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school? ***Determination: Less Than Significant Impact.***

Several schools are located within the general vicinity of the proposed Project alignment. However, as stated in Response 4.8 (a), implementation of the proposed facilities would not involve the routine use of hazardous materials and, thus, the potential to emit hazardous materials near schools would be less than significant.

d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment? ***Determination: No Impact.***

Refer to Response 4.8 (b), above. No listed hazardous sites were identified along the proposed Project alignment. Therefore, no impacts would occur.

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area? ***Determination: Less Than Significant Impact.***

The proposed Project is located near the San Bernardino International Airport (SBIA) but is not located within designated Airport Safety areas. However, the proposed Project would include the development of a non-motorized multi-use trail, and would not result in a safety hazard for people using or working in the Project area. Therefore, less than significant impacts would occur.

f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area? ***Determination: Less Than Significant Impact.***

The proposed Project is located approximately four miles from Redlands Municipal Airport, located at Sessums Drive in the City of Redlands. As stated above, the proposed Project would include the development of a non-motorized multi-use trail, and would not result in a safety hazard for people using or working in the Project area. Therefore, less than significant impacts would occur.

g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan? ***Determination: Less Than Significant Impact.***

Implementation of the proposed Project is not expected to cause significant impacts on emergency response plans or emergency evacuation plans with the implementation of mitigation for linear construction work (e.g., pipelines, gravity mains, etc.). The proposed Project would be developed outside of the existing roadway system and would not impede or interfere with emergency response plans or evacuation plans. Therefore, less than significant impacts would occur.

h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands? ***Determination: Less than Significant Impact.***

The proposed Project would be developed in both rural and urban settings. Portions of the proposed Project would be developed within wildland areas that have increased fire hazards. Therefore, portions of the SART Phase III may be exposed to significant impacts due to wildfires. However, since the Project is a trail with no structures and no exposure potential of people to wildland fire hazards, less than significant impacts would occur.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
4.9 HYDROLOGY AND WATER QUALITY – Would the project:				
a) Violate any water quality standards or waste discharge requirements?		X		
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?		X		
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation onsite or offsite?		X		
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding onsite or offsite?			X	
e) 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?			X	
f) Otherwise substantially degrade water quality?			X	
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?				X
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?			X	
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?			X	
j) Inundation by seiche, tsunami, or mudflow?			X	

SUBSTANTIATION:

a) *Violate any water quality standards or waste discharge requirements?* ***Determination: Less Than Significant with Mitigation Incorporated.***

The proposed Project does not propose to discharge any wastewater so it will not be required to obtain any waste discharge requirements from the Regional Board; therefore it cannot violate such requirements. On the other hand the project will generate stormwater runoff that could violate water quality standards. A "Water Quality Assessment Report" for the Santa Ana River Trail Phase II was prepared for this project. A copy of this report is provided as Appendix 4 to this document. This Report acknowledges the potential for water quality degradation during construction and after SART III is placed in operation from stormwater running off of the construction areas and the completed trail. The Report concludes that with the implementation of a Storm Water Pollution Prevention Plan (SWPPP) during construction and a Water Quality Management Plan during future use of the trail. This analysis considers in some detail the potential construction and operation pollutants (Tables 5 and Table 7 of the Report) and the required Best Management Practices (BMPs) required to control stormwater runoff in a manner the minimizes or eliminates the potential for violation of any water quality standards. The available BMPs for construction are summarized on Table 6 of the Report and long-term BMPs are summarized on Tables 8 and 9 of the Report. The Report concludes that "These BMPs will reduce or eliminate construction pollutants, such as those listed in Table 6, from entering the channel, and if properly designed, implemented, and maintained as required by the NPDES permit, then construction impacts to water quality will be reduced to a level sufficient for protection of receiving waters. The following mitigation measure implements this finding.

4.9-1 The County/construction contractor shall prepare a Storm Water Pollution Prevention Plan using BMPs from Table 6 or equivalent measures that will be effectively implemented to achieve the following performance standards: prevent construction pollutants from making contact with storm water and with the intent of keeping all products of erosion from moving off-site into receiving waters; and eliminate or reduce non-stormwater discharges to MS4s and other waters. The BMPs shall be in place prior to ground disturbance and shall be maintained to achieve the performance standard stated in the preceding text.

The permanent or post-construction BMPs must control the type of pollutants summarized in Table 7. This is not an extensive list because the activities conducted on SART III are not highly polluting. The following mitigation measure implements this finding.

4.9-2 The County/construction contractor shall prepare a Water Quality Management Plan (WQMP) using BMPs from Tables 8 and 9 or equivalent measures that will be effectively implemented to achieve the following performance standards: minimize long-term runoff volumes that can reach the Santa Ana River (SAR); prevent pollutants from making contact with storm water and with the intent of keeping all products of erosion from moving off-site into receiving waters; and capture runoff adjacent to the trail or provide manufactured treatment units to treat the runoff before release into the SAR. The BMPs shall be in place prior to authorizing use of the trail disturbance and shall be maintained to achieve the performance standard stated in the preceding text.

Implementation of these measures are considered sufficient to ensure that no significant violation of any water quality standard will occur from implementing the proposed Project. The Stage 2 temporary bike path uses paint that is used to stripe all roadways. It is non-hazardous and does not pose a potential for water quality degradation. The application of this material also does not require a waste discharge permit.

b) *Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?* ***Determination: Less Than Significant with Mitigation Incorporated.***

Since most of the domestic water produced by the cities of Redlands and San Bernardino, any substantial water use could contribute to depletion of groundwater supplies. Once in operation the trail will require minimal volumes of water as water will not be provided along the trail. Small quantities of water may be required on random occasions during future maintenance of the trail which is proposed to occur two times per year. During construction water will be used to control fugitive dust and to support concrete uses along the trail. For fugitive dust control recycled water is available in the project area and the use of this water can reduce or eliminate demand for domestically produced groundwater. Mitigation requiring the use of recycled water is presented below. Even if domestically produced groundwater is used to support construction, the volume required over the three to six month construction period is estimated to be less than 2 acre-feet based on use of 5,000 gallons per day for construction purposes for 120 days. Given the volume of water pumped from the Bunker Hill Basin, more than 250,000 acre-feet per year, the projected demand of 2 acre-feet is considered *de minimis.*

4.9-3 The County/construction contractor shall use recycled water to support construction of the SART III facilities. This shall be made a part of the construction contract issued by the County.

c) *Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner, which would result in substantial erosion or siltation on- or off-site?* ***Determination: Less Than Significant with Mitigation Incorporated.***

Please refer to the discussion under 4.9.a above. The proposed Project will cause a minor alteration in runoff from the trail alignment compared to the existing dirt levee. No alteration of the course of a stream or river will be caused by the proposed Project. The impervious surface will encompass approximately 9.2 acres, which is 0.0005% of the Santa Ana River watershed according to the Report. Thus, the modification to the drainage pattern is minor, and implementation of mitigation measures 4.9-1 and 4.9-2 will ensure that this modification does not result in substantial erosion or siltation on- or off-site.

d) *Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner, which would result in flooding on or off-site?* ***Determination: Less Than Significant Impact.***

To assess the potential for the proposed Project to substantially increase the rate or amount of surface runoff from the trail alignment, two studies were prepared: the “Location Hydraulic Study Santa Ana River Trail Phase III Project” and the “Summary Floodplain Encroachment Report.” These studies evaluated the physical changes along the trail alignment from installing the trail and the manner in which it will alter stormwater runoff. Copies of these studies are provided as Appendices 5 and 6 to this document, respectively. At the broadest level the proposed Project will not alter the course of Santa Ana River. The increased runoff from the Project alignment is summarized in the discussion under issue 4.9.e above, and it is concluded to be relatively minor. This is further verified in the Summary Floodplain Encroachment Report that includes modeling of the proposed Project’s effects on downstream flood elevations in the “with Project” alternative. Table 2 (Hydraulic Results) in the Encroachment Report indicates that the results of the analysis indicate no significant impacts to the river hydraulics are anticipated with the construction of the proposed trail improvements. Based on this analysis, the proposed Project will not result in flooding on or off-site. No mitigation is required to address this issue.

e) Create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff? ***Determination: Less than Significant Impact.***

Refer to the discussion under issue 4.9.d above and the reports in Appendices 5 and 6 to this document. The small increase in runoff from the proposed Project is not sufficient to cause the capacity of the adjacent Santa Ana River to be exceeded. Regarding additional sources of polluted runoff, mitigation measures 4.9-1 and 4.9-2 will be implemented to ensure that polluted runoff is control to a less than significant level under both the short and long term.

f) Otherwise substantially degrade water quality? ***Determination: Less Than Significant Impact.***

No other sources of pollution, other than stormwater runoff, will be generated from the Project that could otherwise substantially degrade water quality. Refer to the discussion under 4.9.a above which describes how water quality degradation from stormwater runoff will be controlled.

g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map? ***Determination: No Impact.***

This project does not involve any housing so no impact to such housing can occur from implementing the proposed Project.

h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows? ***Determination: Less Than Significant Impact.***

Based on the findings in the Summary Floodplain Encroachment Report (Appendix 6) only the trail segments under the existing bridges are within the 100-year flood hazard boundary, but these segments will have a “very minor effect on the hydraulic characteristics of the River.” The trail is being installed in a manner that will allow these segments to be easily repaired if a 100-year flood occurs. No mitigation is necessary.

i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam? ***Determination: Less Than Significant Impact.***

The proposed Project will not expose humans to risk of injury or death due to flooding as the trail would not be in use during precipitation events that could cause significant flood hazards. The proposed trail is located on an existing flood control levee on the south side of the Santa Ana River. The potential for this levee to fail is very low. Similarly a remote potential does exist for the upstream Seven Oaks Dam to fail and based on Figure S-1 of the City of San Bernardino General Plan, the trail alignment would be flooded if such a failure should occur with the Dam at full pool elevation of 2,580 feet above mean sea level. In either case, the potential for either of these events is low, and the only impact would be the need to repair the trail after exposure to such hazards. These hazards are not considered to be a significant impact.

j) Inundation by seiche, tsunami, or mudflow? ***Determination: Less Than Significant Impact.***

There are no water bodies in the region that could cause a seiche or tsunami impact to the proposed Project alignment. A remote potential exists for a mudflow to damage the bridge over Mission-Zanja Creek, but the damage would be limited to the intersection of the trail and the Creek. Minimal damage to the trail would result which could be repaired. This potential hazard is not considered to be a significant impact.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
4.10. LAND USE AND PLANNING – Would the project:				
a) Physically divide an established community?				X
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?			X	
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?			X	

SUBSTANTIATION:

a) Physically divide an established community? ***Determination: No Impact.***

An example of a project that has the potential to divide an established community includes the construction of a new freeway or highway through an established neighborhood. The Project would include the development of an at-grade, multi-use trail that would act as a link between communities, and would not have any impact to the physical arrangement of an established community. Therefore, no impacts would occur in this regard.

b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?
Determination: Less Than Significant Impact.

The proposed SART Phase III is designed to be consistent with local and regional transportation plans for the SART, as identified in the San Bernardino County Non-Motorized Transportation Plan, dated March 2011. Therefore, less than significant impacts would occur.

c) Conflict with any applicable habitat conservation plan or natural community conservation plan?
Determination: Less Than Significant Impact.

Refer to Response 4.4 (f) above. No conservation plan is known to apply to the Project area. Although not a conservation plan, critical habitat issues for SASU and SBKR are discussed in Section 4.4(f) of this document. Less than significant impacts would affect any habitat conservation or natural community conservation plans since no such plans overlay the project area.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
4.11 MINERAL RESOURCES – Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?			**X**	
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?			**X**	

SUBSTANTIATION:

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? ***Determination: Less Than Significant Impact.***

The State Mining and Geology Board (SMGB) establishes Mineral Resources Zones (MRZs) to designate lands that contain mineral deposits. The classifications used by the State to define MRZs are as follows:

- MRZ-1: Areas where the available geologic information indicates no significant likelihood of significant mineral deposits.
- MRZ-2a: Areas where the available geologic information indicates that there are significant mineral deposits.
- MRZ-2b: Areas where the available geologic information indicates that there is a likelihood of significant mineral deposits.
- MRZ-3a: Areas where the available geologic information indicates that mineral deposits exist, however, the significance of the deposit is undetermined.
- MRZ-3b: Areas where the available geologic information indicates that mineral deposits are likely to exist, however, the significance of the deposit is undetermined.
- MRZ-4: Areas where there is not enough information available to determine the presence or absence of mineral deposits.

Portions of the Project site are located within areas designated as MRZ-1 and MRZ-2. The proposed Project would consist of a multi-use trail and associated facilities located on a Flood Control District levee. Since this area is already unavailable for mineral development, the proposed Project would not result in the loss of significant minerals. Therefore, less than significant impacts would occur.

b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan? ***Determination: Less Than Significant Impact.***

Refer to Response 4.11 (a), above. Less than significant impacts are anticipated for the reasons outlined in the previous analysis under 4.11 (a).

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
4.12 NOISE – Would the project result in:				
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?			X	
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?			X	
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?			X	
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?			X	
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?			X	
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?			X	

SUBSTANTIATION:

a) *Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?* ***Determination: Less Than Significant Impact.***

The major source of noise at the residences with nearest proximity to the Project sphere is from construction activities. The proposed Project would be a Class I Bikeway which is defined as a shared use path that is physically separated from any street or highway and may be used by pedestrians, skaters, wheelchair users, joggers and other non-motorized users. (Note that after considerable discussion, it was agreed that wheelchairs or other electric transportation used by individuals with disabilities will be permitted on the SART.) Such passive recreational uses are not anticipated to generate any substantial noise during operation/utilization. A noise study for this project is provided as Appendix 7.

These closest scattered residential uses are north at Hope Street and Sunnyside Avenue approximately 900 feet from the SART Project. The area south of the site is entirely industrial use. Beyond the industrial uses, between Richardson Street and Sterling Avenue are residential uses along Wallace Court. These residences are at least 1,000 feet from the proposed trail and are separated from the SART by industrial use buildings.

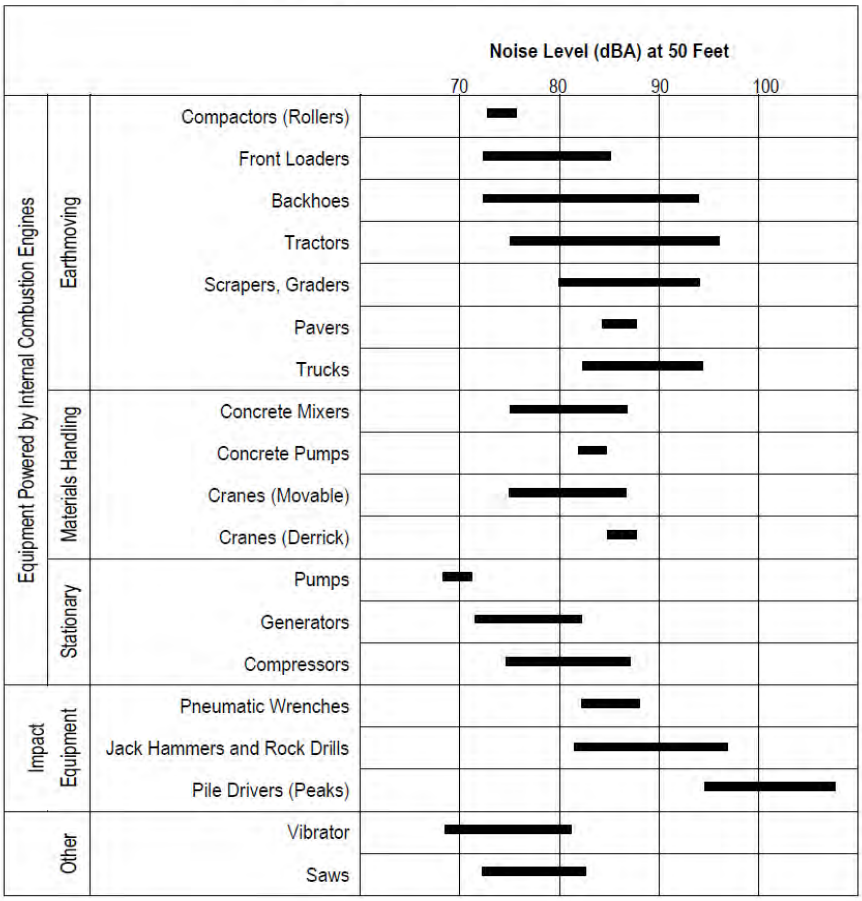
Development of the Project would require site preparation (i.e., land clearing, grading, excavation) and construction of a bridge as well as paving activities. The bridge will span Mission Zanja Creek adjacent to the BNSF Railroad Bridge east of Waterman Avenue, and will be approximately 100 feet in length. There are no residential uses in proximity to the bridge with the closest sensitive use 2,000 feet away.

The bulk of Project activities typically involve the use of heavy equipment, such as graders, excavators and backhoes, and cranes. Trucks would be used to deliver equipment and materials, and to haul away waste earthwork exports. Smaller equipment, such as air compressors, pneumatic tools, plate compactors, and concrete vibrators would also be used throughout the site during its development. This equipment would generate noise that would be heard both on and off the Project site.

Table 4.12-1 lists typical reference equipment noise levels for equipment that may be used during construction of the proposed Project. Construction activities are carried out in discrete steps, each of which has its own mix of equipment, and consequently its own noise characteristics. These various sequential phases would change the character of the noise levels surrounding the construction site as work progresses. Despite the variety in the type and size of construction equipment, similarities in the dominant noise sources and patterns of operation allow noise ranges to be categorized by work phase.

Table 4.12-1

Typical Construction Equipment Noise Generation Levels



Source: EPA PB 206717, Environmental Protection Agency, December 31, 1971, "Noise from Construction Equipment and Operations."

Chapter 3.1 of the FHWA Construction Noise Handbook outlines the basic methodology for predicting construction equipment noise. Equation 3-1 contains the following expression for the energy-averaged equipment Leq at distance D:

Leq (equip)= Ref. Level + 10 log (UF) – K log (D/Do)
Where:
Ref Level is the measured reference level at a distance Do
UF = Usage factor in any given hour, and
Do = the reference distance
K = the propagation constant

If more than one piece of equipment is operating at one given location, the noise becomes additive. However, the trail is narrow such that multiple pieces of equipment cannot easily be co-located. The FHWA Handbook further points out that noise is often dominated by the noisiest piece of equipment with only secondary effects from smaller sources.

The data in Table 4.12-2 presents a range of candidate reference levels that depend upon load factors, soil types and other factors. The FHWA Handbook has developed a single average reference sound level as a function of equipment type that would likely be used on the proposed Project. Table 4.12-2 summarizes representative reference noise level data.

Table 4.12-2
REFERENCE SOUND LEVELS AT 50 FEET

Type	***Make/Model***	***Peak Noise (dB)***
Crane	Buc Ere 308	74
Backhoe	Case 680C	74
Loader	Caterpillar 966	81
Dozer	Caterpillar D6	83
Grader	Caterpillar 12E	81
Air Compressor	I-R DXL 9005	76

FHWA Construction Noise Handbook, Appendix A

Assuming a 50 percent load factor and propagation across a “soft” irregular surface, the construction equipment noise level at the closest homes from the range of equipment shown in Table 4.12-2 is as follows:

North of Trail (900 feet)
Reference Level = 74-83 dB
Spreading Loss = -31 dB
Load Factor = -3 dB
Residual = 40-49 dB

South of Trail (1,000 feet)
Reference Level = 74-83 dB
Spreading Loss = -33 dB
Load Factor = -3 dB
Partial Shielding = -5 dB
Residual = 33-42 dB

Ambient levels along the trail were measured to range from 43-52 dB Leq. These levels are presumed to be comparable to baseline levels at the nearest homes north of south of the trail. Existing homes are significantly separated from the trail alignment as to not experience construction equipment noise that is substantially different from probable existing baseline noise.

Project grading activities estimate 10,000 CY or earthworks export. Assuming haul trucks would have a capacity of 16 CY there would be 625 one way or 1,250 round trips required to complete haul activities. The Project alignment is approximately 3.8 miles long. Major access roadways to the Project site include Tippecanoe, Waterman and Mountain View Avenues. Assuming that each of these three roadways would absorb 1/3 of the total truck trips, there would be 416 truck trips per roadway over Project grading activities. It is probable that trucks would travel south from the site for access to the I-10 Freeway. Grading activities are estimated to require 3 months for the entire alignment, or one month in each third of the Project site. If grading activities immediately adjacent to Tippecanoe, Waterman and Mountain View Avenues spanned one month in each locale, that there would be 416 trips in 20 days or 21 trips per day over the 12 hour days or an average of 2 trucks per hour. For a truck traveling 45 mph the Leq would be 53 dB at 50 feet. This is not expected to create a noise impact.

The San Bernardino County General Plan restricts occurrence of construction activities to between the hours of 7 a.m. to 7 p.m., Monday through Saturday, excluding federal holidays. With construction activities limited to the daytime hours as described in the San Bernardino County General Plan, construction noise is not anticipated to create adverse impacts.

Another potential noise-related impact resulting from construction of the proposed Project is groundborne vibration. Perceptible groundborne vibration is typically associated with blasting operations and the use of pile drivers, neither of which would be used during construction of the proposed Project. As such, no excessive groundborne vibration would be created by the proposed Project, and; therefore, impacts due to Project-generated groundborne vibrations would be imperceptible at the nearest sensitive receiver. Construction activities from Project development may occasionally be audible at the closest residential uses, but not intrusive. Such impacts are mitigated by required compliance with grading/construction permits. These considerations include:

- The hours of construction operation shall be limited to be between the hours of 7 a.m. and 7 p.m., Monday to Saturday. No construction activity is allowed on Sundays or federal holidays.
- Staging areas shall be located away from existing residences.
- All construction equipment shall use properly operating mufflers.

These same requirements are echoed in Section 7-1.1011 of the Caltrans Standard Specification standard Caltrans requirements:

- The contractor shall comply with all local sound control and noise level rules, regulations and ordinances which apply to any work performed pursuant to the contract.

- Each internal combustion engine, used for any purpose on the job or related to the job, shall be equipped with a muffler or a type recommended by the manufacturer. No internal combustion engine shall be operated on the Project without the muffler.

It is unlikely that SART visitor use activities would create noise that could be intrusive to adjacent residences. Visitor traffic and SART utilization is sporadic, a few people at a time, and generally such recreational visitors are not significant noise generators. Since motorized vehicular traffic is not permitted on the trail, audible sounds from operation would likely occur in conjunction with occasional children and adults shouting or talking loudly. However, the nearest sensitive uses to the SART Project are at a distance of 900 feet and are often shielded by intervening structures and/or are across busy roadways whose traffic will mask any Project contribution. Finally, because the trail is not lit, usage will only occur during the daytime during hours of lesser noise sensitivity.

Baseline noise levels along the trail are conducive to quiet activities. Ambient levels are those considered “quiet and serene”. Ambient noise levels are not an impediment to a planned walking and bicycle trail. There is thus no operational noise impact of the Project upon the ambient acoustic environment, not of the environment upon the proposed use.

Installation of the Stage 2 temporary bike lane will occur on existing roadways that have a high background noise level, ranging between 65 dBA and 75 dBA CNEL. The application of the paint to create the bike lane requires a single vehicle in the midst of thousands of vehicles per day. Therefore, the cumulative contribution to noise within the Waterman and Orange Show Road alignments will be negligible,

During the period that bikers traverse the temporary bike trails, they will be exposed ro higher background noise levels than normally occur along SART bike trails (70 dBA or greater). However, due to the short duration, no adverse impacts on the bikers due to noise is forecast to occur.

Based on the analysis above, implementation of the proposed Project would not expose people to or generation of noise levels in excess of standards established by local agencies. Therefore, less than significant impacts would occur.

b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels? ***Determination: Less Than Significant Impact.***

Perceptible groundborne vibration is typically associated with blasting operations and the use of pile drivers, neither of which would be used during construction of the proposed Project. As such, no excessive groundborne vibration would be created by the proposed Project, and; therefore, impacts due to Project-generated groundborne vibrations would be imperceptible at the nearest sensitive receiver. Less than significant impacts would occur.

c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project? ***Determination: Less Than Significant Impact.***

Refer to Response 4.12 (a), above. The Project would not create a substantial permanent increase in ambient noise levels, and therefore, less than significant impacts would occur.

d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project? ***Determination: Less Than Significant Impact.***

Refer to Response 4.12 (a), above. The Project would not create a substantial temporary or periodic increase in ambient noise levels in the Project vicinity, and therefore, less than significant impacts would occur.

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels? ***Determination: Less Than Significant Impact.***

Refer to Response 4.12 (a), above. Portions of the Project site are located within two miles of the SBIA but not within any airport noise exposure zone. However, as stated above, implementation of the Project would not be exposed to excessive noise levels, and therefore, less than significant impacts would occur.

f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels? ***Determination: Less Than Significant Impact.***

Refer to Response 4.12 (a), above. Portions of the Project site are located within the vicinity of the Redlands Municipal Airport, located at Sessums Drive in the City of Redlands. However, as stated above, implementation of the Project would not be exposed to excessive noise levels, and therefore, less than significant impacts would occur.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
4.13 POPULATION AND HOUSING – Would the project:				
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?			X	
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?				X
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?				X

SUBSTANTIATION:

a) *Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?* ***Determination: Less than Significant Impact.***

The Project would include the development of a 3.8 mile segment of the SART within the cities of San Bernardino and Redlands and a Stage 2 temporary bike path along Waterman Avenue and Orange Show Road. While the proposed trail(s) would offer additional methods of transportation both locally and regionally, there is no basis for concluding that implementation of the trail would induce substantial population growth. The Project would not involve housing and would not directly or indirectly lead to an increase in population and would not require extending or improving infrastructure in a manner that would facilitate growth. Therefore, implementation of the Project would not induce substantial population growth, and less than significant impacts would occur.

b) *Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?* ***Determination: No Impact.***

No housing would be displaced as a result of Project implementation, and therefore, no impacts would occur.

c) *Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?* ***Determination: No Impact.***

Refer to Response 4.13 (b), above. No displacement impacts would occur in this regard.

b	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
4.14 PUBLIC SERVICES – Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
a) Fire protection?			X	
b) Police protection?			X	
c) Schools?				X
d) Recreation/Parks?			X	
e) Other public facilities?			X	

SUBSTANTIATION:

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

a) Fire protection? ***Determination: Less Than Significant Impact.***

The SART Project would not directly or indirectly induce population growth. The Project would not result in the need for additional new or altered fire protection services and would not alter acceptable service ratios or response times. Implementation of the Project would also not create the need for the development of additional fire facilities, but it could create a random demand for future emergency response as a result of accidents on the trail. Therefore, less than significant impacts to fire protection services would occur with implementation of the proposed Project.

b) Police protection? ***Determination: Less Than Significant Impact***

The SART Project would not directly or indirectly induce population growth. The Project would not result in the need for additional new or altered police protection services and would not alter acceptable service ratios or response times. Implementation of the Project would also not create the need for the development of additional police facilities, but it could create a random demand for future emergency response as a result of accidents on the trail. Therefore, less than significant impacts to police protection services would occur with implementation of the proposed Project.

c) Schools? ***Determination: No Impact.***

The SART Project would not directly or indirectly induce population growth, and therefore, would not generate additional demand for capacity at local schools. No impacts would occur in this regard.

d) Parks? ***Determination: No Impact.***

Implementation of the proposed Project would fulfill the needs of a regional trail link connecting an area encompassing over four million residents in three counties (Orange, Riverside and San Bernardino). At the present time there are no other multi-jurisdictional trails in the three county areas, and this new segment will extend the SART 3.8 miles closer to the foothills. This Project meets the identified need for a regional non-vehicular trail for the region's residents. The trail will provide safe use and enjoyment of open space, environmental education, and an essential transportation trail system. Therefore, implementation of the proposed Project would have a beneficial impact to the local and regional parks system and no negative or adverse impact.

e) Other public facilities? ***Determination: No Impact.***

The proposed Project would not generate residents either directly or indirectly and would, therefore, not create significant impacts to other public facilities.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
4.15 RECREATION –				
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?				X
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?		X		

SUBSTANTIATION:

a) Would the proposed 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? ***Determination: No Impact.***

Refer to Response 4.14 (c), above. Implementation of the proposed Project would have a beneficial impact to the local and regional parks system and no negative or adverse impact.

b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse effect on the environment? ***Determination: Less Than Significant Impact with Mitigation Incorporated.***

Impacts associated with the development of the proposed Project, which is a recreational trail, are analyzed throughout this document. As identified in this Initial Study, all impacts associated with implementation of the proposed Project would be less than significant with mitigation incorporated.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
4.16 TRANSPORTATION / TRAFFIC – Would the project:				
a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?			X	
b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?			X	
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?			X	
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?			X	
e) Result in inadequate emergency access?			X	
f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?				X

SUBSTANTIATION:

a) *Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?* ***Determination: Less Than Significant Impact.***

Implementation of the proposed SART Phase III Project would have a beneficial impact upon the region's circulation system by providing an additional method of alternative transportation. The Project does not include new uses that would increase the existing traffic load, and, alternately, has the potential to reduce the existing traffic load on the local and regional street system. In addition, all Project plans would be reviewed for consistency with all applicable City and County plans. Therefore, less than significant impacts would occur.

b) Conflict with an applicable congestion management program, including, but not limited to, level-of-service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways? ***Determination: Less Than Significant Impact.***

Refer to Response 4.16 (a), above. Less than significant impacts would occur.

c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks? ***Determination: Less Than Significant Impact.***

Portions of the Project site are located within the general vicinity of the SBIA and the Redlands Municipal Airport. However, the Project proposes the development of a multi-use trail, and would not result in a change in air traffic patterns. Therefore, less than significant impacts would occur.

d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)? ***Determination: Less Than Significant Impact.***

All design improvements associated with the proposed Project would be subject to approval by the County of San Bernardino, City of San Bernardino, and City of Redlands. The SART III design implements trail design requirements for a Class 1 bikeway, including access by disabled recreationists. Therefore, less than significant impacts would occur.

e) Result in inadequate emergency access? ***Determination: Less Than Significant Impact.***

Project design would be subject to review by the County and City's Fire and Police Departments to assure that adequate emergency access is provided. The County and the City's standard review procedures prior to issuance of grading permits would reduce impacts to a less than significant level. Emergency access will be provided at each of the permanent access points so that motorized emergency service personnel can readily access the Project alignment. Less than significant impacts would occur in this regard.

f) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)? ***Determination: No Impact.***

The Project itself would provide an additional mode of alternative transportation. In addition, upon completion, the SART will be the "Crest to Coast" regional trail link connecting an area encompassing over four million residents in three counties (Orange, Riverside and San Bernardino). At the present time there are no other multi-jurisdictional trails in the three county areas, and this new segment will extend the SART 3.8 miles closer to the foothills. This Project meets the identified need for a regional non-vehicular trail for the region's residents. The Stage 2 temporary bike path will be installed along Waterman Avenue between the south side of the Santa Ana River bridge and Orange Show Road. The bike path will follow the west side of Waterman. It will then turn east and follow Orange Show Road on the south side of the roadway until it intercepts the Santa Ana River channel just west of Tippecanoe. At the southeast side of the Orange Show Road bridge over the River, a new connection between the temporary bike path and permanent bike path will be installed. This short-term alternative path is necessary to provide time for acquisition of the permits associated with the Mission-Zanja Creek and railroad track crossing. Both roadways are four-lanes (two in each direction) with space on the paved segment to allow a bike path to be installed. Therefore, no adverse impacts would occur.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
4.17. UTILITIES AND SERVICE SYSTEMS – Would the project:				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?				X
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?				X
c) Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?		X		
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?			X	
e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?				X
f) Be served by a landfill(s) with sufficient permitted capacity to accommodate the project's solid waste disposal needs?			X	
g) Comply with federal, state, and local statutes and regulations related to solid waste?			X	

SUBSTANTIATION:

a) *Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?* ***Determination: No Impact.***

The Project would not generate any wastewater. Therefore, no potential exists to exceed any wastewater treatment requirements of the Santa Ana Regional Board.

b) *Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?* ***Determination: No Impact.***

The does not propose the construction of new water or wastewater facilities nor would it create any demand for capacity within such facilities. Thus, no impact would occur in this regard.

c) *Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?* ***Determination: Less Than Significant Impact with Mitigation Incorporated.***

The Project would not require the expansion of existing stormwater facilities. However, the Project would include the development of new stormwater facilities to control runoff. These stormwater facilities would occur within the trail disturbance area. Impacts associated with the development of these facilities are analyzed throughout this document. The key discussion of this issue is in Section 4.9, Hydrology and Water Quality. Specific BMPs have been identified for short- and long-term management of water quality during stormwater runoff. As noted, these facilities have been incorporated into the SART III design and their installation will not cause any significant adverse effect. Therefore, less than significant impacts with implementation of the required BMP mitigation would occur with the implementation of mitigation.

d) *Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?* ***Determination: Less Than Significant Impact.***

The proposed Project would not require water supply or be connected to a water supply system. A limited volume of water will be used during construction to support construction activities, such as fugitive dust control and use of concrete. The volume of water required to support construction is estimated to be less than 5,000 gallons per day and if recycled water is available to support construction it will be used. No significant impact to water resources would result from project implementation.

e) *Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?* ***Determination: No Impact.***

The proposed Project would not generate wastewater nor require wastewater treatment. No impact would occur.

f) *Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?* ***Determination: Less Than Significant Impact.***

Construction debris from and site preparation would generate solid waste that would need to be properly disposed of in the appropriate landfill. According to the biologist who assessed the Project area, it is anticipated that approximately 40-50 cubic yards of green waste would need to be processed in a landfill. It is anticipated that waste generated by construction of the proposed Project would be placed in the San Timoteo Landfill, located at San Timoteo Canyon Road in the City of Redlands. The landfill has an estimated remaining capacity of 11,360,000 cubic yards, or 55.7 percent of its total capacity. The anticipated closure date for the landfill is 2043. The generation of additional construction-related waste would only be temporary and would cease upon completion of the proposed Project. Solid waste generation during operation of the trail is anticipated to be minimal, and would not result in a significant increase in waste for disposal in area landfills. The Project would be required to be in compliance with adopted programs and federal, state, and local regulations pertaining to solid waste. Therefore, less than significant impacts would occur.

g) *Comply with federal, state, and local statutes and regulations related to solid waste?* ***Determination: Less Than Significant Impact.***

Refer to Response 4.17 (g), above. Less than significant impacts would occur.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
4.18 MANDATORY FINDINGS OF SIGNIFICANCE –				
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?		**X**		
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?		**X**		
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?		**X**		

FINDINGS:

The following findings have been made, regarding the mandatory findings of significance set forth in Section 15065 of the CEQA Guidelines, based on the results of this environmental assessment:

a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory? ***Determination: Less Than Significant Impact with Mitigation Incorporated.***

Refer to the discussions identified in 4.4, above. With the implementation of mitigation measures, less than significant impacts would occur.

b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)? ***Determination: Less Than Significant With Mitigation Incorporated.***

Refer to the detailed discussions above. With the implementation of mitigation measures, no cumulatively considerable adverse impacts would result from implementing the proposed project.

c) *Does the project have environmental effects which would cause substantial adverse effects on human beings, either directly or indirectly?* ***Determination: Less Than Significant with Mitigation Incorporated.***

Refer to the detailed discussions above. With the implementation of mitigation measures, less than significant impacts to humans would occur.

Based on the data contained in this document and supporting technical studies, the County proposes to issue a Notice of Intent to Adopt a Mitigated Negative Declaration as the appropriate environmental determination to comply with the California Environmental Quality Act. Following receipt of comments, the County will compile responses to any comments and prepare a final Mitigated Negative Declaration package for consideration by the County decision-makers. Based on the final Mitigated Negative Declaration package the County will consider whether to proceed with implementation of the proposed Project as defined in this document and as determined by the County at the completion of the review process. If you or your agency comments on this proposed Mitigated Negative Declaration, you or your agency will be provided responses to comments and notified of the date of the County's meetings to consider the proposed Project and the Mitigated Negative Declaration. A decision by the County to approve the proposed Project would be based on all of the information available in the whole of the record before the County decision-makers at the conclusion of the CEQA environmental review process for this proposed Project.

4.19 SUMMARY OF MITIGATION MEASURES

Air Quality

4.3-1 Prior to issuance of grading permits, a Dust Control Plan shall be submitted to the County that demonstrates how construction activities would comply with the following dust control measures:

- Apply soil stabilizers or moisten inactive areas.
- Prepare a high wind dust control plan.
- Address previously disturbed areas if subsequent construction is delayed.
- Water exposed surfaces as needed to avoid visible dust leaving the construction site (typically 3 times/day).
- Cover all stock piles with tarps at the end of each day or as needed.
- Provide water spray during loading and unloading of earthen materials.
- Minimize in-out traffic from construction zone

Biological Resources

4.4-1 A qualified biologist shall provide an environmental awareness class to all persons who will work on-site during construction. The class will consist of a presentation about the biology of the surrounding area and any natural resource laws pertaining to the project. A fact sheet containing this information shall also be prepared and distributed. Upon completion of the class, the attendees will sign a form stating that they understand all protection measures. These forms will be filed with the County and will be made available to the regulatory resource agencies upon request.

4.4-2 The Project applicant shall provide compensatory mitigation for Project-related permanent impacts in a 2:1 impact area to mitigation area ratio by rehabilitating approximately 0.2 acre of degraded habitat located adjacent the north and south sides of trail alignment between Tippecanoe Avenue and California Street. The rehabilitated habitat shall be protected in perpetuity through an approved Conservations Easement (CE) mechanism that allows the County of San Bernardino Flood Control District to maintain access and operations and maintenance activities. The CE will be managed by an approved County District. To cover the cost of maintaining the rehabilitated CE lands, the County of San Bernardino Regional Parks Department will coordinate with County Counsel to set up a non-wasting endowment fund.

For temporary construction-related impacts to SBKR critical habitat, the County of San Bernardino Regional Parks Department will restore the habitat to its pre-project native condition, through the development and implementation of a HMMRP per Corps, USFWS, RWQCB, and CDFW requirements and standards.

4.4-3 Under the supervision of a biologist, bright orange plastic construction fencing, stakes, flags, or markers that are clearly visible to construction personnel on foot and in heavy equipment will be used to delimit areas of grading, staging, and avoidance for the proposed project. These markers will be in place prior to Project initiation (that includes any clearing, grubbing, grading, or staging of equipment or vehicles) and will remain in place until all construction activities are finished. Intrusion by construction personnel into adjacent land, outside of the delineated construction envelope, will not be permitted. All construction personnel and equipment will operate only within the clearly delineated limits of grading and construction activities.

4.4-4 Unauthorized, public off-road use of the Project area shall be discouraged by posting of signs and by monitoring by the construction crew.

4.4-5 Existing routes of travel and approved access roads will be used to and from construction areas. Cross-country travel by vehicles and equipment will be prohibited.

4.4-6 Trash from construction personnel, especially food items or packaging, will be disposed of in covered containers and removed daily.

4.4-7 Avoid the creation of berms, which may attract SBKR, to minimize potential future impacts to SBKR during maintenance activities.

4.4-8 A qualified biologist will perform a visual pre-construction survey for SBKR within the construction footprint immediately prior to ground disturbing activities. Any small mammal burrows within the construction zone that cannot be avoided will be excavated by hand during the visual survey. This will allow the occupant, if any, to run out of harm's way.

4.4-9 The biologist will inspect the sites periodically and will remain on-call for the duration of the Project. The biologist will oversee the implementation of minimization and/or avoidance measures during Project set up and construction.

4.4-10 During construction, if a situation is encountered that could affect a listed species (i.e., SBKR) for which a contingency plan of avoidance, removal, relocation or transplant has not been approved by the USFWS, then all activities will cease and the biologist will be notified. The biologist will then contact the appropriate regulatory authority within 24 hours. The biologist will have the authority to stop immediately any activity that is not in compliance with the natural resource regulatory laws or permits secured for the projects. She/he will have the authority to order any reasonable measure to avoid the take of SBKR.

4.4-11 If, in any event, SBKR is injured as a result of Project related activities during construction, construction will be halted, the USFWS will be notified and the injured animal will be taken to an approved veterinarian clinic. Construction activities will remain halted until the authority to resume is provided by the County in coordination with USFWS.

4.4-12 Construction of SART III shall not occur between April 15 and September 1 which is the timeframe when SWWF migrate into the area, establish territories and potentially breed.

4.4-13 Construction of SART III shall not occur between April 15 and September 1 which is the timeframe when LBVI migrate into the area, establish territories and potentially breed.

4.4-14 Prior to discharge of fill or streambed alteration of jurisdictional areas, the project proponent shall obtain regulatory permits from the U.S. Army Corps of Engineers, Regional Water Quality Control Board and the California Department of Fish and Wildlife. Mitigation can be provided by purchasing into any authorized mitigation bank; by selecting a site of comparable acreage near the site and enhancing it with a native riparian habitat or invasive species removal in accordance with a habitat mitigation plan approved by regulatory agencies; or by acquiring sufficient compensating habitat to meet regulatory agency requirements. Typically, regulatory agencies require mitigation for jurisdictional waters without any riparian or wetland habitat to be mitigated at a 1:1 ratio. For loss of any riparian or other wetland areas or habitat that supports listed species, the mitigation ratio shall be at a 2:1 ratio. A revegetation plan using native riparian vegetation common to the project area where riparian or wetland habitat will be affected shall be prepared and reviewed and approved by the appropriate regulatory agencies. The regulatory agencies can impose greater mitigation requirements in their permits, but County Regional Parks will utilize the ratios outlined above as the minimum required to offset or compensate for impacts to jurisdictional waters, riparian areas or other wetlands.

<u>Cultural Resources</u>

4.5-1 If during ground-disturbance activities, unique archaeological resources are discovered the following procedures shall be followed. Unique archaeological resources are defined, for this condition, as being multiple artifacts in close association with each other, but may include fewer

artifacts if the area of the find is determined to be of significance due to its sacred or cultural importance.

1. All ground disturbance activities within 100 feet of the discovered archaeological resource shall be halted until a meeting is convened between the County and a qualified archaeologist to discuss the significance of the find.
2. The archaeologist shall recommend appropriate actions, in cooperation with the County and Contractor.
3. Grading or further ground disturbance shall not resume within the area of the discovery until a determination has been reached by the County as to the appropriate mitigation.

4.5-2 A trained paleontological monitor shall be present during individual Project excavation activities greater than 5.0 feet in depth. Excavations below 5.0 feet have a high likelihood of encountering older alluvial wash deposits, which may contain paleontological resources. The monitoring for paleontological resources shall be conducted on a half-time basis and on a full-time basis during excavation greater than 5.0 feet in depth. If paleontological resources are located during excavation, the monitoring program would change to full-time. The monitor shall be empowered to temporarily halt or redirect construction activities to ensure avoidance of adverse impacts to paleontological resources. The monitor shall be equipped to rapidly remove any large fossil specimens encountered during excavation. During monitoring, samples shall be collected and processed to recover micro-vertebrate fossils. Processing shall include wet-screen washing and microscopic examination of the residual materials to identify small vertebrate remains.

4.6-1 The County shall finalize the Storm Water Pollution Prevention Plan (SWPPP) and Water Quality Management Plan and implement the Best Management Practices to minimize erosion, siltation and overall water quality during construction and over the long-term operation of SART III.

<u>Hydrology and Water Quality</u>

4.9-1 The County/construction contractor shall prepare a Storm Water Pollution Prevention Plan using BMPs from Table 6 or equivalent measures that will be effectively implemented to achieve the following performance standards: prevent construction pollutants from making contact with storm water and with the intent of keeping all products of erosion from moving off-site into receiving waters; and eliminate or reduce non-stormwater discharges to MS4s and other waters. The BMPs shall be in place prior to ground disturbance and shall be maintained to achieve the performance standard stated in the preceding text.

4.9-2 The County/construction contractor shall prepare a Water Quality Management Plan (WQMP) using BMPs from Tables 8 and 9 or equivalent measures that will be effectively implemented to achieve the following performance standards: minimize long-term runoff volumes that can reach the Santa Ana River (SAR); prevent pollutants from making contact with storm water and with the intent of keeping all products of erosion from moving off-site into receiving waters; and capture runoff adjacent to the trail or provide manufactured treatment units to treat the runoff before release into the SAR. The BMPs shall be in place prior to authorizing use of the trail disturbance and shall be maintained to achieve the performance standard stated in the preceding text.

4.9-3 The County/construction contractor shall use recycled water to support construction of the SART III facilities. This shall be made a part of the construction contract issued by the County.

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5.0 DETERMINATION (To be completed by the Lead Agency)

On the basis of this initial evaluation, the following finding is made:

	The proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
X	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.
	The proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
	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.
	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.

Tom Dodson & Associates
Prepared by

May 2, 2014
Date

Signature
County of San Bernardino

5/2/2014
Date

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- Mr. Irwin Ferguson, Division Chief of Design, Dept. of Public Works

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FIGURES

FIGURE 1
Regional Location

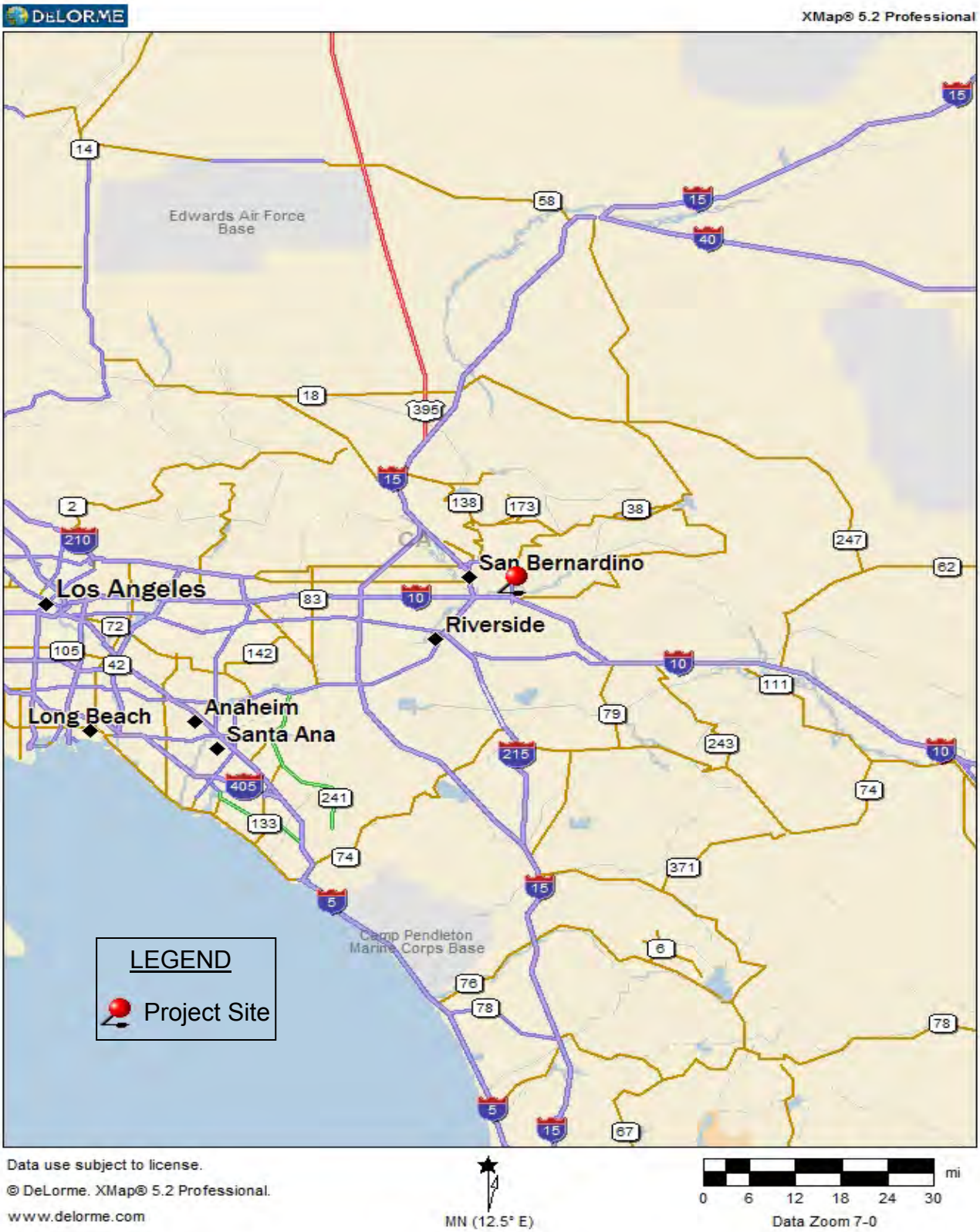

FIGURE 2
Existing Phase I and Phase II

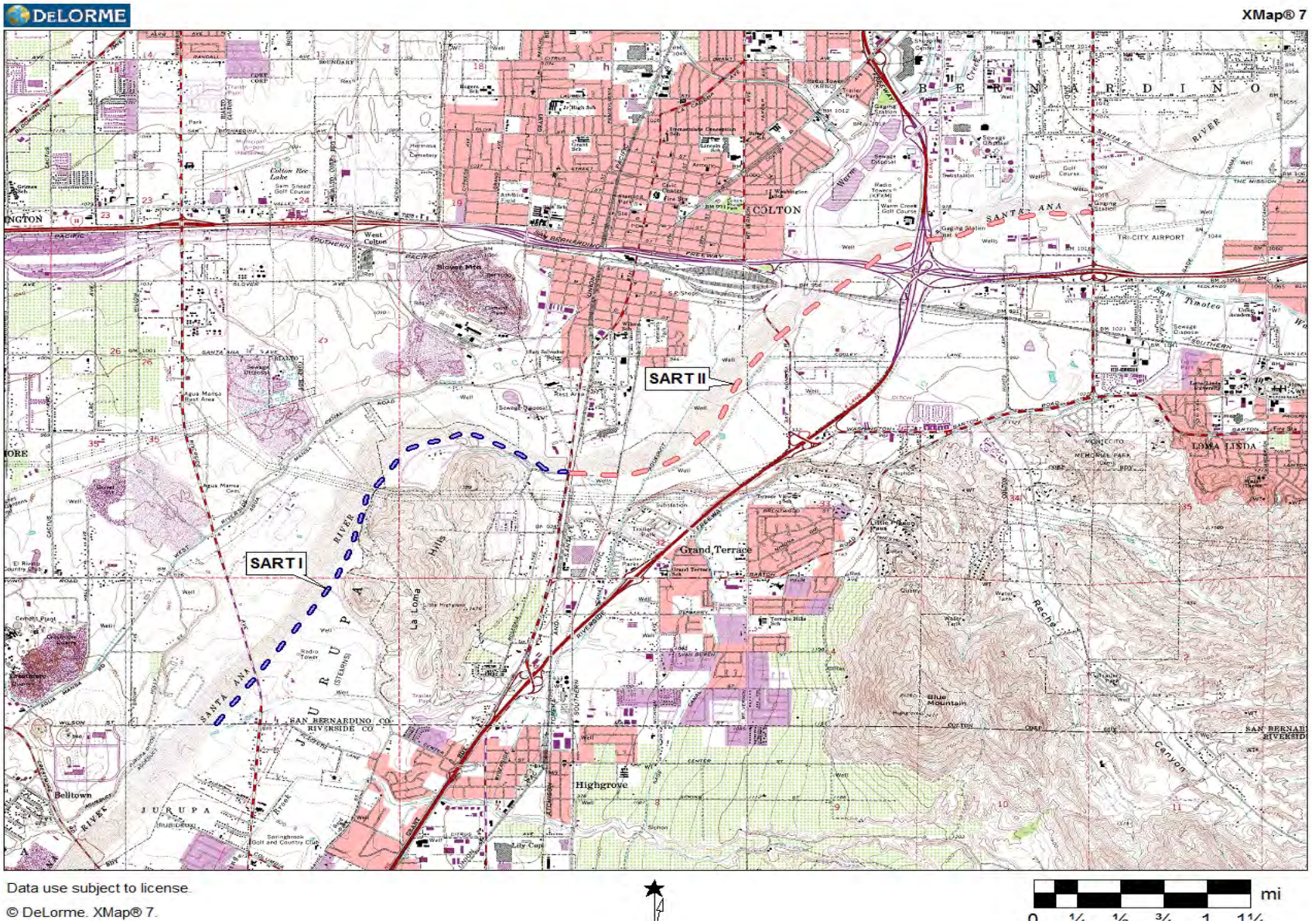

FIGURE 3
Proposed Phase III Alignment

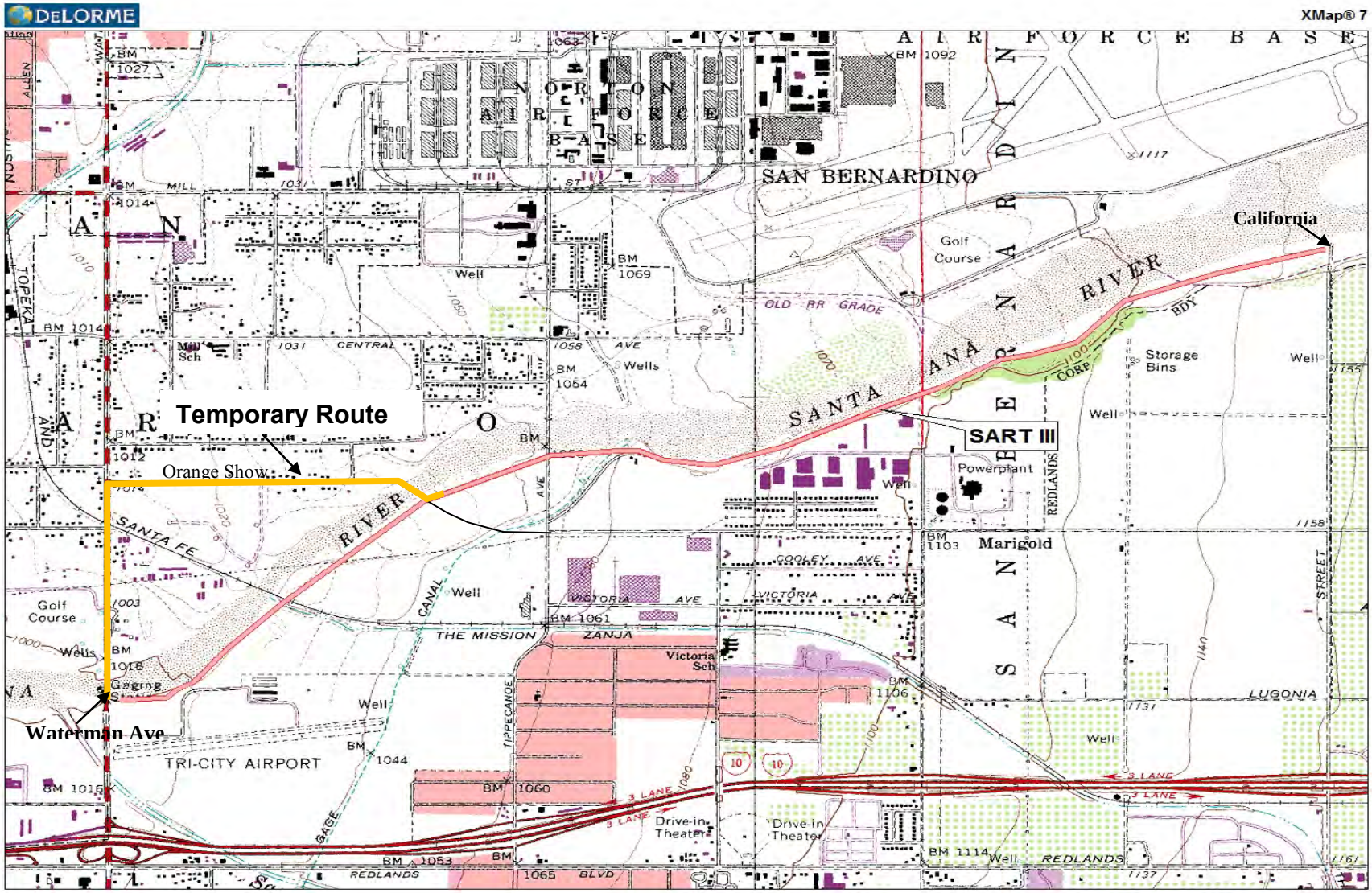

FIGURE 4
Cross Sections for Trail

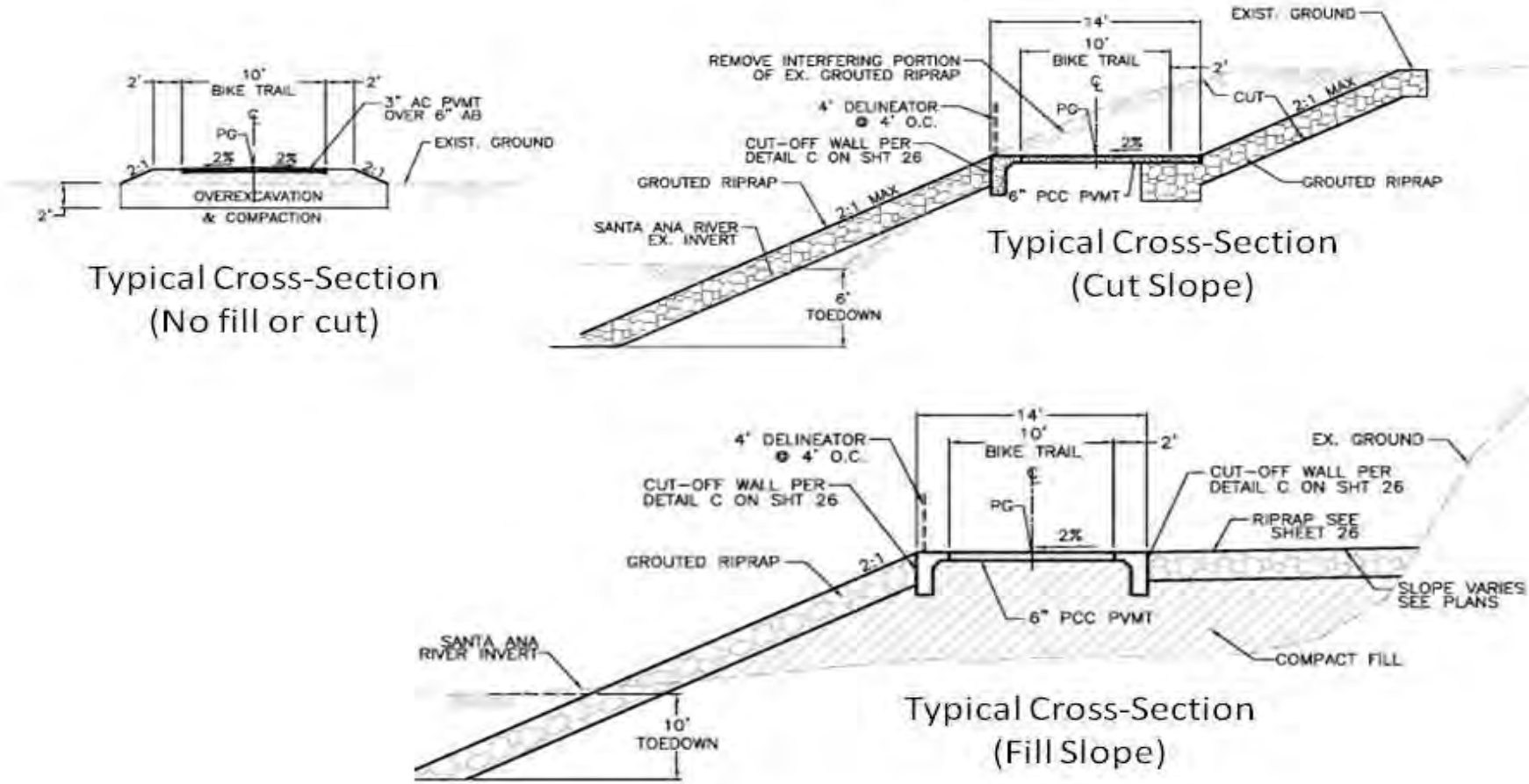

FIGURE 5
Mission Zanja Bridge (Photo) Simulation

FIGURE 6
Mission Zanja Bridge Plan Elevation

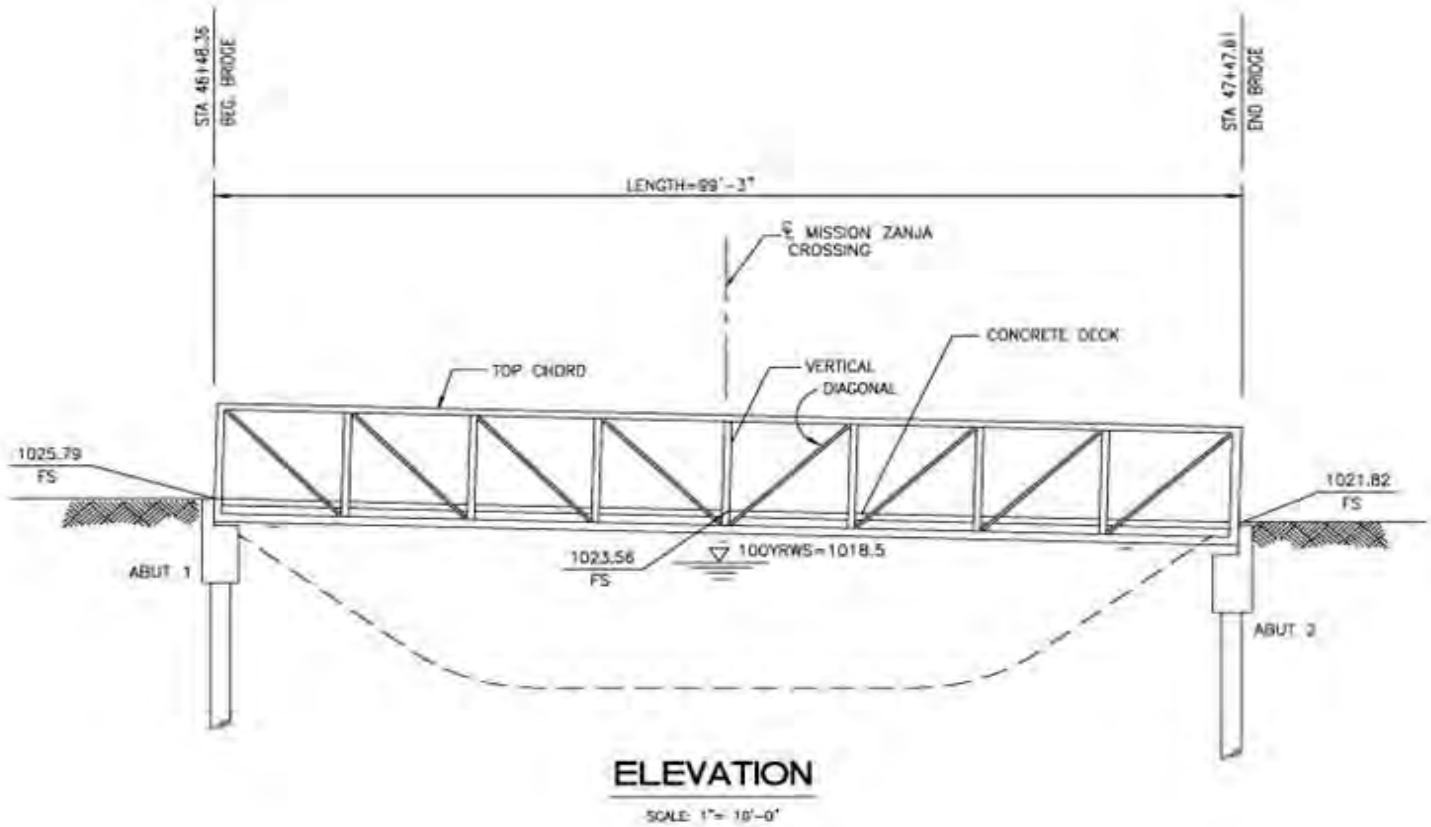

FIGURE 7
Turnaround Station Plan and Section

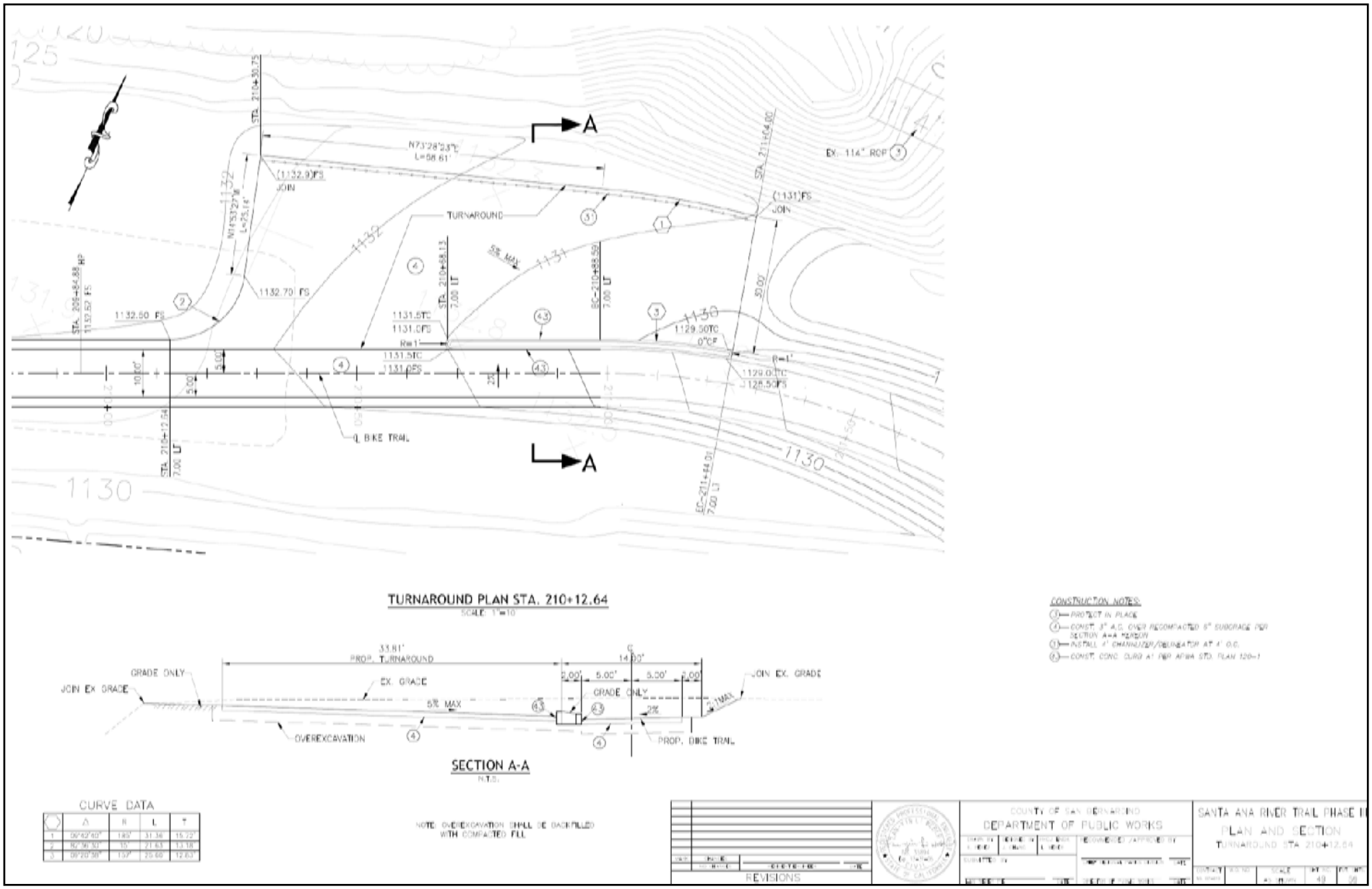

FIGURE 8
Aerial Map Showing Total Alignment

N

FIGURE 8a
Aerial Photo Showing Detailed Temporary Alignment

Temporary Alignment

N

FIGURE 8b
Aerial Photo Showing Detailed Alignment

N

Tom Dodson & Associates
Environmental Consultants

FIGURE 8c
Aerial Photo Showing Detailed Alignment

N

FIGURE 8d
Aerial Photo Showing Detailed Alignment

N

FIGURE 8e
Aerial Photo Showing Detailed Alignment

N

FIGURE 8f
Aerial Photo Showing Detailed Alignment

N

FIGURE 8g
Aerial Photo Showing Detailed Alignment

N

FIGURE 9
Typical Undercrossing at Market Street in Riverside

FIGURE 10
Legend (Key) for Photos

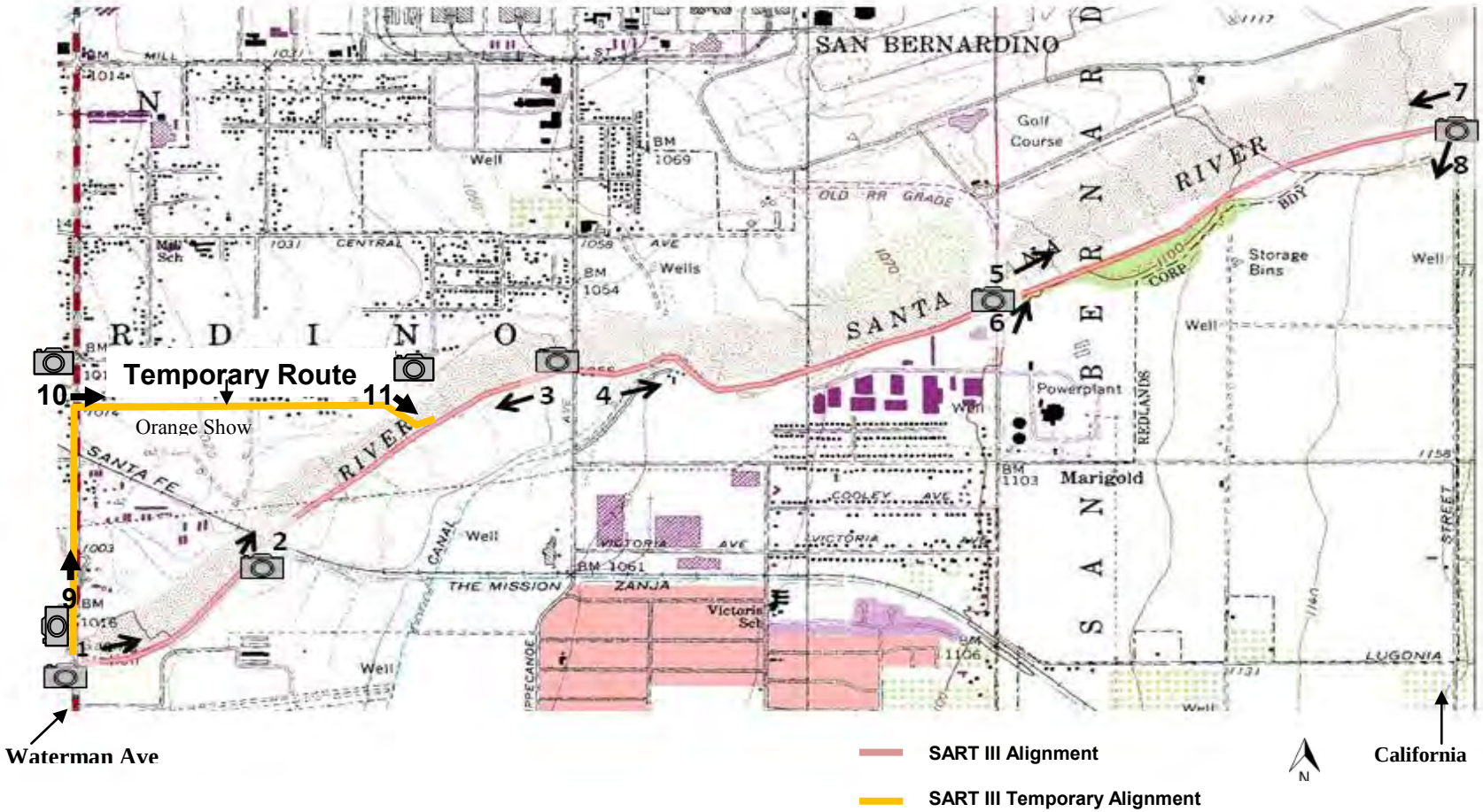

FIGURE 11a
Site Photos – Waterman Avenue to California Street

Photo 1. View looking easterly from Waterman Avenue. Photo shows top of levee toward BNSF Bridge.

Photo 2. View looking easterly toward the BNSF bridge. There is no levee from this point to just west of Orange Show Road. Mission Zanja Creek in foreground over which the 100-foot clear span bridge is to be constructed.

FIGURE 11b
Site Photos – Waterman Avenue to California Street

Photo 3. View looking west from Orange Show Road where levee resumes.

Photo 4. View of levee looking east from Tippecanoe Avenue.

FIGURE 11c
Site Photos – Waterman Avenue to California Street

Photo 5. View looking northeast toward the historic trolley bridge across the River. Bridge was on the north/south alignment with Mt. View Avenue immediately south of the River. This bridge has been removed and replaced by the new Mt. View Avenue bridge across the Santa Ana River.

Photo 6. Existing condition of the Trolley Bridge showing status prior to demolition.

FIGURE 11d
Site Photos – Waterman Avenue to California Street

Photo 7. View looking west from proposed end of the Phase III Trail at California Street.

Photo 8. View looking south from where California Street intersects the Santa Ana River. The California Street Landfill is to the left of the photograph.

FIGURE 11e
Site Photos – Temporary SART III Alignment

Photo 9. View from SART Trail at Waterman Avenue looking north.

Photo 10. View looking east on Orange Show Road.

FIGURE 11e (cont.)
Site Photos – Temporary SART III Alignment

Photo 11. View looking looking southeast on Orange Show Road over the Santa Ana River.

FIGURE 12
Map Showing Access Routes to Trail

N

FIGURE 13
Staging Areas

FIGURE 13a
Potential Staging Areas 1 and 2

N

FIGURE 13b
Potential Staging Areas 3 and 4

N

FIGURE 13c
Potential Staging Area 5

N

FIGURE 13d
Potential Staging Area 6

N

APPENDIX 1

Exhibit 4: Initial Study and Mitigated Negative Declaration for the "Santa Ana River Trail, Phase III Project"

AIR QUALITY ASSESSMENT REPORT

SANTA ANA RIVER TRAIL III

COUNTY OF SAN BERNARDINO, CALIFORNIA

Prepared for:
Tom Dodson & Associates
Attn:
2150 N. Arrowhead Avenue
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Hans D. Giroux
Senior Analyst
Giroux & Associates

Date:

April 13, 2011

Project No.: P11-008 A

Exhibit 4: Initial Study and Mitigated Negative Declaration for the "Santa Ana River Trail, Phase III Project"

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Exhibit 4: Initial Study and Mitigated Negative Declaration for the "Santa Ana River Trail, Phase III Project"

EXECUTIVE SUMMARY

The proposed project is the installation of a 3.6-mile segment of the Santa Ana River Trail (SART) in San Bernardino County on the south side of the Santa Ana River channel, between Waterman Avenue in the City of San Bernardino and California Avenue in the City of Redlands. The project will extend the Santa Ana River Trail (a regional pedestrian and bicycle trail that is proposed to extend from the Pacific Ocean to the San Bernardino Mountains) through the City of San Bernardino to the City of Redlands. The federal Department of Transportation (Department), Federal Highway Administration (FHWA) is the lead agency for compliance with the National Environmental Policy Act (NEPA). FHWA has delegated NEPA compliance to the California Department of Transportation (Caltrans). The San Bernardino County Public Works Department is the lead agency for compliance with the California Environmental Quality Act (CEQA).

This project meets the identified need for a regional non-vehicular trail for the region's residents. The trail will provide safe use and enjoyment of open space, environmental education, and an essential transportation trail system. Portions of the trail, particularly in Orange County, have been developed over the past 20 years; and it is now possible to travel from the City of San Bernardino through Riverside/Orange County to Huntington Beach (the Pacific Ocean) on the SART.

For NEPA Compliance, the Caltrans Standard Environmental Reference, Chapter 11 (Air Quality) mandates preparation of an air quality technical report unless projects are specifically exempt from such requirements. Chapter 93.126 of 40 CFR, Table 2, states that "Bicycle and pedestrial facilities" are exempt from all analysis requirements. An air quality technical report for NEPA compliance has therefore not been prepared. The air quality assessment report for this project therefore only addresses CEQA standards.

All motorized traffic, except for occasional maintenance or emergencies, will be prohibited on the trail. No operational air quality emissions will result from the project. Potential impacts will only result from construction activities. Emissions from off-road equipment, on-road trucks and construction worker commuting were quantified using the SCAQMD CalEEMod. 2011.1.1 computer model for five phases of construction activities. Peak daily emissions during each phase will be less than the SCAQMD CEQA significance threshold for construction activity emissions.

As part of the SCAQMD's Environmental Justice Initiative, the district recommends that impacts be evaluated in terms of "localized significance thresholds" (LSTs). The closest pollution sensitive receptors are located approximately 900 feet from any trail construction activities. LST thresholds will not be exceeded at the nearest homes during construction.

Greenhouse gases (GHG) will be generated by various construction activities. No formal thresholds of significance have been adopted in the South Coast Air Basin. However, annualized GHG emissions from project construction are shown to be well below suggested interim thresholds.

1.0 INTRODUCTION

1.1 PROJECT DESCRIPTION

The proposed project is the installation of a 3.6-mile segment of the Santa Ana River Trail (SART) in San Bernardino County on the south side of the Santa Ana River channel, between Waterman Avenue in the City of San Bernardino and California Avenue in the City of Redlands. The project is called the SART Phase III Project and it will extend the Santa Ana River Trail (a regional pedestrian and bicycle trail that is proposed to extend from the Pacific Ocean to the San Bernardino Mountains) through the City of San Bernardino to the City of Redlands. The federal Department of Transportation (Department), Federal Highway Administration (FHWA) is the lead agency for compliance with the National Environmental Policy Act (NEPA). FHWA has delegated NEPA compliance to the California Department of Transportation (Caltrans). The San Bernardino County Public Works Department is the lead agency for compliance with the California Environmental Quality Act (CEQA).

In general, the project consists of installing the regional trail that will consist of the trail, bridges, culverts, and access ramps. This will require the construction of these trail facilities and the construction activities include fill and embankment construction; relocating and/or adjusting surface features to grade; subsurface preparation for paving the trail with concrete, asphalt concrete, Portland cement concrete (PCC); erosion control measures (best management practices (BMPs); reinforced concrete retaining walls; fencing and railing; access gates; protective pedestrian cover under railroads; storm drain facilities; prefabricated steel, concrete slab bridge and its appurtenances; signage; pavement striping and markings; channelizer/ delineator; and stormwater pollution prevention control.

The regional location is shown on Figure 1-1. Figure 1-2 shows the proposed alignment of the proposed SART Phase III Project.

1.2 PURPOSE AND NEED

The Santa Ana River corridor extends over approximately 110 miles from the Pacific Ocean inland to the San Bernardino National Forest. Upon completion, the SART will be the “Crest to Coast” regional trail link connecting an area encompassing over four million residents in three counties (Orange, Riverside and San Bernardino). At the present time there are no other multi-jurisdictional trails in the three county areas, and this new segment will extend the SART 3.8 miles closer to the foothills. This project meets the identified need for a regional non-vehicular trail for the region’s residents. The trail will provide safe use and enjoyment of open space, environmental education, and an essential transportation trail system. Portions of the trail, particularly in Orange County, have been developed over the past 20 years; and it is now possible to travel from the City of San Bernardino through Riverside/Orange County to Huntington Beach (the Pacific Ocean) on the SART.

Figure 1-1
Regional Location

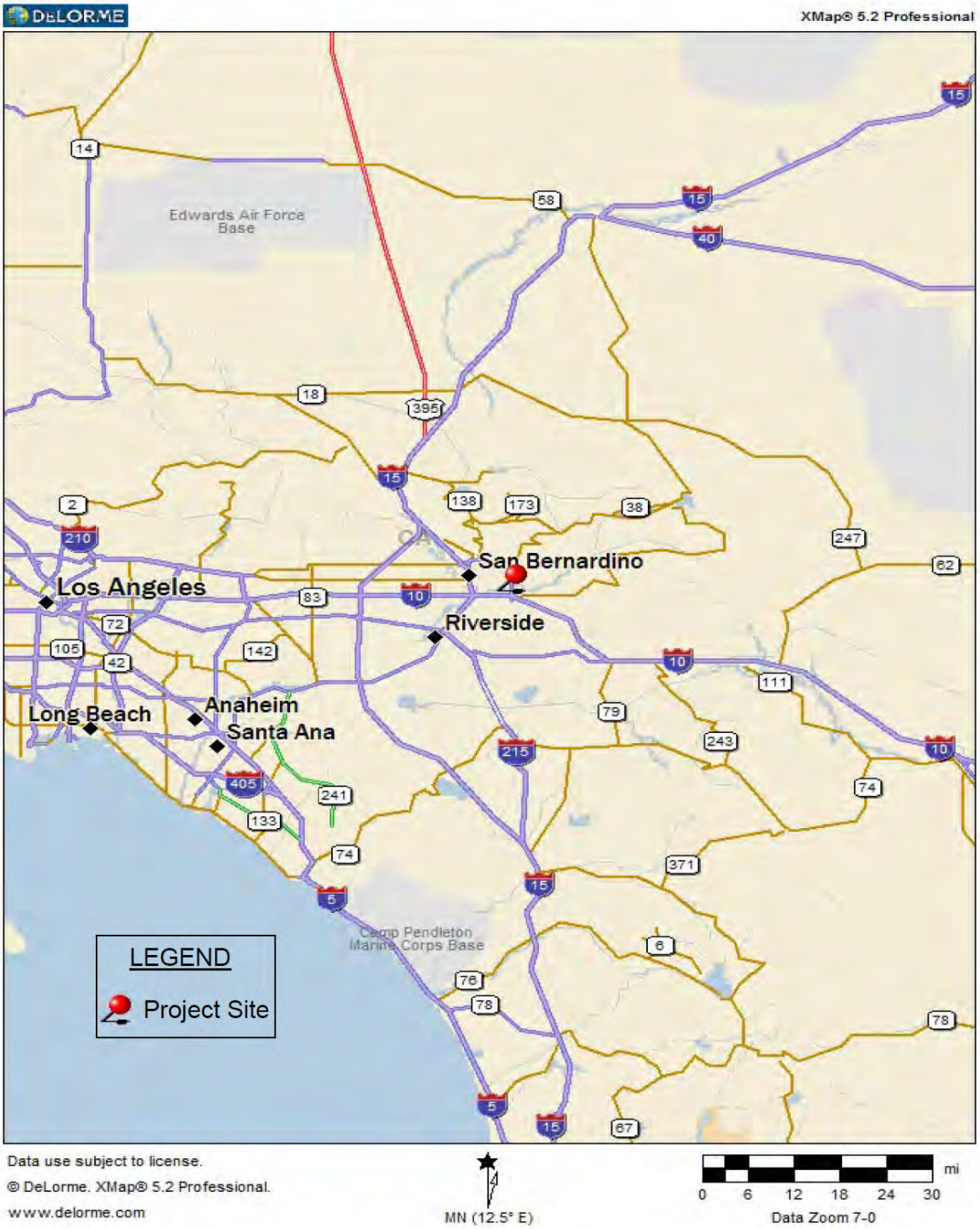
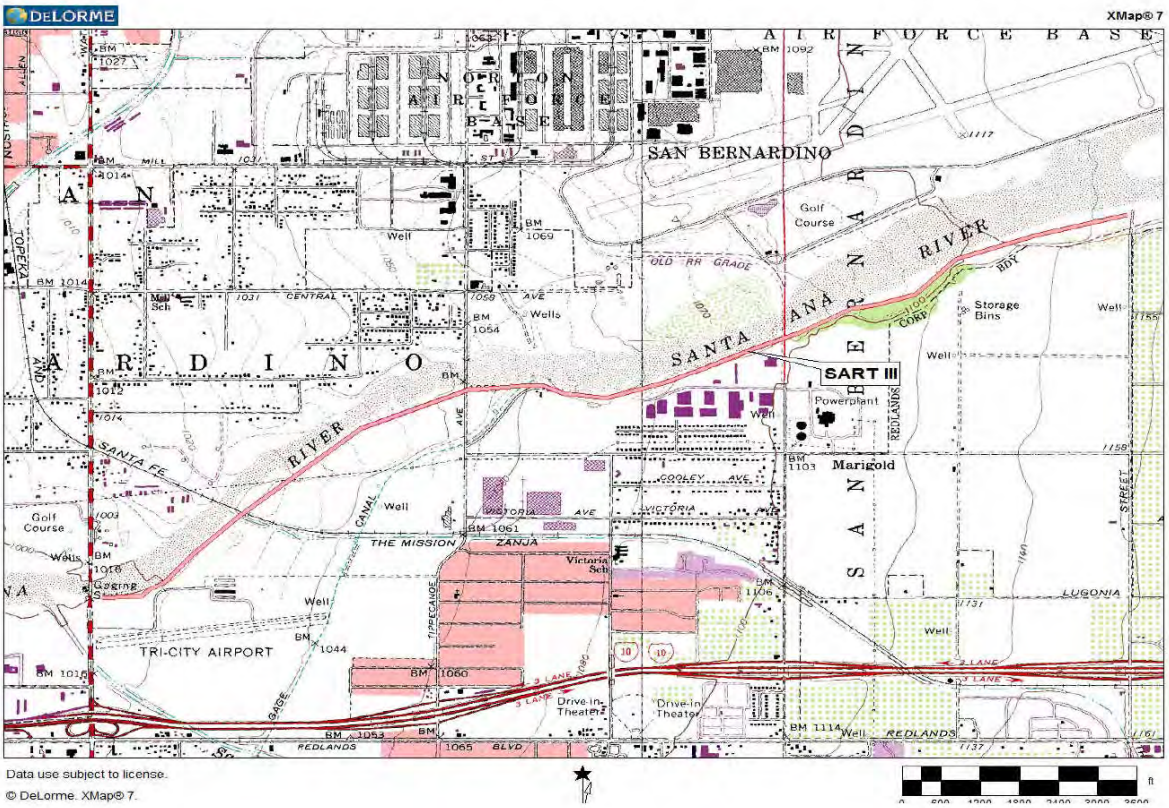


Figure 1-2
Proposed Alignment



1.3 PROJECT FUNDING

Funding and construction of the SART has been incremental. This project consists of local grants from the San Bernardino Associates Governments (SANBAG) with a local matching amount of funds from the County and the Wildlands Conservancy. This project has been assigned project number STPLER-5954 083 by the State of California. Portions of the trail in Riverside County have been completed but there are still linkages in Riverside and San Bernardino counties that have not been developed. The Trail Master Plans for the counties of San Bernardino and Riverside and the cities of San Bernardino, Colton, Grand Terrace, Loma Linda, and Riverside all show trails that will join or are heavily dependent upon this segment of the SART within San Bernardino County.

2.0 METEOROLOGICAL SETTING

The climate the San Bernardino Valley, as with all of Southern California, is governed largely by the strength and location of the semi-permanent high pressure center over the Pacific Ocean and the moderating effects of the nearby vast oceanic heat reservoir. Local climatic conditions are characterized by very warm summers, mild winters, infrequent rainfall, moderate daytime on-shore breezes, and comfortable humidity levels. Unfortunately, the same climatic conditions that create such a desirable living climate combine to severely restrict the ability of the local atmosphere to disperse the large volumes of air pollution generated by the population and industry attracted in part by the climate.

The River Trail will be situated in an area where the pollutants generated in coastal portions of the Los Angeles basin undergo photochemical reactions and then move inland across the project site during the daily sea breeze cycle. The resulting smog at times gives San Bernardino County some of the worst air quality in all of California. Fortunately, significant air quality improvement in the last decade suggests that healthful air quality may someday be attained despite the limited regional meteorological dispersion potential.

Winds across the project area are an important meteorological parameter because they control both the initial rate of dilution of locally generated air pollutant emissions as well as controlling their regional trajectory. Winds across the project site display a very unidirectional onshore flow from the southwest-west that is strongest in summer with a weaker offshore return flow from the northeast that is strongest on winter nights when the land is colder than the ocean. The onshore winds during the day average 6-8 mph while the offshore flow is often calm or drifts slowly westward at 1-3 mph.

During the daytime, any locally generated air emissions are thus rapidly transported eastward toward Banning Pass without generating any localized air quality impacts. The nocturnal drainage winds which move slowly across the area have some potential for localized stagnation, but fortunately, these winds have their origin in the adjacent mountains where background pollution levels are low such that any localized contributions do not create any unhealthful impacts.

In conjunction with the two characteristic wind regimes that affect the rate and orientation of horizontal pollutant transport, there are two similarly distinct types of temperature inversions that control the vertical depth through which pollutants are mixed. The summer on-shore flow is capped by a massive dome of warm, sinking air which caps a shallow layer of cooler ocean air. These marine/subsidence inversions act like a giant lid over the basin. They allow for local mixing of emissions, but they confine the entire polluted air mass within the basin until it escapes into the desert or along the thermal chimneys formed along heated mountain slopes.

In winter, when the air near the ground cools while the air aloft remains warm, radiation inversions are formed that trap low-level emissions such as automobile exhaust near their source. As background levels of primary vehicular exhaust rise during the seaward return flow, the combination of rising non-local baseline levels plus emissions trapped locally by these radiation inversions creates micro-scale air pollution "hot spots" near freeways, shopping centers and other

traffic concentrations in coastal areas of the Los Angeles Basin. Because the nocturnal airflow down the adjacent slopes to the north has its origin in very lightly developed areas of the San Bernardino Mountains, background pollution levels at night in winter are very low in the project vicinity. Localized air pollution contributions are insufficient to create a "hot spot" potential when superimposed upon the clean nocturnal baseline. The combination of winds and inversions are thus critical determinants in leading to the degraded air quality in summer, and the generally good air quality in winter in the project area.

3.0 AIR QUALITY SETTING

3.1 AMBIENT AIR QUALITY STANDARDS (AAQS)

In order to gauge the significance of the air quality impacts of the SART III project, those impacts, together with existing background air quality levels, must be compared to the applicable ambient air quality standards. These standards are the levels of air quality considered safe, with an adequate margin of safety, to protect the public health and welfare. They are designed to protect those people most susceptible to further respiratory distress such as asthmatics, the elderly, very young children, people already weakened by other disease or illness, and persons engaged in strenuous work or exercise, called "sensitive receptors." Healthy adults can tolerate occasional exposure to air pollutant concentrations considerably above these minimum standards before adverse effects are observed. Recent research has shown, however, that chronic exposure to ozone (the primary ingredient in photochemical smog) may lead to adverse respiratory health even at concentrations close to the ambient standard.

National AAQS were established in 1971 for six pollution species with states retaining the option to add other pollutants, require more stringent compliance, or to include different exposure periods. The initial attainment deadline of 1977 was extended several times in air quality problem areas like Southern California. In 2003, the Environmental Protection Agency (EPA) adopted a rule which extended and established a new attainment deadline for ozone for the year 2021. Because the State of California had established AAQS several years before the federal action and because of unique air quality problems introduced by the restrictive dispersion meteorology, there is considerable difference between state and national clean air standards. Those standards currently in effect in California are shown in Table 3-1. Sources and health effects of various pollutants are shown in Table 3-2.

The Federal Clean Air Act Amendments (CAAA) of 1990 required that the U.S. Environmental Protection Agency (EPA) review all national AAQS in light of currently known health effects. EPA was charged with modifying existing standards or promulgating new ones where appropriate. EPA subsequently developed standards for chronic ozone exposure (8+ hours per day) and for very small diameter particulate matter (called "PM-2.5"). New national AAQS were adopted in 1997 for these pollutants.

Planning and enforcement of the federal standards for PM-2.5 and for ozone (8-hour) were challenged by trucking and manufacturing organizations. In a unanimous decision, the U.S. Supreme Court ruled that EPA did not require specific congressional authorization to adopt national clean air standards. The Court also ruled that health-based standards did not require preparation of a cost-benefit analysis. The Court did find, however, that there was some inconsistency between existing and "new" standards in their required attainment schedules. Such attainment-planning schedule inconsistencies centered mainly on the 8-hour ozone standard. EPA subsequently agreed to downgrade the attainment designation for a large number of communities to “non-attainment” for the 8-hour ozone standard.

Evaluation of the most current data on the health effects of inhalation of fine particulate matter prompted the California Air Resources Board (ARB) to recommend adoption of the statewide

Table 3-1

Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards [1]		Federal Standards [2]		
		Concentration [3]	Method [4]	Primary [3,5]	Secondary [3,6]	Method [7]
Ozone (O_3)	1 Hour	0.09 ppm (180 μg/m^3)	Ultraviolet Photometry	—	Same as Primary Standard	Ultraviolet Photometry
	8 Hour	0.070 ppm (137 μg/m^3)		0.075 ppm (147 μg/m^3)		
Respirable Particulate Matter (PM10)	24 Hour	50 μg/m^3	Gravimetric or Beta Attenuation	150 μg/m^3	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 μg/m^3		—		
Fine Particulate Matter (PM2.5)	24 Hour	No Separate State Standard		35 μg/m^3	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12 μg/m^3	Gravimetric or Beta Attenuation	15.0 μg/m^3		
Carbon Monoxide (CO)	8 Hour	9.0 ppm (10mg/m^3)	Non-Dispersive Infrared Photometry (NDIR)	9 ppm (10 mg/m^3)	None	Non-Dispersive Infrared Photometry (NDIR)
	1 Hour	20 ppm (23 mg/m^3)		35 ppm (40 mg/m^3)		
	8 Hour (Lake Tahoe)	6 ppm (7 mg/m^3)		—	—	—
Nitrogen Dioxide (NO_2)	Annual Arithmetic Mean	0.030 ppm (57 μg/m3)	Gas Phase Chemiluminescence	53 ppb (100 μg/m^3) (see footnote 8)	Same as Primary Standard	Gas Phase Chemiluminescence
	1 Hour	0.18 ppm (339 μg/m^3)		100 ppb (188 μg/m^3) (see footnote 8)	None	
Sulfur Dioxide (SO_2)	24 Hour	0.04 ppm (105 μg/m^3)	Ultraviolet Fluorescence	—	—	Ultraviolet Flourescence; Spectrophotometry (Pararosaniline Method)[9]
	3 Hour	—		—	0.5 ppm (1300 μg/m^3) (see footnote 9)	
	1 Hour	0.25 ppm (655 μg/m^3)		75 ppb (196 μg/m^3) (see footnote 9)	—	
Lead[10]	30 Day Average	1.5 μg/m^3	Atomic Absorption	—	—	—
	Calendar Quarter	—		1.5 μg/m^3	Same as Primary Standard	High Volume Sampler and Atomic Absorption
	Rolling 3-Month Average[11]	—		0.15 μg/m^3		
Visibility Reducing Particles	8 Hour	Extinction coefficient of 0.23 per kilometer — visibility of ten miles or more (0.07 — 30 miles or more for Lake Tahoe) due to particles when relative humidity is less than 70 percent. Method: Beta Attenuation and Transmittance through Filter Tape.		No Federal Standards		
Sulfates	24 Hour	25 μg/m^3	Ion Chromatography			
Hydrogen Sulfide	1 Hour	0.03 ppm (42 μg/m^3)	Ultraviolet Fluorescence			
Vinyl Chloride[10]	24 Hour	0.01 ppm (26 μg/m^3)	Gas Chromatography			

See footnotes on next page ...

For more information please call ARB-PIO at (916) 322-2990 California Air Resources Board (09/08/10)

Table 3-1
(continued)

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

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

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

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

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

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

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

8. To attain this standard, the 3-year average of the 98th percentile of the daily maximum 1-hour average at each monitor within an area must not exceed 0.100 ppm (effective January 22, 2010). Note that the EPA standards are in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the national standards to the California standards the units can be converted from ppb to ppm. In this case, the national standards of 53 ppb and 100 ppb are identical to 0.053 ppm and 0.100 ppm, respectively.

9. On June 2, 2010, the U.S. EPA established a new 1-hour SO_2 standard, effective August 23, 2010, which is based on the 3-year average of the annual 99th percentile of 1-hour daily maximum concentrations. EPA also proposed a new automated Federal Reference Method (FRM) using ultraviolet technology, but will retain the older pararosaniline methods until the new FRM have adequately permeated State monitoring networks. The EPA also revoked both the existing 24-hour SO_2 standard of 0.14 ppm and the annual primary SO_2 standard of 0.030 ppm, effective August 23, 2010.
   The secondary SO_2 standard was not revised at that time; however, the secondary standard is undergoing a separate review by EPA. Note that the new standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the new primary national standard to the California standard the units can be converted to ppm. In this case, the national standard of 75 ppb is identical to 0.075 ppm.

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

11. National lead standard, rolling 3-month average: final rule signed October 15, 2008.

For more information please call ARB-PIO at (916) 322-2990 **California Air Resources Board (09/08/10)**

Table 3-2
Health Effects of Major Criteria Pollutants

Pollutants	Sources	Primary Effects
Carbon Monoxide (CO)	• Incomplete combustion of fuels and other carbon-containing substances, such as motor exhaust. • Natural events, such as decomposition of organic matter.	• Reduced tolerance for exercise. • Impairment of mental function. • Impairment of fetal development. • Death at high levels of exposure. • Aggravation of some heart diseases (angina).
Nitrogen Dioxide (NO_2)	• Motor vehicle exhaust. • High temperature stationary combustion. • Atmospheric reactions.	• Aggravation of respiratory illness. • Reduced visibility. • Reduced plant growth. • Formation of acid rain.
Ozone (O_3)	• Atmospheric reaction of organic gases with nitrogen oxides in sunlight.	• Aggravation of respiratory and cardiovascular diseases. • Irritation of eyes. • Impairment of cardiopulmonary function. • Plant leaf injury.
Lead (Pb)	• Contaminated soil.	• Impairment of blood function and nerve construction. • Behavioral and hearing problems in children.
Fine Particulate Matter (PM-10)	• Stationary combustion of solid fuels. • Construction activities. • Industrial processes. • Atmospheric chemical reactions.	• Reduced lung function. • Aggravation of the effects of gaseous pollutants. • Aggravation of respiratory and cardio respiratory diseases. • Increased cough and chest discomfort. • Soiling. • Reduced visibility.
Fine Particulate Matter (PM-2.5)	• Fuel combustion in motor vehicles, equipment, and industrial sources. • Residential and agricultural burning. • Industrial processes. • Also, formed from photochemical reactions of other pollutants, including NOx, sulfur oxides, and organics.	• Increases respiratory disease. • Lung damage. • Cancer and premature death. • Reduces visibility and results in surface soiling.
Sulfur Dioxide (SO_2)	• Combustion of sulfur-containing fossil fuels. • Smelting of sulfur-bearing metal ores. • Industrial processes.	• Aggravation of respiratory diseases (asthma, emphysema). • Reduced lung function. • Irritation of eyes. • Reduced visibility. • Plant injury. • Deterioration of metals, textiles, leather, finishes, coatings, etc.

Source: California Air Resources Board, 2002.

PM-2.5 standard that is more stringent than the federal standard. This standard was adopted in 2002. The State PM-2.5 standard is more of a goal in that it does not have specific attainment planning requirements like a federal clean air standard, but only requires continued progress towards attainment.

Similarly, the ARB extensively evaluated health effects of ozone exposure. A new state standard for an 8-hour ozone exposure was adopted in 2005, which aligned with the federal 8-hour standard. The California 8-hour ozone standard of 0.07 ppm is more stringent than the federal 8-hour standard of 0.075 ppm. The state standard, however, does not have a specific attainment deadline. California air quality jurisdictions are required to make steady progress towards attaining state standards, but there are no hard deadlines or any consequences of non-attainment. During the same re-evaluation process, the ARB adopted an annual state standard for nitrogen dioxide (NO_2) that is more stringent than the corresponding federal standard, and strengthened the state one-hour NO_2 standard.

As part of EPA's 2002 consent decree on clean air standards, a further review of airborne particulate matter (PM) and human health was initiated. A substantial modification of federal clean air standards for PM was promulgated in 2006. Standards for PM-2.5 were strengthened, a new class of PM in the 2.5 to 10 micron size was created, some PM-10 standards were revoked, and a distinction between rural and urban air quality was adopted.

In response to continuing evidence that ozone exposure at levels just meeting federal clean air standards is demonstrably unhealthful, EPA has proposed a further strengthening of the 8-hour standard. Draft standards have been published. The anticipated future 8-hour standard is 0.065 ppm, but EPA has twice delayed the final publication of the rule. Environmental organizations generally praise this proposal. Most manufacturing, transportation or power generation groups oppose the new standard as economically unwise in an uncertain fiscal climate.

A new federal one-hour standard for nitrogen dioxide (NO_2) has also recently been adopted. This standard is more stringent than the existing state standard. Based upon air quality monitoring data in the South Coast Air Basin, the basin will likely be designated as "non-attainment" for the national one-hour standard. That designation will require the inclusion of NO_2 in the basin air quality management plan.

3.2 BASELINE AIR QUALITY

Existing and probable future levels of air quality in the project area can be best inferred from ambient air quality measurements conducted by the South Coast Air Quality Management District (SCAQMD) at its Central San Bernardino monitoring station. This station measures both regional pollution levels such as dust (particulates) and smog, as well as levels of primary vehicular pollutants such as carbon monoxide. Table 3-3 summarizes the last six years of the published data from the Central San Bernardino monitoring station.

Ozone and particulates are seen to be the two most significant air quality concerns. Ozone is the primary ingredient in photochemical smog. About 15 percent of all days of the year experience a violation of the California one-hour standard. The 8-hour state ozone standard has been exceeded an average of 22 percent of all days in the past six years. The federal 8-hour standard is exceeded on slightly less than 16 percent of all days. For the last six years, ozone levels have neither improved nor gotten noticeably worse. While ozone levels are still high, they are much lower than 10 to 20 years ago. Attainment of all clean air standards in the project vicinity is not likely to occur soon, but the severity and frequency of violations is expected to continue to slowly decline during the current decade.

In addition to gaseous air pollution concerns, San Bernardino experiences frequent violations of standards for 10-micron diameter respirable particulate matter (PM-10). High dust levels occur during Santa Ana wind conditions, as well as from the trapped accumulation of soot, roadway dust and byproducts of atmospheric chemical reactions during warm season days with poor visibility. Table 3 shows that approximately 35 percent of all days in the last six years in the project area experienced a violation of the State PM-10 standard. However, the three-times less stringent federal standard has been exceed only once in the past six years.

A substantial fraction of PM-10 is comprised of ultra-small diameter particulates capable of being inhaled into deep lung tissue (PM-2.5). Peak annual PM-2.5 levels are sometimes almost as high as PM-10, which includes PM-2.5 as a sub-set. Approximately 7 percent of days experience a violation of the 24-hour standard of 35 $\mu g/m^3$.

While many of the major ozone precursor emissions (automobiles, solvents, paints, etc.) have been substantially reduced, most major PM-10 sources (construction dust, vehicular turbulence along roadway shoulders, truck exhaust, etc.) have not been as effectively reduced. Prospects of ultimate attainment of ozone standards are better than for particulate matter.

More localized pollutants such as carbon monoxide, nitrogen oxides, etc. are low near the project site because background levels, never approach allowable levels. There is excess dispersive capacity to accommodate localized vehicular air pollutants such as NOx or CO without any threat of violating applicable AAQS.

Table 3-3
Air Quality Monitoring Summary (2004-2009)
(Number of Days Standards Were Exceeded, and
Maximum Levels During Such Violations)
(Entries shown as ratios = samples exceeding standard/samples taken)

Pollutant/Standard	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**
Ozone						
1-Hour > 0.09 ppm (S)	55	54	57	48	62	53
8-Hour > 0.07 ppm (S)	79	72	72	72	90	79
8- Hour > 0.075 ppm (F)	56	56	56	51	62	62
Max. 1-Hour Conc. (ppm)	0.157	0.163	0.154	0.153	0.157	0.150
Max 8-Hour Conc. (ppm)	0.129	0.130	0.127	0.122	0.122	0.127
Carbon Monoxide						
1-hour > 20. ppm (S)	0	0	0	0	0	0
8- Hour > 9. ppm (S,F)	0	0	0	0	0	0
Max 1-hour Conc. (ppm)	4.1	3.8	2.8	3.7	2.0	3.0
Max 8-hour Conc. (ppm)	3.2	2.5	2.2	2.3	1.8	1.9
Nitrogen Dioxide						
1-Hour > 0.18 ppm (S)	0	0	0	0	0	0
Max. 1-Hour Conc. (ppm)	0.12	0.10	0.09	0.08	0.09	0.08
Inhalable Particulates (PM-10)						
24-hour > 50 $\mu g/m^3$ (S)	25/58	20/60	22/57	26/58	19/60	11/52
24-hour > 150 $\mu g/m^3$ (F)	0/58	0/60	0/57	1/58	0/60	0/52
Max. 24-Hr. Conc. ($\mu g/m^3$)	114.	69.	89.	136.+	76.	66.
Ultra-Fine Particulates (PM-2.5)						
24-Hour > 35 $\mu g/m^3$ (F)	16/106	3/109	9/95	11/97	3/110	3/122
Max. 24-Hr. Conc. ($\mu g/m^3$)	93.4	106.3	55.0	72.1	43.5	37.9

+ one higher reading excluded due to high wind event or wildfires

Source: Central San Bernardino SCAQMD Air Monitoring Summary (5203)

(S) = state standard, (F) = federal standard

4.0 AIR QUALITY PLANNING

The Federal Clean Air Act (1977 Amendments) required that designated agencies in any area of the nation not meeting national clean air standards must prepare a plan demonstrating the steps that would bring the area into compliance with all national standards. The SCAB could not meet the deadlines for ozone, nitrogen dioxide, carbon monoxide, or PM-10. In the SCAB, the agencies designated by the governor to develop regional air quality plans are the SCAQMD and the Southern California Association of Governments (SCAG). The two agencies first adopted an Air Quality Management Plan (AQMP) in 1979 and revised it several times as earlier attainment forecasts were shown to be overly optimistic.

The 1990 Federal Clean Air Act Amendment (CAAA) required that all states with air-sheds with "serious" or worse ozone problems submit a revision to the State Implementation Plan (SIP). Amendments to the SIP have been proposed, revised and approved over the past decade. The most current regional attainment emissions forecast for ozone precursors (ROG and NOx) and for carbon monoxide (CO) and for particulate matter are shown in Table 4-1. Substantial reductions in emissions of ROG, NOx and CO are forecast to continue throughout the next several decades. Unless new particulate control programs are implemented, PM-10 and PM-2.5 are forecast to slightly increase.

The Air Quality Management District (AQMD) adopted an updated clean air "blueprint" in August 2003. The 2003 AQMP was approved by the EPA in 2004. The Air Quality Management Plan (AQMP) outlined the air pollution measures needed to meet federal health-based standards for ozone by 2010 and for particulates (PM-10) by 2006. The 2003 AQMP was based upon the federal one-hour ozone standard which was revoked late in 2005 and replaced by an 8-hour federal standard. Because of the revocation of the hourly standard, a new air quality planning cycle was initiated.

With re-designation of the air basin as non-attainment for the 8-hour ozone standard, a new attainment plan was developed. This plan shifted most of the one-hour ozone standard attainment strategies to the 8-hour standard. As previously noted, the attainment date will "slip" from 2010 to 2021. The updated attainment plan also includes strategies for ultimately meeting the federal PM-2.5 standard.

Because projected attainment by 2021 requires control technologies that do not exist yet, the SCAQMD requested a voluntary "bump-up" from a "severe non-attainment" area to an "extreme non-attainment" designation for ozone. The extreme designation will allow a longer time period for these technologies to develop. If attainment cannot be demonstrated within the specified deadline without relying on "black-box" measures, EPA would have been required to impose sanctions on the region had the bump-up request not been approved. In April, 2010, the EPA approved the change in the non-attainment designation from "severe-17" to "extreme." This reclassification sets a later attainment deadline, but also requires the air basin to adopt even more stringent emissions controls.

Table 4-1

South Coast Air Basin Emissions Forecasts (Emissions in tons/day)

Pollutant	2005[a]	2010[b]	2015[b]	2020[b]
NOx	985	742	580	468
ROG	735	576	526	505
CO	4124	2950	2476	2203
PM-10	281	286	297	307
PM-2.5	103	102	102	103

[a]2005 Base Year.
[b]With current emissions reduction programs and adopted growth forecasts.

Source: California Air Resources Board, The 2009 California Almanac of Emission & Air Quality.

In other air quality attainment plan reviews, EPA has disapproved part of the SCAB PM-2.5 attainment plan included in the AQMP. EPA has stated that the current attainment plan relies on PM-2.5 control regulations that have not yet been approved or implemented. It is expected that a number of rules that are pending approval will remove the identified deficiencies. If these issues are not resolved within the next several years, federal funding sanctions for transportation projects could result.

Development, such as the proposed SART Phase III project do not directly relate to the AQMP in that there are no specific air quality programs or regulations governing transportation system improvement projects. If a proposed project is consistent with the local transportation master plan, it will not induce patterns of growth not already anticipated in the AQMP. The SCAQMD, however, while acknowledging that the AQMP is a growth-accommodating document, does not favor designating regional impacts as less-than-significant just because the proposed development is consistent with regional growth projections. Air quality impact significance for CEQA clearance purposes for the proposed project has therefore been analyzed on a project-specific basis.

5.0 AIR QUALITY IMPACT

5.1 CEQA STANDARDS OF SIGNIFICANCE

Air quality impacts are considered "significant" under CEQA if they cause clean air standards to be violated where they are currently met, or if they "substantially" contribute to an existing violation of standards. Any substantial emissions of air contaminants for which there is no safe exposure, or nuisance emissions such as dust or odors, would also be considered a significant impact.

Appendix G of the California CEQA Guidelines offers the following five tests of air quality impact significance. A project would have a potentially significant impact if it:

a. Conflicts with or obstructs implementation of the applicable air quality plan.

b. Violates any air quality standard or contributes substantially to an existing or projected air quality violation.

c. Results in a cumulatively considerable net increase of any criteria pollutants 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).

d. Exposes sensitive receptors to substantial pollutant concentrations.

e. Creates objectionable odors affecting a substantial number of people.

5.1 a Primary Pollutants

Air quality impacts generally occur on two scales of motion. Near an individual source of emissions or a collection of sources such as a crowded intersection or parking lot, levels of those pollutants that are emitted in their already unhealthful form will be highest. Carbon monoxide (CO) is an example of such a pollutant. Primary pollutant impacts can generally be evaluated directly in comparison to appropriate clean air standards. Violations of these standards where they are currently met, or a measurable worsening of an existing or future violation, would be considered a significant impact. Many particulates, especially fugitive dust emissions, are also primary pollutants. Because of the non-attainment status of the SCAB for PM-10, an aggressive dust control program is required to control fugitive dust during project construction.

5.1 b Secondary Pollutants

Many pollutants, however, require time to transform from a more benign form to a more unhealthful contaminant. Their impact occurs regionally far from the source. Their incremental regional impact is minute on an individual basis and cannot be quantified except through complex photochemical computer models. Analysis of significance of such emissions is based

upon a specified amount of emissions (pounds, tons, etc.) even though there is no way to translate those emissions directly into a corresponding ambient air quality impact.

Because of the chemical complexity of primary versus secondary pollutants, the South Coast Air Quality Management District (SCAQMD) has designated significant emissions levels as surrogates for evaluating regional air quality impact significance independent of chemical transformation processes. A recreational roadway project has no direct operational air quality impacts. Project specific impacts would only result from construction activities. Projects with daily emissions that exceed any of the following emission thresholds shown in Table 5-1 are recommended by the SCAQMD to be considered significant under CEQA guidelines:

Table 5-1 SCAQMD Emissions Significance Thresholds (pounds/day)

Pollutant	Emissions (Construction)
ROG	75
NOx	100
CO	550
PM-10	150
PM-2.5	55
SOx	150
Lead	3

Source: SCAQMD CEQA Air Quality Handbook, November, 1993 Rev.

5.1 c Additional Indicators

In its CEQA Handbook, the SCAQMD also states that additional indicators should be used as screening criteria to determine the need for further analysis with respect to air quality. The additional indicators are as follows:

- Project could interfere with the attainment of the federal or state ambient air quality standards by either violating or contributing to an existing or projected air quality violation

- Project could result in population increases within the regional statistical area which would be in excess of that projected in the AQMP and in other than planned locations for the project's build-out year.

- Project could generate vehicle trips that cause a CO hot spot.

The SCAQMD CEQA Air Quality Handbook also identifies various secondary significance criteria related to toxic, hazardous or odorous air contaminants. Hazardous air contaminants are also contained within the small diameter particulate matter ("PM-2.5") fraction of diesel exhaust. Such exhaust will be temporarily generated by heavy construction equipment.

5.2 CONSTRUCTION ACTIVITY IMPACTS

Dust is typically the primary concern during construction of new infrastructure. Because such emissions are not amenable to collection and discharge through a controlled source, they are called "fugitive emissions." Emission rates vary as a function of many parameters (soil silt, soil moisture, wind speed, area disturbed, number of vehicles, depth of disturbance or excavation, etc.). These parameters are not known with any reasonable certainty prior to project development and may change from day to day. Any assignment of specific parameters to an unknown future date is speculative and conjectural.

Because of the inherent uncertainty in the predictive factors for estimating fugitive dust generation, regulatory agencies typically use one universal "default" factor based on the area disturbed assuming that all other input parameters into emission rate prediction fall into midrange average values. This assumption may or may not be totally applicable to site-specific conditions on the proposed project site. As noted previously, emissions estimation for project-specific fugitive dust sources is therefore characterized by a considerable degree of imprecision.

Average daily PM-10 emissions during site grading and other disturbance are stated in the SCAQMD Handbook to be 26.4 pounds/acre. This estimate is based upon required dust control measures in effect in 1993 when the AQMD CEQA Air Quality Handbook was prepared. Rule 403 was subsequently strengthened to require use of a greater array of fugitive dust control on construction projects. All construction projects in the SCAQMD are required to use strongly enhanced control procedures. Use of enhanced dust control procedures such as continual soil wetting, use of supplemental binders, early paving, etc. can achieve a substantially higher PM-10 control efficiency. Daily emissions with use of reasonably available control measures (RACMs) for PM-10 can reduce emission levels to around ten (10) pounds per acre per day. With the use of best available control measures (BACMs) the California Air Resources Board predicts that emissions can be reduced to 1-2 pounds per acre per day. Because of the PM-10 non-attainment status of the air basin, construction activity dust emissions are considered to have a cumulatively significant impact. Use of BACMs is thus required even if SCAQMD individual CEQA thresholds are not exceeded by use of RACMs.

Current research in particulate-exposure health suggests that the most adverse effects derive from ultra-small diameter particulate matter comprised of chemically reactive pollutants such as sulfates, nitrates or organic material. A national clean air standard for particulate matter of 2.5 microns or smaller in diameter (called "PM-2.5") was adopted in 1997. A limited amount of construction activity particulate matter is in the PM-2.5 range. PM-2.5 emissions are estimated by the SCAQMD to comprise 20.8 percent of PM-10. Other studies have shown that the fugitive dust fraction of PM-2.5 is closer to 10 percent.
In addition to fine particles that remain suspended in the atmosphere semi-indefinitely, construction activities generate many larger particles with shorter atmospheric residence times.

This dust is comprised mainly of large diameter inert silicates that are chemically non-reactive and are further readily filtered out by human breathing passages. These fugitive dust particles are therefore more of a potential soiling nuisance as they settle out on parked cars, outdoor furniture or landscape foliage rather than any adverse health hazard. The deposition distance of most soiling nuisance particulates is less than 100 feet from the source (EPA, 1995). There are no sensitive receptors within 100 feet from the primary construction site. The project site is mostly surrounded by commercial or industrial uses. The nearest residential use is more than 900 feet from the site boundary.

Exhaust emissions will result from on and off-site heavy equipment. The types and numbers of equipment will vary among contractors such that such emissions cannot be quantified with certainty. For the proposed project, the following schedule and grading quantities were assumed:

- Grading 30 days 16.6 total acres disturbed
  30,200 CY cut, 40,200 CY fill, 10,000 CY import

- Excavation 30 days (includes under crossings)

- Paving 20 days (includes asphalt trails, shoulders and ramps)

- Bridge Construction 65 days (installation of pre-fabricated clear span bridge for Mission Zanja Creek)

The CalEEMod.2011.1.1 computer model was used to calculate emissions from the following prototype construction equipment fleet shown in Table 5-2:

Table 5-2

Project Equipment Fleet

Site Prep	1 Dozer
	1 Tractor/Loader/Backhoe
Grading	1 Grader
	2 Excavator
	1 Dozer
	2 Tractor/Loader/Backhoes
Excavation	2 Excavators
	1 Dozer
	1 Skid Loader
	2 Tractor/Loader/Backhoes
	1 Grader
Paving	2 Pavers
	2 Paving Equipment
	2 Compactors
	2 Rollers
Bridge Construction	1 Generator Set
	1 Crane
	2 Tractor/Loader/Backhoes
	1 Welders
	1 Forklifts

Utilizing the above equipment fleet and provided grading quantities the maximum daily emissions are calculated by CalEEMod.2011.1.1 as shown in Table 5-3:

Table 5-3 Maximum Daily Construction Activity Emissions (lbs/day)

Maximum Daily Emissions	ROG	NOx	CO	SO_2	PM-10	PM-2.5	CO_2
Unmitigated	8.9	78.6	43.4	0.1	40.1	7.5	8,401.2
With PM Mitigation	8.9	78.6	43.4	0.1	36.1	5.5	8,401.2

CalEEMod.2011.1.1 Output in Appendix

Peak daily construction activity emissions will be below SCAQMD CEQA thresholds. Nevertheless, because of non-attainment SCAQMD recommends use of enhanced fugitive dust control mitigation measures for any project in the region. These recommended dust emissions mitigation measures are detailed in the “Mitigation” section of this report.

As previously noted, construction equipment exhaust contains carcinogenic compounds within the diesel exhaust particulates. The toxicity of diesel exhaust is evaluated relative to a 24-hour

per day, 365 days per year, 70-year lifetime exposure. Public exposure to heavy equipment emissions will be an extremely small fraction of the above dosage assumption. Diesel equipment is also becoming progressively "cleaner" in response to air quality rules on new off-road equipment.

The SCAQMD does not generally require the analysis of construction related diesel emissions relative to health risk due to the short period for which the majority of diesel exhaust would occur. For roadwork projects, heavy equipment will operate near any single receptor for only a small number of days. The majority of diesel exhaust would occur during the paving phase, which would be approximately 9 month period. Health risk analyses are typically assessed over a 9, 30 or 70 year time frame and not over a period of months due to the lack of health risk associated with such a brief exposure.

5.3 LOCALIZED SIGNIFICANCE THRESHOLDS

The SCAQMD has developed analysis parameters to evaluate ambient air quality on a local level in addition to the more regional emissions-based thresholds of significance. These analysis elements are called Localized Significance Thresholds (LSTs). LSTs were developed in response to Governing Board's Environmental Justice Enhancement Initiative 1-4 and the LST methodology was provisionally adopted in October 2003 and formally approved by SCAQMD's Mobile Source Committee in February 2005.

Use of an LST analysis for a project is optional. For recreational improvement projects, the only source of LST impact would be during construction. LSTs are only applicable to the following criteria pollutants: oxides of nitrogen (NOx), carbon monoxide (CO), and particulate matter (PM-10 and PM-2.5). 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, and are developed based on the ambient concentrations of that pollutant for each source receptor area and distance to the nearest sensitive receptor.

LST analysis thresholds are based on one-site construction activity emissions (off-road emissions). A portion of the total construction activity for any project would include vehicular emissions from vendor trips, construction worker trips as well as on-road truck haul of grading earthworks. Such emissions are excluded from the LST analysis. The CalEEMod on-site construction equipment emissions by phase are as shown in Table 5-4:

Table 5-4

On-Site Construction Activity Emissions (pounds/day)

Activity	ROG	NOx	CO	SO_2	PM-10	PM-2.5	CO_2
Site Prep							
Unmitigated	3.4	28.5	15.9	0.0	7.4	4.7	2,534.7
With PM Mitigation	3.4	28.5	15.9	0.0	3.7	2.7	2,534.7
Grading							
Unmitigated	6.5	51.2	30.0	0.1	9.5	6.2	4,839.3
With PM Mitigation	6.5	51.2	30.0	0.1	5.5	4.2	4,839.3
Excavation							
Unmitigated	7.6	59.4	35.3	0.1	10.0	6.7	5,737.5
Paving							
Unmitigated	6.2	37.5	21.3	0.0	3.3	3.3	2,929.3
Construction							
Unmitigated	4.5	28.4	16.3	0.0	2.0	2.0	2,792.3
SCAQMD Threshold	75	100	550	150	150	55	-

Source: CalEEMod.2011.1.1 Model, Output in Appendix

LST pollutant concentration data is currently published for 1, 2 and 5 acre sites for varying distances. Although the screening tables are valid for construction projects of five acres and less, they can be used as screening criteria for larger projects. If emissions exceed the LST for a five-acre site, then dispersion modeling needs to be conducted. If the daily disturbed footprint is greater than 5 acres but project construction emissions meet LST thresholds for a 5 acre site, then the threshold for a larger site will be met with a larger margin of safety and no additional analysis is required. The project area encompasses 16.6 acres. If LST thresholds for a 5-acre project site are not exceeded during construction, LST impacts are considered less-than-significant under CEQA.

LST screening tables are only available for 25, 50, 100, 200 and 500 meter source-receptor distances. For the proposed project, the closest residential use is more than 900 feet from the site. Therefore, utilizing data for a 5 acre site and a source receptor distance of 200 meters, the following thresholds and emissions are determined (pounds per day):

Table 5-5

LST and Project Emissions (lbs/day)

Central San Bernardino	**CO**	**NOx**	**PM-10**	**PM-2.5**
LST Thresholds	8,532	486	106	35
On-Site Construction Emissions				
Max Emissions	35	59	10	7

All emissions are below the LST for on-site construction.

5.4 OPERATIONAL IMPACTS

Powered vehicles will be prohibited on SART III except for an occasional maintenance vehicle. No operational air pollutants will be generated by the project. A small long term benefit through fugitive dust reduction may result through replacement of a currently unpaved river bank with a paved and landscaped trail.

6.0 GREENHOUSE GAS EMISSIONS

"Greenhouse gases" (so called because of their role in trapping heat near the surface of the earth) emitted by human activity are implicated in global climate change, commonly referred to as "global warming." These greenhouse gases contribute to an increase in the temperature of the earth's atmosphere by transparency to short wavelength visible sunlight, but near opacity to outgoing terrestrial long wavelength heat radiation in some parts of the infrared spectrum. The principal greenhouse gases (GHGs) are carbon dioxide, methane, nitrous oxide, ozone, and water vapor. For purposes of planning and regulation, Section 15364.5 of the California Code of Regulations defines GHGs to include carbon dioxide, methane, nitrous oxide, hydro-fluorocarbons, perfluorocarbons and sulfur hexafluoride. Fossil fuel consumption in the transportation sector (on-road motor vehicles, off-highway mobile sources, and aircraft) is the single largest source of GHG emissions, accounting for approximately half of GHG emissions globally. Industrial and commercial sources are the second largest contributors of GHG emissions with about one-fourth of total emissions.

California has passed several bills and the Governor has signed at least three executive orders regarding greenhouse gases. GHG statues and executive orders (EO) include AB 32, SB 1368, EO S-03-05, EO S-20-06 and EO S-01-07.

AB 32 is one of the most significant pieces of environmental legislation that California has adopted. Among other things, it is designed to maintain California's reputation as a "national and international leader on energy conservation and environmental stewardship." It will have wide-ranging effects on California businesses and lifestyles as well as far reaching effects on other states and countries. A unique aspect of AB 32, beyond its broad and wide-ranging mandatory provisions and dramatic GHG reductions are the short time frames within which it must be implemented. Major components of the AB 32 include:

- Require the monitoring and reporting of GHG emissions beginning with sources or categories of sources that contribute the most to statewide emissions.
- Requires immediate "early action" control programs on the most readily controlled GHG sources.
- Mandates that by 2020, California's GHG emissions be reduced to 1990 levels.
- Forces an overall reduction of GHG gases in California by 25-40%, from business as usual, over the next 13 years (by 2020).
- Must complement efforts to achieve and maintain federal and state ambient air quality standards and to reduce toxic air contaminants.

Statewide, the framework for developing the implementing regulations for AB 32 is under way. Additionally, through the California Climate Action Registry (CCAR now called the Climate Action Reserve), general and industry-specific protocols for assessing and reporting GHG emissions have been developed. GHG sources are categorized into direct sources (i.e. company owned) and indirect sources (i.e. not company owned). Direct sources include combustion

emissions from on-and off-road mobile sources, and fugitive emissions. Indirect sources include off-site electricity generation and non-company owned mobile sources.

6.1 GREENHOUSE GAS EMISSIONS SIGNIFICANCE THRESHOLDS

In response to the requirements of SB97, the State Resources Agency developed guidelines for the treatment of GHG emissions under CEQA. These new guidelines became state laws as part of Title 14 of the California Code of Regulations in March, 2010. The CEQA Appendix G guidelines were modified to include GHG as a required analysis element. A project would have a potentially significant impact if it:

- Generates GHG emissions, directly or indirectly, that may have a significant impact on the environment, or,

- Conflicts with an applicable plan, policy or regulation adopted to reduce GHG emissions.

Section 15064.4 of the Code specifies how significance of GHG emissions is to be evaluated. The process is broken down into quantification of project-related GHG emissions, making a determination of significance, and specification of any appropriate mitigation if impacts are found to be potentially significant. At each of these steps, the new GHG guidelines afford the lead agency with substantial flexibility.

Emissions identification may be quantitative, qualitative or based on performance standards. CEQA guidelines allow the lead agency to "select the model or methodology it considers most appropriate". The most common practice for transportation/combustion GHG emissions quantification is to use a computer model such as URBEMIS2007, as was used in the ensuing analysis.

The significance of those emissions then must be evaluated; the selection of a threshold of significance must take into consideration what level of GHG emissions would be cumulatively considerable. The guidelines are clear that they do not support a zero net emissions threshold. If the lead agency does not have sufficient expertise in evaluating GHG impacts, it may rely on thresholds adopted by an agency with greater expertise.

On December 5, 2008 the SCAQMD Governing Board adopted an Interim quantitative GHG Significance Threshold for industrial projects where the SCAQMD is the lead agency (e.g., stationary source permit projects, rules, plans, etc.) of 10,000 Metric Tons CO_2 equivalent/year. As part of the Interim GHG Significance Threshold development process for industrial projects, the SCAQMD established a working group of stakeholders that also considered thresholds for commercial or residential projects. As discussed in the Interim GHG Significance Threshold guidance document, the focus for commercial projects is on performance standards and a screening level threshold. For discussion purposes, the SCAQMD's working group considered performance standards primarily focused on energy efficiency measures beyond Title 24 and a screening level of 3,000 metric tons (MT) CO_2 equivalent/year based on the relative GHG emissions contribution between non-industrial sectors versus stationary source (industrial) sectors. The working group and staff ultimately decided that additional analysis was needed to

further define the performance standards and to coordinate with CARB staff's interim GHG proposal. Staff, therefore, did not recommend action for adopting an interim threshold for non-industrial projects but rather recommended bringing this item back to the Board for discussion and possible action. As of this date, no final action on a quantitative significance threshold has been taken, but 3,000 MT per year has become a *de facto* screening threshold for non-industrial projects.

6.2 CONSTRUCTION ACTIVITY GHG EMISSIONS

The build-out timetable for this project is estimated to require approximately 155 work days. During project construction, the CalEEMod computer model predicts that the indicated activities will generate the following annual CO_2-equivalent (CO_2(e) emissions:

Construction Emissions

Year 2011	8,401 "metric" tons CO_2(e)

*Output provided in appendix

SCAQMD GHG emissions policy from construction activities is to amortize these emissions over a 30-year lifetime. The amortized level from 8,401 metric tons CO_2(e) is 280 metric tons per year. The screening level threshold is 3,000 metric tons (MT) of CO_2(e) per year. Construction activities would be well below this threshold. GHG impacts are therefore considered less-than-significant.

7.0 CONSTRUCTION EMISSIONS MITIGATION

Construction activities are not anticipated to cause dust emissions to exceed SCAQMD CEQA thresholds. Nevertheless, mitigation through enhanced dust control measures is recommended for use because of the non-attainment status of the air basin. Recommended mitigation includes:

7.1 DUST CONTROL

- Apply soil stabilizers or moisten inactive areas.
- Prepare a high wind dust control plan.
- Address previously disturbed areas if subsequent construction is delayed.
- Water exposed surfaces as needed to avoid visible dust leaving the construction site (typically 3 times/day).
- Cover all stock piles with tarps at the end of each day or as needed.
- Provide water spray during loading and unloading of earthen materials.
- Minimize in-out traffic from construction zone

APPENDIX

CalEEMod.2011.1.1 Computer Model Output

- **Daily Emissions**
- **Annual Emissions**

Exhibit 4: Initial Study and Mitigated Negative Declaration for the "Santa Ana River Trail, Phase III Project"

CalEEMod Version: CalEEMod.2011.1.1 Date: 4/7/2011

SART 3

San Bernardino-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric
User Defined Recreational	0	User Defined Unit

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Utility Company**	Southern California Edison
Climate Zone	10	**Precipitation Freq (Days)**	32		

1.3 User Entered Comments

Project Characteristics - Construction Only

Land Use - Recreational river trail

Construction Phase - Used actual data. Program not calculating number of days correctly and mistakenly marking in yellow.

Off-road Equipment - Limited bridge construction

Off-road Equipment - no demolition in this project

Off-road Equipment - User specified equipment fleet, deleted equipment

Off-road Equipment - actual fleet

Off-road Equipment - Additional equipment

Off-road Equipment - Limited prep

Trips and VMT - what?

Grading - Actual acreage

Construction Off-road Equipment Mitigation -

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					
2011	8.95	78.62	43.39	0.08	36.03	4.07	40.10	3.44	4.07	7.51	0.00	8,386.37	0.00	0.71	0.00	8,401.22
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2011	8.95	78.62	43.39	0.08	31.98	4.07	36.06	1.42	4.07	5.49	0.00	8,386.37	0.00	0.71	0.00	8,401.22
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

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	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00		0.00
Energy	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00	0.00	0.00
Mobile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**		**0.00**		**0.00**	**0.00**	**0.00**

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	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00		0.00
Energy	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00	0.00	0.00
Mobile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**		**0.00**		**0.00**	**0.00**	**0.00**

3.0 Construction Detail

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use DPF for Construction Equipment

Use Soil Stabilizer

Replace Ground Cover

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Site Preparation - 2011

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.02	0.00	6.02	3.31	0.00	3.31						0.00
Off-Road	3.44	28.50	15.86	0.02		1.41	1.41		1.41	1.41		2,528.21		0.31		2,534.70
Total	**3.44**	**28.50**	**15.86**	**0.02**	**6.02**	**1.41**	**7.43**	**3.31**	**1.41**	**4.72**		**2,528.21**		**0.31**		**2,534.70**

3.2 Site Preparation - 2011

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Worker	0.04	0.04	0.45	0.00	0.08	0.00	0.08	0.00	0.00	0.01		63.78		0.00		63.86
Total	**0.04**	**0.04**	**0.45**	**0.00**	**0.08**	**0.00**	**0.08**	**0.00**	**0.00**	**0.01**		**63.78**		**0.00**		**63.86**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.35	0.00	2.35	1.29	0.00	1.29						0.00
Off-Road	3.44	28.50	15.86	0.02		1.41	1.41		1.41	1.41	0.00	2,528.21		0.31		2,534.70
Total	**3.44**	**28.50**	**15.86**	**0.02**	**2.35**	**1.41**	**3.76**	**1.29**	**1.41**	**2.70**	**0.00**	**2,528.21**		**0.31**		**2,534.70**

3.2 Site Preparation - 2011

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Worker	0.04	0.04	0.45	0.00	0.08	0.00	0.08	0.00	0.00	0.01		63.78		0.00		63.86
Total	**0.04**	**0.04**	**0.45**	**0.00**	**0.08**	**0.00**	**0.08**	**0.00**	**0.00**	**0.01**		**63.78**		**0.00**		**63.86**

3.3 Grading - 2011

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.63	0.00	6.63	3.32	0.00	3.32						0.00
Off-Road	6.52	51.16	29.96	0.05		2.88	2.88		2.88	2.88		4,827.00		0.58		4,839.28
Total	**6.52**	**51.16**	**29.96**	**0.05**	**6.63**	**2.88**	**9.51**	**3.32**	**2.88**	**6.20**		**4,827.00**		**0.58**		**4,839.28**

3.3 Grading - 2011

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	2.34	27.36	12.27	0.03	29.20	1.18	30.38	0.12	1.18	1.30		3,393.55		0.11		3,395.91
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Worker	0.10	0.10	1.16	0.00	0.20	0.01	0.21	0.01	0.01	0.01		165.82		0.01		166.03
Total	**2.44**	**27.46**	**13.43**	**0.03**	**29.40**	**1.19**	**30.59**	**0.13**	**1.19**	**1.31**		**3,559.37**		**0.12**		**3,561.94**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.58	0.00	2.58	1.29	0.00	1.29						0.00
Off-Road	6.52	51.16	29.96	0.05		2.88	2.88		2.88	2.88	0.00	4,827.00		0.58		4,839.28
Total	**6.52**	**51.16**	**29.96**	**0.05**	**2.58**	**2.88**	**5.46**	**1.29**	**2.88**	**4.17**	**0.00**	**4,827.00**		**0.58**		**4,839.28**

3.3 Grading - 2011

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	2.34	27.36	12.27	0.03	29.20	1.18	30.38	0.12	1.18	1.30		3,393.55		0.11		3,395.91
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Worker	0.10	0.10	1.16	0.00	0.20	0.01	0.21	0.01	0.01	0.01		165.82		0.01		166.03
Total	**2.44**	**27.46**	**13.43**	**0.03**	**29.40**	**1.19**	**30.59**	**0.13**	**1.19**	**1.31**		**3,559.37**		**0.12**		**3,561.94**

3.4 Excavation - 2011

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.59	0.00	6.59	3.31	0.00	3.31						0.00
Off-Road	7.61	59.44	35.31	0.06		3.38	3.38		3.38	3.38		5,723.14		0.68		5,737.47
Total	**7.61**	**59.44**	**35.31**	**0.06**	**6.59**	**3.38**	**9.97**	**3.31**	**3.38**	**6.69**		**5,723.14**		**0.68**		**5,737.47**

3.4 Excavation - 2011

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Worker	0.11	0.12	1.34	0.00	0.23	0.01	0.24	0.01	0.01	0.02		191.33		0.01		191.58
Total	**0.11**	**0.12**	**1.34**	**0.00**	**0.23**	**0.01**	**0.24**	**0.01**	**0.01**	**0.02**		**191.33**		**0.01**		**191.58**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.57	0.00	2.57	1.29	0.00	1.29						0.00
Off-Road	7.61	59.44	35.31	0.06		3.38	3.38		3.38	3.38	0.00	5,723.14		0.68		5,737.47
Total	**7.61**	**59.44**	**35.31**	**0.06**	**2.57**	**3.38**	**5.95**	**1.29**	**3.38**	**4.67**	**0.00**	**5,723.14**		**0.68**		**5,737.47**

3.4 Excavation - 2011

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Worker	0.11	0.12	1.34	0.00	0.23	0.01	0.24	0.01	0.01	0.02		191.33		0.01		191.58
Total	**0.11**	**0.12**	**1.34**	**0.00**	**0.23**	**0.01**	**0.24**	**0.01**	**0.01**	**0.02**		**191.33**		**0.01**		**191.58**

3.5 Building Construction - 2011

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	4.45	28.44	16.26	0.03		1.97	1.97		1.97	1.97		2,783.94		0.40		2,792.32
Total	**4.45**	**28.44**	**16.26**	**0.03**		**1.97**	**1.97**		**1.97**	**1.97**		**2,783.94**		**0.40**		**2,792.32**

3.5 Building Construction - 2011

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**		**0.00**		**0.00**		**0.00**

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	4.45	28.44	16.26	0.03		1.97	1.97		1.97	1.97	0.00	2,783.94		0.40		2,792.32
Total	**4.45**	**28.44**	**16.26**	**0.03**		**1.97**	**1.97**		**1.97**	**1.97**	**0.00**	**2,783.94**		**0.40**		**2,792.32**

3.5 Building Construction - 2011

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**		**0.00**		**0.00**		**0.00**

3.6 Paving - 2011

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	6.21	37.52	21.30	0.03		3.31	3.31		3.31	3.31		2,917.64		0.56		2,929.34
Paving	0.00					0.00	0.00		0.00	0.00						0.00
Total	**6.21**	**37.52**	**21.30**	**0.03**		**3.31**	**3.31**		**3.31**	**3.31**		**2,917.64**		**0.56**		**2,929.34**

3.6 Paving - 2011

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Worker	0.11	0.12	1.34	0.00	0.23	0.01	0.24	0.01	0.01	0.02		191.33		0.01		191.58
Total	**0.11**	**0.12**	**1.34**	**0.00**	**0.23**	**0.01**	**0.24**	**0.01**	**0.01**	**0.02**		**191.33**		**0.01**		**191.58**

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	6.21	37.52	21.30	0.03		3.31	3.31		3.31	3.31	0.00	2,917.64		0.56		2,929.34
Paving	0.00					0.00	0.00		0.00	0.00						0.00
Total	**6.21**	**37.52**	**21.30**	**0.03**		**3.31**	**3.31**		**3.31**	**3.31**	**0.00**	**2,917.64**		**0.56**		**2,929.34**

3.6 Paving - 2011

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Worker	0.11	0.12	1.34	0.00	0.23	0.01	0.24	0.01	0.01	0.02		191.33		0.01		191.58
Total	**0.11**	**0.12**	**1.34**	**0.00**	**0.23**	**0.01**	**0.24**	**0.01**	**0.01**	**0.02**		**191.33**		**0.01**		**191.58**

4.0 Mobile Detail

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Unmitigated	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
User Defined Recreational	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW
User Defined Recreational	8.90	13.30	7.40	0.00	0.00	0.00

5.0 Energy Detail

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	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00	0.00	0.00
NaturalGas Unmitigated	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00	0.00	0.00
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

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	lb/day										lb/day					
User Defined Recreational	0	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00	0.00	0.00
Total		**0.00**	**0.00**	**0.00**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**		**0.00**		**0.00**	**0.00**	**0.00**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU	lb/day										lb/day					
User Defined Recreational	0	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00	0.00	0.00
Total		**0.00**	**0.00**	**0.00**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**		**0.00**		**0.00**	**0.00**	**0.00**

6.0 Area Detail

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	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00		0.00
Unmitigated	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00		0.00
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

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	0.00					0.00	0.00		0.00	0.00						0.00
Consumer Products	0.00					0.00	0.00		0.00	0.00						0.00
Landscaping	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00		0.00
Total	**0.00**	**0.00**	**0.00**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**		**0.00**		**0.00**		**0.00**

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	0.00					0.00	0.00		0.00	0.00						0.00
Consumer Products	0.00					0.00	0.00		0.00	0.00						0.00
Landscaping	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00		0.00
Total	**0.00**	**0.00**	**0.00**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**		**0.00**		**0.00**		**0.00**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Vegetation

Exhibit 4: Initial Study and Mitigated Negative Declaration for the "Santa Ana River Trail, Phase III Project"

CalEEMod Version: CalEEMod.2011.1.1 Date: 4/7/2011

SART 3

San Bernardino-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric
User Defined Recreational	0	User Defined Unit

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Utility Company**	Southern California Edison
Climate Zone	10	**Precipitation Freq (Days)**	32		

1.3 User Entered Comments

Project Characteristics - Construction Only

Land Use - Recreational river trail

Construction Phase - Used actual data. Program not calculating number of days correctly and mistakenly marking in yellow.

Off-road Equipment - Limited bridge construction

Off-road Equipment - no demolition in this project

Off-road Equipment - User specified equipment fleet, deleted equipment

Off-road Equipment - actual fleet

Off-road Equipment - Additional equipment

Off-road Equipment - Limited prep

Trips and VMT - what?

Grading - Actual acreage

Construction Off-road Equipment Mitigation -

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					
2011	0.48	3.52	2.04	0.00	0.63	0.22	0.84	0.12	0.22	0.34	0.00	315.91	315.91	0.04	0.00	316.69
Total	**0.48**	**3.52**	**2.04**	**0.00**	**0.63**	**0.22**	**0.84**	**0.12**	**0.22**	**0.34**	**0.00**	**315.91**	**315.91**	**0.04**	**0.00**	**316.69**

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					
2011	0.48	3.52	2.04	0.00	0.49	0.22	0.71	0.05	0.22	0.26	0.00	315.91	315.91	0.04	0.00	316.69
Total	**0.48**	**3.52**	**2.04**	**0.00**	**0.49**	**0.22**	**0.71**	**0.05**	**0.22**	**0.26**	**0.00**	**315.91**	**315.91**	**0.04**	**0.00**	**316.69**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Energy	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mobile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Waste						0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Water						0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Energy	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mobile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Waste						0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Water						0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use DPF for Construction Equipment

Use Soil Stabilizer

Replace Ground Cover

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Site Preparation - 2011

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					0.03	0.00	0.03	0.02	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.02	0.14	0.08	0.00		0.01	0.01		0.01	0.01	0.00	11.46	11.46	0.00	0.00	11.49
Total	**0.02**	**0.14**	**0.08**	**0.00**	**0.03**	**0.01**	**0.04**	**0.02**	**0.01**	**0.03**	**0.00**	**11.46**	**11.46**	**0.00**	**0.00**	**11.49**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.27	0.27	0.00	0.00	0.27
Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.27**	**0.27**	**0.00**	**0.00**	**0.27**

3.2 Site Preparation - 2011

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					0.01	0.00	0.01	0.01	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.02	0.14	0.08	0.00		0.01	0.01		0.01	0.01	0.00	11.46	11.46	0.00	0.00	11.49
Total	**0.02**	**0.14**	**0.08**	**0.00**	**0.01**	**0.01**	**0.02**	**0.01**	**0.01**	**0.02**	**0.00**	**11.46**	**11.46**	**0.00**	**0.00**	**11.49**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.27	0.27	0.00	0.00	0.27
Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.27**	**0.27**	**0.00**	**0.00**	**0.27**

3.3 Grading - 2011

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					0.10	0.00	0.10	0.05	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.10	0.77	0.45	0.00		0.04	0.04		0.04	0.04	0.00	65.67	65.67	0.01	0.00	65.83
Total	**0.10**	**0.77**	**0.45**	**0.00**	**0.10**	**0.04**	**0.14**	**0.05**	**0.04**	**0.09**	**0.00**	**65.67**	**65.67**	**0.01**	**0.00**	**65.83**

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	0.04	0.41	0.19	0.00	0.39	0.02	0.41	0.00	0.02	0.02	0.00	46.07	46.07	0.00	0.00	46.11
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.07	2.07	0.00	0.00	2.08
Total	**0.04**	**0.41**	**0.21**	**0.00**	**0.39**	**0.02**	**0.41**	**0.00**	**0.02**	**0.02**	**0.00**	**48.14**	**48.14**	**0.00**	**0.00**	**48.19**

3.3 Grading - 2011

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					0.04	0.00	0.04	0.02	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.10	0.77	0.45	0.00		0.04	0.04		0.04	0.04	0.00	65.67	65.67	0.01	0.00	65.83
Total	**0.10**	**0.77**	**0.45**	**0.00**	**0.04**	**0.04**	**0.08**	**0.02**	**0.04**	**0.06**	**0.00**	**65.67**	**65.67**	**0.01**	**0.00**	**65.83**

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	0.04	0.41	0.19	0.00	0.39	0.02	0.41	0.00	0.02	0.02	0.00	46.07	46.07	0.00	0.00	46.11
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.07	2.07	0.00	0.00	2.08
Total	**0.04**	**0.41**	**0.21**	**0.00**	**0.39**	**0.02**	**0.41**	**0.00**	**0.02**	**0.02**	**0.00**	**48.14**	**48.14**	**0.00**	**0.00**	**48.19**

3.4 Excavation - 2011

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					0.10	0.00	0.10	0.05	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.11	0.89	0.53	0.00		0.05	0.05		0.05	0.05	0.00	77.86	77.86	0.01	0.00	78.05
Total	**0.11**	**0.89**	**0.53**	**0.00**	**0.10**	**0.05**	**0.15**	**0.05**	**0.05**	**0.10**	**0.00**	**77.86**	**77.86**	**0.01**	**0.00**	**78.05**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.39	2.39	0.00	0.00	2.39
Total	**0.00**	**0.00**	**0.02**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**2.39**	**2.39**	**0.00**	**0.00**	**2.39**

3.4 Excavation - 2011

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					0.04	0.00	0.04	0.02	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.11	0.89	0.53	0.00		0.05	0.05		0.05	0.05	0.00	77.86	77.86	0.01	0.00	78.05
Total	**0.11**	**0.89**	**0.53**	**0.00**	**0.04**	**0.05**	**0.09**	**0.02**	**0.05**	**0.07**	**0.00**	**77.86**	**77.86**	**0.01**	**0.00**	**78.05**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.39	2.39	0.00	0.00	2.39
Total	**0.00**	**0.00**	**0.02**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**2.39**	**2.39**	**0.00**	**0.00**	**2.39**

3.5 Building Construction - 2011

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	0.14	0.92	0.53	0.00		0.06	0.06		0.06	0.06	0.00	82.06	82.06	0.01	0.00	82.30
Total	**0.14**	**0.92**	**0.53**	**0.00**		**0.06**	**0.06**		**0.06**	**0.06**	**0.00**	**82.06**	**82.06**	**0.01**	**0.00**	**82.30**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.5 Building Construction - 2011

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	0.14	0.92	0.53	0.00		0.06	0.06		0.06	0.06	0.00	82.06	82.06	0.01	0.00	82.30
Total	**0.14**	**0.92**	**0.53**	**0.00**		**0.06**	**0.06**		**0.06**	**0.06**	**0.00**	**82.06**	**82.06**	**0.01**	**0.00**	**82.30**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.6 Paving - 2011

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	0.06	0.38	0.21	0.00		0.03	0.03		0.03	0.03	0.00	26.46	26.46	0.01	0.00	26.57
Paving	0.00					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	**0.06**	**0.38**	**0.21**	**0.00**		**0.03**	**0.03**		**0.03**	**0.03**	**0.00**	**26.46**	**26.46**	**0.01**	**0.00**	**26.57**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.59	1.59	0.00	0.00	1.60
Total	**0.00**	**0.00**	**0.01**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**1.59**	**1.59**	**0.00**	**0.00**	**1.60**

3.6 Paving - 2011

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	0.06	0.38	0.21	0.00		0.03	0.03		0.03	0.03	0.00	26.46	26.46	0.01	0.00	26.57
Paving	0.00					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	**0.06**	**0.38**	**0.21**	**0.00**		**0.03**	**0.03**		**0.03**	**0.03**	**0.00**	**26.46**	**26.46**	**0.01**	**0.00**	**26.57**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.59	1.59	0.00	0.00	1.60
Total	**0.00**	**0.00**	**0.01**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**1.59**	**1.59**	**0.00**	**0.00**	**1.60**

4.0 Mobile Detail

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Unmitigated	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
User Defined Recreational	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW
User Defined Recreational	8.90	13.30	7.40	0.00	0.00	0.00

5.0 Energy Detail

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						0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Electricity Unmitigated						0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NaturalGas Mitigated	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NaturalGas Unmitigated	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

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	tons/yr										MT/yr					
User Defined Recreational	0	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total		**0.00**	**0.00**	**0.00**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU	tons/yr										MT/yr					
User Defined Recreational	0	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total		**0.00**	**0.00**	**0.00**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	kWh	tons/yr				MT/yr			
User Defined Recreational	0					0.00	0.00	0.00	0.00
Total						**0.00**	**0.00**	**0.00**	**0.00**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	kWh	tons/yr				MT/yr			
User Defined Recreational	0					0.00	0.00	0.00	0.00
Total						**0.00**	**0.00**	**0.00**	**0.00**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Unmitigated	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

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	0.00					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	0.00					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Landscaping	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	**0.00**	**0.00**	**0.00**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

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	0.00					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	0.00					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Landscaping	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	**0.00**	**0.00**	**0.00**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

7.0 Water Detail

7.1 Mitigation Measures Water

	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr				MT/yr			
Mitigated					0.00	0.00	0.00	0.00
Unmitigated					0.00	0.00	0.00	0.00
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	tons/yr				MT/yr			
User Defined Recreational	0 / 0					0.00	0.00	0.00	0.00
Total						**0.00**	**0.00**	**0.00**	**0.00**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	tons/yr				MT/yr			
User Defined Recreational	0 / 0					0.00	0.00	0.00	0.00
Total						**0.00**	**0.00**	**0.00**	**0.00**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
	tons/yr				MT/yr			
Mitigated					0.00	0.00	0.00	0.00
Unmitigated					0.00	0.00	0.00	0.00
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	tons	tons/yr				MT/yr			
User Defined Recreational	0					0.00	0.00	0.00	0.00
Total						**0.00**	**0.00**	**0.00**	**0.00**

Mitigated

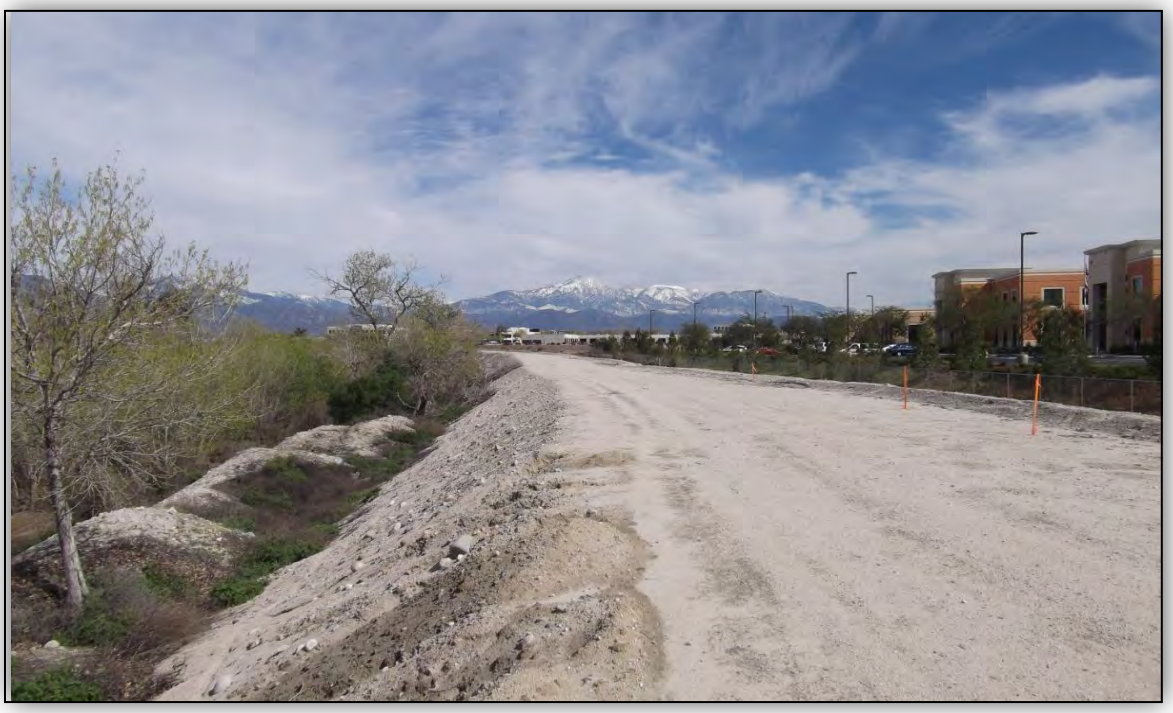
	Waste Disposed	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	tons	tons/yr				MT/yr			
User Defined Recreational	0					0.00	0.00	0.00	0.00
Total						**0.00**	**0.00**	**0.00**	**0.00**

9.0 Vegetation

APPENDIX 2A

Exhibit 4: Initial Study and Mitigated Negative Declaration for the "Santa Ana River Trail, Phase III Project"

Santa Ana River Trail Phase III ***NES***



Natural Environment Study

Discussions of Biological Assessment & Delineation of Jurisdictional Waters

Waterman Avenue in the City of San Bernardino to California Street in the City of Redlands, San Bernardino County, California

U.S. Geological Survey (USGS) – San Bernardino South and Redlands quadrangles, 7.5 Minute Series topographic T1S, R4 & 3 W

08-SBD-0-STPLR-5954-(083)

April 2012

Caltrans
CALIFORNIA DEPARTMENT OF TRANSPORTATION

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08-SBD-0- STPLR-5954-(083)

April 2012

STATE OF CALIFORNIA
Department of Transportation

San Bernardino County Regional Parks

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District 8 Environmental Local Assistance

Approved By: _____ Date: _____
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California Department of Transportation
District 8 Environmental Local Assistance

S.0 Summary

The County of San Bernardino Regional Parks Department (Regional Parks) and the Department of Public Works (Public Works) propose to construct an approximately 3.8 mile long section of the Santa Ana River Trail (SART) on the southern bank of the Santa Ana River. This segment of the SART is the third phase of the trail developed within San Bernardino County (Phase III). The proposed SART Phase III Project (Project) begins at Waterman Avenue in the City of San Bernardino and continues easterly to California Street in the City of Redlands.

The majority of Phase III will be constructed along an existing County of San Bernardino Flood Control bank/levee adjacent to the River corridor. In one area of the alignment (approximately 2,500 linear feet) easterly of Waterman Avenue, from the confluence of Mission Zanja Creek east to Orange Show Road, no levee currently exists and, therefore, this area of the trail will be developed on the unimproved southern bank of the riverbed within the County Flood Control right-of-way. The remainder of the proposed 3.8-mile SART Phase III will be developed on the existing flood control levee maintenance road. The existing levee maintenance road will be improved and paved as a Class 1 Bikeway. The Project will be built as a 10-foot-wide asphalt trail with an adjacent 2-foot-wide unpaved shoulder on either side to accommodate non-motorized modes of transportation and pedestrians. The majority of the trail will be 14 feet wide. Construction will result in approximately 17.5 acres of land disturbance. Of the total area disturbed, 13.6 acres will be temporary construction and staging disturbance and 5.9 acres will be permanent trail facility disturbance.

The trail alignment is adjacent to the SAR, a jurisdictional river system with a largely natural geomorphological and hydrological process that dominates the physical landscape. Construction of the SART Phase III will result in temporary and permanent alteration and fill of jurisdictional waters. Impacts to jurisdictional waters usually require regulatory approvals from the one or more of the following regulatory agencies: U.S. Army Corps of Engineers (Corps), Regional Water Quality Control Board (RWQCB), and/or California Department of Fish and Game (CDFG). Based on the projected impacts gathered from the jurisdictional delineation, the Project will require a Clean Water Act (CWA) Section 404 permit, CWA Section 401 Certification, and CDFG Code Section 1602 Streambed Alteration Agreement.

Additionally critical habitat (CH) has been designated over parts of the Project area for the federally listed Bernardino Kangaroo rat (SBKR) [*Dipodomys merriami parvus*], southwestern willow flycatcher (*Empidonax trallii extimus*) [SWWF], and Santa Ana sucker (*Catostomus santaannae*) [SASU] and according to the survey information gathered for this project between 2009 and 2011, SBKR occur in the vicinity of the project area. There are also records of the federally listed least Bell's vireo (*Vireo bellii pusillus*) [LBVI] and SWWF in the project area between Waterman Avenue and Orange Show Road. This project however, has been designed in a way and will be implemented in a manner that avoids impacts to federally listed species and CH. As a result of the project design and proposed construction timing, this project is not likely to affect federally listed species or adversely modify federally designated CH.

List of Abbreviated Terms

A	absent
ADA	Americans with Disabilities Act
APN	Assessor Parcel Number
BMP	Best Management Practice
BSA	Biological Study Area
Caltrans	California Department of Transportation
CE	Conservation Easement
CESA	California Endangered Species Act
CH	Critical Habitat
CNDDB	California Natural Diversity Data Base
CNPS	California Native Plant Society
CNPSEI	California Native Plant Society Electronic Inventory
Corps	U.S. Army Corps of Engineers
CWA	Clean Water Act
ESA	Endangered Species Act
FE	Federally Endangered
FGC	Fish and Game Code
ft	feet
FT	Federally Threatened
HMMRP	Habitat Mitigation Monitoring and Reporting Program
HP	Habitat Present
LBVI	least Bell's vireo
M	meters
MBTA	Migratory Bird Treaty Act
msl	mean sea level
NES	Natural Environment Study
OHWM	ordinary high water mark
P	Present
PCC	Portland Cement Concrete
PCE	primary constituent elements
RAFSS	Riversidean Alluvial Fan Sage Scrub
RWQCB	Regional Water Quality Control Board
SANBAG	San Bernardino Associated Government
SART	Santa Ana River Trail
SASU	Santa Ana sucker
SBKR	San Bernardino kangaroo rat
SUSMP	Standard Urban Stormwater Management Plan
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resources Control Board
SWWF	southwestern willow flycatcher
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
WDR	waste discharge requirement
WoUS	waters of the United States
WQMP	Water Quality Management Plan

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Chapter 1. Introduction

The purpose of the Natural Environment Study (NES) is to summarize biological studies and biological related information necessary for the environmental review process for the Santa Ana River Trail Phase III Project, located in the City of San Bernardino, San Bernardino County, California. The NES includes documentation of the biological resources in the project area and assesses the project-related impacts on those resources.

1.1. Project History

The County of San Bernardino Regional Parks Department (Regional Parks) and the Department of Public Works (Public Works) propose to construct an approximately 3.8 mile long section of the Santa Ana River Trail (SART) on the southern bank of the Santa Ana River. This segment of the SART is the third phase of the trail developed within San Bernardino County (Phase III). The proposed SART Phase III Project (Project) begins at Waterman Avenue in the City of San Bernardino and continues easterly to California Street in the City of Redlands.

The Project consists of the design and construction of a Class I paved bicycle trail, which is defined as a shared use path that is physically separated from any street or highway and may be used by pedestrians, bicyclists, skaters, wheelchair users, joggers and equestrians. The trail will provide safe contiguous use and enjoyment of open space, environmental education, and an essential transportation trail system.

The urban southern California region is in need of a non-motorized system of trails to allow people to safely travel by foot, bicycle, or other non-motorized methods without competing with motorized vehicles for space on the roadways. Urban residential, commercial and industrial development has followed the path of the Santa Ana River (SAR) over the years. The SAR corridor extends over approximately 110 miles from the Pacific Ocean inland to the San Bernardino National Forest. Upon completion, the SART will constitute the “Crest to Coast” regional trail link connecting an area encompassing over four million residents in three counties (Orange, Riverside and San Bernardino). The County of San Bernardino estimates that 500,000 Inland Valley residents live in cities and unincorporated communities adjacent to the SAR corridor, from the San Bernardino National Forest to the San Bernardino/Riverside County line. Portions of the trail, particularly in Orange County, have been developed over the past 20 years; it is now possible to travel from the City of San Bernardino through Riverside to the Hidden Valley Wildlife Area near Norco. Riverside and Orange Counties are working to complete the SART between Hidden Valley and the Green River Golf Course area. The SART continues uninterrupted from Green River to Huntington Beach (the Pacific Ocean).

At the present time there are no other multi-jurisdictional trails in the three county areas and this new segment will extend the SART 3.8 miles closer to the foothills. This project meets the identified need for a regional non-vehicular trail for the region’s residents.

The County of San Bernardino is responsible for the completion of 21.5 miles of the SART. Development of the SART within San Bernardino County has been divided into four phases. Phase I of the trail, located between the county line and La Cadena Drive (Phase I) in the

City of Colton, provides the necessary link with the bikeway in Riverside County and the adjacent San Bernardino County segment. The Phase II segment links Phase I at La Cadena Drive to the current terminus at Waterman Avenue in San Bernardino. Phase III will construct an additional trail segment between Waterman Avenue east to California Street. This Phase III segment will allow trail use from California Street in Redlands to the San Bernardino County/Riverside County line on the west, totaling an approximate 10.6 miles.

Ultimately, the bikeway will enhance access to recreational opportunities in the region by: (a) providing neighborhood links to green space and natural areas; (b) providing connections with city urban trails that provide safe travel to parks, community recreation facilities, fairgrounds, urban lakes, amphitheaters, historic neighborhoods, and tourist attractions; and (c) providing direct access to San Bernardino National Forest camping and outdoor recreation areas.

In conjunction with fulfilling basic non-motorized transportation purposes, the proposed Project will also meet the needs of individuals with disabilities; specifically in an area where few trails fulfill the outdoor trail needs of these individuals. All of the access ramps to the SART will be designed to comply with requirements of the Americans with Disabilities Act (ADA). The SART facilities will incorporate Caltrans Highway Design Manual, Chapter 1000, “Bikeway Planning and Design” to ensure that individual with disabilities will have both access and effective use of the SART facilities.

Funding and construction of the SART has been incremental. This project consists of local grants from the San Bernardino Associated Governments (SANBAG) with a local matching amount of funds from the County and the Wildlands Conservancy. This project has been assigned project number STPLR-5954 083 by the State of California. Portions of the trail in Riverside County have been completed but there are still linkages in Riverside and San Bernardino counties that have not been developed. The Trail Master Plans for the counties of San Bernardino and Riverside and the cities of San Bernardino, Colton, Grand Terrace, Loma Linda, and Riverside all show trails that will join or are heavily dependent upon this segment of the SART within San Bernardino County.

1.2. Project Description

Figure 1 shows the regional location of the Project and Figure 2 provides an aerial view of the Project which begins at Waterman Avenue in the City of San Bernardino and continues easterly to California Street in the City of Redlands. The Project location can also be found on the U.S. Geological Survey (USGS) – San Bernardino South and Redlands quadrangles, 7.5 Minute Series topographic within unsectioned portions of Township 1 South and Ranges 4 and 3 West as depicted in Figure 3.

In general, the Project consists of installing a regional trail that will consist of the trail, bridges, culverts, and ADA-compliant access ramps. Construction activities include fill and embankment construction; relocating and/or adjusting surface features to grade; subsurface preparation for paving the trail with asphalt concrete, Portland cement concrete (PCC), and decomposed granite pavement; erosion control best management practices (BMPs); reinforced concrete retaining walls; fencing and railing; access gates; storm drain facilities; signage; pavement striping and markings; and storm water pollution prevention control.

The SART will be built as a 10-foot-wide asphalt trail with an adjacent 2-foot-wide unpaved shoulder on either side to accommodate non-motorized modes of transportation and

pedestrians. The majority of the trail will be 14 feet wide as indicated on the detailed engineered plans which show that construction will result in approximately 17.5 acres of land disturbance. Of the total area disturbed, 13.6 acres will be temporary construction and staging disturbance and 5.9 acres will be permanent trail facility disturbance. For views of the temporary construction and permanent trail impact areas please refer to Figures 4 a-f.

The majority of Phase III will be constructed along an existing County of San Bernardino Flood Control bank/levee adjacent to the River corridor. In one area of the alignment (approximately 2,500 linear feet) easterly of Waterman Avenue, from the confluence of Mission Zanja Creek east to Orange Show Road, no levee currently exists and, therefore, this area of the trail will be developed on the unimproved southern bank of the riverbed within the County Flood Control right-of-way. The remainder of the proposed 3.8-mile SART Phase III will be developed on the existing flood control levee maintenance road. The existing levee maintenance road will be improved and paved as a Class 1 Bikeway.

As designed, the proposed Project includes erecting a prefabricated, fully engineered clear span bridge of steel construction. This bridge will span Mission Zanja Creek adjacent to the BNSF Railway Bridge east of Waterman Avenue and will be approximately 100 feet in length. The bridge will be 14 feet wide and maintaining consistency with the rest of the SART. In light of the San Bernardino Association of Governments (SANBAG) proposed project to rebuild and widen the BNSF Railway Bridge, the SART Mission Zanja bridge and undercrossing is being reassessed. The Mission Zanja bicycle crossing and Railroad interface are being realigned with SANBAG's project.

Disturbance will consist of grading operations, asphalt and concrete installation, and construction of ramps under Waterman Avenue, Orange Show Road and Tippecanoe Avenue. Additional rip-rap or slope protection will be constructed in these areas. The proposed underpass at the BNSF railroad bridge is similarly being reassessed due to SANBAG's needs. Although it will delay a small segment of Phase III and create a missing link, a cooperative effort with SANBAG has been initiated to improve bicycle travel, eliminate complex curves, and to minimize the trail impacts to jurisdictional waters.

The trail under each of the roads would consist of a ramp leading from the levee, under the road, then up the other side to the levee. A typical bikeway underpass is constructed by creating a berm of compacted fill material under the roadway with a maximum slope of 2:1 (horizontal to vertical). The berm is then finished with grouted rip-rap and concrete. Construction of the underpasses may require engineered fill in the river channel.

The County estimates that the construction of the entire SART Phase III would take approximately 6 to 9 months to complete. It is anticipated that the construction of the trail on top of the existing levee would take 2 to 3 months. The remaining 3 to 6 months would be for constructing the undercrossings at the Orange Show Road and Tippecanoe Avenue bridges.

Potential construction staging areas are located on the levee bank where the top of bank is wider and can support staging and lay down areas. The potential areas are: (1) from approximately 200 feet to 1,250 feet downstream of Mission Zanja Creek, (2) from approximately 350 feet to 1,100 feet downstream of Orange Show Road, and (3) downstream from Mountain View and at the terminus of California Street at the River. Construction staging areas will be east of Waterman and west of Mission Zanja Creek on parcel APN 0281-021-16; west of Orange Show road on parcel APN 0281-031-38; west of

Mountain View on portions of the parcels APN 0280-251-23, 0280-301-12 and 0280-302-22; and west of California Street on parcels APN 0167-721-02 and 0292-011-42. All parcels listed for these four locations are owned by the San Bernardino County Flood Control District.

Temporary fencing during construction will be required to prevent the general public from trespassing onto any excavation, construction, or storage areas.

Public access, parking and a small trail staging area for the SART Phase III will be from the parking lot at the County of San Bernardino Hall of Records. This site is located on the north side of Hospitality Lane between South 'E' Street and Waterman Avenue adjacent to a portion of SART Phase II that is already developed. The access ramp at the County of San Bernardino Hall of Records would be a logical entry point because: the site is easily accessible and is near the Waterman Avenue/I-10 freeway ramps; the parking lot is several hundred feet away from the road making it easy for trail patrons to safely unload their bicycles and to stage equipment used by individuals with disabilities; and the parking lot can accommodate cars, especially on weekends. The SART Phase III will ultimately include five trail access ramps from surface streets. These access ramps will be located along the south side of the SAR at the following locations: (1) east of Waterman Avenue; (2) west of Orange Show Road; (3) east of Orange Show Road; (4) west of Tippecanoe Avenue; and (5) east of Tippecanoe Avenue. California Street would be the end of the SART Phase III and would have a 100-by-30 foot paved, turnaround area.

The SART Phase III will not have any street or night lighting. Permanent fencing will be the minimum requirement for safety reasons. The existing fencing along adjoining private property will be maintained.

Once placed in operation, maintenance of the SART includes periodic inspection of the system in April and October of each year. The April inspection is to determine the need for repair from the previous winter storms, if any. The October inspection is to ensure that all components of the system are in good operational condition and ready for the winter rainy season. Any necessary repairs would be performed on as-needed basis.

Chapter 2. Study Methods

2.1. Study Methods

The following list of study methods were used to obtain information on the biological resources potentially affected by implementation of this Project:

- Records Search & Literature Review
- General Biological & Avian Habitat Assessments
- Focused Fauna Survey
- General Botanical and Focused Plant Surveys
- Delineation of Jurisdictional Waters

2.1.1. Records Search and Literature Review

Background information was gathered prior to visiting the Project site to obtain information on rare and listed plant and animal species' occurrences in the Project vicinity. The biological surveyors examined the California Native Plant Society's Electronic Inventory (CNPSEI) and 2011 California Natural Diversity Data Base (CNDDB). The CNDDB search was conducted for the USGS – Redlands and San Bernardino South quadrangles, 7.5 Minute Series topographic map. This resource provided baseline data regarding species' occurrences within the Project area.

A literature review was also conducted to examine data gathered from various biological surveys previously conducted in the vicinity of the SART Phase III project area. The literature review included a review of standard field guides and texts on sensitive and non-sensitive biological resources, as well as the following sources:

- *Draft Jurisdictional Delineation Letter Report for the SART Phase III prepared by Chambers Group, September 2006;*
- *Preliminary Environmental Study Form prepared for the SART Phase III Project by the County of San Bernardino Regional Parks Department;*
- *Letter Report of the Results of the 2009 Southwestern Willow Flycatcher and Least Bell's Vireo Surveys for the Mojave and Santa Ana Rivers, San Bernardino County, California, December 3, 2009 prepared by IFC Jones & Stokes*
- *U.S. Fish and Wildlife Service. 2001. Least Bell's Vireo survey guidelines. Ecological Services, Carlsbad Fish and Wildlife Office, Carlsbad, Ca;*
- *U.S. Fish and Wildlife Service. 2005. Endangered and Threatened Wildlife and Plants; Designation of Critical Habitat for the Southwestern Willow Flycatcher (Empidonax traillii extimus);*
- *Final Rule. Federal Register 70:60866-61009; The Status and Known Distribution of the San Bernardino Kangaroo Rat (Dipodomys merriami parvus): Field surveys conducted between 1987 and 1996. McKernan 1997;*
- *U.S. Fish and Wildlife Service, 1998c. Endangered and Threatened Wildlife and Plants; Final Rule to List the San Bernardino Kangaroo Rat as Endangered, Vol. 63, No. 185, pp. 51005 – 51017;*
- *General Biological Assessment & Focused Survey Report for the Mountain View Avenue Extension & Widening Project prepared by Tom Dodson & Associates, 2008.*

2.1.1 General Biological Survey and Avian Habitat Assessment

On September 27, and 28, 2010 and February 28, 2011 a qualified biologist familiar with the resources associated with the project site and the surrounding area conducted general biological pedestrian surveys and avian habitat assessments within the Biological Study Area (BSA) by walking the site and noting habitat types, disturbance levels and animal species. Pedestrian surveys were conducted with the intention of observing all habitat types, with particular attention focused on the riparian habitat structure and potential suitability for the least Bell's vireo (*Vireo bellii pusillus*) [LBVI] and southwestern willow flycatcher (*Empidonax trallii extimus*) [SWWF]. Habitat type and structure was considered suitable for LBVI and/or SWWF if woody, riparian vegetation supporting a mosaic of cottonwood (*Populus fermontii*), willow (*Salix* spp), and other riparian vegetative associations was present in stands larger than 0.5 acres in size with over 50 percent cover densely structured in a two- or three-story canopy.

2.1.2 General & Focused Botanical Surveys

General botanical surveys were conducted during the course of focused surveys for slender-horned spineflower (*Dodecahema leptoceras*) [spineflower] and Santa Ana River woollystar (*Eriastrum densifolium* ssp. *sanctorum*) [woollystar]. The 2010 and 2011 botanical surveys conducted for this project followed all relevant State and federal guidelines and/or protocols for botanical surveys and habitat assessments, including the "Suitable Habitat Criteria and Survey Requirements for *Dodecahema leptoceras* Slender-horned spineflower" dated September 2002." This spineflower protocol allows the surveyor to meet recommendations for focal taxa by requiring surveying in tight transects so the surveyor can observe 100% of the ground surface. The 2010 and 2011 botanical survey reports are provided in **Appendix A and B** respectively.

Surveys were conducted on June 7 and 8, and December 24, 2010, January 4, and April 6, 19 and 26, 2011 when sensitive plant species would be expected to have been readily detectable. Botanical surveys were conducted within and adjacent to the Project alignment and approximately 92 meters (m) or 300 feet (ft) out into the SAR floodplain. The surveys extended across the sandy riverbed of the SAR to determine the proximity of populations of woollystar and spineflower and/or any other special-status plant species to the Project site. Focused surveys were not conducted in areas of the Project alignment where extremely disturbed conditions preclude the occurrence of sensitive botanical species.

A nearby reference population of spineflower was visited prior to each spring survey to confirm that the species was readily detectable. Surveys of the site were conducted by walking transects through suitable habitat at 2m spacing. Care was taken to be sure that all areas of the habitat were visible at some point in the survey. All plant species present on site were identified in the field or, if unknown, either a photo or relevant pieces of the plant were collected. Identification of species utilized a Leica 7-35x dissecting scope and floras such as the Jepson Manual of the California Flora, Manual of North American Grasses, and Calflora.org. A Garmen Oregon global positioning system (GPS) was carried and tracks were collected during the surveys.

2.1.3 Focused Fauna Surveys

A biologist permitted by the U.S. Fish and Wildlife Service (USFWS) to trap and handle San Bernardino Kangaroo rats (SBKR) [*Dipodomys merriami parvus*] (TE-831207-2) conducted a protocol live-trapping survey in the Project area between Orange Show Road and Tippecanoe Avenue from February 12 to 17 of 2011. This survey report is provided in

Appendix C. Trapping was conducted according to protocols established by the USFWS for the SBKR. The protocols call for five consecutive nights of trapping, conducted when the animal is active aboveground at night. Six trap-lines, consisting of 20-30 traps each, were placed in suitable habitat areas within the Biological Study Area (BSA) site and adjacent suitable habitat, concentrating on locating traps in areas containing sandy soils relatively free of debris and containing suitable vegetation. Areas with kangaroo rat/small mammal sign (scat, burrows, tail drags) were also targeted. Each trap was baited with a mixture of bird seed and rolled oats placed at the back of the traps. The traps were set at dusk each night and inspected once during the night and at dawn each morning. All animals were identified and released at the point of capture. Notes and photographs were taken on the habitat conditions where the traps were placed. The weather conditions at the time of the trapping studies were also noted.

2.1.4 Delineation of Jurisdictional Waters

In March 2011 the trail centerline was surveyed and staked and the study area was surveyed to determine the presence/absence of potential special aquatic resources and their boundaries. Data related to The U.S Army Corps of Engineers (Corps)-defined waters of the U.S. (WoUS), including wetlands, were recorded on the engineered drawings by locating the resource areas using the station numbers and measuring tape. Field notebooks, and wetland data sheets, were used where applicable. The evaluation process initially looked at vegetation, soils, and hydrology parameters (in that order) of potential wetland habitats within the study area using the methodology for routine determinations set forth in the Corps Wetland Delineation Manual and the Arid West Regional Supplement (EL, 1987; Reed, 1988; Corps 2001a, 2001b, 2008). Drainage features were evaluated using the methodology set forth in the Corps and EPA Clean Water Act jurisdiction guidance documents following the U.S. Supreme Court's Decision in *Rapanos v. United States* and *Carabell v. United States* (Corps, 2007; Corps, 2007a; Corps, 2007c; Corps, 2008).

Suspected California Department of Fish and Game (CDFG).jurisdictional areas were field checked for the presence of definable streambeds (bed, bank, and channel) and any associated riparian habitat. Streambeds and suspected riparian habitats were evaluated using the California Fish and Game (CFG) Code (Section 1600 et seq.) and guidance described in *A Field Guide to Lake and Streambed Alteration Agreements Sections 1600-1607* (ESD-CDFG, 1994). The width(s) across both the bed and banks (top-of-bank to top-of-bank) for each feature was determined, and the results were noted on the engineered drawings and field notebook. If adjacent floodplain and/or terrace areas were vegetated with riparian vegetation, then these features were mapped on aerial maps and included as part of CDFG jurisdiction.

Fieldwork for the jurisdictional delineation was conducted on March 17 & 18, 2011 and the report is provided in **Appendix D**.

2.2. Regulatory Requirements

The trail alignment is adjacent to the SAR, a jurisdictional river system with a largely natural geomorphological and hydrological process that dominates the physical landscape. Along the Project alignment the SAR is characterized by active meander zones (within man-made levees) with quickly changing sedimentation and accretion patterns and a broad natural floodplain that frequently floods in the winter and spring. Construction of the SART Phase III will result in temporary and permanent alteration and fill of jurisdictional waters. Impacts to

jurisdictional waters usually require regulatory approvals from the one or more of the following regulatory agencies: Corps, Regional Water Quality Control Board (RWQCB), and/or CDFG. Based on the projected impacts gathered from the jurisdictional delineation, the Project will require a Clean Water Act (CWA) Section 404 permit, CWA Section 401 Certification, and CDFG Code Section 1602 Streambed Alteration Agreement.

Further, critical habitat (CH) has been designated over parts of the Project area for the federally listed SBKR, SWWF and Santa Ana sucker. According to the survey information gathered for this project between 2009 and 2011, SBKR and LBVI occur in the vicinity of the Project area. Potential project-related impacts to CH and/or federally listed species are discussed in Chapter 4.

Below is a discussion of each regulation and the corresponding agency or agencies with regulatory jurisdiction.

2.2.1 Clean Water Act (CWA)

The CWA is the principal federal law that governs pollution in the nation's lakes, rivers, and coastal waters. Originally enacted in 1972 as a series of amendments to the Federal Water Pollution Control Act of 1948, the Act was last amended in 1987. The overriding purpose of the CWA is to "restore and maintain the chemical, physical and biological integrity of the nation's waters." The statute employs a variety of regulatory and non-regulatory tools to eliminate the discharge of pollutants into the nation's waters and achieve water quality that is both "swimmable and fishable".

Under Section 404 of the CWA, the Corps has primary federal responsibility for administering regulations that concern the discharge of dredged or fill material into waters of the U.S. (including wetlands). Waters of the U.S. (WoUS) are defined as: "*All waters used in interstate or foreign commerce; all interstate waters including interstate wetlands; all other waters such as intrastate lakes, rivers, streams (including intermittent and ephemeral streams), mudflats, sand flats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes or natural ponds, where the use, degradation, or destruction of which could affect interstate commerce; impoundments of these waters; tributaries of these waters; or wetlands adjacent to these waters"* (Section 404 of the CWA; 33 CFR 328).

The limit of the Corps jurisdiction for non-tidal waters (including non-tidal perennial and intermittent watercourses and tributaries to such watercourses) in the absence of adjacent wetlands is defined by the ordinary high water mark. The ordinary high water mark (OHWM) is defined as: "*The line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas* (Section 404 of the CWA; 33 CFR 328). Wetlands are defined as: *Those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions"* (Section 404 of the CWA; 33 CFR 328).

2.2.2 Porter-Cologne Water Quality Control Act (Porter-Cologne)

Porter-Cologne is the principal State law that governs water protection efforts in California. Porter-Cologne establishes the State Water Resources Control Board (SWRCB) and each of the nine RWQCBs as the principal state agencies for coordinating and controlling water

quality in California. The RWQCB's regulatory jurisdiction is pursuant to Section 401 of the Federal CWA. The RWQCB typically regulates discharges of dredged or fill material into WoUS, however, they also have regulatory authority over waste discharges into Waters of the State, which may be isolated, under Porter-Cologne. In the absence of a nexus with the Corps, the RWQCB requires the submittal of a Waste Discharge Requirement (WDR) application, which must include a copy of the project Storm Water Pollution Prevention Plan (SWPPP) and a copy of the project Water Quality Management Plan (WQMP), otherwise called a Standard Urban Stormwater Management Plan (SUSMP). The RWQCB's role is to ensure that disturbances in the stream channel do not cause water quality degradation.

2.2.3 California Fish and Game Code (FGC)

Sections 1600 to 1616 of the California FGC require any person, state, or local government agency or public utility to notify the CDFG before beginning any activity that will substantially modify a river, stream, or lake. If it is determined that the activity could substantially adversely impact an existing fish and wildlife resource, then a Lake or Streambed Alteration Agreement is required.

Like the Corps and RWQCB, the CDFG also regulates discharges of dredged or fill material. The regulatory jurisdiction of CDFG is much broader however, than Corps or RWQCB jurisdictions. CDFG regulates **all** activities that alter streams and lakes and their associated habitats. The CDFG, through provisions of the FGC Sections 1601-1603 is empowered to issue agreements for any alteration of a river, stream, or lake where fish or wildlife resources may be adversely affected. Streams (and rivers) are defined by the presence of a channel bed and banks and at least an intermittent flow of water. The CDFG typically extends the limits of their jurisdiction laterally beyond the channel banks for streams that support riparian vegetation. In these situations the outer edge of the riparian vegetation is generally used as the lateral extent of the stream and CDFG jurisdiction. CDFG regulates wetland areas only to the extent that those wetlands are a part of a river, stream, or lake as defined by CDFG.

2.2.4 California Endangered Species Act (CESA)

The CDFG administers the California Endangered Species Act (CESA). The State of California considers an endangered species one whose prospects of survival and reproduction are in immediate jeopardy. A threatened species is 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, and a rare species is one present in such small numbers throughout its range that it may become endangered if its present environment worsens. "Rare species" classification applies to California native plants. The State definition of "take" is narrow and specifically refers to the direct loss of a State-listed species.

Provisions within the FGC protect all native birds of prey and their nests (FGC §3503.5), and all non-game birds (other than those not listed as Fully Protected) that occur naturally in the State (§38oo). The handful of species, such as the California condor, that are designated by the State as "fully protected" received this rare designation through special legislation. There is no mechanism allowed for CDFG to issue take authorization for a fully protected species. Species of Special Concern is an informal designation used by CDFG for some declining wildlife species that are not proposed for listing as threatened or endangered, such as the burrowing owl. This designation does not provide legal protection, but signifies that these species are recognized as sensitive by CDFG.

2.2.5 Federal Endangered Species Act (ESA)

Special status species are native species that have been afforded special legal protection because of concern for their continued existence. The USFWS enforces the provisions of the federal ESA. Section 9 of the ESA prohibits the "taking" of a listed species by anyone, including private individuals, and state and local agencies. The term "take" under federal law means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in such conduct. "Take" can include adverse modification of habitats used by a threatened or endangered species during any portion of its life history. Threatened and endangered species on the federal list (50 CFR Sections 17.11 and 17.12) are protected from indirect and/or direct or take. If "take" of a listed species is necessary to complete an otherwise lawful activity, this triggers the need for consultation under Section 7 or Section 10 of ESA. A Biological Opinion with incidental take provisions would be rendered. Pursuant to the requirements of the ESA, a federal agency reviewing a proposed project within its jurisdiction must determine whether any federally listed species may be present in the study area and whether the proposed project will have a potentially significant impact upon such species.

Under the ESA habitat loss is considered to be an impact to the species. In addition, the agency is required to determine whether the project is likely to jeopardize the continued existence of any species that is proposed for listing under ESA or to result in the destruction or adverse modification of CH proposed to be designated for such species. Therefore, project-related impacts to these species, or their habitats, would be considered significant and require mitigation. The term "critical habitat" for a threatened or endangered species refers to the following: specific areas within the geographical range of the species at the time it is listed that contain suitable habitat for the species, which may require special management considerations or protection; and specific areas outside the geographical range of the species at the time it is listed that contain suitable habitat for the species and is determined to be essential for the conservation of the species. Under Section 7 of the ESA, all federal agencies (including USFWS) are required to ensure that any action they authorize, fund, or carry out will not likely jeopardize the continued existence of a listed species or adversely modify their CH.

2.2.6 Migratory Bird Treaty Act

Migratory birds are protected under the federal Migratory Bird Treaty Act (MBTA) of 1918 (16 U.S.C 703-711). The MBTA provides protection for nesting birds that are both residents and migrants whether or not they are considered sensitive by resource agencies. The MBTA prohibits take of nearly all native birds. The MBTA makes it unlawful to take, possess, buy, sell, purchase, or barter any migratory bird listed under 50 CFR 10, including feathers or other parts, nests, eggs, or products, except as allowed by implementing regulations (50 CFR 21). The direct injury or death of a migratory bird, due to construction activities or other construction-related disturbance that causes nest abandonment, nestling abandonment, or forced fledging would be considered take under federal law. The USFWS, in coordination with the CDFG administers the MBTA. CDFG's authoritative nexus to MBTA is provided in FGC Sections 3503.5 which protects all birds of prey and their nests and FGC Section 3800 which protects all non-game birds that occur naturally in the State.

2.3. Studies Required

The list of special status species initially considered was obtained from the USFWS and the CNDDB. On December 6, 2010, the USFWS provided a list of the federally-listed

(threatened or endangered) species likely to occur in the Project area (**Appendix E**). The CNDDB provided a comprehensive list of the sensitive species documented to occur in the USGS – Redlands and San Bernardino South quadrangles. Table 1 below provides a list of these species and information as to the presence of suitable habitat and the potential for project-related impacts.

The Biological Study Area (BSA) is defined as the area of analysis for direct effects, indirect effects, and cumulative effects within the Project boundary. The BSA encompassed the entire construction envelope, including staging and access areas, as well as adjacent habitat potentially impacted indirectly by the project.

The biological study work plan for this Project was discussed in detail with Caltrans and USFWS staff on December 8, 2010 during the quarterly meeting. The work plan consists of relying on existing survey data documenting recent locations of LBVI and SWWF in the vicinity of the Project alignment. Based on the existing data, LBVI and SWWF shall be assumed present within the areas of suitable riparian habitat located between Waterman Avenue and Orange Show Road during the migratory season of these species between April 1 and August 31. The work plan also assumes presence of SBKR in areas adjacent to the alignment where Riversidean alluvial fan sage scrub (RAFSS) habitat exists between Tippecanoe Avenue and California Street. This assumption also relies on data gathered previously from various focused surveys conducted for SBKR. The USFWS concurred with the work plan strategy but stated that additional focused SBKR surveys were warranted between Tippecanoe Avenue and Orange Show Road. Therefore, focused SBKR surveys were conducted between Tippecanoe Avenue and Orange Show Road in 2011. Focused woollystar and spineflower surveys were also conducted within the BSA where suitable habitat exists for these species. The methods for these studies are described above.

Protocols, guidelines and permit requirements issued by the USFWS were strictly adhered to for all of the surveys.

2.4. Personnel and Survey Dates

- Shay Lawrey conducted the general biological assessment and habitat suitability evaluations for SBKR, LBVI and SWWF on September 27 & 28 2010 and February 28, and April 14, 2011. Ms. Lawrey is an Ecologist and Regulatory Specialist that is permitted by the USFWS to trap and handle SBKR and survey for SWWF (federal permit number TE 094308-0). She received a B.A. in Environmental Studies from the University of California, Santa Cruz and M.S. in Biology from Occidental College. Ms. Lawrey has over a decade of survey experience within San Bernardino County for SBKR, SWWF and LBVI.

- Lisa Tollstrup conducted the jurisdictional delineation on February 28, March 17 and 18, and April 14, 2011. Ms. Tollstrup is an Ecologist and Regulatory Specialist that has twenty years of experience in the regulatory field. She received a B.S. in Biology from Cal Poly Pomona University.

- C.J. Fotheringham conducted the second year of botanical surveys on April 6, 19 and 26, 2011. Ms. Fotheringham received a B.A. in Biology from Occidental College, a M.S. in Biology from California State University, Los Angeles, and a PhD in Biology at the University of California, Los Angeles. She has more than 15 years experience

in field studies and surveys of the California flora. She has been involved in a wide scope of projects in both the public and private sectors including studies conducted by California State University, University of California, United States Geological Survey, United States Forest Service and National Parks. These studies have lead to more than 30 publications in peer-reviewed journal articles and book chapters as well as numerous unpublished reports.

- Philippe Jean Vergne conducted the focused SBKR trapping surveys between Tippecanoe Avenue and Orange Show Road from February 12 to 17 of 2011. Mr. Vergne is permitted by the USFWS to trap and handle SBKR and Stephen's kangaroo rat (federal permit number TE 068072-1). Mr. Vergne received a B.S. in Biology from California State University, Fullerton and a M.S. in Animal Science from California State Polytechnic University, Pomona. He has 20 years of experience conducting field studies on sensitive small mammals in Southern California.

- Kent W. Hughes conducted the first year of botanical surveys on June 7 and 8, and December 24, 2010. Mr. Hughes received a B.S. in Botany from Southern Utah State College, Cedar City, Utah. Mr. Hughes is a Botanist and Wildlife Biologist specializing in plant identification and in the identification, analysis, and restoration of Great Basin and Southwest native plant communities.

2.5. Agency Coordination and Professional Contacts

On December 8, 2010 the biological study work plan for this Project was presented during the quarterly meeting held between the California Department of Transportation and USFWS staff. Attendees relevant to this Project included:

- Felicia M. Sirchia, USFWS
- Craig Wentworth, California Department of Transportation
- Julie Lugaro, California Department of Transportation
- Gabriella Duff, California Department of Transportation
- Juan Jose Lopez Torres, California Department of Transportation
- Shay Lawrey, Tom Dodson & Associates

Members of the Project team conducted a field review with the USFWS on February 22, 2011. The purpose of the site visit was to familiarize the USFWS with the Project alignment and biological resources potentially affected and proposed measures to avoid and/or minimize those impacts. In attendance were the following:

- Felicia M. Sirchia, USFWS
- Craig Wentworth, California Department of Transportation
- Julie Lugaro, California Department of Transportation
- Gabriella Duff, California Department of Transportation
- Juan Jose Lopez Torres, California Department of Transportation
- Jim Canaday, County of San Bernardino Regional Parks Department
- Phil Krause, County of San Bernardino Regional Parks Department
- Gia Kim, County of San Bernardino Department of Public Works
- Mindy Davis, County of San Bernardino Department of Public Works
- Brandy Wood, County of San Bernardino Department of Public Works
- Shay Lawrey, Tom Dodson & Associates
- Lisa Tollstrup, Tom Dodson & Associates

2.6. Limitations That May Influence Results

No limitations or constraints could be identified that could influence the survey results. Surveys were conducted during the appropriate season, in good weather conditions, by qualified biologists who followed all pertinent protocols.

Chapter 3. Results: Environmental Setting

The proposed Project alignment follows the top of the south levee of the SAR. The vicinity of the proposed SART Phase III is a relatively open area where the SAR widens to several hundred feet wide and the adjacent south levee proposed as the SART Phase III alignment is up to 50 feet wide. Adjacent land uses along the southerly boundary with the wash, where the trail will be located, include (proceeding easterly of Waterman Avenue to California Street): a hotel, commercial/offices, vacant land, industrial uses, including self-storage and a Southern California Edison power plant. North of the levee is the SAR channel. Land uses on the north side of the River consist of commercial roofing and lumber yards, the BNSF Railway (until it crosses the River), and the San Bernardino International Airport (formerly Norton Air Force Base) and vacant land.

Elevations within the Project area range from 1,130 ft above mean sea level (msl) at California Street to 1,000 ft above msl at Waterman Avenue. The topography of the trail alignment and surrounding area is relatively flat and slopes generally toward the west.

As stated previously, the Project alignment is adjacent to the SAR which is a major drainage feature that collects flows from the surrounding mountains and valley washes. The SAR transports a substantial amount of sediment, including boulders, cobbles, gravel, sand and silt from the mountains to the ocean. In the Project area, the soils primarily consist of sandy loams with sandy, gravelly material (Psamments and Fluvents) such as Tujunga loamy sand (0-5% slopes), Tujunga gravelly loamy sand (0-9% slopes) and Grangeville fine sandy loam.

The climate of the San Bernardino Valley (Valley) is characterized by hot summers, mild winters and seasonal rainfall which occurs almost entirely in the winter and early spring months. The average annual rainfall for the Valley is about 15 inches a year, but increases locally in the adjacent foothills and mountains. Average temperatures range from a minimum of 37 degrees Fahrenheit in January to an average of 97 degrees Fahrenheit in July. Winds in the Valley occur from all directions. Onshore winds from the west/southwest occur during the day. At night, wind patterns reverse with an offshore flow generally coming from the east/northeast. These predominate wind patterns are broken by occasional winter storms and Santa Ana winds. The latter are strong northerly or northeasterly dry winds, which occur during September through March.

Surrounding current land uses include:

Existing Land Use / Official Land Use District	
Project Site:	Flood Control Levee Floodway / FW
North:	Santa Ana River / FW
South:	Various Industrial/Commercial Office Uses / Various Industrial and Commercial designations by the Cities of San Bernardino and Redlands
East:	Santa Ana River / FW
West:	Santa Ana River / FW

3.1. Description of the Existing Biological and Physical Conditions

3.1.1. Biological Study Area

The Biological Study Area (BSA) encompasses the footprint of the completed project, construction limits and easements, construction access areas, construction staging areas, drainage improvement areas, as well as areas of the SAR (up to 92m or 300ft north of the Project alignment) affected indirectly by the Project (Figure 4).

3.1.2. Physical Conditions

Topography of the Project alignment is relatively flat and two surface-water resources occur in the Project area: the SAR and Mission Zanja Creek, which has its confluence with the SAR in the vicinity of the Orange Show Road Bridge across the river.

3.1.3. Biological Conditions in the Biological Study Area

The BSA supports a myriad of habitat types, including but not limited to riparian (Holland community code 61330), RAFSS (Holland community code 32720), sandy river wash (Holland community code 11730), bare areas (Holland community code 11760), disturbed ground urban or built-up land (Holland community code 11100) and non-native grassland (Holland community code 42200). Please refer to Appendix B: Figures 1a-1d for a view of habitat types found within the BSA.

The habitat types found within the project construction footprint are limited to bare areas and riparian (Figure 5-1 through 5-17)

Dense stands of riparian habitat that are modest in size are found scattered along the BSA within SAR from Waterman Avenue to Tippecanoe Avenue. The riparian habitat within the BSA is in various seral stages and generally consists of tall, multilayered, open canopy riparian woodland. The characteristic vegetative species within this riparian habitat include; Freemont cottonwood (*Populus fremontii),* black willow (*Salix goodingii*), sandbar willow (*S. hindsiana*), mule fat (*Baccharis salicifolia*), and sycamore (*Platanus racemosa).* In the absence of flooding, this riparian woodland has emerged with a complex canopy structure of varying layers of trees, shrubs, herbs and vines. The overstory averages over 35 ft in height.

RAFSS occurs within the BSA, outside of but adjacent to the Project alignment, between California Street and Orange Show Road. The RAFSS found in the BSA is characterized by buckwheat (*Eriogonum fasciculatum*), deerweed (*Lotus scoparus*) yerba santa (*Eriodictyon trichocalyx* var *trichocalyx*), scale broom (*Lepidospartum squamatum*), brittlebrush (*Encelia farinosa*), California sagebrush (*Artemisia Californica*), golden currant (*Ribes aureum*), California croton (*Croton californica*), and black sage (*Salvia melifera*).

In addition to the rich RAFSS and riparian habitat communities found within the BSA, there are small pockets where non-native exotic species have colonized. The dominant non-native invasive plants found in the riparian areas include arundo *(Arundo donax)*, tree tobacco (*Nicotiana glauca*), castor bean (*Ricinus communis*), and salt cedar (*Tamarix ramosissima*). At this point, none of these species are well established and/or are out-competing the native species. In contrast, non-native mustard (*Brassica incanca*) has become well-established in non-native grassland habitat within the BSA.

The BSA contains habitat of varying quality and value. The riparian habitat within the BSA is important because it provides shelter and forage to neo-tropical migratory birds, many of which are rare or are declining species. Neotropical migrants such as the yellow-rumped warbler *(Dendroica coronata),* orange-crowned warbler *(Vermivora celata),* blackthroated gray warbler *(Dendroica nigrescens),* MacGillivray's warbler *(Oporornis tolmiet),*white-crowned sparrow *(Zonotrichia leucophrys),* golden-crowned sparrow *(Zonotrichia atricapilla),* song sparrow *(Melospiza melodia),* common yellowthroat *(Geothlypis trichas),* yellow warbler *(Dendroica petechia),* yellow-breasted chat *(Icteria virens),* and ruby-crowned kinglet *(Regulus calendula)* depend on the deciduous trees and shrubs for foraging during migration. The mature riparian trees provide numerous cavities for cavity-dependent wildlife and the tall trees are used by nesting raptors. Raptors such as Cooper's hawk *(Accipiter cooperii),* red-tailed hawk, red-shouldered hawk *(Buteo lineatus),* white-tailed kite *(Elanus caeruleus)*, and American kestrel *(Falco sparvarious)* have a wealth of resources to draw on for foraging and nesting within the BSA.

The reptiles known to occur in the vicinity of the BSA are the western fence lizard *(Sceloporus occidentalis)*and San Diego alligator lizard *(Gerrhonotus multicarinatus webbi),* red coachwhip *(Masticophis flagellum piceus),* side-blotched lizard *(Uta stansburiana),* western skink *(Eumeces sldltoniansus),* San Diego gopher snake *(Pituophis melanoleucus annectens),* and California kingsnake *(Lampropeltis getulus californiae).*

Fish known to occur in the SAR and Mission-Zanja Creek within the BSA include the introduced mosquito fish (Gambusia affinis), fathead minnow (Pimephales promelas), and bluegill (Lepomis macrochirus). Amphibians include the Pacific chorus frog (*Pseudacris regila*), western toad (*Bufo boreus*) and the non-native bullfrog (*Rana catesbeiana*), and African clawed frog (*Xenopus laevis*).

The habitat within the BSA serves is favorable for foraging, nesting, burrowing, and wildlife movement. The most common mammals occurring or expected to occur in the BSA include small mammals such as ornate shrew *(Sorex omatus),* broadfooted mole *(Scapanus latimanus),* California vole *(Microtus micrtous),* Botta's pocket gopher *(Thomomys bottae),* deer mouse *(Peromyscus maniculatus),* dusky-footed woodrats *(Neotoma fuscipes),* raccoon *(Procyon lotor),* long-tailed weasel *(Mustela frenata),* and striped skunk *(Mephitis mephitis).* Larger mammals would include mule deer *(Odocoileus hemionus),* and coyote *(Canis latrans).*

3.2. Regional Species and Habitats of Concern

Despite its location in the middle of a dense urban area, the SAR floodplain maintains considerable habitat value. In addition to the fundamental flood control and water-related functions of the SAR, this watercourse serves as a wildlife habitat linkage, corridor, and buffer in an urban context, linking habitats that are separated by development and providing wildlife dispersal and migration pathways. The floodplain also buffers plants and wildlife from surrounding human disturbance. For these and other reasons the habitats in SAR floodplain, and by default the BSA, support a high level of natural resource diversity and richness. Within the BSA, the SAR supports riparian and RAFSS habitats which are two habitat types of concern and are known to support several sensitive species.

Table 1 below provides a list of sensitive species with a potential to occur in the vicinity of the BSA and information as to the presence of suitable habitat and/or CH. Information

relative to the federally-listed (threatened or endangered) species likely to occur in the Project area was furnished by the USFWS and a list of all sensitive species documented to occur in the USGS – Redlands and San Bernardino South quadrangles was generated by the CNDDB.

Table 1: Listed, Proposed Species, and Critical Habitat Potentially Occurring or Known to Occur in the Project Area.

Common Name	Scientific Name	Status	General Habitat	Habitat Present / Absent	Rationale
Plants					
bristly sedge	*Carex comosa*	CNPS 2.1	Marshes and swamps.	A	Grows along lake margins and wet places which are absent..
California bedstraw	*Galium californicum ssp. primum*	CNPS 1B	Chaparral, lower montane coniferous forest.	A	Grows in shade of trees and shrubs at the lower edge of the pine belt, in pine forest-chaparral ecotone.
California satintail	*Imperata brevifolia*	CNPS 2.1	Coastal scrub, chaparral, riparian scrub, mojavean scrub, meadows and seeps (alkali).	HP	Marginal habitat present. Species not found during survey.
Gambel's water cress	*Nasturtium gambelii*	FE/ST	Marshes and swamps.	A	Fond in freshwater and brackish marshes at the margins of lakes and along streams, in or just above the water level.
Horn's milk-vetch	*Astragalus hornii var. hornii*	CNPS1B	Meadows and seeps, playas.	A	Grows along lake margins, alkaline sites which are absent.
Los Angeles sunflower	*Helianthus nuttallii ssp. parishii*	CNPS 1A	Marshes and swamps (coastal salt and freshwater). Historical from southern California.	A	Marsh/swamp habitat is not present.
marsh sandwort	*Arenaria paludicola*	FE/SE/ CNPS1B	Marshes and swamps.	A	No dense mats of typha, juncus, scirpus, etc. and no freshwater marsh.
mesa horkelia	*Horkelia cuneata ssp. puberula*	CNPS 1B	Chaparral, cismontane woodland, coastal scrub.	HP	Suitable habitat present but this species is not documented in the local vicinity of the Project and was not found during survey.
Nevin's barberry	*Berberis nevinii*	FE/SE	Chaparral, cismontane woodland, coastal scrub, riparian	A	Preferred steep, north-facing are absent from site..

Common Name	Scientific Name	Status	General Habitat	Habitat Present / Absent	Rationale
			scrub.		
Parish's gooseberry	*Ribes divaricatum var. parishii*	CNPS 1A	Riparian woodland.	HP	Suitable habitat present. Species not found during survey.
Parish's desert-thorn	*Lycium parishii*	CNPS 2.3	Coastal scrub, sonoran desert scrub.	HP	Suitable habitat present. Species not found during survey.
Parish's bush-mallow	*Malacothamnus parishii*	CNPS 1A	Chaparral, coastal sage scrub.	HP	Suitable habitat present. Species not found during survey.
Parry's spineflower	*Chorizanthe parryi var. parryi*	CNPS 1B	Coastal scrub, chaparral.	HP	Suitable habitat present. Species not observed during survey.
Plummer's mariposa-lily	*Calochortus plummerae*	CNPS 1B	Coastal scrub, chaparral, grassland, lower montane coniferous forest.	HP	Suitable habitat present. Species not observed during survey.
Pringle's monardella	*Monardella pringlei*	CNPS 1A	Coastal scrub.	HP	Suitable habitat present. Species not found during survey.
Robinson's pepper-grass	*Lepidium virginicum var. robinsonii*	CNPS 1B	Chaparral, coastal scrub.	HP	Suitable habitat present. Species not found during survey.
Salt Spring checkerbloom	*Sidalcea neomexicana*	CNPS 2.2	Alkali playas, brackish marshes, chaparral, coastal scrub, lower montane forest.	A	Species requires alkali springs and marshes which are absent from site.
salt marsh bird's-beak	*Cordylanthus maritimus ssp. maritimus*	FE/SE	Coastal salt marsh, coastal dunes.	A	Limited to the higher zones of the salt marsh habitat
San Bernardino aster	*Symphyotrichum defoliatum*	CNPS 1B	Meadows and seeps, marshes and swamps, coastal scrub, cismontane woodland, lower montane coniferous forest, grassland.	A	Requires vernally mesic grassland, ditches, streams and springs. Species not found during survey.
Santa Ana River woollystar	*Eriastrum densifolium ssp. sanctorum*	FE/SE	Coastal scrub, chaparral.	HP	Suitable habitat present. Species was found approx. 150 meters outside of the Project boundaries.
slender-horned spineflower	*Dodecahema leptoceras*	FE/SE	Chaparral, coastal scrub (alluvial fan sage scrub).	HP	Suitable habitat present. Species documented in local vicinity, but not found during focused survey.

Common Name	Scientific Name	Status	General Habitat	Habitat Present / Absent	Rationale
smooth tarplant	*Centromadia pungens ssp. laevis*	CNPS 1B	Valley and foothill grassland, chenopod scrub, meadows, playas, riparian woodland.	A	Grows in alkali meadow, alkali scrub which is absent.

Fish

arroyo chub	*Gila orcuttii*	SSC	Los Angeles basin south coastal streams.	A.	Project abuts dry sandy river habitat. This species occurs in slow water stream sections with mud or sand bottoms.
Santa Ana sucker	*Catostomus santaanae*	FT	Endemic to Los Angeles basin south coastal streams.	A/ CH	Nearest location is d/s of La Cadena at the Rialto Drain. CH adjacent to Project alignment
Santa Ana speckled dace	*Rhinichthys osculus ssp. 3*	SSC	Headwaters of the Santa Ana and san Gabriel rivers. May be extirpated from the los Angeles river system.	A	Requires permanent flowing streams with summer water temps of 17-20 c.

Reptiles & Amphibians

coast (San Diego) horned lizard	*Phrynosoma coronatum (blainvillii population)*	SSC	Inhabits coastal sage scrub and chaparral in arid and semi-arid climate conditions	HP	Species documented in vicinity.
northern red-diamond rattlesnake	*Crotalus ruber ruber*	SSC	Chaparral, woodland, grassland, & desert areas from coastal San Diego County to the eastern slopes of the mountains.	A	Occurs in rocky areas & dense vegetation. Needs rodent burrows, cracks in rocks or surface cover objects.
orange-throated whiptail	*Aspidoscelis hyperythra*	SSC	Inhabits low-elevation coastal scrub, chaparral, and valley-foothill hardwood habitats.	HP	Prefers washes & other sandy areas with patches of brush & rocks. Species not observed during general biological surveys, but note that focused herpetological surveys were not conducted.
Sierra Madre yellow-legged frog	*Rana muscosa*	FE	Federal listing refers to populations in the San Gabriel, San Jacinto & San Bernardino	A	Always encountered within a few feet of water.

Common Name	Scientific Name	Status	General Habitat	Habitat Present / Absent	Rationale
			mountains only.		
silvery legless lizard	*Anniella pulchra pulchra*	SSC	Sandy or loose loamy soils under sparse vegetation.	A	Soil moisture is essential. They prefer soils with a high moisture content. Soils on site are dry.

Birds

burrowing owl	*Athene cunicularia*	SSC	Open, dry annual or perennial grasslands, deserts & scrublands characterized by low-growing vegetation.	HP	Suitable habitat present adjacent to trail alignment between Orange Show Road and California Street. Species or evidence such as feathers, castings , white wash or burrows were not observed during any of the field work, but note that protocol surveys were not conducted.
coastal California gnatcatcher	*Polioptila californica californica*	FT	Obligate, permanent resident of coastal sage scrub below 2500 ft in southern California.	A	Species not documented in local vicinity for over 10 years. RAFSS is not the preferred habitat of this species.
least Bell's vireo	*Vireo bellii pusillus*	FE/SE	Summer resident of southern California in low riparian in vicinity of water or in dry river bottoms; below 2000 ft.	P	Documented and observed on April 14, 2011.
loggerhead shrike	*Lanius ludovicianus*	SSC	Broken woodlands, savannah, pinyon-juniper, Joshua tree, & riparian woodlands, desert oases, scrub & washes.	P	Suitable habitat present and species observed.
southwestern willow flycatcher	*Empidonax traillii extimus*	FE/SE	Riparian woodlands in southern California.	P/CH	Portions of the Project are mapped within CH. Species is documented in Project area near Waterman Avenue.
yellow-breasted chat	*Icteria virens*	SSC	Summer resident; inhabits riparian thickets of willow & other brushy tangles near watercourses.	HP	Suitable habitat present. Species documented in local vicinity.

Common Name	Scientific Name	Status	General Habitat	Habitat Present / Absent	Rationale
western yellow-billed cuckoo	*Coccyzus americanus occidentalis*	FC/SE	Riparian forest nester, along the broad, lower flood-bottoms of larger river systems.	A	Nests in riparian jungles of willow. Habitat is not suitable for this species.
yellow warbler	*Dendroica petechia brewsteri*	SSC	Riparian plant associations. Prefers willows, cottonwoods, aspens, sycamores, & alders for nesting & foraging.	HP	Suitable habitat present. Species not seen during survey, but note focused avian surveys were not conducted.

Mammals

American badger	*Taxidea taxus*	SSC	Most abundant in drier open stages of most shrub, forest, and herbaceous habitats, with friable soils.	HP	Suitable habitat present and species documented in vicinity.
Los Angeles pocket mouse	*Perognathus longimembris brevinasus*	SSC	Lower elevation grasslands & coastal sage communities in and around the los Angeles basin.	P	Suitable habitat present. Species documented in vicinity and found during survey.
northwestern San Diego pocket mouse	*Chaetodipus fallax fallax*	SSC	Coastal scrub, chaparral, grasslands, sagebrush, etc. In western San Diego co.	P	Known locations
pallid bat	*Antrozous pallidus*	SSC	Deserts, grasslands, shrublands, woodlands & forests. Most common in open, dry habitats with rocky areas for roosting.	A	No suitable roosting sites.
pocketed free-tailed bat	*Nyctinomops femorosaccus*	SSC	Variety of arid areas in southern California; pine-juniper woodlands, desert scrub, palm oasis, desert wash, desert riparian	A.	Species found in rocky areas with high cliffs
San Bernardino kangaroo rat	*Dipodomys merriami parvus*	FE	Alluvial scrub vegetation on sandy loam substrates characteristic of alluvial fans and flood plains.	P/CH	Project area mapped within CH. Species was found during survey and is documented in Project area.

Common Name	Scientific Name	Status	General Habitat	Habitat Present / Absent	Rationale
Stephens' kangaroo rat	*Dipodomys stephensi*	FE/ST	Primarily annual & perennial grasslands, but also occurs in coastal scrub & sagebrush with sparse canopy cover.	A	Out of species range.
San Diego black-tailed jackrabbit	*Lepus californicus bennettii*	SSC	Open shrub / herbaceous & tree / herbaceous edges.	HP	Suitable habitat present. Species not found during survey.
San Diego desert woodrat	*Neotoma lepida intermedia*	SSC	Coastal scrub of southern California from San Diego county to San Luis Obispo county.	P	Suitable habitat present. Species documented in vicinity and found during survey.
southern grasshopper mouse	*Onychomys torridus ramona*	SSC	Desert areas, especially scrub habitats with friable soils for digging. Prefers low to moderate shrub cover.	HP	Suitable habitat present. Species documented in vicinity.
western mastiff bat	*Eumops perotis californicus*	SSC	Many open, semi-arid to arid habitats, including conifer & deciduous woodlands, coastal scrub, grasslands, chaparral etc	A	Roosts in crevices in cliff faces, high buildings, & tunnels.
western yellow bat	*Lasiurus xanthinus*	SSC	Found in valley foothill riparian, desert riparian, desert wash, and palm oasis habitats.	HP	Suitable habitat present.

Insects

Delhi Sands flower-loving fly	*Rhaphiomidas terminatus abdominalis*	FE	Found only in areas of the Delhi sands formation in southwestern San Bernardino & northwestern Riverside counties.	A	Requires fine, sandy soils, often with wholly or partly consolidated dunes & sparse vegetation.

Coding of Terms: Absent [A] - no habitat present and no further work needed. Habitat Present [HP] -habitat is, or may be present. The species may be present. Present [P] - the species is present. Critical Habitat [CH] - Project footprint is located within a designated CH unit, but does not necessarily mean that appropriate habitat is present.

Status: Federal Endangered (FE); Federal Threatened (FT); Federal Proposed (FP, FPE, FPT); Federal Candidate (FC), Federal Species of Concern (FSC); State Endangered (SE); State Threatened (ST); Fully Protected (FP); State Rare (SR); State Species of Special Concern (SSC); California Native Plant Society (CNPS) 1A- presumed extinct in California, 1B - Rare, Threatened or Endangered in California and elsewhere, 2 - Rare, Threatened or Endangered in California but more common elsewhere, 3 - Plants for which more information is needed, 4 - Plants with a limited distribution.

Chapter 4. Results: Biological Resources, Discussion of Impacts and Mitigation

4.1. Natural Communities of Special Concern

The Natural Communities of Special Concern that are located within and/or adjacent to the trail alignment are RAFSS, riparian, Jurisdictional Waters, and Critical Habitat (CH) for SBKR, Santa Ana sucker (*Catostomus santaannae*) [SASU] and SWWF.

4.1.1. RAFSS

RAFSS is a distinct habitat type composed of species found in both coastal sage scrub and chaparral communities. Areas where there are historical braided channels containing soils deposited by alluvial or wind driven processes, typically support both alluvial sage scrub and chaparral vegetation (Smith, 1980). This is a relatively open vegetation type adapted to periodic disturbances such as flooding and erosion. RAFSS is composed of an assortment of drought-deciduous shrubs and larger evergreen woody shrubs. Vegetation generally associated with RAFSS is characterized by perennial vegetation consisting of California Juniper (*Juniperus californica*), Birch-leaf mountain mahogany (*Cercocarpus betuloides*), California Buckwheat (*Eriogonum faciculatum*), Yerba Santa *(Eriodictyon trichocalyx*), deer weed *(Lotus scoparus)*, California Croton (*Croton californicus*), scalebroom *(Leptospartum squamatum*) and Santa Ana River woollystar. RAFSS also has an herbaceous component consisting of several species including: introduced brome grasses *(Bromus madritensis)* and (*Bromus tectorum)*, Lupines *(Lupinus Bicolor),* storksbill *(Erodium cicutarium)*, chia *(Salvia columbariae),* and dove weed *(Eremocarpus setigerus)*.

Three phases of RAFSS have been described; pioneer, intermediate, and mature with shrub species associations varying. The phases are thought to correspond to the factors such as flood scour, distance from flood channel, time since last flood, and substrate features. The pioneer stage is the earliest phase and is generally sparse as it occurs within active channels and is, therefore, subject to frequent hydrological disturbances. The intermediate phase is typically found on higher benches between active channel (pioneer phase) and mature floodplain terraces and is subject to less-frequent periodic flooding. The vegetation of both the pioneer and intermediate phases is relatively open. The oldest or mature phase of alluvial sage scrub is rarely affected by flooding and supports the highest plant density.

4.1.1.1. SURVEY RESULTS

RAFSS occurs within the BSA but not within the Project construction area. RAFSS is found north of the Project alignment between Orange Show Road and California Street and south of the Project alignment between Mountain View Avenue and California Street.

4.1.1.2. AVOIDANCE AND MINIMIZATION EFFORTS

The trail was specifically sited along the top of the southern flood control levee to avoid impacts to the native habitat and open space adjacent to both sides of the levee. The construction staging locations where also chosen in previously disturbed areas where no sensitive resources exists such as on the levee bank where the top of the bank is wider.

This project avoids impacts to RAFSS. No further action is warranted, recommended, or required.

4.1.2. Riparian

Riparian habitat is dependent upon a dynamic hydrologic regime. Periodic flooding contributes to the habitat's structural diversity and sediment deposition contributes to the topographical diversity thereby increasing species diversity in the floodplain community.

4.1.2.1. SURVEY RESULTS

Dense stands of riparian habitat that are modest in size are found scattered along the BSA within SAR from Waterman Avenue to Tippecanoe Avenue with narrower strips occurring between Tippecanoe Avenue and California Avenue. An additional riparian forest patch occurs south of the levee between Mountain View and California. This has been isolated from the river and there is substantial die-back and accumulation of potential fuels.

The riparian habitat within the BSA is in various seral stages and generally consists of tall, multilayered, open, canopy riparian woodland. The characteristic vegetative species within this riparian habitat include: Freemont cottonwood (*Populus fremontii),* black willow (*Salix goodingii*) narrow-leaved willow (*S. exigua*), mule fat (*Baccharis salicifolia*), and sycamore (*Platanus recemosa).*

4.1.2.2. AVOIDANCE AND MINIMIZATION

The Waterman Avenue, Orange Show Road and Tippecanoe Avenue underpasses were designed to minimize impacts to the maximum extent possible. Rip-rap or slope protection is proposed in these areas to keep the width of disturbance to a minimum. Segments of the trail alignment were re-adjusted to the south to avoid and/or minimize temporary impacts related to construction. The engineering details for the drainage structures required for this project have been reduced to the greatest extent possible in order to minimize effects to riparian habitat.

4.1.2.3. PROJECT IMPACTS

It is estimated that construction of the Phase III underpasses will result in a total disturbance area of approximately 2.0 acres to riparian habitat. Of the total impact area to riparian habitat, approximately 1 acre of impact will be permanent. The largest area of impact to riparian habitat will occur east of the Mission/Zanja creek. This is the only unimproved area where the trail will be constructed. The engineering design in this area includes the installation of a retaining wall to minimize and avoid impacts to jurisdictional waters, decrease future maintenance requirements, and increase user safety.

4.1.2.4. MITIGATION

There is no specific mitigation for impacts to riparian habitat because these impacts also fall within the impacts to SWWF CH and jurisdictional waters. To avoid duplicative mitigation, impacts to riparian habitat, as well as impacts to SWWF CH, are accounted for and will be offset by the mitigation proposed for impacts to CDFG jurisdictional streambed. The reason being is that the extent of the CDFG jurisdiction encompasses the project-related impacts to riparian habitat and SWWF CH.

4.1.2.5. CUMULATIVE IMPACTS

There are no known proposed developments in the general vicinity of this Project that will result in the loss or fragmentation of riparian habitat. Other future projects including the SART Phase IV, Mountain View Avenue Bridge, and Greenspot Realignment and Bridge Replacement Projects will not result in appreciable loss or degradation to riparian habitat.

4.1.3. Jurisdictional Waters

The SAR is considered a WoUS. and a Water of the Sate and is regulated under the jurisdictions of the ACOE and CDFG. This section summarizes the findings of ACOE and CDFG jurisdiction for the Project and delineates the subject jurisdictional boundaries using the most up-to-date regulations and written policy and guidance from the ACOE and CDFG. Only the ACOE and CDFG can make a final determination of jurisdictional boundaries.

4.1.3.1. SURVEY RESULTS

An expert regulatory permitting specialist used the engineered plans in conjunction with survey staking in the field to examine the trail alignment and construction envelope relative to the OHWM (limits of ACOE jurisdiction) and outer riparian canopy drip line (limits of CDFG jurisdiction). Data gathered during the field investigations determined that the project will encroach into CDFG streambed at the Waterman Avenue, Orange Show Road, Tippecanoe underpasses, east of the Mission/Zanja Creek and at the outfall structures. Construction of the trail will encroach into non-wetland WoUS at the Waterman Avenue underpass, east of the Mission/Zanja Creek and at the outfall structures are located within the project action area.

Please note that the federal and state water quality standards are intertwined in the federal Clean Water Act, as implemented by the Porter-Cologne Act. The RWQCB's regulatory jurisdiction is pursuant to Section 401 of the Federal CWA. Impacts to Corps jurisdiction are the same for RWQCB.

4.1.3.2. AVOIDANCE AND MINIMIZATION

The project avoids impacts to non-wetland WoUS at Orange Show Road and Tippecanoe Avenue.

4.1.3.3. PROJECT IMPACTS

Project related impacts to Corps jurisdiction total of 2 acres, of which 0.3 acre will be permanent and 1.39 will be temporary. Impacts to vegetated CDFG an RWQCB jurisdiction total 2 acres, of which 1 acre will be permanent and impacts to un-vegetated CDFG an RWQCB jurisdiction total 1.35 acres, of which 0.5 acre will be permanent.

4.1.3.4. MITIGATION

The Regional Parks will restore the temporarily disturbed streambed and WoUS to their pre-construction native condition in a 1:1 ratio.

Regional Parks proposes to utilize the Santa Ana Watershed Association (SAWA), an In-Lieu-Fee (ILF) entity approved by the ACOE and CDFG, to mitigate permanent impacts to streambed and WoUS in a 2:1 mitigation to impact ratio. Off-site compensatory mitigation was chosen to mitigate permanent impacts because it is an efficient mitigation option.

4.1.3.5. CUMULATIVE IMPACTS

There are no known proposed developments in the general vicinity of this Project that will result in the loss or fragmentation of jurisdictional waters. Other future projects including the SART Phase IV, Mountain View Avenue Bridge, and Greenspot Realignment and Bridge Replacement Projects will not result in appreciable loss or degradation to jurisdictional waters.

4.1.4. San Bernardino Kangaroo Rat Critical Habitat

The USFWS is the principal Federal agency responsible for conserving, protecting and enhancing fish, wildlife and plants and their habitats by enforcing Federal wildlife laws, administering the ESA, managing migratory bird populations, restoring nationally significant fisheries, and conserving wildlife habitat. The USFWS listed the SBKR as endangered on September 24, 1998 (63 FR 51005) and designated CH for this species on April 23, 2002 (67 FR 19812). On January 10, 2011 the Court rejected the USFWS's 2008 revised SBKR CH designation (FR 73, No. 202). As a result of this decision, this project is subject to the SBKR CH that was designated by the USFWS in 2002 (67 FR 19812). The 2002 CH designation for the SBKR encompasses 33,295 acres of land in Riverside and San Bernardino counties, California.

CH is defined in section 3(5)(A)(i) of the ESA, in part, as "*areas occupied by the species at the time of listing and containing those physical and biological features (Primary Constituent Elements or PCEs) that are essential to the conservation of the species, and that may require special management considerations or protection. General requirements include, but are not limited to: space for individual and population growth and for normal behavior; food, water, air, light, minerals, or other nutritional or physiological requirements; cover or shelter; sites for breeding, reproduction, and rearing of offspring; and habitats that are protected from disturbance or are representative of the historic geographical and ecological distributions of a species*".

The areas designated as CH for SBKR are identified in four separate units. The four units are within the geographical range of the SBKR and support the habitat the species requires for foraging, sheltering, reproduction, rearing of young, dispersal, and genetic exchange. This project falls within the Santa Ana River CH Unit (Unit 1), located in San Bernardino County. Unit 1 encompasses approximately 8,935 ac, and includes the SAR and portions of City, Plunge, and Mill creeks. It is bounded by Seven Oaks Dam to the northeast. Although Seven Oaks Dam impedes sediment transport and reduces the magnitude, frequency, and extent of flood events, the system still retains partial fluvial dynamics because contributions from Mill Creek are not impeded by a dam or debris basin. This unit contains upland refugia and tributaries that are occupied by the species, active hydrological channels, floodplain terraces, and areas of habitat immediately adjacent to floodplain terraces. The functions and values of the SBKR CH within Unit 1 include: (1) Soil series consisting predominantly of sand, loamy sand, sandy loam, or loam; (2) Alluvial fan sage scrub and associated vegetation, such as coastal sage scrub and chamise chaparral, with a moderately open canopy; (3) River, creek, stream, and wash channels; alluvial fans; floodplains; floodplain benches and terraces; and historic braided channels that are subject to dynamic geomorphological and hydrological processes typical of fluvial systems within the historical range of the San Bernardino kangaroo rat; and (4) Upland areas proximal to floodplains with suitable habitat.

4.1.4.1. SURVEY RESULTS

The entire BSA is mapped within Unit 1 of designated SBKR CH. The CH within the BSA between Orange Show Road and California Street contains the PCEs for SBKR, is suitable for SBKR and is connected to a large block of occupied habitat. In contrast, the CH within the BSA between Waterman Avenue and Orange Show Road does not contain any PCEs for SBKR, is not suitable for SBKR and does not provide connectivity to large blocks of occupied habitat. It is not likely that this area will be re-colonized by SBKR because it supports primarily riparian habitat.

Although the entire BSA is mapped within SBKR CH, the project alignment and construction footprint do not contain any PCEs required by SBKR.

4.1.4.2. AVOIDANCE AND MINIMIZATION EFFORTS

The project was specifically designed to avoid impacts to habitat suitable for or occupied by SBKR. The majority of the trail will be constructed on the existing flood control levee and maintenance road. All suitable SBKR habitat areas will be avoided.

4.1.4.3. PROJECT IMPACTS

The Project will result in approximately 17.5 acres of land disturbance all of which is within designated SBKR CH. None of the 17.5 acres contains PCE for SBKR. As such, the permanent loss of 5.9 acres of the 8,935 acres of CH designated within Unit 1 will not result in an adverse modification of the CH designated in this unit. Furthermore, this Project will not change the hydrologic processes in any way that will contribute to further loss of PCEs elements identified for SBKR within the SAR.

4.1.4.4. MITIGATION

Although, all project-related impacts to SBKR CH will occur in low quality and, unsuitable habitat devoid of PCEs, losses of CH must be fully accounted for to ensure that adequate amounts of suitable habitat remain available for the long-term survival of the affected species. Therefore, Regional Parks proposes to offset the project-related impacts to SBKR CH by rehabilitating a portion of a degraded, bare lot west of Orange Show Road, north of the trail alignment.

Additionally, the following measures shall also be implemented.

- A qualified biologist shall provide an environmental awareness class to all persons who will work on-site during construction. The class will consist of a presentation about the biology of the surrounding area and any natural resource laws pertaining to the project. A fact sheet containing this information shall also be prepared and distributed. Upon completion of the class, the attendees will sign a form stating that they understand all protection measures. These forms will be filed with the County and will be made available to the regulatory resource agencies upon request.

- Under the supervision of a biologist, bright orange plastic construction fencing, stakes, flags, or markers that are clearly visible to construction personnel on foot and in heavy equipment will be used to delimit areas of grading, staging, and avoidance for the proposed project. These markers will be in place prior to Project initiation (that includes any clearing, grubbing, grading, or staging of equipment or vehicles) and will remain in place until all construction activities are finished. Intrusion by construction personnel into adjacent land, outside of the delineated construction

envelope, will not be permitted. All construction personnel and equipment will operate only within the clearly delineated limits of grading and construction activities.

- Unauthorized, public off-road use of the Project area shall be discouraged by posting of signs and by monitoring by the construction crew.
- Existing routes of travel and approved access roads will be used to and from construction areas. Cross-country travel by vehicles and equipment will be prohibited.
- Trash from construction personnel, especially food items or packaging, will be disposed of in covered containers and removed daily.

4.1.4.5. CUMULATIVE IMPACTS

CH was designated for SBKR as a result of this species trend towards extinction. Since the designation of CH in 2002 a number of permitted and authorized residential, commercial, and industrial development projects in the San Bernardino Valley have resulted in the fragmentation and loss of CH. The SART Phase IV, Mountain View Avenue Bridge, and Greenspot Realignment and Bridge Replacement Projects are future projects that will result in cumulative (approximately 36 acres), direct, permanent and temporary loss of SBKR CH.

4.1.5. Santa Ana sucker Critical Habitat

Santa Ana sucker (*Catostomus santaannae*) [SASU] is a sucker fish found only in a handful of rivers in southern California. The SASU's range is extremely restricted; they are native only to the Los Angeles, San Gabriel, Santa Ana, and Santa Clara River systems in Southern California. Populations have been lost from several parts of the rivers, so that they now only live in the upper portion of the Los Angeles and San Gabriel drainages, and the lower part of the SAR in Reaches 4 thru2, especially in areas with additional treated wastewater effluent from sewage treatment plants. Limiting factors for the SASU are hydrology and sediment. The USFWS listed the SASU as threatened on April 12, 2000 (65 FR 19686) and designated CH for this species on February 26, 2004 (69 FR 8839) which was revised on January 4, 2005 (70 FR 425). On December 9, 2009, the USFWS proposed another revised CH designation for the SASU (74 FR 65056), which was finalized December 14, 2010 (75 FR 77962).

One of the key issues identified in earlier rules of the USFWS to designate CH for the SASU was sediment load and sediment transport. According to the sediment transport analysis prepared by EIP Associates in their evaluation of the final rule to designate CH for the SASU, the primary sediment sources for Reaches 3 and 4 of the Santa Ana River originate from Mill Creek, Plunge Creek, City Creek Lytle /Cajon Creek and Reche Canyon Channel (April 26, 2004 Comments to USFWS submitted by SBVMWD, Western Municipal Water District of Riverside County, San Bernardino County Flood Control District). As sediments travel down the SAR, much of the sediment load falls out at the I-10 freeway overcrossing. The Corps installed dissipation structures to protect the I-10 freeway overcrossing of the SAR. As designed, the dissipaters slow the surface flow velocities down. The results are sediment deposition at the dissipaters and downstream channel bed degradation.

In 2004, EIP Associates evaluated the Final Rule to designate CH for the SASU (69 FR 8839). In this evaluation EIP showed that the channel degradation in a 10-mile stretch downstream of the dissipaters currently averages 0.6 inches of degradation per year. The

EIP evaluation also showed that even with the 40% reduction in sediment load caused by the Seven Oaks Dam, the remaining sediment sources were substantial. The conclusion of EIP's evaluation was that substantial sediment sources exist in the tributaries identified above and that transport of those sediments into occupied SASU habitat in the SAR is sufficient to sustain their populations.

4.1.5.1. SURVEY RESULTS

The December 14, 2010 (75 FR 77962) final rule on the revised CH for SASU defines seven (7) primary constituent elements that are essential to the conservation of SASU. These primary constituent elements are as follows: 1) A functioning hydrological system within the historical geographic range of Santa Ana sucker that experiences peaks and ebbs in the water volume (either naturally or regulated) that encompasses areas that provide or contain sources of water and coarse sediment necessary to maintain all life stages of the species, including adults, juveniles, larvae, and eggs, in the riverine environment; 2) Stream channel substrate consisting of a mosaic of loose sand, gravel, cobble, and boulder substrates in a series of riffles, runs, pools, and shallow sandy stream margins necessary to maintain various life stages of the species, including adults, juveniles, larvae, and eggs, in the riverine environment; 3) Water depths greater than 1.2 in (3 cm) and bottom water velocities greater than 0.01 ft per second (0.03 m per second); 4) Clear or only occasionally turbid water; 5) Water temperatures less than 30 °C (86 °F); 6) In-stream habitat that includes food sources (such as zooplankton, phytoplankton, and aquatic invertebrates), and associated vegetation such as aquatic emergent vegetation and adjacent riparian vegetation to provide: (a) Shading to reduce water temperature when ambient temperatures are high, (b) shelter during periods of high water velocity, and (c) protective cover from predators; and 7) Areas within perennial stream courses that may be periodically dewatered, but that serve as connective corridors between occupied or seasonally occupied habitat and through which the species may move when the habitat is wetted.

The December 2010 final rule designated a total of 9,331 acres as SASU CH within portions of creeks and rivers in San Bernardino, Los Angeles, and Riverside counties, California. Unit 1 encompasses portions of the SAR in San Bernardino, Riverside, and Orange Counties including upper, mainstem and lower portions of the SAR as well as portions of the Rialto Drain and Sunnyslope Creek. Unit 1 is divided into three (3) subunits 1A, 1B and 1C.

The SART Phase III Project falls within Subunit 1A which is not occupied by the SASU but is essential to its conservation. 1,559 acres of CH have been designated as part of Subunit 1A. Subunit 1A provides essential sources of water and coarse sediment to occupied portions of the unit downstream. Upper Santa Ana River Subunit 1A is located near the Cities of Highland, Mentone, and Redlands in San Bernardino County, California. This subunit includes: 7 mi (12 km) of City Creek (measured from its confluence with the SAR), 12 mi (19 km) of Mill Creek (measured from its confluence with the SAR), and 10 mi (17 km) of the SAR from below the Seven Oaks Dam to near Tippecanoe Avenue.

While City Creek and the SAR above Tippecanoe Avenue are not currently occupied, these areas were historically occupied. The SAR above Tippecanoe Avenue, Mill Creek, and City Creek has been determined to be essential for the conservation of SASU because it provides stream and storm waters which are necessary to transport coarse sediments necessary to maintain preferred substrate conditions in downstream occupied portions in the SAR. According to the USFWS, the section of the SAR from above Tippecanoe Avenue in San Bernardino, City Creek, and Mill Creek are particularly essential for the conservation of the SASU since the Seven Oaks Dam has reduced the transport of coarse sediment and

altered the natural flow in the downstream, occupied areas of the SAR. The SAR and its unconfined tributaries are the primary sources of coarse sediment in the upper SAR watershed and are also part of the SAR hydrologic system, and assist in maintaining suitable water quality and temperature to occupied reaches of the SAR.

4.1.5.2. AVOIDANCE AND MINIMIZATION

The Project will implement stringent stormwater pollution prevention measures during construction and then will implement water quality management of runoff from the trail. All impacts to SASU CH will be avoided.

The trail alignment and construction footprint does not encroach into designated SASU CH. Therefore, the Project will not result in impacts or adverse modification to SASU CH. Furthermore, installation of the trail will not change the hydrologic processes in any way that will contribute to the loss of primary constituent elements identified for SASU. According to the US Army Corps of Engineers the hydrology for the SAR from the Seven Oaks Dam outflow is as follows. The 100-year discharge from Seven Oaks Dam is 5,000 cfs and the maximum controlled outflow from the Dam is 8,000 cfs before the spillway starts to overflow. The proposed trail is proposed to be installed where bank improvements already exist. The Project does not change the width of channel or the ability for the watercourse to meander back and forth during low flow storm events. The watercourses ability to transport of coarse sediment from upstream to downstream is not altered with the construction of the SART Phase III. The watercourse within the Project area is dry during the summer months and only carries storm flow in the winter time during the rainy season.

Since impacts to SASU CH will be avoided and no cumulative impacts can be identified, no mitigation is required.

4.1.6. Southwestern Willow Flycatcher Critical Habitat

Revised CH for the SWWF was issued October 19, 2005 (70 FR 60885 61009.) The Santa Ana Management Unit includes large portions of the SAR including a 25.3-mile segment beginning at the headwaters and an 8.5-mile segment beginning just upstream of Waterman Avenue. The physical and biological features or PCEs that are essential to the conservation of the SWWF include but are not limited to: space for individual and population growth and for normal behavior; food, water, air, light, minerals or other nutritional or physiological requirements; cover or shelter; sites for propagation and dispersal; and habitats that are protected from disturbance or are representative of the historical, geographical, and ecological distributions of the SWWF.

It is important to recognize the combined nature of the relationships between river function, water, hydrology, floodplains, soils, aquifers, and plant growth as together they form and support the vegetation and insect populations essential for the conservation of the SWWF. All the PCEs of CH for the SWWF are found in the riparian ecosystem within the 100-year floodplain or flood prone area. SWWF use riparian habitat for nesting, feeding, and sheltering while breeding, migrating, and dispersing. Because riparian vegetation is prone to periodic disturbance, flycatcher habitat is ephemeral and its distribution is dynamic in nature. Therefore, the riparian vegetation used by SWWFs is part of a gradually changing system, not only in its rapid growth due to its proximity to water, but its location within the floodplain due to the dynamic riverine environment.

The purpose of the CH is to sustain SWWFs across their range by providing a sufficient amount of riparian habitat. The CH designated in the SAR channel provides riparian habitat for breeding, migrating, dispersing, non-breeding and territorial SWWFs, metapopulation stability, gene flow, connectivity, population growth, and prevention against catastrophic loss. There are seven breeding sites known along the SAR.

4.1.6.1. SURVEY RESULTS

A total of 5.1 acres of SWWF CH is mapped within the Project area between Waterman Avenue and Tippecanoe Avenue. Of these 5.1 acres, 1.5 acres contain PCEs identified for SWWF including but not exclusive to woody, riparian vegetation supporting a mosaic of cottonwood, willow and other riparian vegetative associations in stands larger than 0.5 acres in size, with over 50 percent cover, densely structured in a two- or three-story canopy.

4.1.6.2. AVOIDANCE AND MINIMIZATION EFFORTS

The Project was designed so that the vast majority of the trail alignment will not result in permanent impacts to sensitive habitat, such as riparian, due to its location on an existing flood control levee and maintenance road. The underpasses were designed to minimize impacts to the maximum extent possible. Rip-rap or slope protection is proposed in these areas to keep the width of disturbance to a minimum.

4.1.6.3. PROJECT IMPACTS

As stated in the results, a total of 5.1 acres of SWWF CH is mapped within the Project area between Waterman Avenue and Tippecanoe Avenue. However, of those 5.1 acres, only 1.5 acres contain PCEs for SWWF. Within the 1.5 acres of CH where PCEs occur for SWWF, 0.9 acre will be permanently impacted and 0.6 acre will be temporarily impacted. The permanent loss of 0.9 acre within Santa Ana Management Unit will not result in an adverse modification of the CH designated in this unit. Furthermore, this Project will not change the hydrologic processes in any way that will contribute to further loss of PCEs elements identified for SWWF within the SAR.

4.1.6.4. MITIGATION

Any cumulative loss of SWWF CH habitat must be fully accounted for and the SWWF assured adequate habitat to protect long-term survival. A permanent impact of 0.9 acre will occur in SWWF CH between Waterman Avenue and Orange Show Road.

Regional Parks will restore temporarily disturbed areas to a pre-construction native condition in a 1:1 ratio. Please refer to the mitigation proposed for permanent impacts to streambed and WoUS.

4.1.6.5. CUMULATIVE IMPACTS

There are no known proposed developments in the general vicinity of this Project that will result in the loss or fragmentation of SWWF CH habitat. No cumulative impact is identified.

4.2. Special Status Plant Species

4.2.1. Santa Ana River woollystar

Santa Ana River woollystar is State and federally-listed as Endangered. It is a shrubby perennial which can grow to one meter (3.3 feet) tall. This species blooms from June to August and produces bright blue flowers. This species is associated with early- to moderate-

successional alluvial scrub, and thus requires periodic flooding and silting for the creation of new habitats and colonization. Suitable habitat is comprised of a patchy distribution of gravelly soils, sandy soils, rock mounds and boulder fields, with low amounts of clay and silt (USFWS 1986). These areas typically maintain a perennial plant cover of less than 50%. Associated perennial plants include California buckwheat (*Eriogonum fasciculatum*), California croton (*Croton californicus*), yerba santa (*Eriodictyon trichocalyx*) and scale-broom (*Lepidospartum squamatum*). The Santa Ana River woolly-star occurs along the SAR and Lytle and Cajon Creek flood plains from the base of the San Bernardino Mountains in San Bernardino County southwest along the SAR through Riverside County into the Santa Ana Canyon of northeastern Orange County from about 150 to 580 meters (Munz 1974).

4.2.1.1. SURVEY RESULTS

Santa Ana woollystar occurs on the north side of the SAR including near Mountain View Avenue and in conservation management areas, south of the San Bernardino airport. A number of large rainfall events and flooding from landscape scale burns in the adjacent mountains have led to wash-out of some populations and dispersal of soil seed banks downstream. Isolated individuals have been seen in somewhat atypical settings in the Project vicinity in recent years. However, it does not appear that new populations have established from these waifs and no individuals were found in the 2010 or 2011 focused surveys conducted for this project.

The proposed Project will not result in direct, indirect, or cumulative impacts to Santa Ana River woollystar because this plant species is absent from the Project footprint, construction zone, staging and access areas and from adjacent areas. No further action is required.

4.2.2. Slender-horned spineflower

The slender-horned spineflower is a small annual flower that is found in sandy soil in association with mature alluvial scrub. The ideal habitat for this species appears to be a terrace or bench that receives over-bank deposits every 50 to 100 years. This flower is endemic to southwestern California, ranging from central Los Angeles County east to San Bernardino County, and south to southwestern Riverside County in the foothills of the Transverse and Peninsular Ranges, at 200 to 700 meters elevation (Hickman 1993). Only eight areas are still known to support slender-horned spineflower populations, including two in San Bernardino County (SAR floodplain and Cajon Wash) (CNDDB 2008). Individuals are small and difficult to locate. This species is only readily detectable in the spring between April and June when in bloom. The Slender-horned spineflower was listed as endangered in January 1982 by the California Fish and Game Commission. On September 28, 1987, it was federally listed as endangered. This species occurs in Los Angeles, San Bernardino and Riverside Counties.

4.2.2.1. SURVEY RESULTS

Experienced botanists conducted focused surveys for this species according to an established protocol in appropriate habitat in 2010 and 2011. No spineflowers were found during the course of the surveys.

The proposed Project will not result in direct, indirect, or cumulative impacts to slender-horned spineflower because this plant species is absent from the Project footprint, construction zone, staging and access areas and from adjacent areas. No further action is required.

4.3. Special Status Animal Species Occurrences

4.3.1. San Bernardino kangaroo rat

The USFWS emergency listed the SBKR on January 27, 1998 and subsequently listed them as federally endangered later that same year on September 24, 1998 (63 FR 3837). The USFWS also designated CH units for the SBKR on April 23, 2002. SBKR are found primarily on well drained, sandy loam substrates, characteristic of alluvial fan and floodplains. In San Bernardino County, SBKR currently occupy the SAR, Cajon Creek Wash, Lytle Creek Wash, City Creek, and upper Etiwanda Wash. The SAR and its' tributaries, and Cajon and Lytle Creeks support robust, sustaining populations of SBKR and large contiguous patches of occupied habitat.

SBKR occur in more open areas of washes and benches above creek channel where alluvial sage scrub and chaparral vegetation is supported (McKernan, 1997). SBKR rarely occupy areas with vegetative cover over 60% or areas dominated by non-native vegetation. SBKR tend to prefer a more open canopy like what is found in the pioneer and intermediate RAFFS found adjacent to the Project area between Orange Show Road and California Street. This area also contains floodplain benches and terraces that are subject to periodic flooding. The Project is near upland refugia and is within the historical range of the SBKR.

4.3.1.1. SURVEY RESULTS

SBKR are known to occur in areas containing suitable habitat between Tippecanoe Avenue and California Street. Two SBKR individuals were also found within suitable habitat between Orange Show Road and Tippecanoe Avenue during a focused trapping survey conducted in December 2010. Downstream of Orange Show Road, the habitat quickly transitions from RAFSS habitat to Riparian forest. SBKR are not associated with riparian habitat and do not occur between Orange Show Road and Waterman Avenue.

4.3.1.2. AVOIDANCE AND MINIMIZATION

The project was specifically designed to avoid impacts to habitat suitable for or occupied by SBKR. The majority of the trail will be constructed on the existing flood control levee and maintenance road. Although all suitable SBKR habitat areas will be avoided the following avoidance and minimization measures shall be implemented regardless.

- Avoid the creation of berms, which may attract SBKR, to minimize potential future impacts to SBKR during maintenance activities.

- An employee education program for all construction personnel will be developed and implemented by a biologist familiar with SBKR and its habitat. For the life of the project, each employee (including temporary contractors and subcontractors) will receive a training/awareness program prior to conducting any work on the site. At a minimum, the program will include the following topics: 1) biology, conservation, and legal status of the SBKR; 2) delineation and flagging of adjacent habitat; 3) limitations on all movement of those employed on site, including ingress and egress of equipment and personnel, to designated construction zones; 4) use of trash containers for disposal and removal of trash; and 5) project features designed to reduce the impacts to SBKR CH. A fact sheet containing this information shall also be prepared and distributed. The class attendees will be made aware of the definition of take and that at no time are they authorized to handle, move, or take sensitive species. Upon completion of the class, the attendees will sign a form stating that they

understand all protection measures. These forms will be filed with the County and will be made available to the regulatory resource agencies upon request.

- A qualified biologist will perform a visual pre-construction survey within the construction footprint immediately prior to ground disturbing activities. The biologist will inspect the project site periodically and will remain on-call for the duration of the project. The biologist will oversee the implementation of minimization and/or avoidance measures during project set up and construction.

- During construction, if a situation is encountered that could affect a listed species (i.e SBKR) for which a contingency plan of avoidance, removal, relocation or transplant has not been approved by the USFWS, then all activities will cease and the biologist will be notified. The biologist will then contact the appropriate regulatory authority within 24 hours. Construction activities will remain halted until the authority to resume is provided by the County in coordination with the USFWS.

- The biologist will have the authority to stop immediately any activity that is not in compliance with the natural resource regulatory laws or permits secured for the projects. She/he will have the authority to order any reasonable measure to avoid the take of a listed species.

4.3.1.3. PROJECT IMPACTS

Since all suitable habitat areas will be avoided, no direct, indirect or cumulative impacts to SBKR can be identified. This project is not likely to adversely affect SBKR.

4.3.2. Southwestern willow flycatcher

The SWWF is a small passerine bird that has a grayish-green back and wings, whitish throat, a light gray-olive breast, and pale yellowish belly. It has two visible white wing bars and a faint or absent eye ring. The call consists of a repeated “whit” and their song is a sneezy “fitz-bew.” (60 FR 10694) The southwestern willow flycatcher is currently one of the four recognized subspecies of the willow flycatcher. This flycatcher is a neotropical migrant that breeds in the southwestern United States from mid-April to early-September. In the fall, it migrates south to its wintering grounds in portions of South America, Central America and Mexico. (60 FR 10694)

A rapid decrease in the numbers of southwestern willow flycatchers in California and other southwestern states prompted the USFWS to designate it as a Category 1 candidate species in 1991. One year later in 1992, the California Fish and Game Commission listed the species as endangered, under the California Endangered Species Act (CESA) of 1970. On July 23, 1993 the southwestern willow flycatcher was proposed for listing as endangered by the USFWS and was then listed as Federally endangered on February 27, 1995, under the Endangered Species Act (ESA) of 1973 (60 FR 10694). The USFWS designated critical habitat for the species on July 22, 1997. This habitat includes 18 units with a total of 599 miles of river in California, New Mexico, and Arizona. In California, CH was designated along portions of the SAR, San Luis Rey River, San Diego River, Santa Margarita River, Tijuana River, and south fork of the Kern River (62 FR 39129). On May 11, 2001, the CH designation from 1997 was struck down by the U.S. 10th Circuit Court of Appeals who required further economic analysis. A recovery plan was finalized by USFWS in March of 2003.

The SWWF breeds in dense riparian habitats along rivers, streams, and other wetlands. They have been documented to establish territories in elevations ranging from sea level to 8,500 feet (Sogge 1997). Plant species closely associated with the flycatcher include willows (*Salix* spp.), boxelder (*Acer negungo*), seepwillow *(Baccharis* spp.), with an overstory of cottonwood (*Populus fremontii*) (62 FR 39129). Occupied habitat is generally dominated by shrubs and trees 13 to 23 feet or more in height, which provide dense lower and mid-story vegetation approximately 13 feet aboveground. This dense vegetation is often interspersed with open water, small openings, or sparse vegetation, creating a mosaic that is not uniformly dense (62 FR 39129).

4.3.2.1. SURVEY RESULTS

The riparian habitat in the BSA between Waterman Avenue and Orange Show Road is considered suitable for SWWF. Although focused surveys for SWWF were not conducted as part of this project, SWWF have been documented in the riparian habitat near Waterman Avenue. Therefore, this species has a high potential for occurrence and as such is assumed present.

4.3.2.2. AVOIDANCE AND MINIMIZATION

Timing of construction will avoid all impacts to this species. Construction of the trail between Waterman Avenue and Tippecanoe Avenue will not occur between April 15 and September 1 which is the timeframe when SWWF migrate into the area, establish territories and potentially breed. Since impacts to this species will be avoided no mitigation is required.

4.3.3. Least Bells vireo

The LBVI is a small, olive-gray migratory songbird that nests and forages almost exclusively in riparian woodland habitats. Bell's vireos as a group are highly territorial and are almost exclusively insectivorous. LBVI nesting habitat typically consists of well developed overstory, understory, and low densities of aquatic and herbaceous cover. The understory frequently contains dense sub-shrub or shrub thickets. These thickets are often dominated by plants such as narrow-leaf willow, mulefat, young individuals of other willow species such as arroyo willow or black willow, and one or more herbaceous species. LBVI generally begin to arrive from their wintering range in southern California and establish breeding territories by mid-April. A large majority of breeding vireos depart their breeding grounds by the September.

LBVI was first proposed for listing as endangered by the USFWS on May 3, 1985, (50 FR 18968) and was subsequently listed as federally endangered on May 2, 1986 (60 FR 10694). CH units were designated by the USFWS on February 2, 1994 (59 FR 4845) and included reaches of ten streams in six counties in southern California and the surrounding approximately 38,000 acres. The CH units exist in the Santa Ynez River, Santa Clara River, SAR, Santa Margarita River, San Luis Rey River, Sweetwater River, San Diego River, Tijuana River, Coyote Creek, and Jumul-Dulzura Creek.

Although LBVI use a variety of riparian plant species for nesting, it appears that the structure of the vegetation is more important than other factors such as species composition or the age of the stand. Upon arrival, males establish breeding territories that range in size from 0.5 to 7.4 acres, with an average size of approximately 2 acres. After pair formation, vireos construct a hanging cup nest made up of dried plant material. Nests are usually placed in forks of branches between 2 and 5 feet from the ground. Females lay two to five eggs with

both parents incubating the clutch for approximately 14 days and the young fledging after 10 to 12 days. The fledglings will remain in the parental territory for up to a month.

4.3.3.1. SURVEY RESULTS

The riparian habitat in the BSA between Waterman Avenue and Tippecanoe Avenue is highly suitable for LBVI. Breeding LBVI pairs have been documented annually in the riparian habitat near Waterman Avenue since the early 1990's. In April 2011, Biologist Shay Lawrey casually observed five territorial LBVI vocalizing in the riparian habitat between Waterman Avenue and Orange Show Road during a field meeting with the County of San Bernardino County Regional Parks Department and Flood Control District Engineers. This species is present.

4.3.3.2. AVOIDANCE AND MINIMIZATION

Timing of construction will avoid all impacts to this species. Construction of the trail between Waterman Avenue and Tippecanoe Avenue will not occur between April 15 and September 1 which is the timeframe when LBVI migrate into the area, establish territories and potentially breed. Since impacts to this species will be avoided no mitigation is required.

Chapter 5. Results: Permits and Technical Studies for Special Laws or Conditions

5.1. Federal Endangered Species Act Consultation Summary

Informal Consultation with the USFWS is in process.

- The Project was presented to the USFWS on December 8, 2010 during the quarterly meeting held between the California Department of Transportation, District 8 and USFWS, Carlsbad Field Office staff.
- The USFWS provided a list of the federally-listed (threatened or endangered) species likely to occur in the Project area on December 6, 2010, (Appendix E)
- A field review with the USFWS was conducted on February 22, 2011.

This Project will be constructed outside of the nesting season between Waterman Avenue and Orange Show Road where riparian habitat exists and LBVI and SWWF could potentially occur. Due to the timing of construction in this area there is no risk of taking either the federally-listed as endangered SWWF or LBVI. Therefore, take authority from the USFWS for these species is not required.

Project construction will avoid all areas of suitable SBKR CH. No direct, indirect or cumulative impacts to SBKR can be identified. This project is not likely to adversely affect SBKR or adversely modify SBKR CH.

All impacts to SASU CH will be avoided. The trail alignment and construction footprint does not encroach into designated SASU CH. Therefore, the Project will not result in impacts or adverse modification to SASU CH.

A total of 5.1 acres of SWWF CH is mapped within the Project area between Waterman Avenue and Tippecanoe Avenue. However, of those 5.1 acres, only 1.5 acres contain PCEs for SWWF. Within the 1.5 acres of CH where PCEs occur for SWWF, 0.9 acre will be permanently impacted. The permanent loss of 0.9 acre within Santa Ana Management Unit will not result in an adverse modification of the CH designated in this unit. Furthermore, this Project will not change the hydrologic processes in any way that will contribute to further loss of PCEs elements identified for SWWF within the SAR.

The proposed Project will not result in direct, indirect, or cumulative impacts to slender-horned spineflower or Santa Ana River wollystar because both plant species are absent from the Project footprint, construction zone, staging and access areas and from adjacent areas.

5.2. Federal Fisheries and Essential Fish Habitat Consultation Summary

Not applicable to this project.

5.3. California Endangered Species Act Consultation Summary

Not applicable to this project. This Project will be constructed outside of the nesting season between Waterman Avenue and Orange Show Road where riparian habitat exists and LBVI and SWWF could potentially occur. Due to the timing of construction in this area there is no risk of taking either the State-listed as endangered SWWF or LBVI. Therefore, take authority from the CDFG is not required.

5.4. Wetlands and Other Waters Coordination Summary

Coordination with the ACOE, RWQCB, and CDFG has not been initiated at this time, but will be conducted at the time the CWA Section 404 and 401, and FGC Section 1600 Streambed Alteration Agreement applications are submitted to the agencies.

5.5. Invasive Species

On February 3, 1999, President Bill Clinton signed Executive Order 13112 requiring federal agencies to combat the introduction or spread of invasive species in the United States. The order defines invasive species as “any species (including its seeds, eggs, spores, or other biological material capable of propagating a species), that is not native to that ecosystem and whose introduction does or is likely to cause economic or environmental harm or harm to human health.” Federal Highway Administration guidance issued August 10, 1999 directs the use of the state’s noxious weed list to define the invasive plants that must be considered as part of the NEPA analysis for a proposed project.

Introduced invasive grasses including rip-gut brome, soft brome, and wild-oat, are found along levee road edges that are designated as non-native grassland within the BSA. Further, a number of weed species occur in the BSA. Tree of heaven (*Ailanthus altissima*), tree tobacco (*Nicotiana glauca*), Caster bean (*Ricinus communis*), Russian thistle (*Salsola tragus*), Yellow star-thistle (*Centaurea melitensis*), milk thistle (*Silybum marlanum*), and giant reed (*Arundo donax*). These are species identified as “invasive plants that threaten California wildlands” by the California Invasive Plant Council that are already distributed throughout most of the site, especially in previously disturbed areas. Construction of the Project will not promote these species. During construction individuals of these species will be removed from the Project construction area.

Although the majority of construction will occur on an existing, disturbed, dirt access road and within a highly disturbed staging area, some land disturbance will impact small areas containing native vegetation and will require post-construction re-vegetation. Much of the existing habitat immediately adjacent to the levee road is highly disturbed by past construction activities and frequent maintenance. Where the trail goes under the bridges at Waterman Avenue, Orange Show Road, and Tippecanoe Avenue; adjacent native riparian vegetation will be temporarily disturbed in order to construct the trail. The riparian vegetation found in the areas around the proposed bridge underpasses is in good condition and of high quality.

Another consideration regarding invasive plant species when evaluating impacts is the effect the proposed Project may have on increasing the propagation of non-native invasive plant species. Following a disturbance to the soil of any natural habitat, a plant succession follows over time. As typical with most areas within the region of the Project site, more aggressive, rapid growth, non-native species would become established instead of native species after a soil disturbance

which would alter conditions and make it difficult for native plants to re-establish. The Project proposes to revegetate the temporary impacts within the riverbed using native species from the surrounding area. The San Bernardino County Regional Parks Department will create a Habitat Mitigation Monitoring and Reporting Program (HMMRP) which will outline the planting pallet, the weeding regime, and define success criteria for the restored areas.

In compliance with the Executive Order on Invasive Species, EO 13112, and subsequent guidance from the Federal Highway Administration, the landscaping and erosion control included in the Project will not use species listed as noxious weeds. In areas of particular sensitivity (i.e. in the Santa Ana River bottom), extra precautions will be taken if invasive species are found in or adjacent to the construction areas. These precautions include a noxious weed special provision in the Contract that the contractor would adhere to during construction. The contractor would be required to wash equipment and vehicles before entering the Project site, and keep a written log of vehicle washings. If soil is brought onsite from outside the immediate area, it would be inspected by a qualified botanist for invasive plant and weed seeds. If soil or mulch is purchased from a vendor, it would be certified "weed-free."

In addition, any areas re-vegetated following disturbance would be seeded with a weed-free/native plant mixture following construction. Landscaping and erosion control included in the Project would not use species listed as noxious weeds. In areas of particular sensitivity, extra precautions would be taken if invasive species are found in or adjacent to the construction areas. These include the inspection and cleaning of construction equipment and eradication strategies to be implemented should an invasion occur.

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Figures 1 through 8-5

Exhibit 4: Initial Study and Mitigated Negative Declaration for the "Santa Ana River Trail, Phase III Project"

FIGURE 1
Regional Location

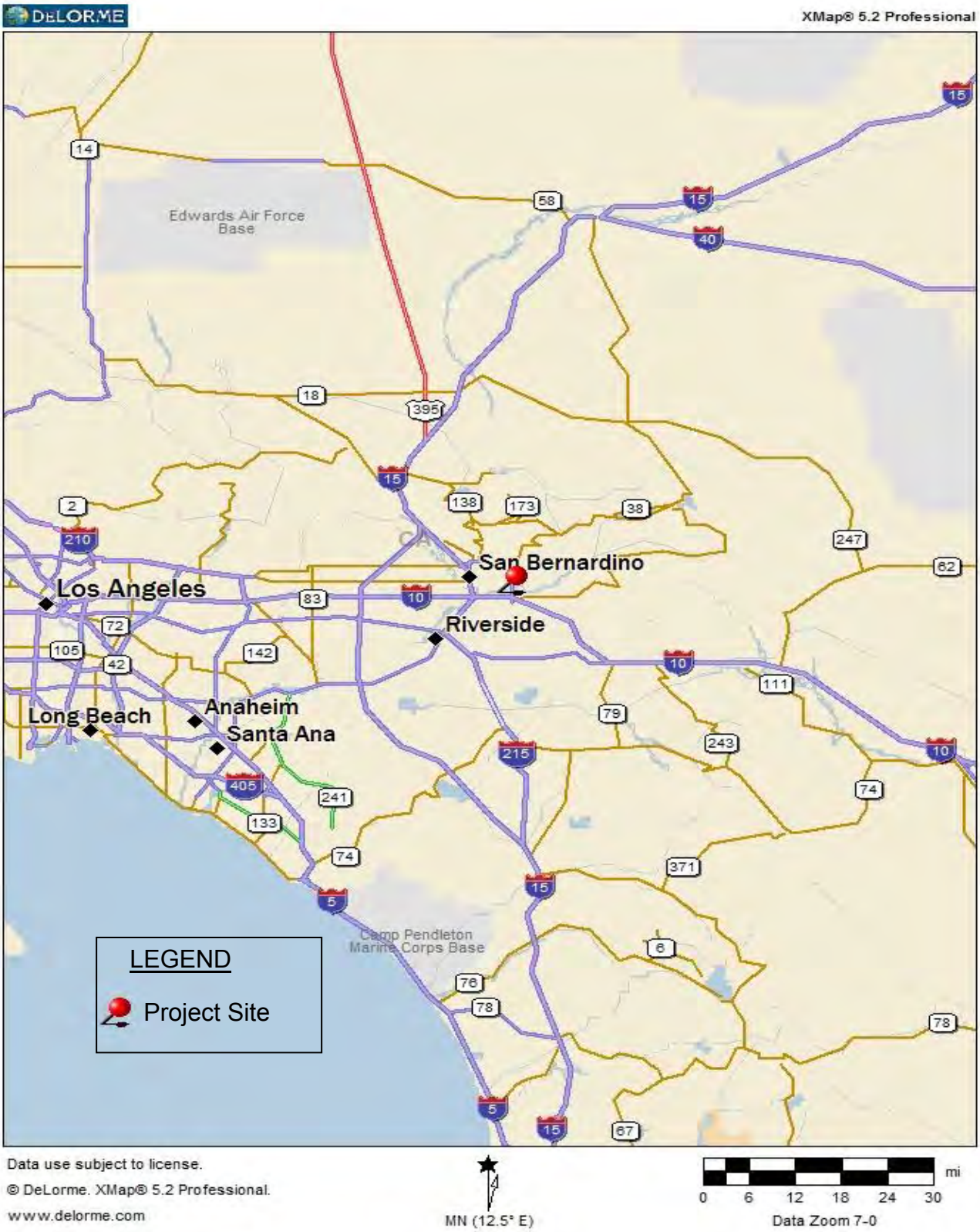

FIGURE 2 Site Location Map

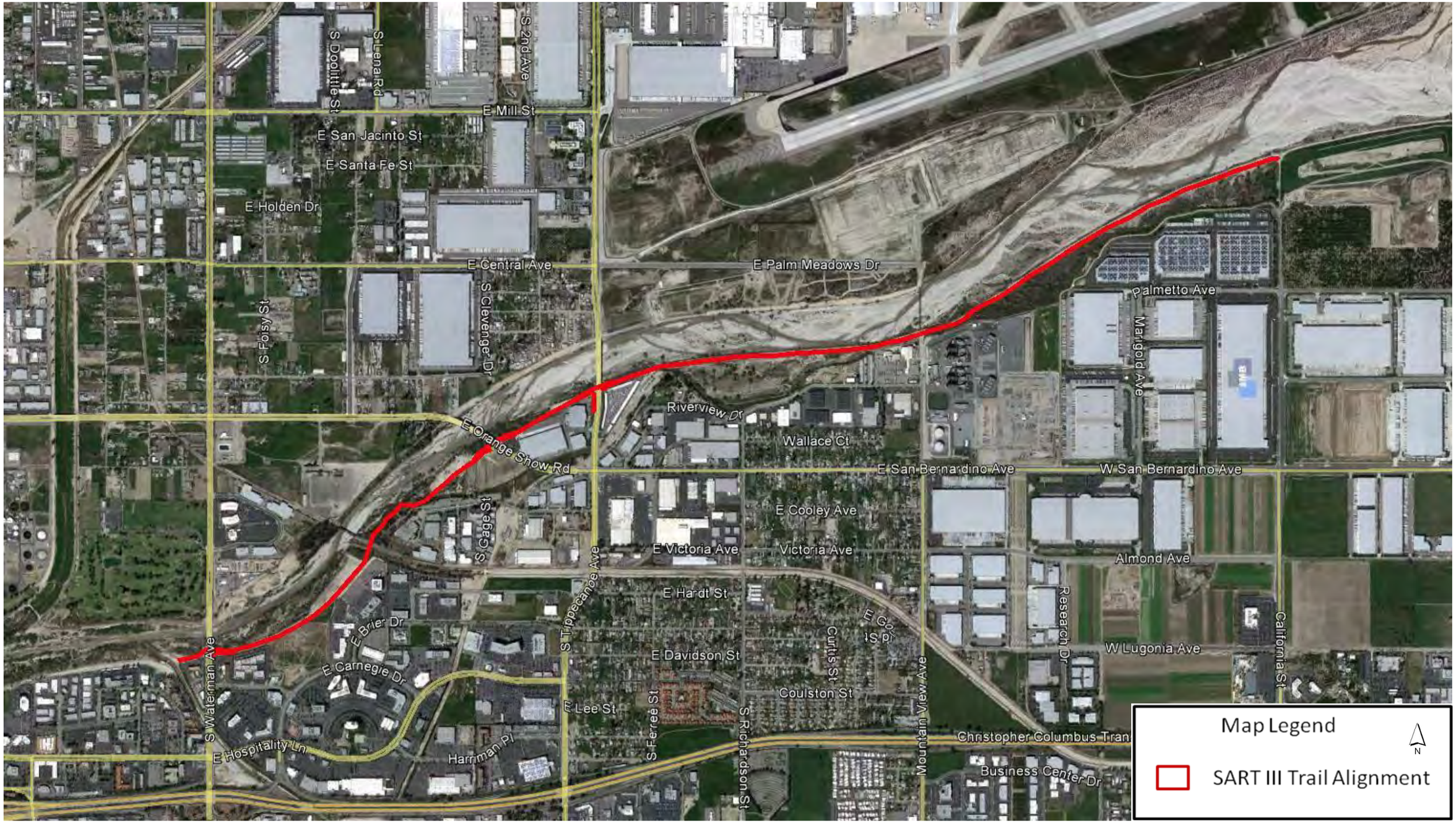

FIGURE 3. Project Alignment Shown on USGS Topographical

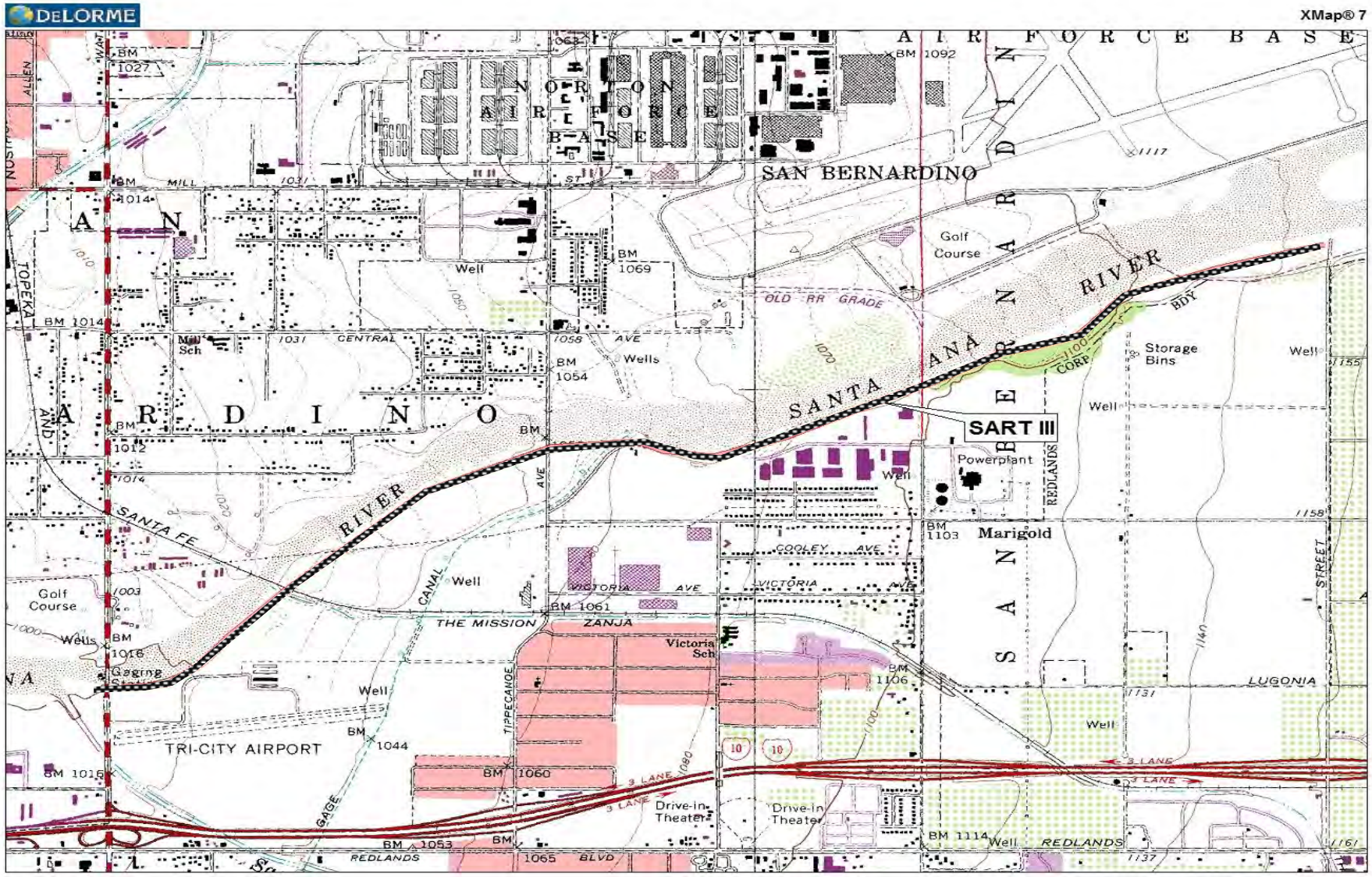

FIGURE 4 Biological Survey Area (BSA)

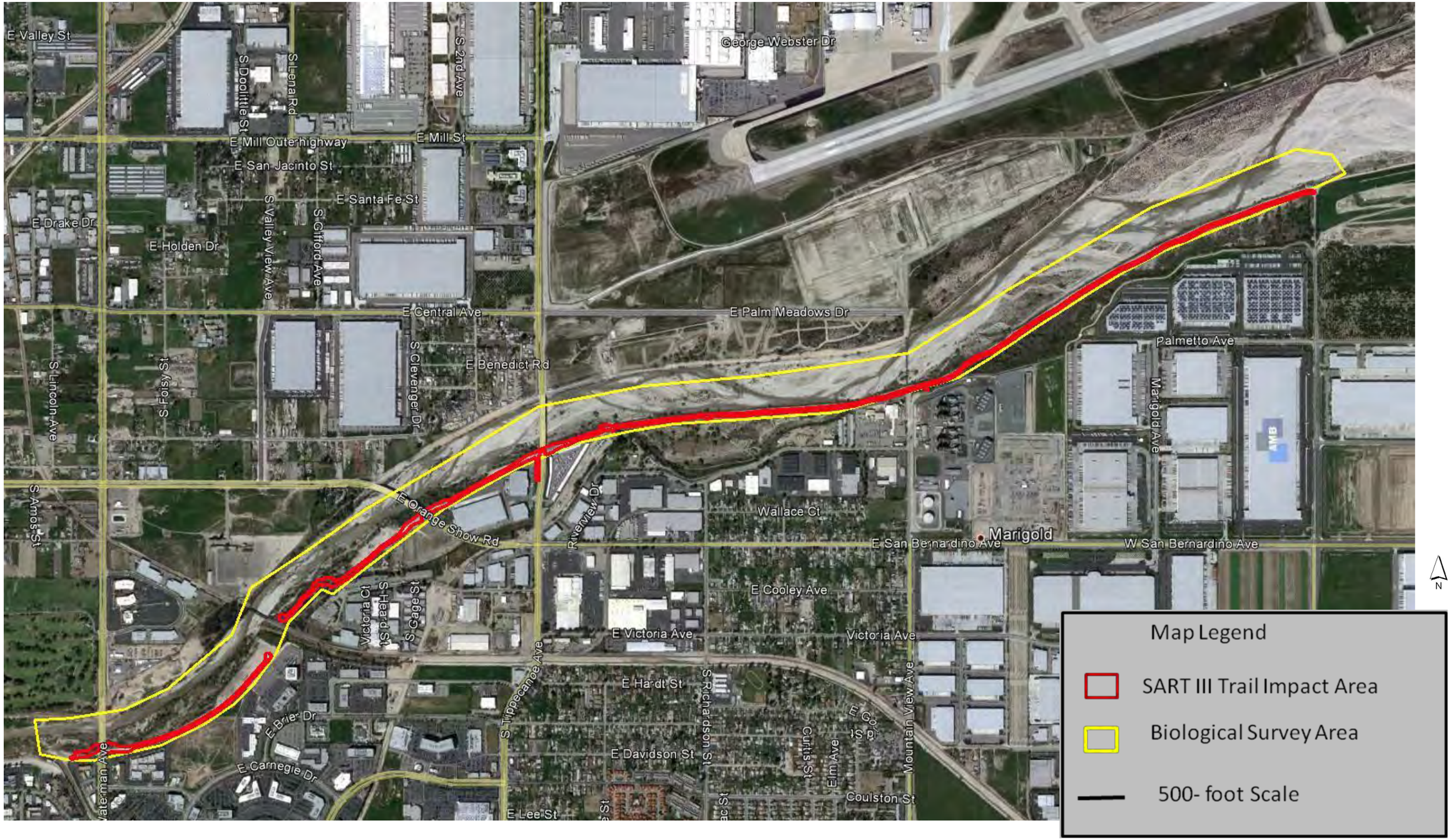

FIGURE 5-1 Habitat Map

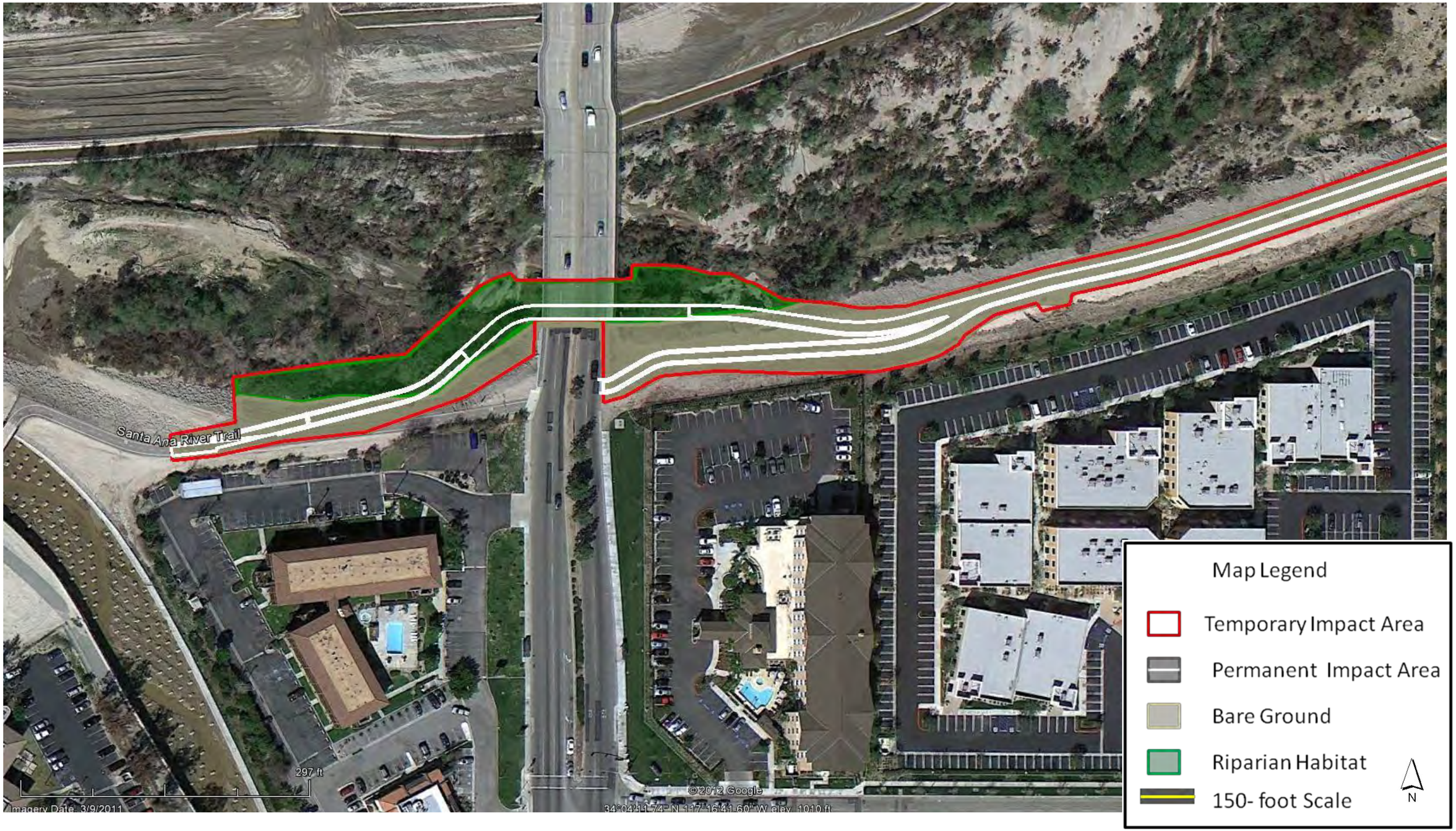

FIGURE 5-2 Habitat Map

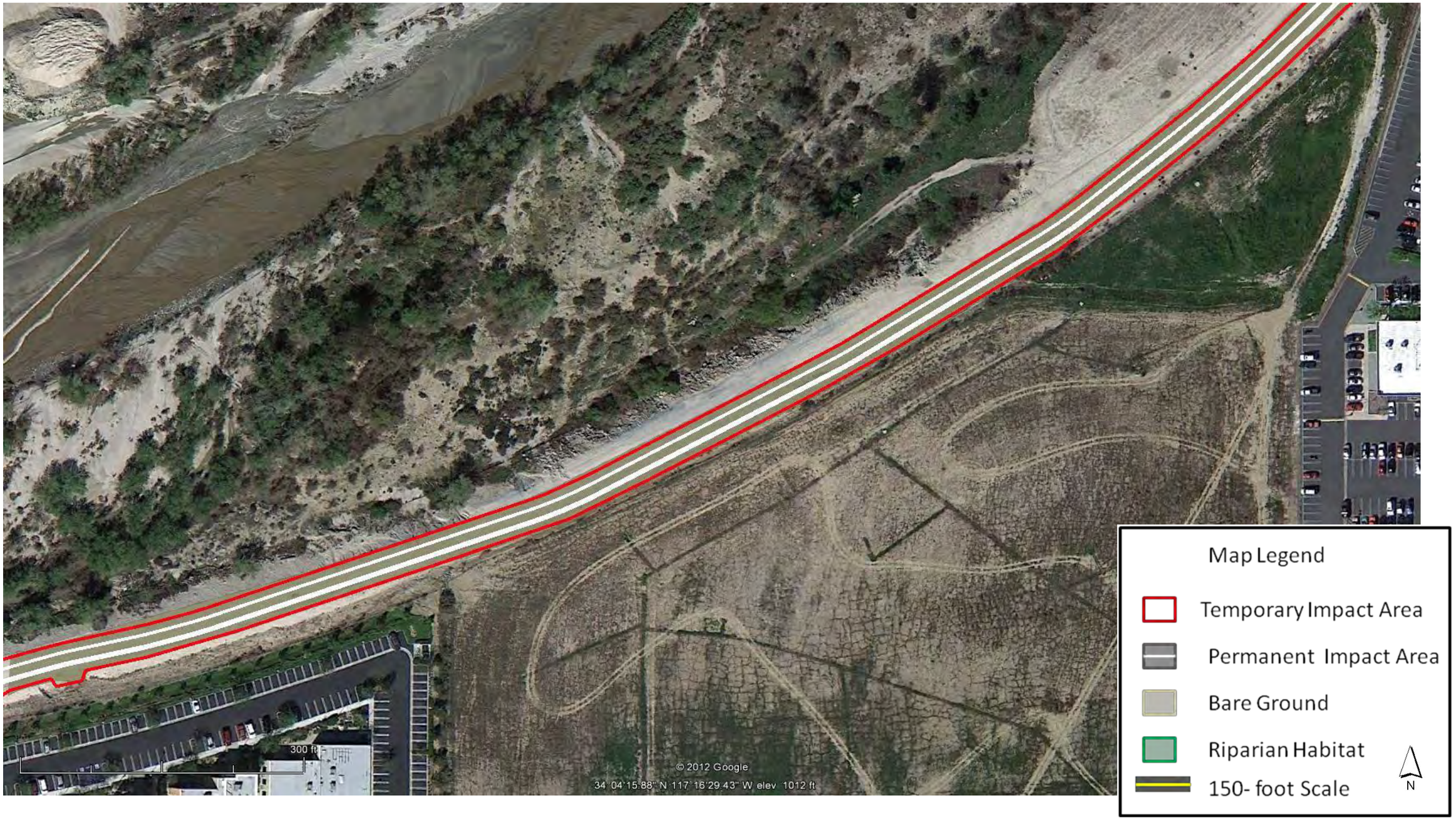

FIGURE 5-3 Habitat Map

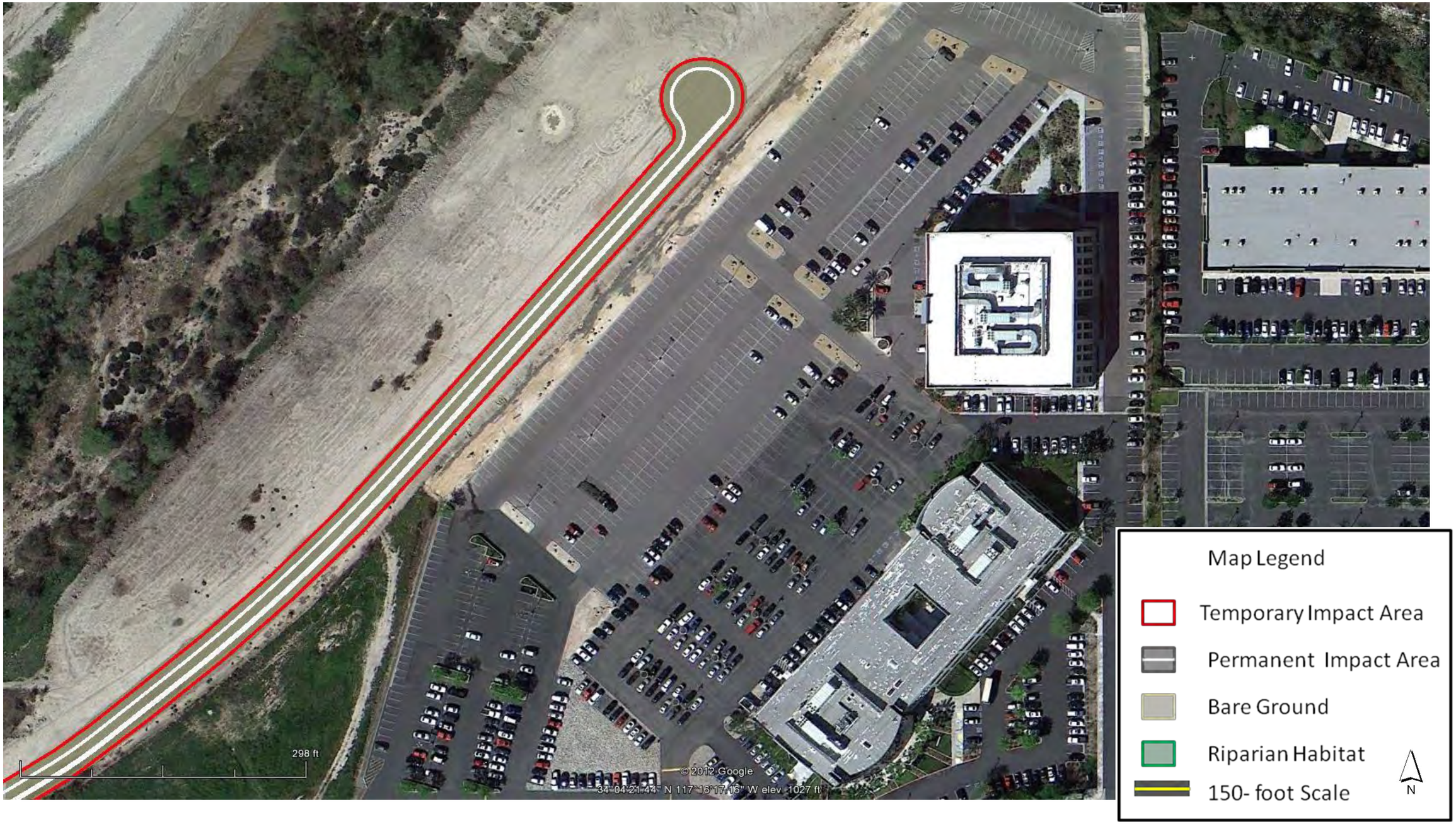

FIGURE 5-4 Habitat Map

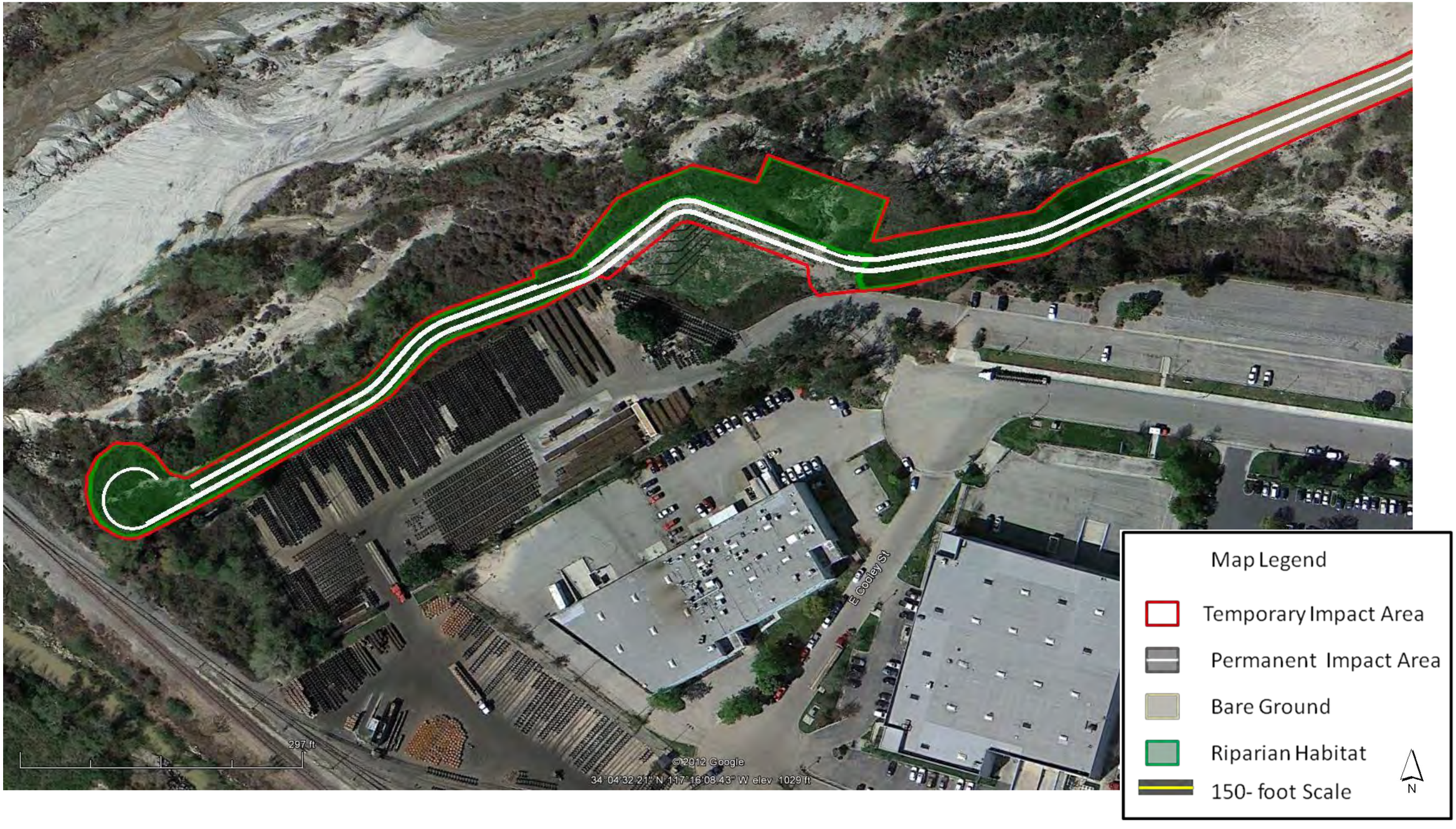

FIGURE 5-5 Habitat Map

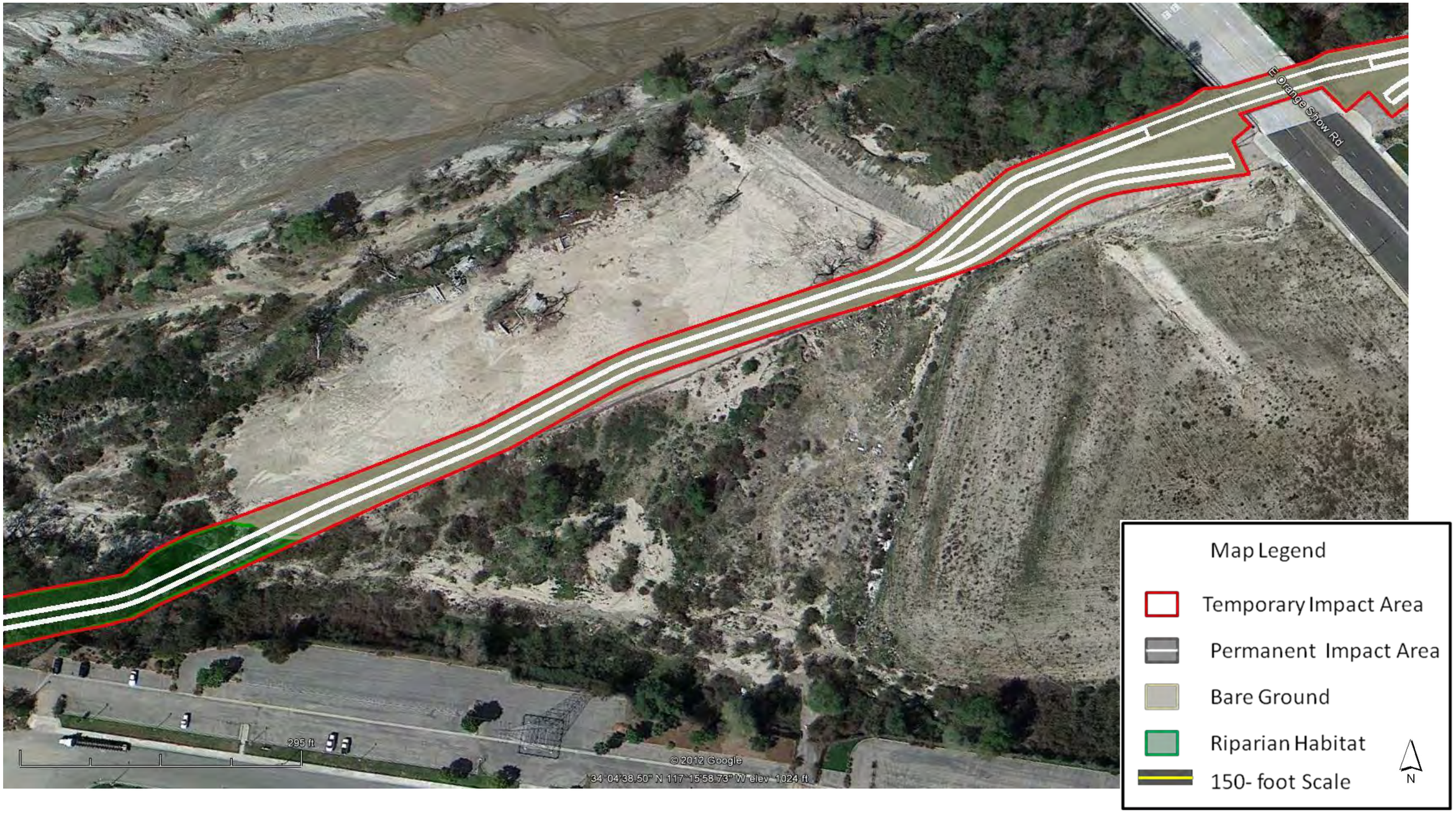

FIGURE 5-6 Habitat Map

FIGURE 5-7 Habitat Map

FIGURE 5-8 Habitat Map

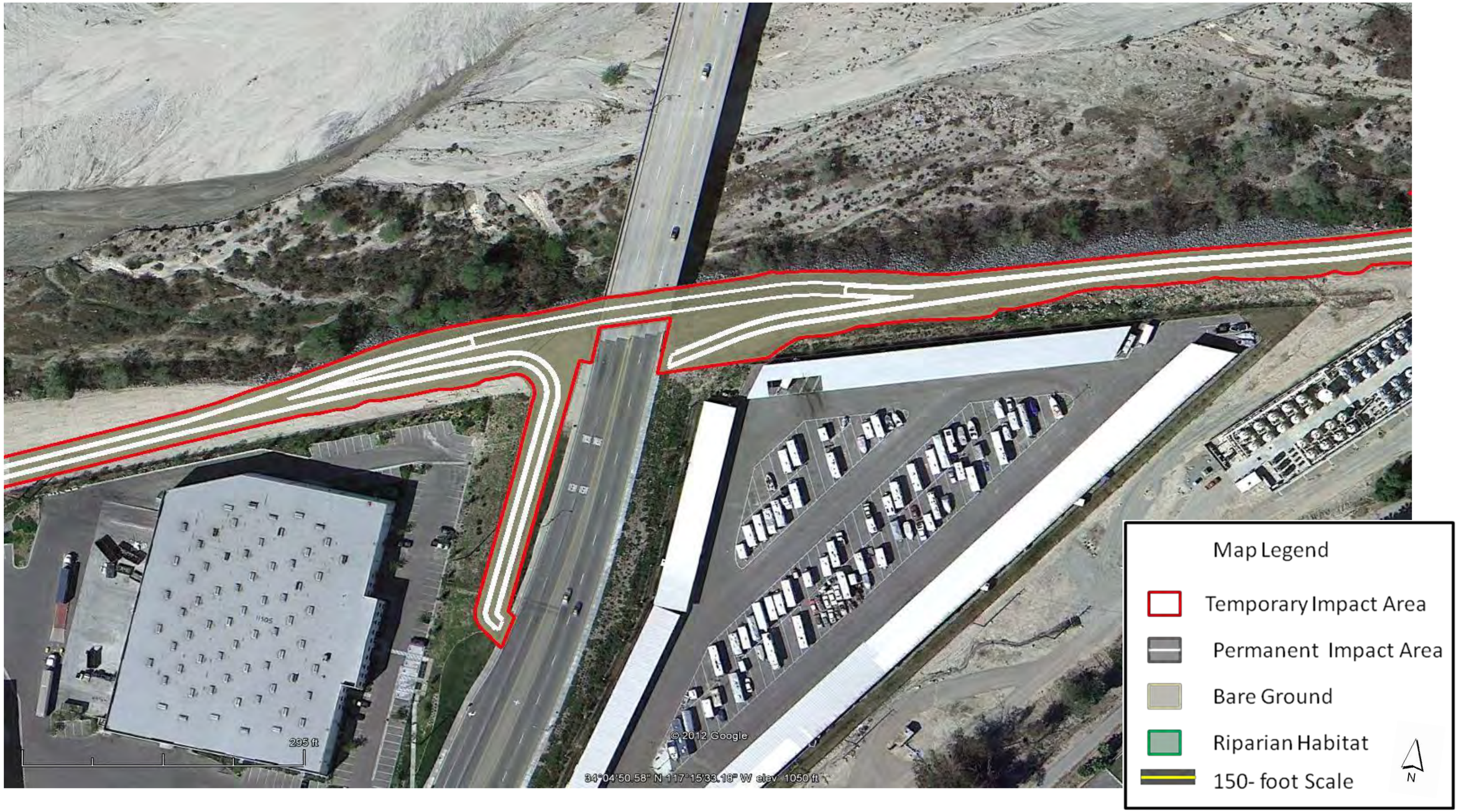

FIGURE 5-9 Habitat Map

FIGURE 5-10 Habitat Map

FIGURE 5-11 Habitat Map

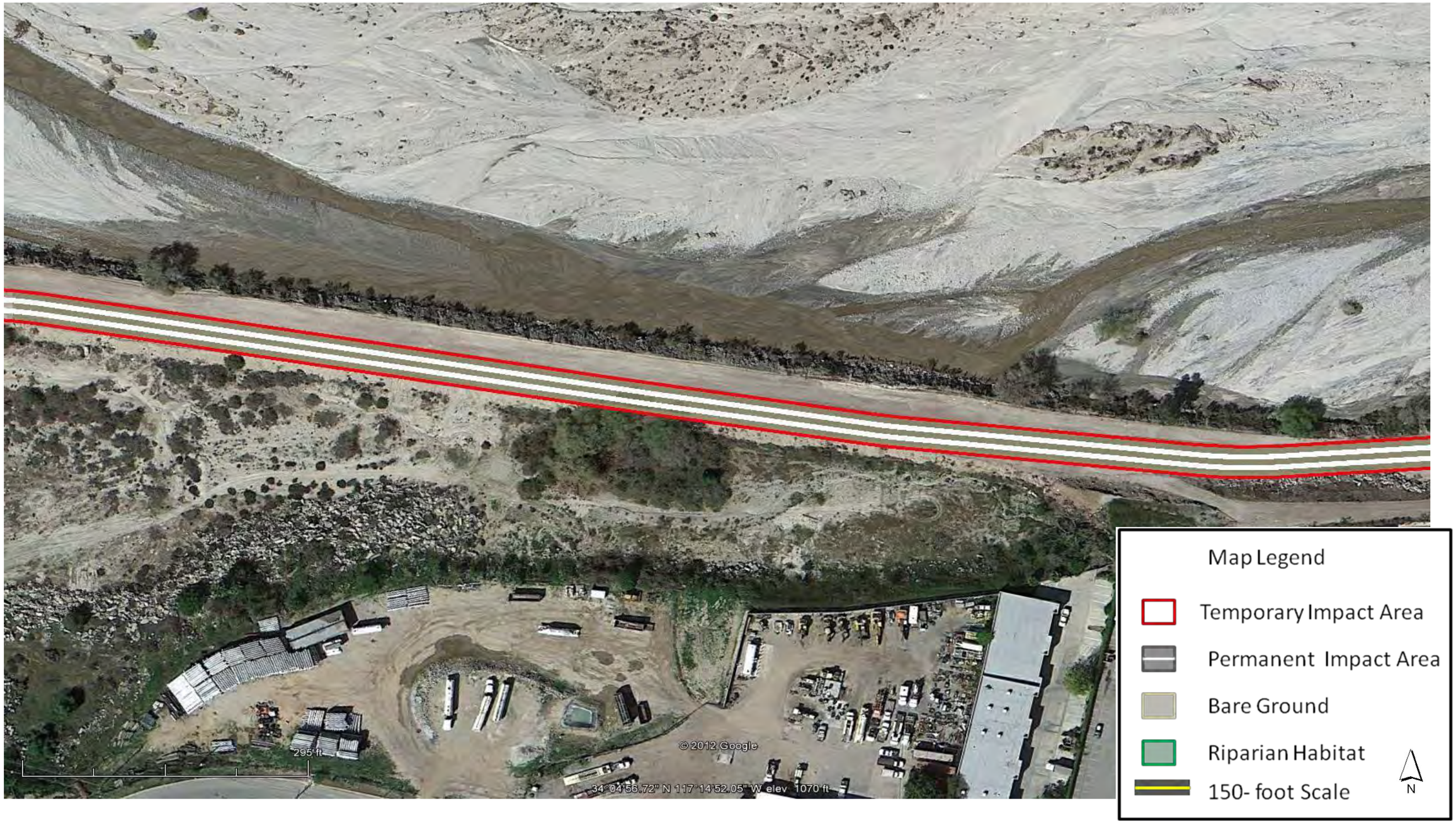

FIGURE 5-12 Habitat Map

FIGURE 5-13 Habitat Map

FIGURE 5-14 Habitat Map

FIGURE 5-15 Habitat Map

FIGURE 5-16 Habitat Map

FIGURE 5-17 Habitat Map

FIGURE 6-1
SART III San Bernardino Kangaroo Rat Critical Habitat Map

FIGURE 6-2
SART III San Bernardino Kangaroo Rat Critical Habitat Map

FIGURE 6-3
SART III San Bernardino Kangaroo Rat Critical Habitat Map

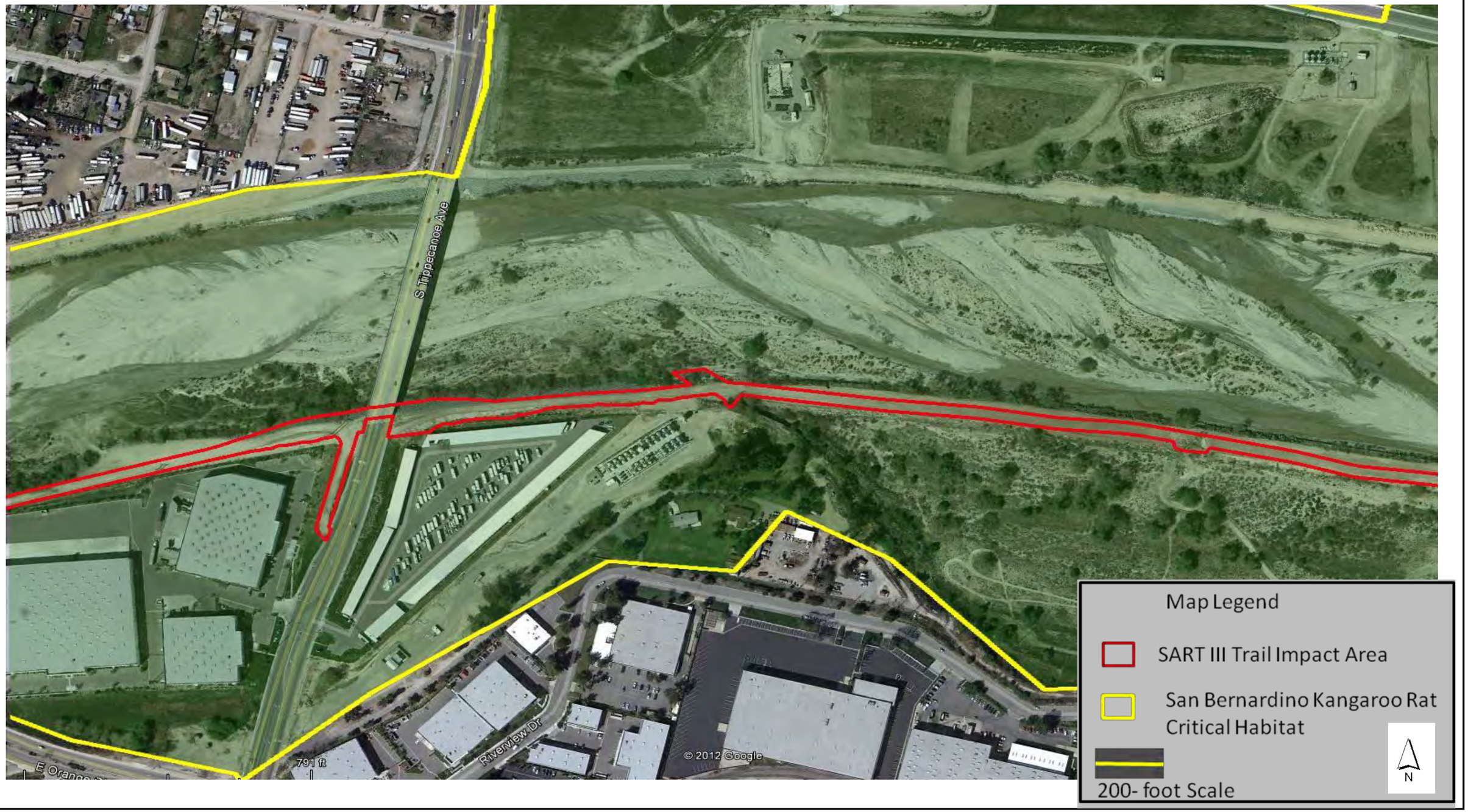

FIGURE 6-4
SART III San Bernardino Kangaroo Rat Critical Habitat Map

FIGURE 6-5
SART III San Bernardino Kangaroo Rat Critical Habitat Map

FIGURE 6-6
SART III San Bernardino Kangaroo Rat Critical Habitat Map

FIGURE 7-1
SART III Santa Ana Sucker Critical Habitat Map

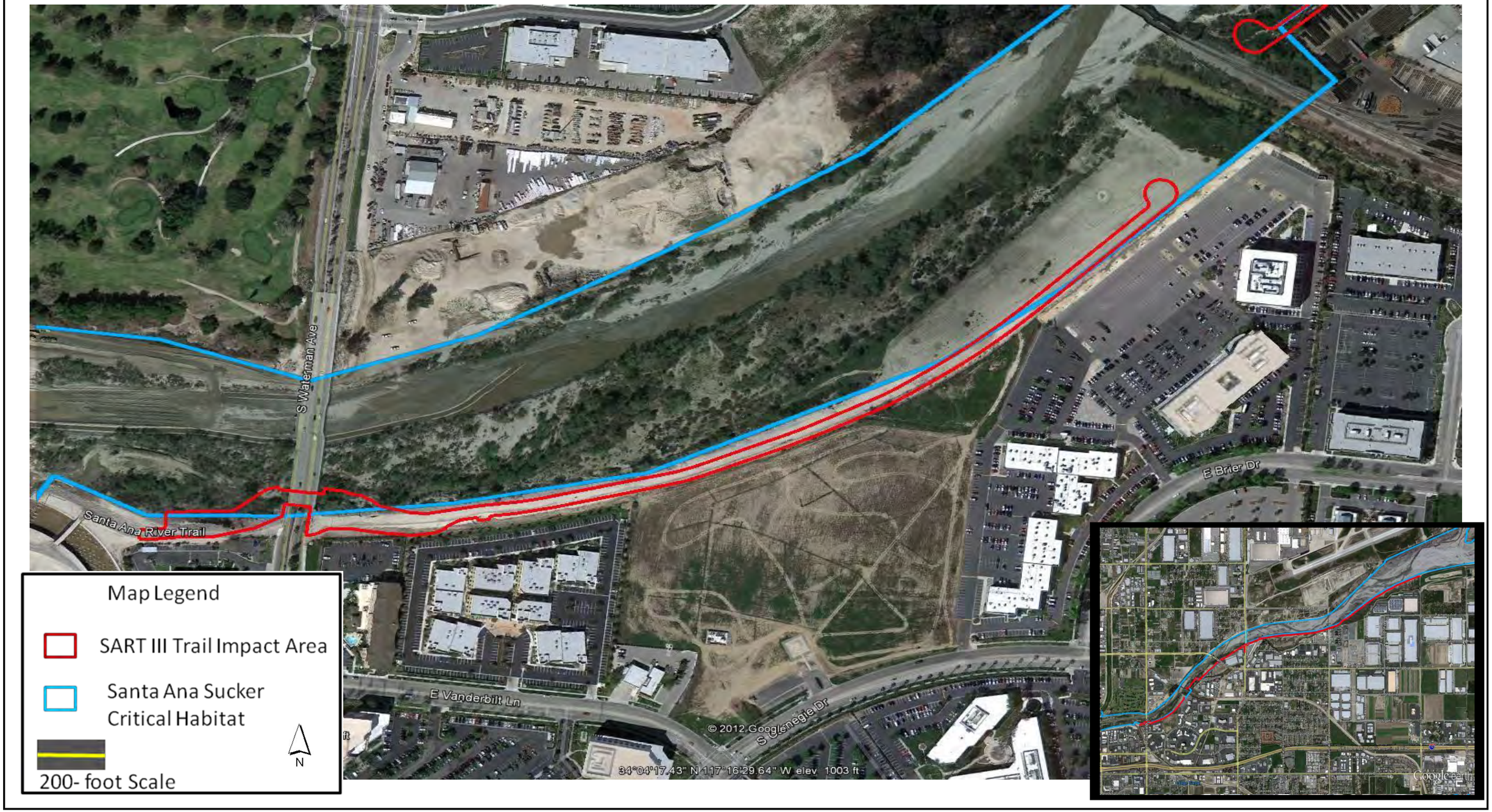

FIGURE 7-2
SART III Santa Ana Sucker Critical Habitat Map

FIGURE 7-3
SART III Santa Ana Sucker Critical Habitat Map

FIGURE 7-4
SART III Santa Ana Sucker Critical Habitat Map

FIGURE 7-5
SART III Santa Ana Sucker Critical Habitat Map

FIGURE 7-6
SART III Santa Ana Sucker Critical Habitat Map

FIGURE 8-1
SART III Southwestern Willow Flycatcher Critical Habitat Map

FIGURE 8-2
SART III Southwestern Willow Flycatcher Critical Habitat Map

FIGURE 8-3
SART III Southwestern Willow Flycatcher Critical Habitat Map

FIGURE 8-4
SART III Southwestern Willow Flycatcher Critical Habitat Map

FIGURE 8-5
SART III Southwestern Willow Flycatcher Critical Habitat Map

Appendix A

Exhibit 4: Initial Study and Mitigated Negative Declaration for the "Santa Ana River Trail, Phase III Project"

BOTANICAL SURVEY REPORT
SANTA ANA RIVER TRAIL PHASE III
SOUTH WATERMAN AVENUE TO CALIFORNIA AVENUE
SAN BERNARDINO, CA

Prepared for
San Bernardino County Regional Parks Department
777 E. Rialto Ave
San Bernardino, CA 92415-0763

Prepared by:
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1412 S. Center St.
Redlands, CA 92373

January 2011

Summary

The San Bernardino County Regional Parks Department is proposing to extend the existing Santa Ana River Trail from its current end point at Waterman Avenue in the City of San Bernardino to California Street in the City of Redlands. Sunrise Consulting, Inc. was contracted to conduct a botanical survey of the extension area to determine the presence or absence of sensitive plant species on the project site.

No sensitive plant species were observed during these surveys and none are expected to be found on the project site.

1.0 Site Location and Description

The proposed trail extension is located on the south bank of the Santa Ana River, above the riverbed itself (project site). It extends from South Waterman Avenue to California Street. The project site can be found in T1S R4W Section 13 and T1S R3W Section 18 on USGS 7.5 minute San Bernardino South and Redlands quads. The vicinity and location of the project site are shown on Figures 1 and 2, respectively.

The eastern portion of the project site, from just west of Orange Show Road to California Street is previously cleared land currently in use as unpaved access roads along the bank of the Santa Ana River. From Orange Show Road west to South Waterman Avenue site is a mix of trails, undisturbed vegetation, and cleared areas. Areas under the Tippecanoe Avenue and Orange Show Road bridges and a railroad between Waterman Avenue and Orange Show Road are highly disturbed and human-generated trash is present.

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2.0 Methods

Prior to conducting the focused surveys, a biological resources literature search was performed. This included researching information the California Department of Fish and Game's (CDFG's) *California Natural Diversity Data Base* (CNDDB) and the California Native Plant Society's Electronic Inventory (CNPSEI) to determine the sensitive species that had been documented in the project region. Additionally, reference populations for both the slender-horned spineflower and the Santa Ana River woollystar in Santa Ana River Woolllystar mitigation area near Orange Street and the Santa Ana River in Redlands, Ca, were visited to determine the phenological state of each species. In both cases it was determined that each species was sufficiently mature for positive identification.

Using this information a list of sensitive plant species that have the potential to occur within the project site was generated. For the purposes of this assessment, sensitive species are defined as plants that:

- Have been designated as either rare, threatened, or endangered by the California Department of Fish and Game (CDFG) or the U.S. Fish and Wildlife Service (USFWS), and are protected under either the California or Federal Endangered Species Act (ESA);
- Are candidate species being considered or proposed listed species under these same acts; and/or
- Are listed by the CNPS.

Botanist and wildlife biologist Kent Hughes conducted botanical surveys of the proposed Santa Ana River Trail extension on June 7th and 8th, 2010; December 24, 2010, and January 4, 2011. The surveys covered the proposed project route on the south side of the Santa Ana River from Waterman Avenue to California Street. All areas along the route and immediately adjacent to it were surveyed, including areas beneath the Tippecanoe Avenue and Orange Show Road bridges and the railroad bridge crossing the riverbed between Waterman Avenue and Orange Show Road. Site surveys were performed on foot encompassing the proposed trail extension path and approximately one hundred-fifty (150) meters across the Santa Ana River channel for the length of the proposed extension as well as areas underneath the Tippecanoe Avenue and Orange Show Road bridges and beneath the railroad bridge between Orange Show Road and

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South Waterman Avenue. Plant communities and all plant species encountered were recorded. Plant community identification and nomenclature follows definitions and descriptions from *A Manual of California Vegetation.* (Sawyer, Keeler-Wolf, and Gevens. 2009). Additionally, the survey was extended across the sandy riverbed of the Santa Ana River to determine the proximity of populations of Santa Ana River woollystar (*Eriastrum densifolium* ssp. *sanctorum)* and slender-horned spineflower (*Dodecahema leptoceras*) and/or any other special-status plant species to the project site. Though suitable habitat for slender-horned spineflower was marginal, portions of the survey area that did contain suitable habitat for sender-horned spineflower (limited to the section of the riverbed between the Trolley Avenue railroad bridge and California Avenue) transects spaced at 2-meter intervals were walked according to protocols in " Suitable Habitat Criteria and Survey Requirements for *Dodecahema leptoceras",* CDFG, 2002 (Appendix D). All plant species encountered were recorded and are listed in Appendix A.

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Figure 1. Project Vicinity.

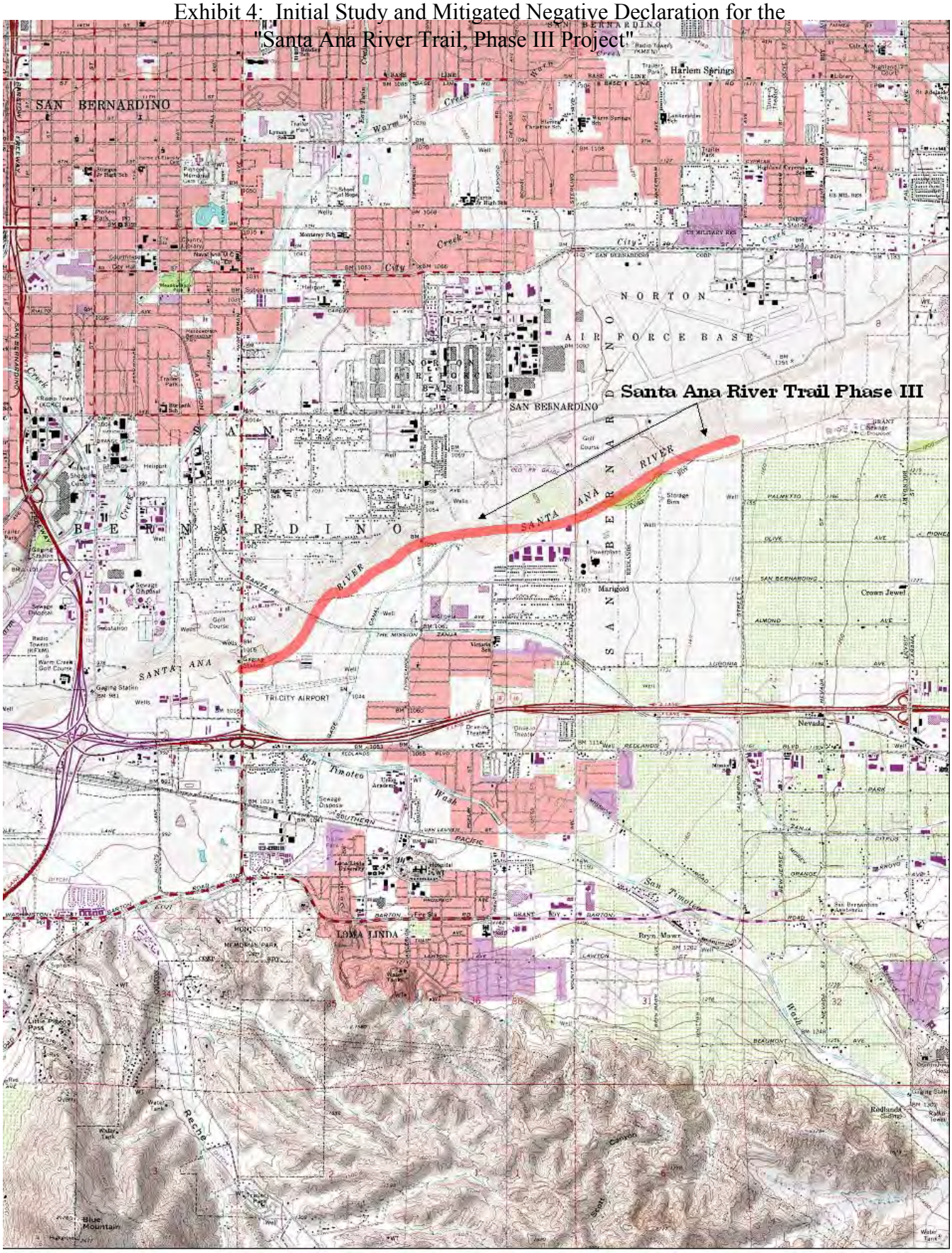

Figure 2. Santa Ana River Trail Phase III Location

3.0 Results

3.1 Vegetation Communities

3.1.1 *Populus Fremontii* Forest Alliance (Sawyer, Keeler-Wolf, and Evens, 2009)

The *Populus fremontii* Forest Alliance is a community in which *P. fremontii* is dominant or co-dominant in the canopy with maple (*Acer* sp.), ash (*Fraxinus* sp.), sycamore (*Plantanus* sp.), oaks (*Quercus* sp.), and willow (*Salix* sp.). This community is found on floodplains, along perennial or seasonally intermittent streams, on alluvial fans, in lower canyons in desert mountains, and in valleys with dependable subsurface water (Sawyer, Keelr-Wolf, and Evens, 2009). In regards to the project this community can be found between Waterman Ave. and the BNSF Railroad ROW, on both sides of Orange Show Road, immediately west of Tippecanoe Ave., and east of Trolly Drive south of the levee road.

3.1.2 Disturbed *Populus fremontii* Forest Alliance

This vegetation community contains the same elements as the *P. fremontii* Forest Alliance but at a significantly reduced density. Additionally, ruderal vegetation such as Tamarisk (*Tamarix ramosissima*), castor bean (*Ricinus communis*), tree tobacco (*Nicotiana glauca*), tree-of-heaven (*Ailanthus altissima*), and Russian thistle (*Salsola tragus*) are abundantly present. Additionally, there is evidence of previous ground disturbance in the form of grading or vehicle passage. In regards to the project this community is present between Waterman Ave. and Orange Show Road and between Tippecanoe Ave. and Trolley Drive south of the leave road.

3.1.3 *Baccharis salicifolia* Shrubland Alliance (Sawyer, Keeler-Wolf, and Evens, 2009)

The *Baccharis salicifolia* Shrubland Alliance is a community in which *B. salicifolia* is dominant or co-dominant in the shrub canopy with *Artemisia californica, Nicotiana glauca, Malosma laurina, Rubus* sp., *Salix* sp., and other FAC+ plant species. This community is found on floodplains, lake margins, stream channels, irrigation ditches, and in canyon bottoms (Sawyer, Keeler-Wolf, and Evens, 2009). In regards to the

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project this community is present in the Santa Ana River channel adjacent to the south levee east of the abandoned Trolley Street railroad bridge.

3.1.4 *Eriogonum fasciculatum* Shrubland Alliance (Sawyer, Keeler-Wolf, and Evens, 2009)

The *Eriogonum fasciculatum* Shrubland Alliance is a community in which *E. fasciculatum* is dominant or co-dominant in the cismontaine stands with *Artemisia californica, Baccharis pilularis, Encelia* sp., Salvia apiana, and others; in the transmontane stands with *Ambrosia dumosa, Coleogyne ramosissima, Simmondsia chinensis,* and others. This community is found on floodplains, lake margins, stream channels, irrigation ditches, and in canyon bottoms (Sawyer, Keeler-Wolf, and Evens, 2009). In regards to the project this community is present in the Santa Ana River channel adjacent to the south levee east of the abandoned Trolley Street railroad bridge.

3.2 Disturbed Areas

There are areas along the project path in which the original vegetation communities have been so degraded that they no longer support native vegetation communities in either a definitive or disturbed form. In these areas components of the original vegetation communities may be present but only in an depauperate state. The vegetation in these areas consists mainly of weedy, invasive species including, but not limited to, tree-of-heaven, blessed thistle (*Cniscus benedictus*), Russian thistle, prickley lettuce (*Lactuca serriola*), and horehound (*Marrubium vulgare*).

Location of vegetation communities and disturbed areas is shown in Appendix B. Photographs of the communities can be found in Appendix C.

3.2 Sensitive Plant Species

A search of the CNDDB and the CNPS Inventory resulted in a list of twenty-three (23) plant species with historical records of occurrence in the project vicinity. Six (6) of these species are both federal- and state-listed endangered. The remaining seventeen (17) species are listed by the CNPS. These species are listed in Table 1 along with their

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potential for occurrence. Further information regarding 2 of the federal- and state-listed endangered species, slender-horned spineflower (*Dodecahema leptoceras*) and Santa Ana River woollystar (*Eriastrum densiflorum sanctorum*), both of which are known to occur in the area, is presented following the table.

The potential for occurrence (PFO) for each plant was assessed and has been defined using the following criteria:

Present	Species was observed within the project site during current survey or a survey within the past year.
High	Both a historical record of occurrence of the species within the project site or its immediate vicinity (approximately 5 miles) exists *and* the environmental conditions historically associated with species occurrence (including elevation and soils) are present within the project site.
Moderate	Either a historical record of the species occurrence within the immediate vicinity of the project site (approximately 5 miles) exists *or* the environmental conditions historically associated with species occurrence (including elevation and soils) are present within the project site.
Low	No records of occurrence of the species occurring within the project site or its immediate vicinity exist or the environmental conditions historically associated with species occurrence (including elevation and soils) are absent or of poor quality within the project site.
Absent	Species was not observed during focused surveys conducted at an appropriate time for identification (generally, but not always, considered the blooming period.).

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Table 1. CNDDB/CNPSEI Plant Species with Potential to Occur along the Santa Ana River Bike Trail Site

Common name *Scientific name*	Staus	Habitat	Bloom	Elev. Range (meters)	Life Form	PFO	Reason
ENDANGERED OR THREATENED SPECIES							
Marsh sandwort *Arenaria paludicola*	Fed: END Ca: END CNPS: 1B.1	Sandy openings in freshwater or brackish marshes and swamps	May–Aug	3 – 170	Perennial stoloniferous herb	Absent	Associated habitat not present, species not observed during survey.
Nevin's barberry *Berberis nevinii*	Fed: END Ca: END CNPS: 1B.1	Chaparral, cismontane woodland, coastal scrub, sandy or gravelly riparian scrub	May–Aug	274 – 825	Perennial evergreen shrub	Absent	Associated habitat not present, species not observed during survey.
Salt-marsh bird's beak *Cordylanthus maitimus* ssp. *maritimus*	Fed: END Ca: END CNPS: 1B.2	Coastal dunes, coastal salt marshes and swamps	May–Oct	0 - 30	Annual hemiparasitic herb	Absent	Associated habitat not present, species not observed during survey.
Slender-horned spineflower *Dodecahema leptoceras*	Fed: END Ca: END CNPS: 1B.1	Mature alluvial benches in chaparral; cismontane woodland; and alluvial fan, sandy coastal scrub	Apr–Jun	200 – 760	Annual herb	Absent	Associated habitat not present, species not observed during survey.
Santa Ana River woollystar *Eriastrum densifolium* ssp. *sanctorum*	Fed: END Ca: END CNPS: 1B.1	Mature alluvial benches in chaparral and sandy or gravelly coastal scrub.	May–Sep	90 – 600	Perennial herb	Absent	Present in riverbed but absent on project footprint.
Gambel's Watercress *Nasturtium gambellii*	Fed: END Ca: END CNPS: 1B.1	Freshwater or brackish marshes and swamps.	Apr–Oct	0 – 330	Perennial rhizomatous herb	Absent	Associated habitat not present, species not observed during survey.
OTHER SENSITIVE SPECIES							
Horn's milkvetch *Astragulus hornii* var. *hornii*	Fed: None Ca: None CNPS: 1B.1	Meadows and seeps, alkaline lake margins and playas	May–Oct	0 – 850	Annual herb	Absent	Associated habitat not present, species not observed during survey.
Plummer's mariposa lily *Calochortus plummerae*	Fed: None Ca: none CNPS: 1B.1	Chaparral, cismontane woodland, coastal scrub, lower montane coniferous forest, and valley and foothill grassland.	May–Jul	100 – 700	Perennial bulbiferous herb	Absent	Associated habitat not present, species not observed during survey.
Bristly sedge *Carex comosa*	Fed: None Ca: none CNPS: 2.1	Coastal prairie, marshes and swamps, and valley and foothill grassland	Map–Sep	0 – 625	Perennial rhizomatous herb	Absent	Associated habitat not present, species not observed during survey.

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Common name *Scientific name*	Staus	Habitat	Bloom	Elev. Range (meters)	Life Form	PFO	Reason
Payson's jewelflower *Caulanthus simulans*	Fed: None Ca: None CNPS: 4.2	Chaparral and sandy, granitic coastal scrub	Mar–May	90 – 2200	Annual herb	Absent	Associated habitat not present, species not observed during survey.
Smooth tarplant *Centromadia pungens* ssp.*puberula*	Fed: None Ca: None CNPS: 1B.1	Chenopod scrub, meadows and seeps, playas, riparian woodland, and alkaline valley and foothill grasslands.	Apr–Sep	0 – 640	Annual herb	Absent	Associated habitat not present, species not observed during survey.
Parry's spineflower *Chorizanthe parryi* var. *parryi*	Fed: None Ca: none CNPS: 1B.1	Chaparral, cismontane woodland, and coastal scrub	Apr–Jun	275 – 1220	Annual herb	Absent	Associated habitat not present, species not observed during survey.
Los Angeles sunflower *Helianthus nuttallii* ssp. *parishii*	Fed: None Ca: none CNPS: 1A	Coastal salt and freshwater marshes and swamps	Aug–Oct	0 – 1675	Perennial rhizomatous herb	Absent	Associated habitat not present, species not observed during survey.
Mesa horkelia *Horkelia cuneata* ssp. *puberula*	Fed: None Ca: None CNPS: 1B.1	Chaparral, cismontane woodland, and sandy, gravelly costal scrub	Feb–Jul	0 – 810	Perennial herb	Absent	Associated habitat not present, species not observed during survey.
California satintail *Imperata brevifolia*	Fed: None Ca: None CNPS 2.1	Chaparral, coastal scrub, Mojavean desert scrub, meadows and seeps, riparian scrub	Sep–May	0 – 500	Perennial rhizomatous herb	Absent	Associated habitat not present, species not observed during survey.
Robinson's peppergrass *Lepidium virginicum* var. *robinsonii*	Fed: None Ca: None CNPS 1B.2	Chaparral, coastal scrub	Jan–Jul	0 – 900	Annual herb	Absent	Associated habitat not present, species not observed during survey.
Parishi's desert-thorn *Lycium parishii*	Fed: None Ca: None CNPS 2.3	Coastal scrub, Sonoran desert scrub	Mar–Apr	300 – 455	Perennial shrub	Absent	Associated habitat not present, species not observed during survey.
Parish's bush-mallow *Malacothamnus parishii*	Fed: None Ca: None CNPS 1A	Chaparral and coastal scrub	Jun–Jul	300 – 455	Perennial deciduous shrub	Absent	Associated habitat not present, species not observed during survey.
Pringle's monardella *Monardella pringlei*	Fed: None Ca: None CNPS: 1A	Coastal scrub	May–Jun	300 – 400	Annual herb	Absent	Associated habitat not present, species not observed during survey.
Parish's gooseberry *Ribe divaricatum* var. *parishii*	Fed: None Ca: None CNPS 1A	Riparian woodland	Feb–Apr	0 – 30	Perennial deciduous shrub	Absent	Associated habitat not present, species not observed during survey.
Salt spring checkerbloom *Sidalcea neomexicana*	Fed: None Ca: None CNPS: 2.2	Chaparral, coastal scrub, lower montane coniferous forest	Mar–Jun	0 – 1530	Perennial herb	Absent	Associated habitat not present, species not observed during survey.

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Common name *Scientific name*	Staus	Habitat	Bloom	Elev. Range (meters)	Life Form	PFO	Reason
Prairie wedge grass *Sphemopholis obtusata*	Fed: None Ca: None CNPS: 2.2	Cismontane woodland and mesic meadows and seeps	Apr–Jul	100-850	Perennial herb	Absent	Associated habitat not present, species not observed during survey.
San Bernardino aster *Symphyotriichum defoliatum*	Fed: None Ca: None CNPS: 1B.2	Cismontane woodland, coastal scrub, lower montane coniferous forest, meadows and seeps, marshes and swamps, and valley and foothill grassland, near ditches streams and springs	Jul–Nov	0-900	Perennial rhizomatous herb	Absent	Associated habitat not present, species not observed during survey.

FEDERAL DESIGNATIONS:

END: federal-listed endangered
THR: federal-listed threatened

STATE DESIGNATIONS:

END: state-listed endangered
THR: state-listed threatened
RARE: state-listed rare

California Native Plant Society (CNPS) designations: (Note: According to CNPS [Skinner and Pavlik 1994], plants on Lists 1B and 2 meet definitions for listing as threatened or endangered under Section 1901, Chapter 10 of the California Fish and Game Code. This interpretation is inconsistent with other definitions. See text.)

List 1A: Plants presumed extinct in California.
List 1B: Plants rare and endangered in California and throughout their range.
List 2: Plants rare, threatened or endangered in California but more commons elsewhere in their range.
List 3: Plants about which we need more information; a review list.
List 4. Plants of limited distribution; a watch list.

CNPS Threat Ranks

.1: Seriously threatened in California (high degree/immediacy of threat).
.2: fairly threatened in California (moderate degree/immediacy of threat).
.3: Not very threatened in California (low degree/immediacy of threat).

Source: California Natural Diversity Data Base (CNDDB) 2010, California Native Plant Society Electronic Inventory (CNPSEI) 2010 San Bernardino South, Redlands USGS 7.5 minute quadrangles

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Slender-horned spineflower (*Dodecahema leptoceras*) is a federal- and state-listed endangered, CNPS List 1B.1 annual herb of the Polygonaceae (Buckwheat) family known to occur in sandy soil in association with mature alluvial scrub; ideally on a terrace or bench that receives overbank deposits every 50 to 100 years (*Western Riverside County MHSCP Species Accounts: Plants*, 2003). Although the project footprint does not contain the type of habitat associated with slender-horned spineflower protocol surveys for this species were conducted in the Santa Ana River bed between California Avenue and South Waterman Avenue and the species was not found. The nearest recorded occurrence of this species to the project site is approximately 2.2 miles southwest of the South Waterman Avenue end of the project (Figure 3).

Santa Ana River Woollystar (*Eriastrum densiflorum sanctorum*) is a federal- and state-listed CNPS List 1B.1 perennial herb of the Polemoniaceae (Phlox) family known to occur only in open washes and alluvial fan scrub above main watercourses where flooding and scouring occur, allowing open shrublands to persist (*Western Riverside County MHSCP Species Accounts: Plants*, 2003). Its preferred habitat includes gravelly soils, sandy soils, rock mounds, and boulders. Although the project footprint does not contain the type of habitat associated with Santa Ana River woollystar it does occur in the Santa Ana River bed adjacent to the project and was found there during the June 7 surveys between California Avenue and the Trolley Avenue abandoned railroad bridge, however, the closest individuals occur approximately 100 meters (300 ft.) from the project footprint as it currently stands and, most probably, well outside the project footprint.

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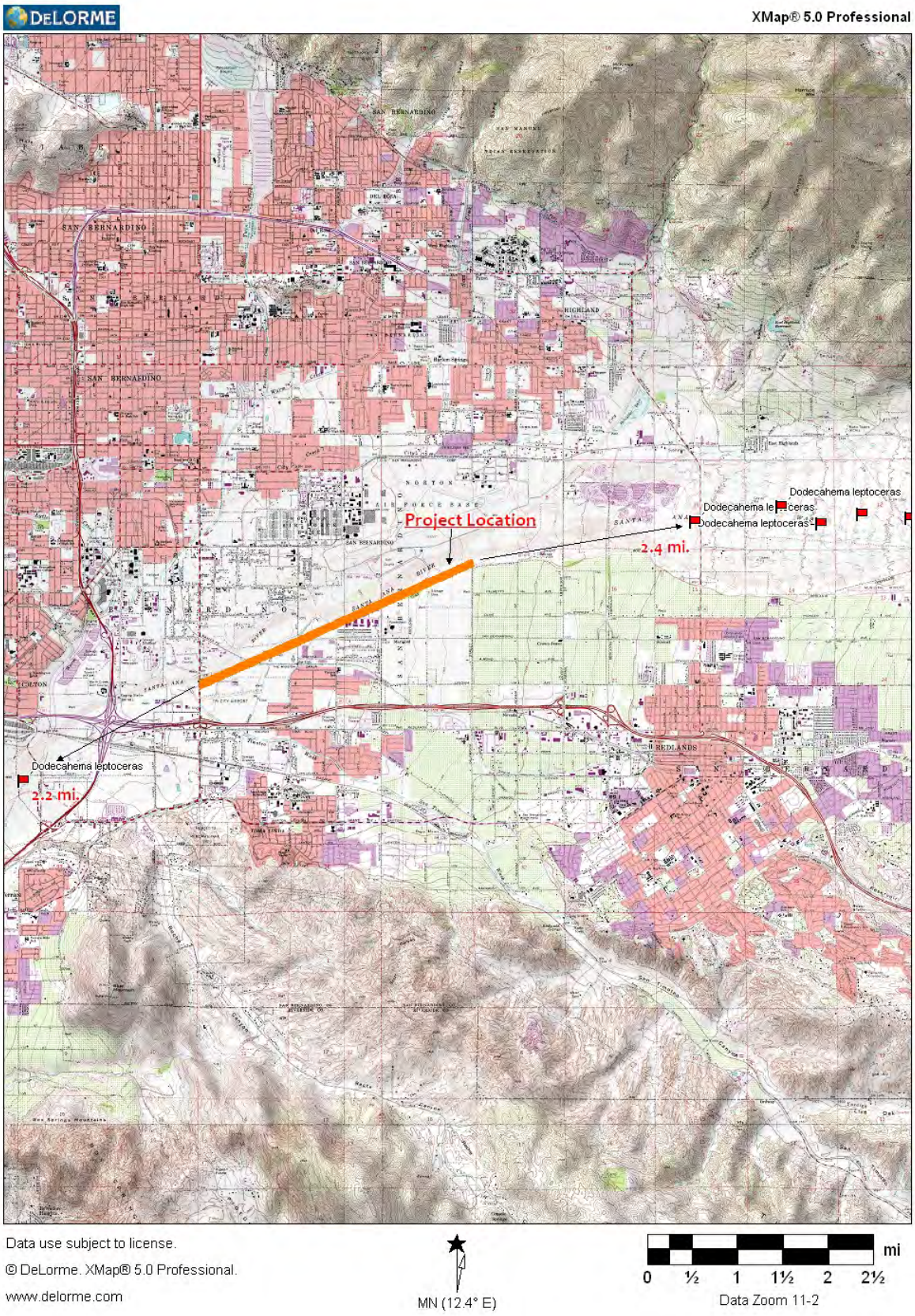

Figure 3. Slender-horned spineflower locations relative to project site.

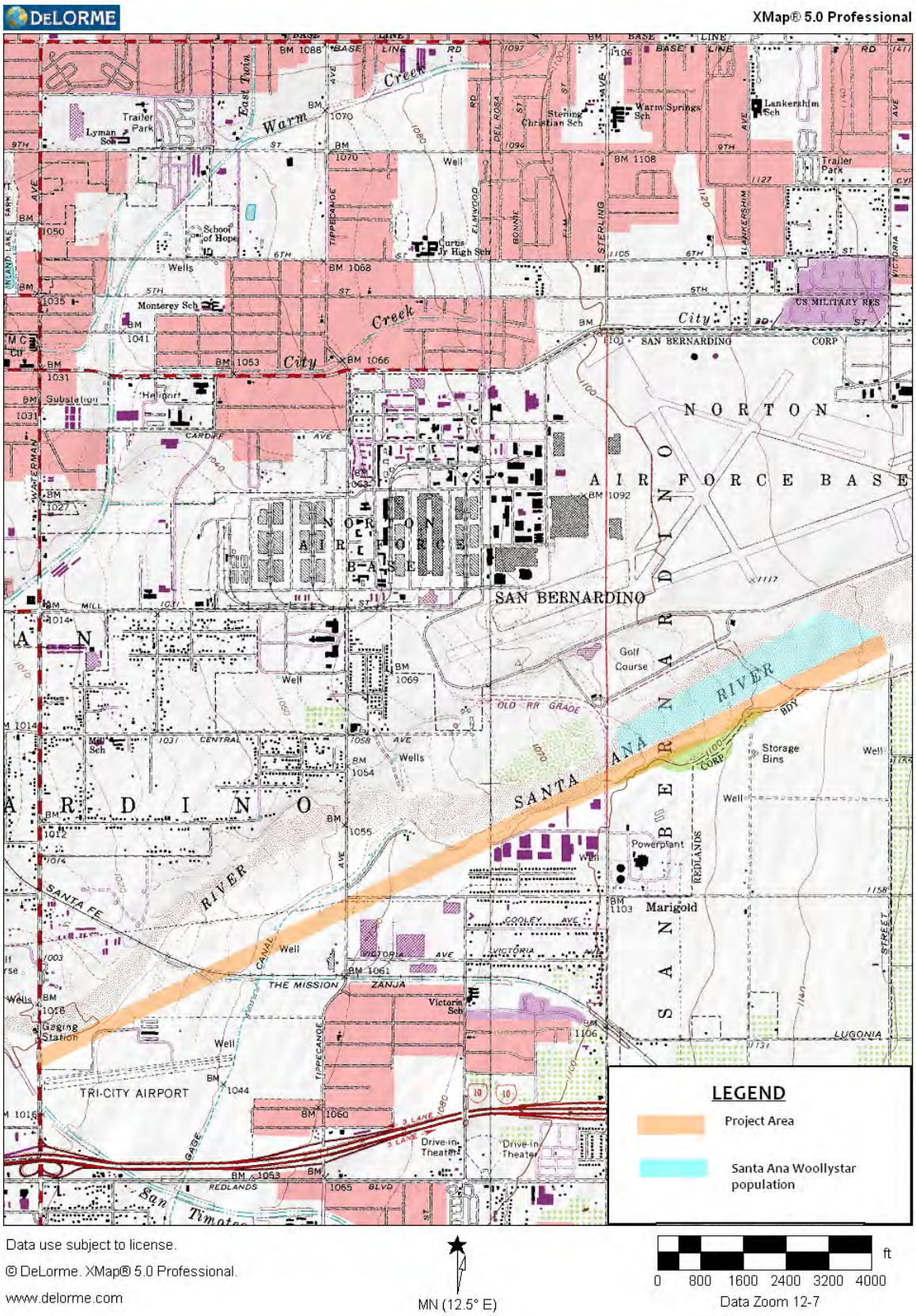

Figure 4. Santa Ana woollystar population.

4.0 Conclusions and Recommendations

No special-status plant species were encountered within the project site during the surveys. A number of individual Santa Ana woollystar plants were found in the river bed, all 100 meters or further from the project.

A biological monitor familiar with the plants species found in this area should be on the site during all vegetation clearing activities to prevent any sensitive species being removed. Keeping construction activities, materials, and debris from encroaching on the riverbed will prevent impacts to the Santa Ana woollystar plants in the riverbed.

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Appendix A

Plant Species Present on the Santa Ana River Trail Extension Project Site

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Scientific Name	Common Name	Family
*Ailanthus altissima**	tree of heaven	Simbaroubaceae
Ambrosia acanthicarpa	Annual bur-sage	Asteraceae
Artemisia californica	California sagebrush	Asteraceae
Artemisia douglasiana	Mugwort	Asteraceae
*Arundo donax**	giant reed	Poaceae
*Avena fatua**	wild oat	Poaceae
Baccharis salicifolia	Mulefat	Asteraceae
*Bromus catharticus**	rescue grass	Poaceae
*Bromus rubens**	foxtail chess	Poaceae
Camissonia sp.	camissonia	Onagraceae
*Cnicus benedictus**	Blessed thistle	Asteraceae
Conyza canadensis	Horseweed	Asteraceae
Croton californicus	California croton	Euphorbiaceae
Datura wrightii	jimson weed	Solanaceae
Encelia farinosa	brittlebush	Asteraceae
Eriastrum densiflorum sanctorum	Santa Ana woollystar	Polemoniaceae
Eriastrum sapphirinum	sapphire eriastrum	Polemoniaceae
Eriodictyon crassifolium	thick-leaved yerba santa	Hydrophyllaceae
Eriogonum fasciculatum	California buckwheat	Polygonaceae
Eucalyptus sp.	gum tree	Myrtaceae
Helianthus annuus	common sunflower	Asteraceae
Heterotheca grandiflora	telegraph weed	Asteraceae
*Hirshfeldia incana**	short-podded mustard	Brassicaceae
*Lactuca serriola**	prickly lettuce	Asteraceae
Lepidospartum squamatum	scale-broom	Asteraceae
Lotus scoparius	deerweed	Fabaceae
Lupinus sp.	lupine	Fabaceae
Malosma laurina	Laurel sumac	Anacardiaceae
*Marrubium vulgare**	horehound	Lamiaceae
*Nicotiana glauca**	tree tobacco	Solanaceae
Opuntia littoralis	coastal prickly pear	Cactaceae
*Parkinsonia acleata**	Mexican palo verde	Fabaceae
*Pennisetum setaceum**	fountain grass	Poaceae
Platanus racemosa	western sycamore	Platanaceae
Populus balsamifera trichocarpa	black cottonwood	Salicaceae
Populus fremontii fremontii	Fremont's cottonwood	Salicaceae
*Ricinus communis**	castor-bean	Euphorbiaceae
Salix gooddingii	black willow	Salicaceae
Salix lasiolepis	arroyo willow	Salicaceae
*Salsola tragus**	Russian thistle	Chenopodiaceae
Salvia columbariae	chia	Lamiaceae
Sambucus mexicana	Mexican elderberry	Caprifoliaceae
Senecio flaccidus	shrubby butterweed	Asteraceae
*Tamarix ramosissima**	Mediterranean tamarisk	Tsmaraceae
Ulmus parvifolia	Chinese Elm	Ulmaceae
Vitis californica	Californica wild grape	Vitaceae
Yucca whipplei	Our Lord's candle	Liliaceae

*Non-native species

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Appendix B

Plant Communities

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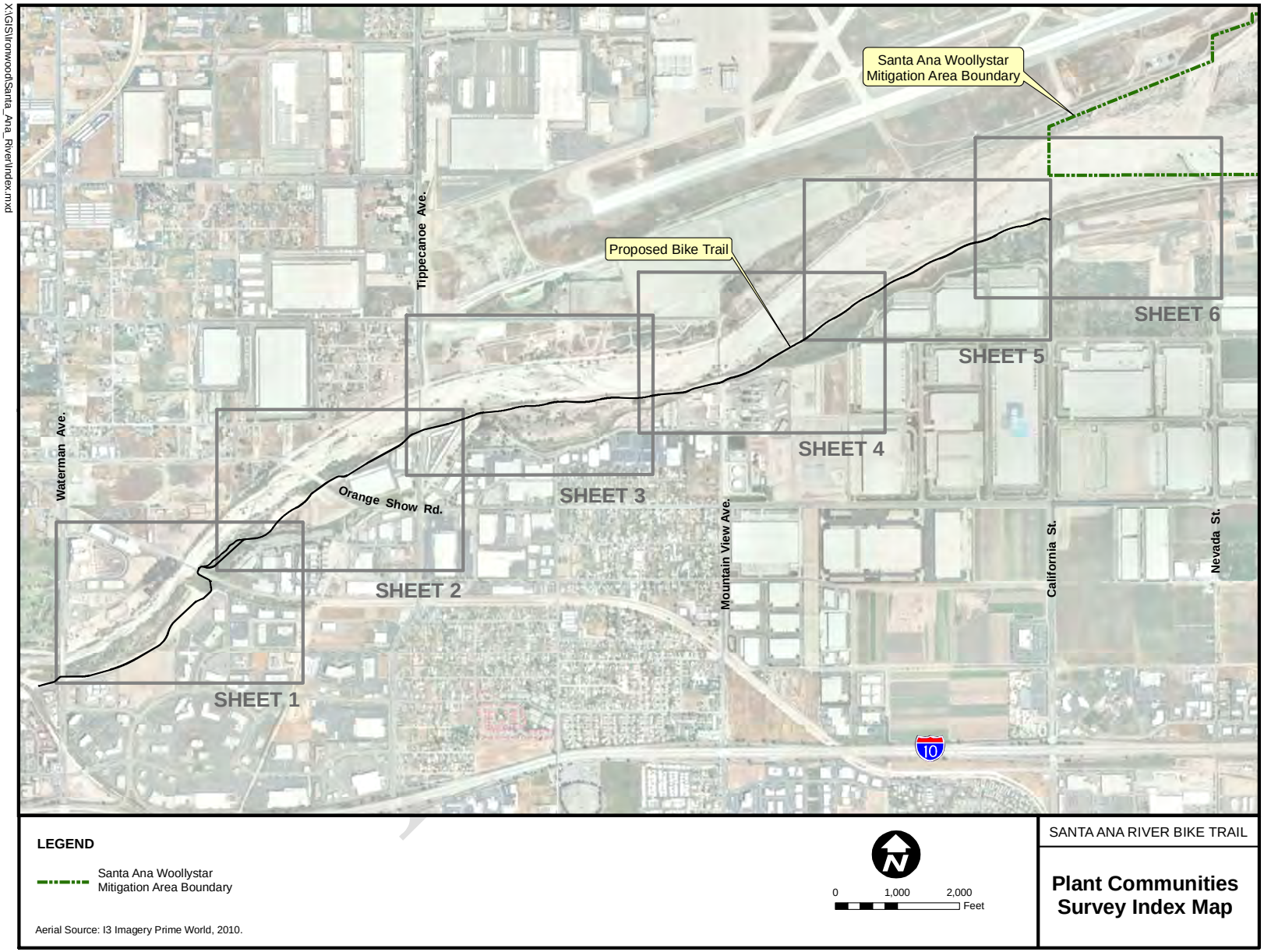
Exhibit 4: Initial Study and Mitigated Negative Declaration for the "Santa Ana River Trail, Phase III Project"



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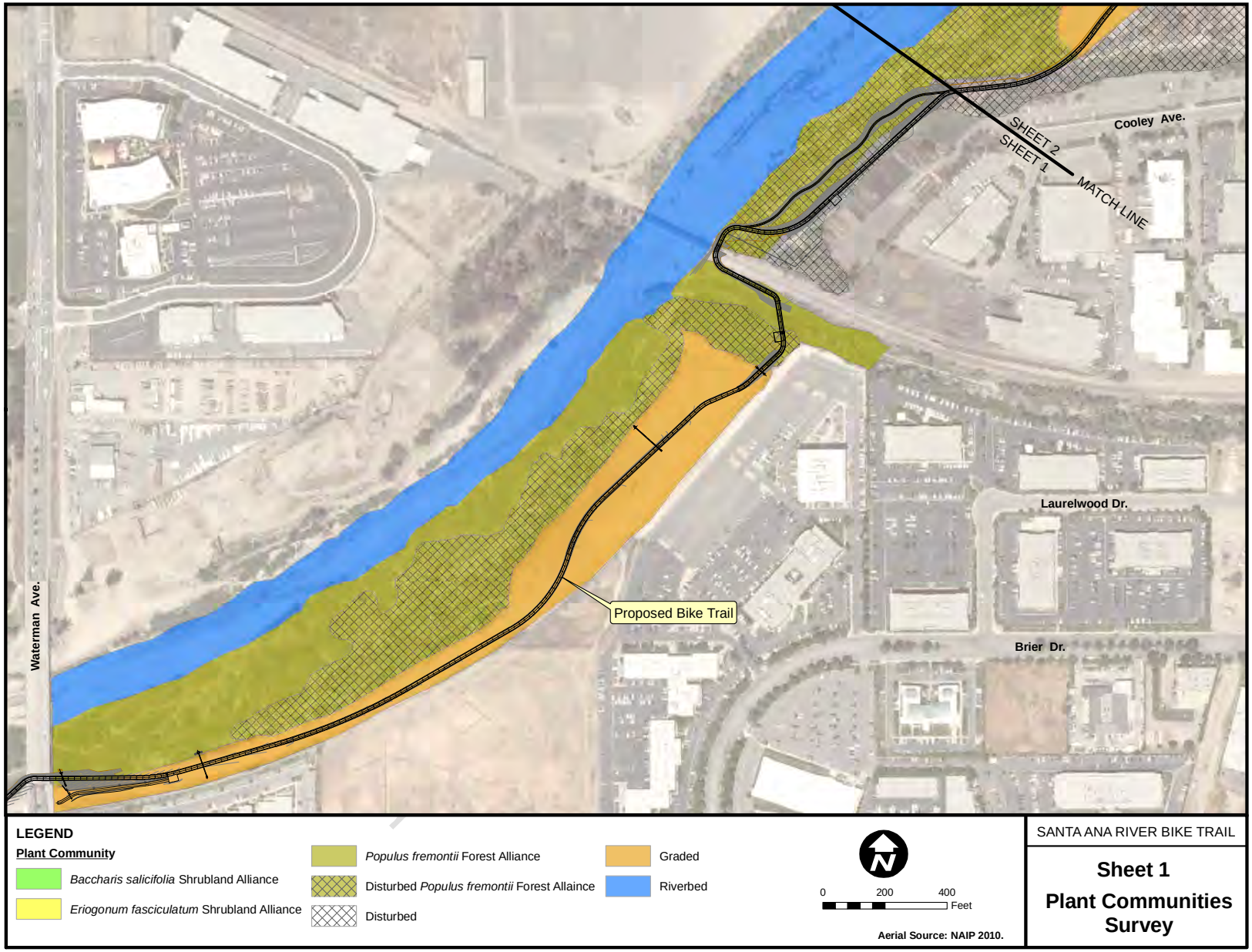

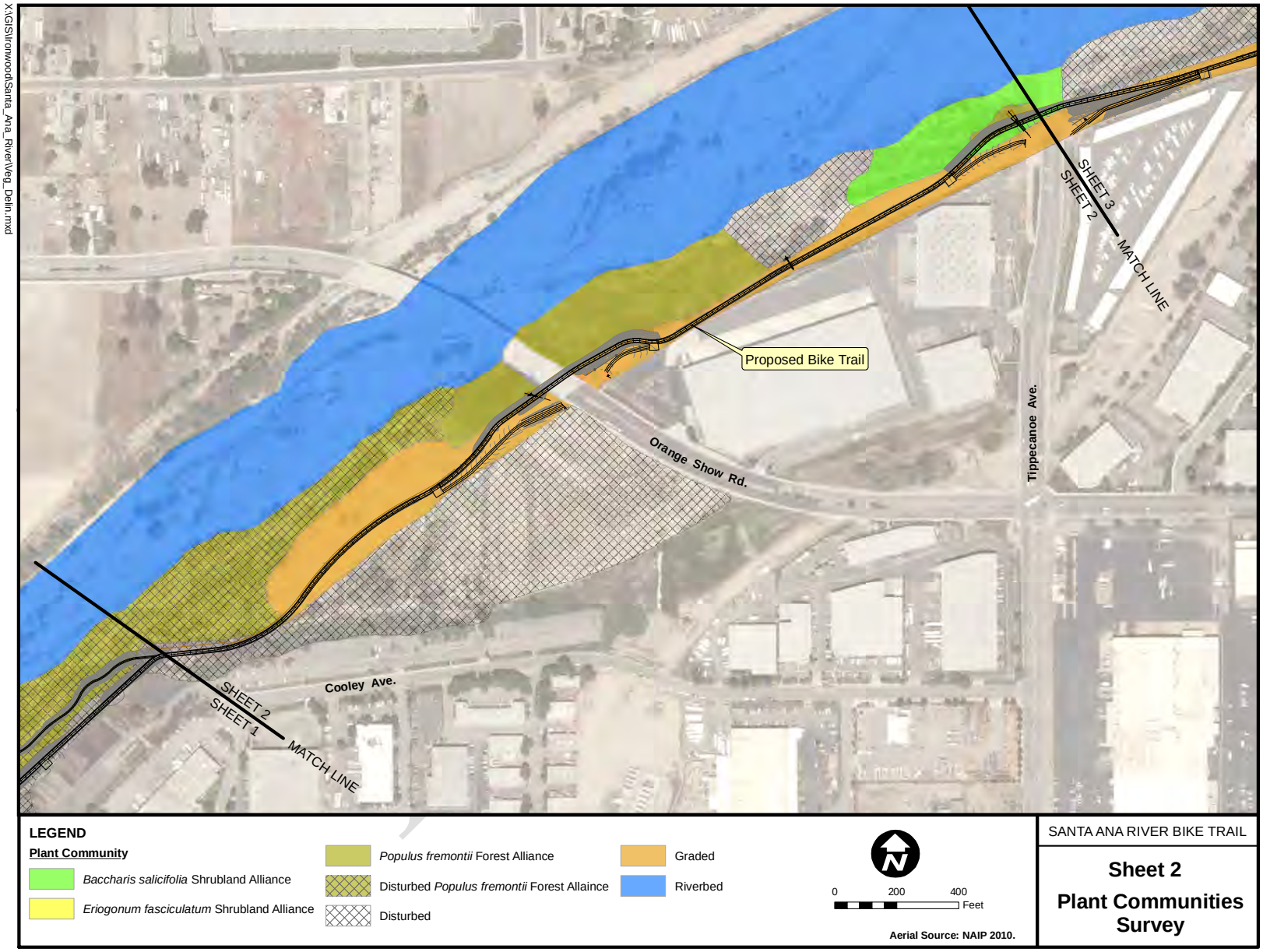
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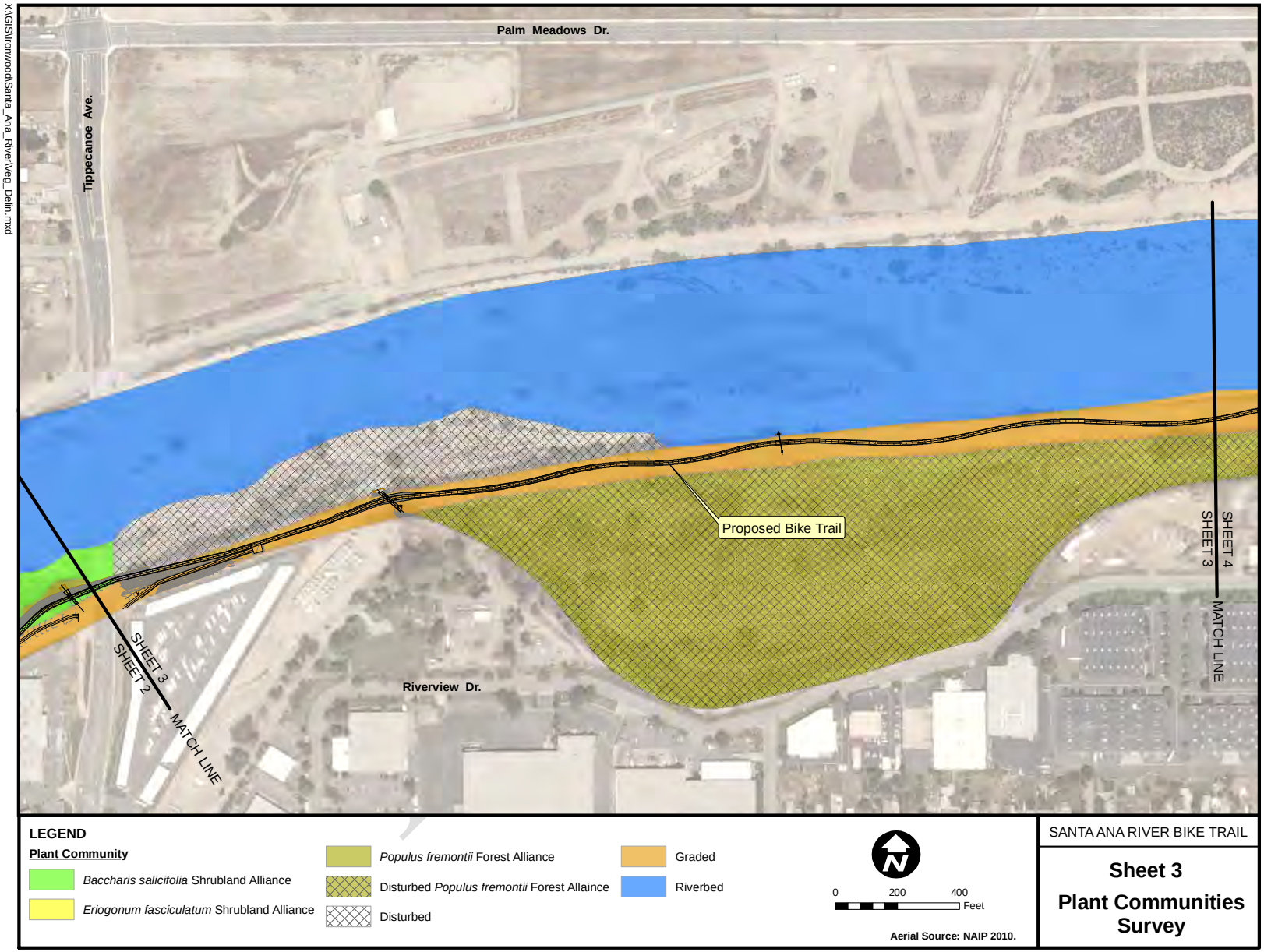
Proposed Bike Trail
Orange Show Rd.
Tippecanoe Ave.
Cooley Ave.
SHEET 2
SHEET 1
MATCH LINE
SHEET 3
SHEET 2
MATCH LINE
LEGEND
Plant Community
Baccharis salicifolia Shrubland Alliance
Eriogonum fasciculatum Shrubland Alliance
Populus fremontii Forest Alliance
Disturbed Populus fremontii Forest Allaince
Disturbed
Graded
Riverbed
0 200 400
Feet
Aerial Source: NAIP 2010.
SANTA ANA RIVER BIKE TRAIL
Sheet 2
Plant Communities Survey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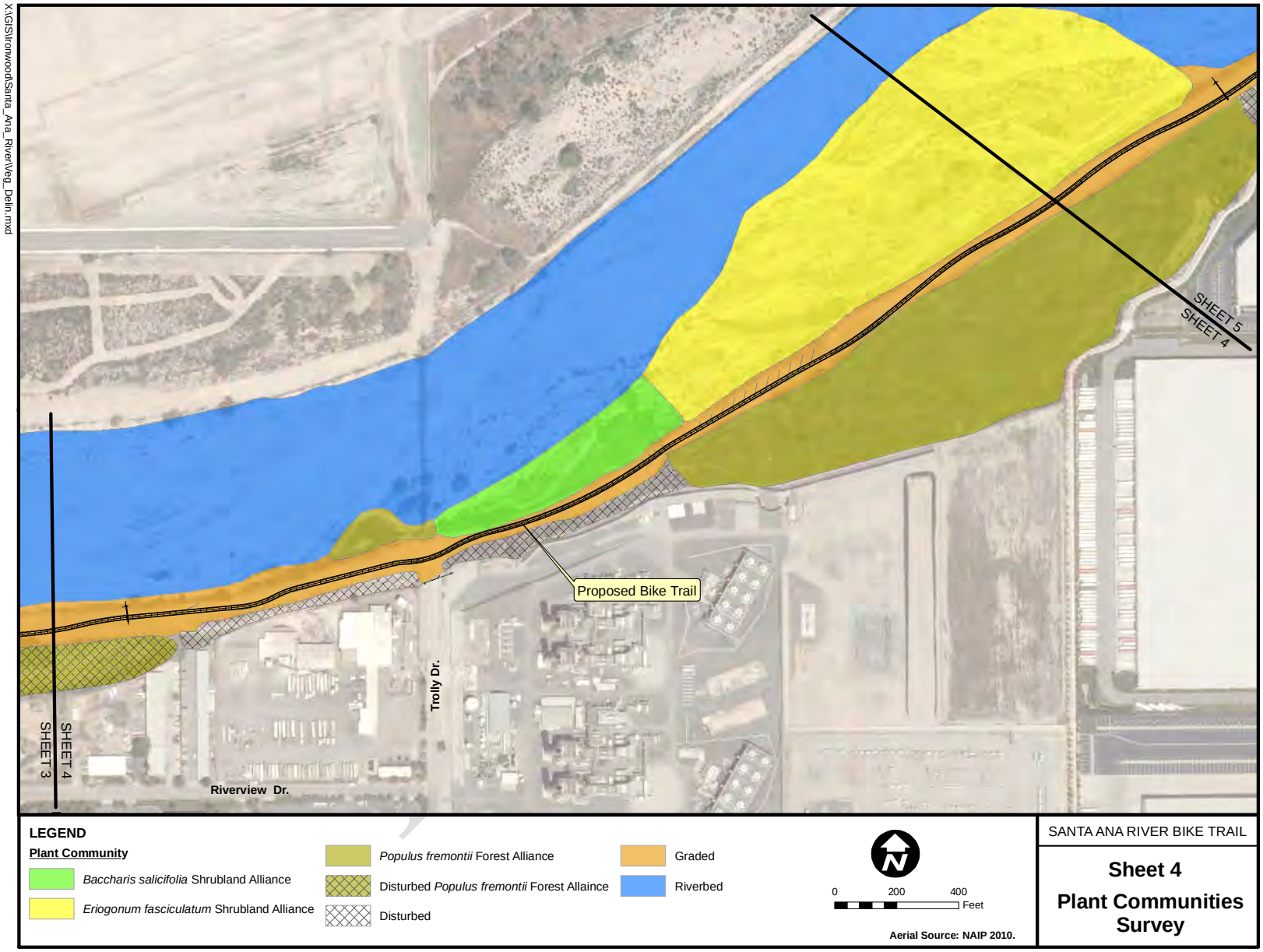
Palm Meadows Dr.
Tippecanoe Ave.
Proposed Bike Trail
SHEET 4
SHEET 3
MATCH LINE
SHEET 3
SHEET 2
MATCH LINE
Riverview Dr.
LEGEND
Plant Community
Baccharis salicifolia Shrubland Alliance
Eriogonum fasciculatum Shrubland Alliance
Populus fremontii Forest Alliance
Disturbed Populus fremontii Forest Allaince
Disturbed
Graded
Riverbed
0 200 400 Feet
Aerial Source: NAIP 2010.
SANTA ANA RIVER BIKE TRAIL
Sheet 3
Plant Communities Survey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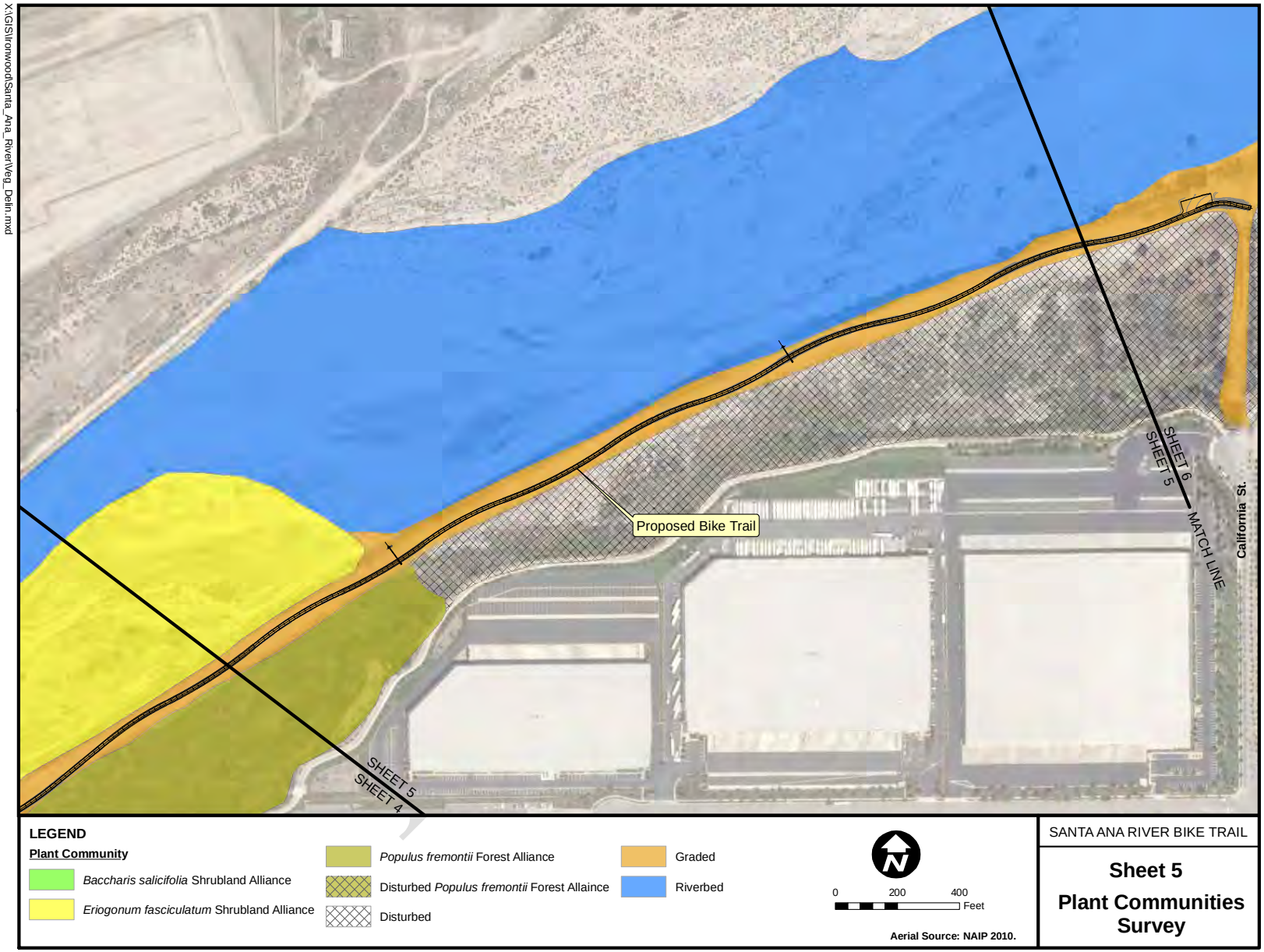
Proposed Bike Trail
Trolly Dr.
Riverview Dr.
SHEET 3
SHEET 4
SHEET 4
SHEET 5
LEGEND
Plant Community
Baccharis salicifolia Shrubland Alliance
Eriogonum fasciculatum Shrubland Alliance
Populus fremontii Forest Alliance
Disturbed Populus fremontii Forest Allaince
Disturbed
Graded
Riverbed
0 200 400
Feet
Aerial Source: NAIP 2010.
SANTA ANA RIVER BIKE TRAIL
Sheet 4
Plant Communities Survey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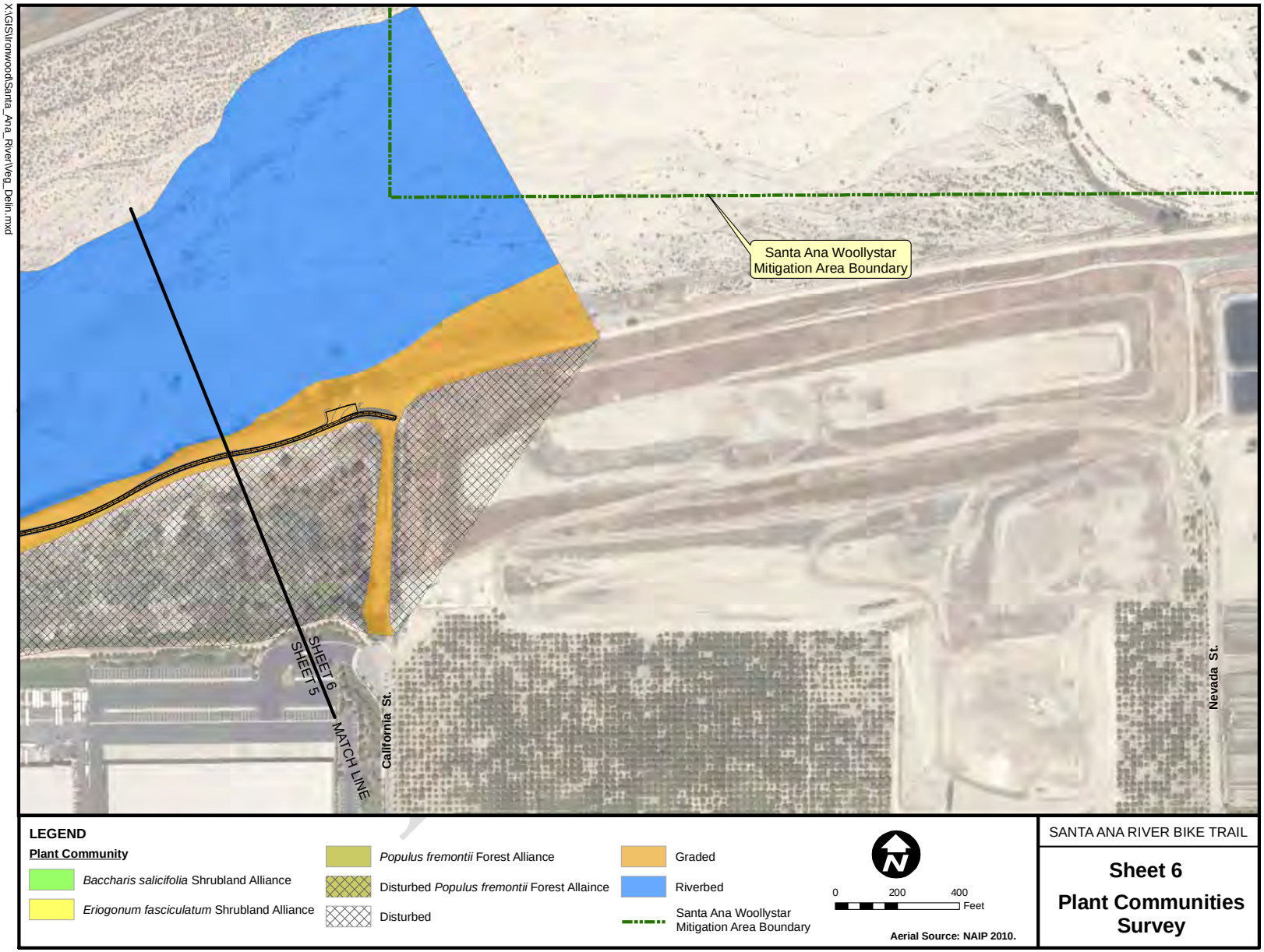
Proposed Bike Trail
SHEET 5
SHEET 4
SHEET 6
SHEET 5
MATCH LINE
California St.
LEGEND
Plant Community
Baccharis salicifolia Shrubland Alliance
Eriogonum fasciculatum Shrubland Alliance
Populus fremontii Forest Alliance
Disturbed Populus fremontii Forest Allaince
Disturbed
Graded
Riverbed
0 200 400 Feet
Aerial Source: NAIP 2010.
SANTA ANA RIVER BIKE TRAIL
Sheet 5
Plant Communities Survey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Santa Ana Woollystar
Mitigation Area Boundary
SHEET 6
SHEET 5
MATCH LINE
California St.
Nevada St.
LEGEND
Plant Community
Baccharis salicifolia Shrubland Alliance
Eriogonum fasciculatum Shrubland Alliance
Populus fremontii Forest Alliance
Disturbed Populus fremontii Forest Allaince
Disturbed
Graded
Riverbed
Santa Ana Woollystar
Mitigation Area Boundary
0
200
400
Feet
Aerial Source: NAIP 2010.
SANTA ANA RIVER BIKE TRAIL
Sheet 6
Plant Communities
Survey

Appendix C

Photographs

DRAFT

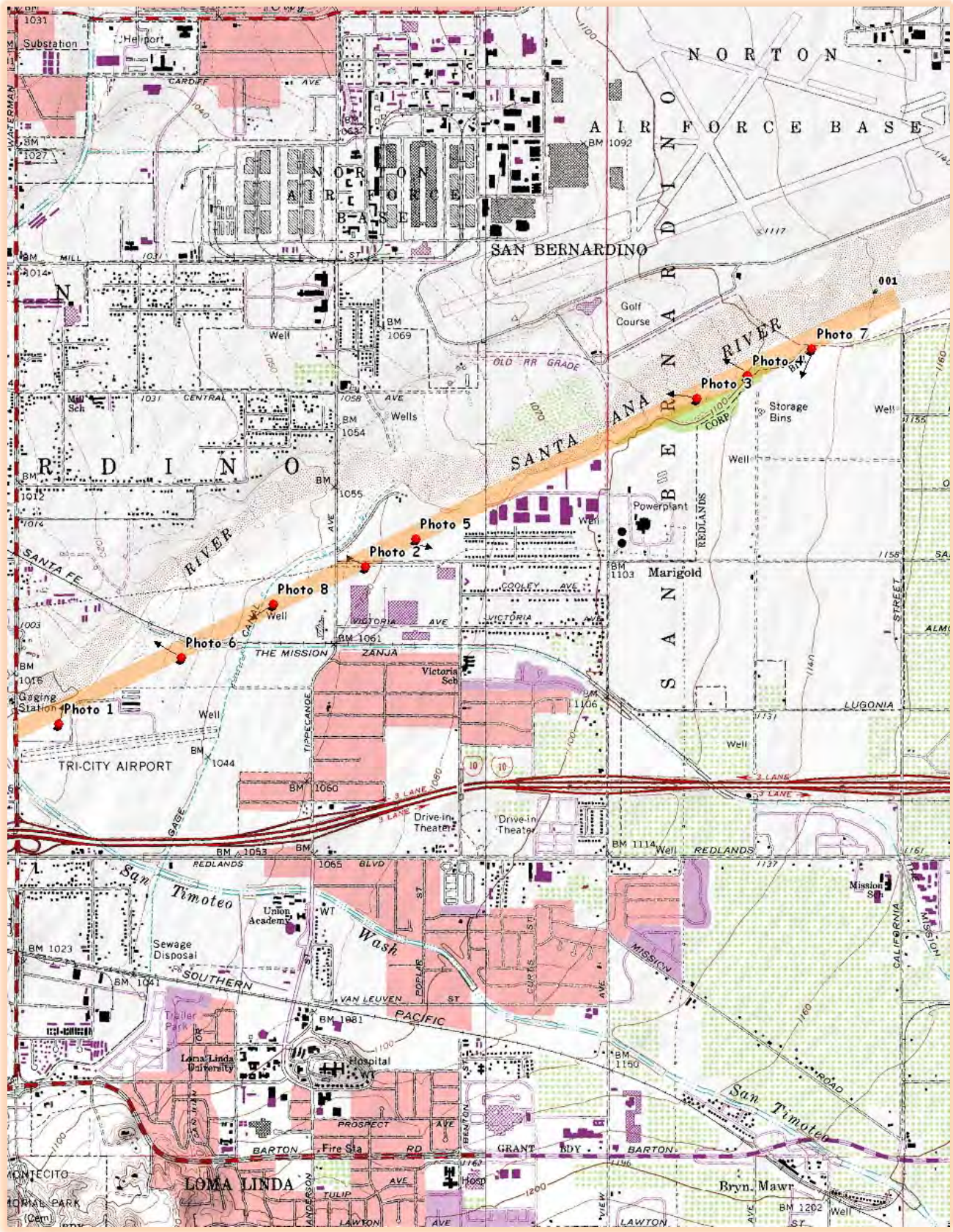

Photo Locations (approximate)

Photo 1. *Populus fremontii* Forest Alliance north of Waterman Ave.

Photo 2. *Populus fremontii* Forest Alliance north of Tippecanoe.

Photo 3. *Baccharis salicifolia* Shrubland Alliance north of Trolley Avenue railroad bridge.

Photo 4. *Eriogonum fasciculatum* Shrubland Alliance in riverbed north of Trolley Avenue.

Photo 5. Disturbed *P. fremontii* Forest Alliance north of Tippecanoe Avenue.

Photo 6. Disturbed area north of Waterman Avenue near railroad ROW.

Photo 7. Disturbed area north of Trolley Avenue.

Photo 8. Graded area south of Tippecanoe Avenue.

Appendix C

Slender-horned Spineflower
Habitat Criteria and Survey Requirements

DRAFT

Suitable Habitat Criteria and Survey Requirements for
Dodecahema leptoceras (A. Gray) Rev. & Hardham (Polygonaceae)
Slender-horned spineflower
September 2002

Modeled habitat for *Dodecahema leptoceras* is based on elevations between 700 and 2500 feet (213-762 m) for cismontane areas and up to 3000 feet (914 m) for transmontane areas. Soil types used for modeled habitat are EsD to capture young alluvial benches in Bautista Canyon, San Jacinto Mountains. In addition, geology used for modeled habitat includes all quaternary alluvial wash, terrace and fan types (Qw, Qal, Qc, Qco, Qf, Qo, Qod, Qof, Qow, Qya, and Qyf). Areas within National Forest System Lands, plus a 1 mile buffer, were used within Los Angeles, Riverside, San Bernardino, and San Diego counties, excluding all areas designated as urban using vegetation layers and satellite imagery interpretation.

Suitable Habitat:

The following criteria 1, 2 and 3 must be met OR criteria 4 must be met:

1. Vegetation is alluvial fan sage scrub, sage scrub (coastal or inland types), or basin sagebrush. Associated species may include *Cercocarpus betuloides, Chorizanthe* spp., *Juniperus californica, Lastarriaea coriacea, Mucronea californica,* and *Yucca whipplei.*

2. Site is composed of open vegetation structure.

3. Sandy, gravelly, or silty alluvial soils associated with any alluvial benches, fans or terraces.

4. *–or-* Unconsolidated/decomposed granite slopes near alluvial systems that support *Lasterriaea coriacea* and *Chorizanthe spp.*

Protocol for Surveys of Suitable Habitat – Presence/Absence Determinations

Detectability Profile: *Dodecahema leptoceras* is highly variable in size and density from year to year, depending on amount and timing of winter rains, and can range from zero to high detectability during the optimal survey period. In years with average or above average growing conditions, plants (where up) are highly detectable during the flowering period (generally April-June), and for about two months thereafter while the inflorescence stalks are intact and red.

Plants are annual and there is high variability in the expression and distribution of occurrences, between years with average or above average growing conditions. In dry years, or sometimes years following dry years, detectability of occurrences can range from low to zero.

Survey Requirements for Negative Determination in Suitable Habitat

Repeat Requirements: This species has high annual variability in presence, and exhibits high detectability under optimal conditions. A negative determination requires at least two years of complete surveys. If any of those two years are characterized by low detectability based on condition of the reference population, an additional (3rd) year will be required for a negative determination.

For each survey year, one complete survey at a time when detectability is confirmed at the reference population, and one complete follow-up survey within 4 weeks will provide sufficient repeat confidence. Surveys should be postponed any year where detectability is zero, or very poor at the reference population, as negative survey data from such years are not reliable.

Survey Intensity: During the flowering season and shortly after while inflorescence stalks are still intact and red suitable habitat must be surveyed in walking transects no more than 2 meters apart.

References:

Allen, Edith B. 1996. Characterizing the habitat of slender-horned spineflower (*Dodecahema leptoceras*), Ecological analysis. Prepared for California Department of Fish and Game, Region 5, Long Beach.

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Tibor, David P., ed. 2001. Inventory of Rare and Endangered Plants of California, 6th edition. California Native Plant Society, Sacramento, CA.

Appendix B

Exhibit 4: Initial Study and Mitigated Negative Declaration for the "Santa Ana River Trail, Phase III Project"

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MEMORANDUM

DATE: 06/08/2011

TO: Tom Dodson

FROM: C.J Fotheringham, PhD

REGARDING: Focused Botanical Surveys for the SART Phase III Project Located in the City of San Bernardino, CA

Per your request spring-time, focused botanical surveys were conducted for a pedestrian trail project located on the southern bank of the Santa Ana River. The County of San Bernardino Regional Parks Department (Regional Parks) and the Department of Public Works (Public Works) proposes to construct an approximately 3.8 mile long section of the Santa Ana River Trail (SART) on the southern bank of the Santa Ana River. This segment of the SART is the third phase of the trail developed within San Bernardino County (Phase III). The proposed SART Phase III Project (Project) begins at Waterman Avenue in the City of San Bernardino and continues easterly to California Street in the City of Redlands.

In general, the Project consists of installing a regional trail that will consist of the trail, culverts, and ADA-compliant access ramps. Construction activities include fill and embankment construction; relocating and/or adjusting surface features to grade; subsurface preparation for paving the trail with asphalt concrete, Portland cement concrete (PCC), and decomposed granite pavement; erosion control best management practices (BMPs); reinforced concrete retaining walls; fencing and railing; access gates; storm drain facilities; signage; pavement striping and markings; channelizer/delineator; and stormwater pollution prevention control.

The project will be built as a 10-foot-wide asphalt trail with an adjacent 2-foot-wide unpaved shoulder on either side to accommodate non-motorized modes of transportation and pedestrians. The majority of the trail will be 14 feet wide with additional total width at turns as indicated on the detailed engineered plans. It is anticipated that construction will result in approximately 17.5 acres of land disturbance. Of the total area disturbed, 13.6 acres will be temporary construction and staging disturbance and 5.9 acres will be permanent trail facility disturbance (10-foot-wide trail plus 4-foot-wide (total) shoulders, 3.8miles in length).

The majority of Phase III will be constructed along the existing County of San Bernardino Flood Control southern bank/levee adjacent to the River corridor. In one area of the alignment (approximately 2,500 linear feet) easterly of Waterman Avenue, from the confluence of Mission Zanja Creek east to Orange Show Road, no levee currently exists and, therefore, this area of the trail will be developed on the unimproved southern bank of the riverbed within the County Flood Control right-of-way. The remainder of the proposed 3.8-mile SART Phase III will be developed on the existing flood control levee

maintenance road. The existing levee maintenance road will be improved and paved as a Class 1 Bikeway. Project location can be found on the U.S. Geological Survey (USGS) – San Bernardino South and Redlands quadrangles, 7.5 Minute Series topographic within unsectioned portions of Township 1 South and Ranges 4 and 3 West.

Methods:
General botanical surveys were conducted during the course of focused surveys for slender-horned spineflower (spineflower) [*Dodecahema leptoceras*] and Santa Ana River woollystar (woollystrar) [*Eriastrum densifolium* ssp. *sanctorum*]. The surveys were conducted in accordance with "Suitable Habitat Criteria and Survey Requirements for *Dodecahema leptoceras* Slender-horned spineflower" dated September 2002 which allows the surveyor to meet recommendations for focal taxa by requiring surveying in tight transects so the surveyor can observe 100% of the ground surface.

Surveys were conducted on April 6, 16, and 26, 2011 when sensitive plant species would be expected to have been readily detectable. Botanical surveys were conducted within and adjacent to the project alignment and 300 feet out into the Santa Ana River floodplain. The surveys extended across the sandy riverbed of the Santa Ana River to determine the proximity of populations of woollystar and spineflower and/or any other special-status plant species to the project site. Focused surveys were not conducted in areas of the Project alignment where extremely disturbed conditions preclude the occurrence of sensitive botanical species.

A nearby reference population of spineflower was visited prior to each spring survey to confirm that the species was readily detectable. Surveys of the site were conducted by walking transects through suitable habitat at 2m spacing. Care was taken to be sure that all areas of the habitat were visible at some point in the survey. All plant species present on site were identified in the field or, if unknown, either a photo or relevant pieces of the plant were collected. Identification of species utilized a Leica 7-35x dissecting scope and floras such as the Jepson Manual of the California Flora, Manual of North American Grasses, and Calflora.org. A GPS (Garmen Oregon) was carried and tracks were collected during the surveys.

Results:
The Santa Ana River floodplain contains, among other habitat types, RAFSS habitat, which is a regionally significant habitat type confined to river and creek floodplains of southern San Bernardino and northwest Riverside counties. The habitat within the Project area include a mosaic of vegetative communities including Riversidean alluvial fan sage scrub (Holland community code 32720), southern cottonwood-willow riparian forest (Holland community code 61330), sandy river wash (Holland community code 11730), southern willow scrub (Holland community code 63320), mule fat scrub (Holland community code 63310), non-native grassland (Holland community code 42200), transitional bare areas (Holland community code 11760), and disturbed ground Urban or built-up land (Holland community code 11100) .

Dense stands of riparian habitat that are modest in size are found scattered along the BSA within SAR from Waterman Avenue to Tippecanoe Avenue. The riparian habitat within the BSA is in various seral stages and generally consists of tall, multilayered, open canopy riparian woodland. The characteristic vegetative species within this riparian habitat include: Freemont cottonwood (*Populus fremontii),* black willow (*Salix goodingii*) narrow-leved willow (*S. exigua*), arroyo willow (*S. lasiolepis*), sandbar willow (*S. hindsiana*), mule fat (*Baccharis salicifolia*), and sycamore (*Platanus recemosa).* Within the riparian habitat community, the plants are able to spread by seed and rhizomes, rapidly invading exposed sand or gravel bars. In the absence of flooding, this willow woodland has emerged with an overstory averaging 30 feet in height. The canopy structure of this riparian woodland has a complex architecture and its understory consists of varying layers of shrubs, herbs and vines.

In addition to the riparian habitat found within the BSA, there is also mule fat scrub found in discrete patches along the outer edges of the north side of the project alignment. The mule fat scrub is dominated by mule fat *(Baccharis salicifolia)* and typically occurs in areas that experience less frequent inundation and scour than the willow riparian woodland. Mule fat scrub often comprises an important subcomponent of the willow riparian woodland through its presence along the upper edge and within openings of the woodland.

RAFSS occurs within the BSA, outside of but adjacent to the project alignment, between California Street and Orange Show Road. The RAFSS found in the BSA is characterized by buckwheat (*Eriogonum fasciculatum*), deerweed (*Lotus scoparus*) yerba santa (*Eriodictyon trichocalyx* var *trichocalyx*), scale broom (*Lepidospartum squamatum*), brittlebrush (*Encelia farinosa*), (*Artemisia Californica*), golden currant (*Ribes aureum*), California croton (*Croton californica*), and black sage (*Salvia melifera*).

In addition to the RAFSS and riparian habitat communities found within the BSA, there are small pockets where non-native exotic species have colonized. The dominant non-native invasive plants found in the riparian areas include arundo *(Arundo donax)*, tree tobacco (*Nicotiana glauca*), castor bean (*Ricinus communis*), and salt cedar (*Tamarix ramosissima*). At this point, none of these species are well established and/or are out-competing the native species. In contrast, non-native mustard (*Brassica incanca*) has become well established in mule fat scrub habitat within the BSA.

Santa Ana River woollystar was not found to occur within the project foot print but there are known occurrences $\leq$ 0.25 miles north of the proposed project site. There is an occurrence at Mountain View on and near the north bank. There is also a large occurrence associated with the San Bernardino airport. The latter could potentially act as a seed source for new populations within and adjacent to the proposed project impact area. Surveys would need to be conducted immediately prior to any construction activity in the riverbed to avoid inadvertent take.

While there was marginally habitat on and adjacent to the proposed project slender-horned spineflower was not found during surveys. The nearest location is 2.5miles E.N.E. of the nearest point of project area and was visited prior to surveys to assess visibility of species. Figures 1a-d and Photos 1-8 depict habitat types found and conditions observed on site within the BSA..

Other special status species that occur in the area, as listed in table1 below, were not found in the course of general and focused surveys.

Table 1: Listed, Proposed Species, and Critical Habitat Potentially Occurring or Known to Occur in the Project Area.

Common Name	Scientific Name	Status	General Habitat	Habitat Present / Absent	Rationale
bristly sedge	*Carex comosa*	CNPS 2.1	Marshes and swamps.	A	Grows along lake margins and wet places which are absent..
California bedstraw	*Galium californicum ssp. primum*	CNPS 1B	Chaparral, lower montane coniferous forest.	A	Grows in shade of trees and shrubs at the lower edge of the pine belt, in pine forest-chaparral ecotone.
California satintail	*Imperata brevifolia*	CNPS 2.1	Coastal scrub, chaparral, riparian scrub, mojavean scrub, meadows and seeps (alkali).	HP	Marginal habitat present. Species not found during survey.
Gambel's water cress	*Nasturtium gambelii*	FE/ST	Marshes and swamps.	A	Fond in freshwater and brackish marshes at the margins of lakes and along streams, in or just above the water level.
Horn's milk-vetch	*Astragalus hornii var. hornii*	CNPS1B	Meadows and seeps, playas.	A	Grows along lake margins, alkaline sites which are absent.
Los Angeles sunflower	*Helianthus nuttallii ssp. parishii*	CNPS 1A	Marshes and swamps (coastal salt and freshwater). Historical from southern California.	A	Marsh/swamp habitat is not present.
marsh sandwort	*Arenaria paludicola*	FE/SE/ CNPS1B	Marshes and swamps.	A	No dense mats of typha, juncus, scirpus, etc. and no freshwater marsh.
mesa horkelia	*Horkelia cuneata ssp. puberula*	CNPS 1B	Chaparral, cismontane woodland, coastal scrub.	HP	Suitable habitat present but this species is not documented in the local vicinity of the Project and was not found during survey.
Nevin's barberry	*Berberis nevinii*	FE/SE	Chaparral, cismontane woodland, coastal scrub, riparian scrub.	A	Preferred steep, north-facing are absent from site..
Parish's gooseberry	*Ribes divaricatum var. parishii*	CNPS 1A	Riparian woodland.	HP	Suitable habitat present. Species not found during survey.
Parish's desert-thorn	*Lycium parishii*	CNPS 2.3	Coastal scrub, sonoran desert scrub.	HP	Suitable habitat present. Species not found during survey.
Parish's bush-mallow	*Malacothamnus parishii*	CNPS 1A	Chaparral, coastal sage scrub.	HP	Suitable habitat present. Species not found during survey.

Common Name	Scientific Name	Status	General Habitat	Habitat Present / Absent	Rationale
Parry's spineflower	*Chorizanthe parryi var. parryi*	CNPS 1B	Coastal scrub, chaparral.	HP	Suitable habitat present. Species not observed during survey.
Plummer's mariposa-lily	*Calochortus plummerae*	CNPS 1B	Coastal scrub, chaparral, grassland, , lower montane coniferous forest.	HP	Suitable habitat present. Species not observed during survey.
Pringle's monardella	*Monardella pringlei*	CNPS 1A	Coastal scrub.	HP	Suitable habitat present. Species not found during survey.
Robinson's pepper-grass	*Lepidium virginicum var. robinsonii*	CNPS 1B	Chaparral, coastal scrub.	HP	Suitable habitat present. Species not found during survey.
Salt Spring checkerbloom	*Sidalcea neomexicana*	CNPS 2.2	Alkali playas, brackish marshes, chaparral, coastal scrub, lower montane forest.	A	Species requires alkali springs and marshes which are absent from site.
salt marsh bird's-beak	*Cordylanthus maritimus ssp. maritimus*	FE/SE	Coastal salt marsh, coastal dunes.	A	Limited to the higher zones of the salt marsh habitat
San Bernardino aster	*Symphyotrichum defoliatum*	CNPS 1B	Meadows and seeps, marshes and swamps, coastal scrub, cismontane woodland, lower montane coniferous forest, grassland.	A	Requires vernally mesic grassland, ditches, streams and springs. Species not found during survey.
Santa Ana River woollystar	*Eriastrum densifolium ssp. sanctorum*	FE/SE	Coastal scrub, chaparral.	HP	Suitable habitat present. Species was found approx. 150 meters outside of the project boundaries.
slender-horned spineflower	*Dodecahema leptoceras*	FE/SE	Chaparral, coastal scrub (alluvial fan sage scrub).	HP	Suitable habitat present. Species documented in local vicinity, but not found during focused survey.
smooth tarplant	*Centromadia pungens ssp. laevis*	CNPS 1B	Valley and foothill grassland, chenopod scrub, meadows, playas, riparian woodland.	A	Grows in alkali meadow, alkali scrub which is absent.

Coding of Terms: Absent [A] - no habitat present and no further work needed. Habitat Present [HP] -habitat is, or may be present. The species may be present. Present [P] - the species is present. Critical Habitat [CH] - project footprint is located within a designated critical habitat unit, but does not necessarily mean that appropriate habitat is present. Status: Federal Endangered (FE); Federal Threatened (FT); Federal Proposed (FP, FPE, FPT); Federal Candidate (FC), Federal Species of Concern (FSC); State Endangered (SE); State Threatened (ST); Fully Protected (FP); State Rare (SR); State Species of Special Concern (SSC); California Native Plant Society (CNPS) 1A- presumed extinct in California, 1B - Rare, Threatened or Endangered in California and elsewhere, 2 - Rare, Threatened or Endangered in California but more common elsewhere, 3 - Plants for which more information is needed, 4 - Plants with a limited distribution.

Exhibit 4: Initial Study and Mitigated Negative Declaration for the
"Santa Ana River Trail, Phase III Project"

Focused Botanical Surveys for the SART Phase III Project

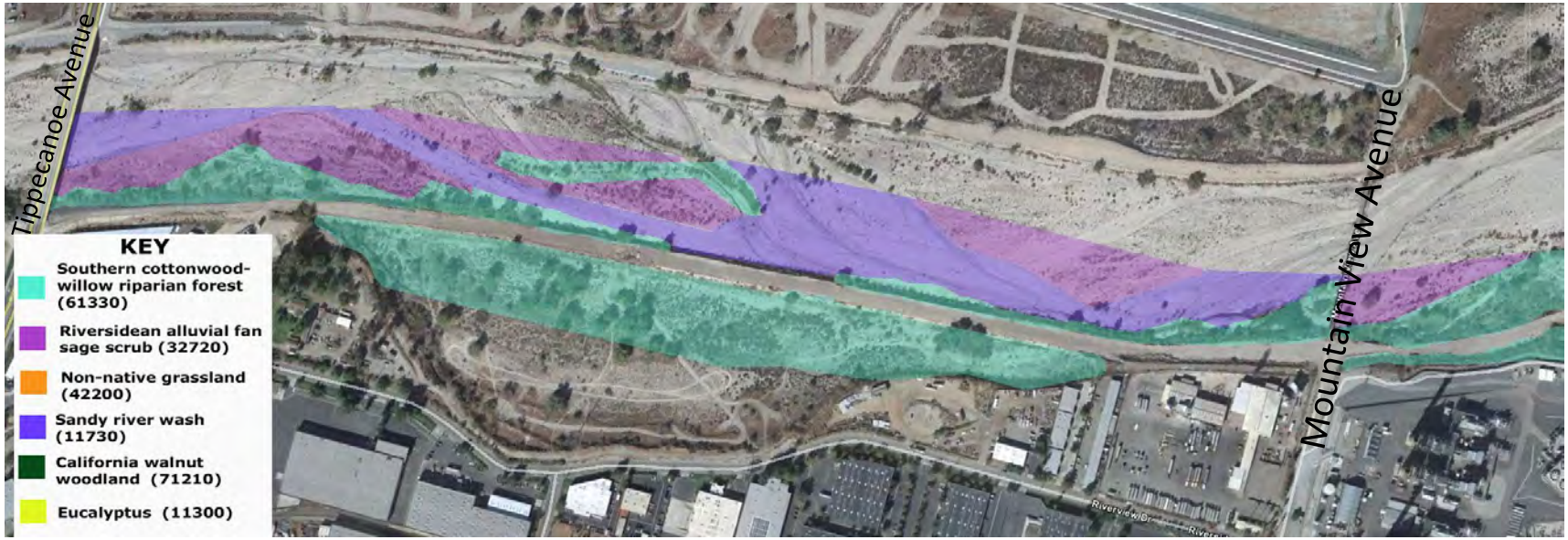
Figure 1a Habitat within the Biological Study Area between Waterman Avenue and BNSF RR Bridge at Mission Creek

Focused Botanical Surveys for the SART Phase III Project

Figure 1b Habitat within the Biological Study Area between Orange Show Road and Tippecanoe Avenue

Focused Botanical Surveys for the SART Phase III Project

Figure 1c Habitat within the Biological Study Area between Tippecanoe Avenue and Mountain View Avenue



Focused Botanical Surveys for the SART Phase III Project

Figure 1d Habitat within the Biological Study Area between Mountain View Avenue and California Street

Focused Botanical Surveys for the SART Phase III Project

Photo 1. First visit to slender-horned spineflower reference population

Photo 2. Potentially suitable habitat for slender-horned spineflower within the Biological Study Area south of the project alignment at California Street

Focused Botanical Surveys for the SART Phase III Project

Photo 3. Second visit to slender-horned spineflower reference population

Photo 4. Potentially suitable habitat for slender-horned spineflower within the Biological Study Area north of the project alignment at between Mountain View Avenue and California Street

Focused Botanical Surveys for the SART Phase III Project

Photo 5. Riparian Habitat north of Project alignment east of Tippecaone Avenue.

Photo 6. RAFSS habitat within the BSA north of Project alignment east of Tippecaone Avenue.

Focused Botanical Surveys for the SART Phase III Project

Photo 7. Typical view of the habitat conditions found under each of the road under crossings.

Photo 8. View of Eucalyptus grove at east end of the project alignment.

Suitable Habitat Criteria and Survey Requirements for
Dodecahema leptoceras (A. Gray) Rev. & Hardham (Polygonaceae)
Slender-horned spineflower
September 2002

Modeled habitat for *Dodecahema leptoceras* is based on elevations between 700 and 2500 feet (213-762 m) for cismontane areas and up to 3000 feet (914 m) for transmontane areas. Soil types used for modeled habitat are EsD to capture young alluvial benches in Bautista Canyon, San Jacinto Mountains. In addition, geology used for modeled habitat includes all quaternary alluvial wash, terrace and fan types (Qw, Qal, Qc, Qco, Qf, Qo, Qod, Qof, Qow, Qya, and Qyf). Areas within National Forest System Lands, plus a 1 mile buffer, were used within Los Angeles, Riverside, San Bernardino, and San Diego counties, excluding all areas designated as urban using vegetation layers and satellite imagery interpretation.

Suitable Habitat:

The following criteria 1, 2 and 3 must be met OR criteria 4 must be met:

1. Vegetation is alluvial fan sage scrub, sage scrub (coastal or inland types), or basin sagebrush. Associated species may include *Cercocarpus betuloides, Chorizanthe* spp., *Juniperus californica, Lastarriaea coriacea, Mucronea californica,* and *Yucca whipplei.*

2. Site is composed of open vegetation structure.

3. Sandy, gravelly, or silty alluvial soils associated with any alluvial benches, fans or terraces.

4. *–or-* Unconsolidated/decomposed granite slopes near alluvial systems that support *Lasterriaea coriacea* and *Chorizanthe spp.*

Protocol for Surveys of Suitable Habitat – Presence/Absence Determinations

Detectability Profile: *Dodecahema leptoceras* is highly variable in size and density from year to year, depending on amount and timing of winter rains, and can range from zero to high detectability during the optimal survey period. In years with average or above average growing conditions, plants (where up) are highly detectable during the flowering period (generally April-June), and for about two months thereafter while the inflorescence stalks are intact and red.

Plants are annual and there is high variability in the expression and distribution of occurrences, between years with average or above average growing conditions. In dry years, or sometimes years following dry years, detectability of occurrences can range from low to zero.

Survey Requirements for Negative Determination in Suitable Habitat

Repeat Requirements: This species has high annual variability in presence, and exhibits high detectability under optimal conditions. A negative determination requires at least two years of complete surveys. If any of those two years are characterized by low detectability based on condition of the reference population, an additional (3rd) year will be required for a negative determination.

For each survey year, one complete survey at a time when detectability is confirmed at the reference population, and one complete follow-up survey within 4 weeks will provide sufficient repeat confidence. Surveys should be postponed any year where detectability is zero, or very poor at the reference population, as negative survey data from such years are not reliable.

Survey Intensity: During the flowering season and shortly after while inflorescence stalks are still intact and red suitable habitat must be surveyed in walking transects no more than 2 meters apart.

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Exhibit 4: Initial Study and Mitigated Negative Declaration for the "Santa Ana River Trail, Phase III Project"

Appendix C

Exhibit 4: Initial Study and Mitigated Negative Declaration for the "Santa Ana River Trail, Phase III Project"

Presence/Absence Trapping Studies for the San Bernardino Kangaroo Rat

Santa Ana River Trails Phase III
Tippecanoe Avenue to Orange Show Road
City of San Bernardino, San Bernardino County, California

Total Project Acreage and Surveyed Area: 25 Acres Estimated Bank to Bank;
Temporary Impacts 1 Acre; Permanent Impacts 0.5 Acre

Prepared by:

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P. O. Box 2612
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E-mail phvergne@aol.com

Trapping Surveys Conducted On:
February 12 to 17, 2011

Report Date:
March 3, 2011

Prepared For :

Tom Dodson and Associates
2150 North Arrowhead Avenue
San Bernardino, CA 92405

This report was prepared in accordance with professional requirements and recommended protocols for small mammal trapping studies (USFWS Permit TE068072-2).

Philippe Jean Vergne

Philippe Jean Vergne, Field Biologist and Author

EXECUTIVE SUMMARY

ENVIRA was contracted by Tom Dodson and Associates to conduct a San Bernardino kangaroo rat (SBKR) trapping survey on an estimated 25 acre site of which from 0.5 to 1 acres will be impacted by the proposed Santa Ana River Trail Phase III project. The proposed project action is located within the Santa Ana River between Tippecanoe Avenue and Orange Show Road. The assessment was required to determine the presence or absence of SBKR in the alluvial fan drainages and disturbed upland habitat located on the property.

The proposed Santa Ana River Trail Phase III Project will be located on the southern edge of the river.

The proposed project is located within the USFWS SBKR Critical Habitat Area.

A total of 82 individual small mammals comprising 6 species were captured as a result of the trapping effort. Two individuals of the endangered San Bernardino Kangaroo rat were captured. Both scrotal males possibly looking for mates. Two sensitive species that were captured are the San Diego pocket mouse (*Chaetodippus fallax fallax*), and the Los Angeles pocket mouse (*Perognathus longimembris brevinasus*).

Based on the trap results, portions of the wash are currently occupied by SBKR. It is highly likely that trace levels of SBKR could be present within the areas adjacent to the project site. No SBKR were captured within the actual project footprint.

Medium quality alluvial fan scrub habitat is present within the wash and adjacent to the project footprint. Because of the project's location within critical habitat, development within the floodplain habitat could result in impacts to SBKR due to habitat loss.

Project impacts to SBKR and other sensitive small mammal species may include:

- Loss of mature/disturbed Riversidian alluvial fan sage scrub
- Alteration to potential foraging/corridor habitat
- Loss of wildlife habitat
- Loss of wildlife either through direct take or as the result of the loss of wildlife habitat.

INTRODUCTION

ENVIRA was contracted to conduct a San Bernardino kangaroo rat (SBKR) (*Dipodomys merriami parvus*) trapping survey on an estimated 25 acre site located within the Santa Ana River between Tippecanoe Avenue and Orange Show Road. The assessment was required to determine the presence or absence of SBKR in the alluvial fan drainages and disturbed upland habitat located on the property.

The proposed Santa Ana River Trail Phase Three Project will be located on the southern edge of the river (Figure 1).

METHODS

Research

ENVIRA reviewed available information on the known sensitive resources in the area. The literature review included a review of standard field guides and texts on sensitive and non sensitive biological resources, as well as the following sources:

> *The Status and Known Distribution of the San Bernardino Kangaroo Rat (Dipodomys merriami parvus*): *Field surveys conducted between 1987 and 1996.* McKernan 1997.
>
> *U.S. Fish and Wildlife Service, 1998c. Endangered and Threatened Wildlife and Plants; Final Rule to List the San Bernardino Kangaroo Rat as Endangered, Vol. 63, No. 185, pp. 51005 - 51017.*

We also reviewed other available technical information on the biological resources of the site, including previous trapping surveys and discussed recent findings with researchers in the field.

Habitat Evaluation Surveys

Field surveys and focused trapping for SBKR were performed by Mr. Philippe Vergne of ENVIRA who holds a U.S. Fish and Wildlife Service permit to trap and handle Stephens's (*Dipodomys stephensi*) and San Bernardino Kangaroo rats (*Dipodomys merriami parvus)*, Pacific Pocket mouse (*Perognathus longimembris brevinasus pacificus)*, and to conduct field studies on sensitive small mammals in Southern California (TE-831207-2), a California Department of Fish and Game Memorandum of Understanding for above mentioned species and Los Angeles pocket mouse (*Perognathus longimembris brevinasus)*, Palms Springs pocket mouse (*Perognathus longimembris bangsi)*, Palm Springs ground squirrel (*Spermophilus tereticaudus chlorus*), white-eared pocket mouse (*Perognathus alticola alticola)*, Jacumba pocket mouse (*Perognathus longimembris internationalis)* , north-western San Diego pocket mouse (Chaetodipus fallax fallax), and Dulzura pocket mouse (*Chaetodipus californicus femoralis)* , and a CDFG collection permit.

Mr. Vergne also conducted a general biological assessment of the plant and wildlife species on site. In addition, he noted site characteristics such as soils, topography, the condition of the plant communities, and evidence of human use of the site.

Trapping Surveys

Trapping was conducted according to protocols established for the SBKR. The protocol calls for five consecutive nights of trapping, conducted when the animal is active aboveground at night.

A focused trapping survey was conducted from February 12 to 17 of 2011.

Trapping lines consisting of 20-30 traps were set at trapping Areas A through F (Figure 2). Traps were placed in suitable habitat areas on the project site and adjacent suitable habitat, concentrating on locating traps in areas containing sandy soils, relatively free of debris and containing suitable vegetation. Areas with kangaroo rat/small mammal sign (scat, burrows, tail drags) were also targeted.

Each trap was baited with a mixture of bird seed and rolled oats placed at the back of the traps. The traps were set at dusk each night and inspected once during the night and at dawn each morning. All animals were identified and released at the point of capture.

Notes and photographs were taken on the habitat conditions where the traps were placed. The weather conditions at the time of the trapping studies were also noted.

RESULTS

Research

Several sensitive small mammal species were identified as potentially present in the vicinity of the project. They are the San Bernardino kangaroo rat, the San Diego pocket mouse, the Los Angeles pocket mouse, and the San Diego desert woodrat (*Neotoma lepida*).

Of the animal species potentially present, only the San Bernardino kangaroo rat requires specific survey protocols to establish presence or absence. These specific survey protocols are required for areas where impacts may occur to the sensitive species or their occupied habitat. The remaining species are usually identified through casual observation while trapping for targeted species.

Potential Sensitive Biological Resources

<u>San Bernardino Kangaroo Rat</u>

The San Bernardino kangaroo rat is one of several kangaroo rat species in its range. The Dulzura (*Dipodomys simulans*), the Pacific kangaroo rat (*Dipodomys agilis*) and the Stephens kangaroo rat (*Dipodomys stephensi*) occur in areas occupied by the San Bernardino kangaroo rat, but these other species have a wider habitat range. The habitat of the San Bernardino kangaroo rat is described as being confined to primary and secondary alluvial fan scrub habitats, with sandy soils deposited by fluvial (water) rather than aeolian (wind) processes. Burrows are dug in loose soil, usually near or beneath shrubs.

The San Bernardino kangaroo rat (*Dipodomys merriami parvus*) is one of three subspecies of the Merriam's kangaroo rat. The Merriam's kangaroo rat is a widespread species that can be found from the inland valleys to the deserts. The subspecies known as the San Bernardino kangaroo, however, is confined to inland valley scrub communities, and more particularly, to scrub communities occurring

along rivers, streams and drainage. Most of these drainage have been historically altered as a result of flood control efforts and the resulting increased use of river resources, including mining, off-road vehicle use and road and housing development. This increased use of river resources has resulted in a reduction in both the amount and quality of habitat available for the San Bernardino kangaroo rat.

The past habitat losses and potential future losses prompted the emergency listing of the San Bernardino kangaroo rat as an endangered species (U.S. Fish and Wildlife Service, 1998a).

SBKR are documented as occurring at discreet locations both upstream and downstream of the project site.

The proposed project is located within the USFWS SBKR Critical Habitat Area.

Northwestern San Diego Pocket Mouse

The northwestern San Diego pocket mouse (*Chaetodippus fallax fallax*) prefers habitat similar to that preferred by the SBKR. The northwestern San Diego pocket mouse occurs in open, sandy areas in the valleys and foothills of southwestern California.

The range of this species extends from Orange County to San Diego County, and includes Riverside and San Bernardino counties. This mouse is a California Species of Special Concern (CSC) whose historical range has been reduced by urban development and agriculture.

CSC designation of species is based on a series of publications prepared by the CDFG on declining species of mammals, birds, fishes, and amphibians and reptiles. The documents were intended to focus attention on declining wildlife in California, species that are not currently listed but may merit listing under the California Endangered Species Act (CESA). Some of the species identified in these documents have been subsequently listed, or are provided protection under provisions in the California Endangered Species Act (CEQA). Others have remained on the CSC list, and have not been elevated to a greater status of protection. The reasons are many, including a lack of understanding on the specific numbers of individuals and populations, the habitats occupied by the species and the threats to those habitats.

Los Angeles Pocket Mouse

The Los Angeles pocket mouse (*Perognathus longimembris brevinasus*) is one of two pocket mice found in this area of San Bernardino County. Both the Los Angeles pocket mouse and the San Diego pocket mouse occupy similar habitats, but the San Diego pocket mouse has a wider range extending south into San Diego County. The habitat of the Los Angeles pocket mouse is described as being confined to lower elevation grasslands and coast sage scrub habitats, in areas with soils composed of fine sands (Williams, 1986). The present known distribution of this species extends from Rancho Cucamonga east to Morongo Valley and south to the San Diego County border.

Los Angeles pocket mouse forages in open ground and underneath shrubs. Pocket mice in general dig burrows in loose soil, although this has not been completely documented for this subspecies.

The L.A. pocket mouse is listed as a California Species of Special Concern by the California Department of Fish and Game (CDFG).

San Diego Desert Woodrat

The desert woodrat (*Neotoma lepida*) is a relatively wide-ranging species extending along the coast of California from south of San Francisco through to the border with Baja California. This species also occurs in the Central Valley and the deserts of southern California and extends along the desert side of the Sierra Nevada into southeastern Oregon.

The coastal race of the desert woodrat, the San Diego desert woodrat, prefers scrub habitats such as coastal sage scrub, chaparral and alluvial fan sage scrub. It is more common in areas with rock piles and coarse sandy to rocky soils throughout coastal southern California. The range of this species extends from just south of Sacramento and the San Francisco area to the border with Baja California. The coastal subspecies of the widespread *Neotoma lepida* is listed as a CSC; its historical range has been impacted by the conversion of scrub habitats into residential, commercial and industrial use.

RESULTS

Weather Conditions

Weather conditions did not vary much during the course of the trapping survey. Morning temperatures were in the mid fifties degrees Fahrenheit. Skies were variable but mostly partially overcast. The moon was new at the end of the trapping survey.

TABLE 1

WEATHER CONDITIONS

Day	Cloud Cover	Night Temperature (F)	Wind (mph)
1	Clear	53	0
2	Clear	51	0
3	Clear	51	0
4	Overcast	53	0
5	Partial Overcast	50	0
6	Partial Overcast	50	0

Topography and Soils

The topography on the property ranges from level to gently sloping terrain within and on either side of the Santa Ana River floodplain.

In general, surface soils on site are a mix of Soboba sand, gravel and river-wash cobbles and boulders transported by the Santa Ana River system that traverse the site (Soil Conservation Service 1980).

Surrounding Land Uses

Ruderal open space and industrial parks are located on either side of the river. A berm and flood control service roads are located on either sides of the river.

Plant Communities

There are three dominant plant communities on the property. The plant communities, in order of decreasing dominance, disturbed Riversidian alluvial fan scrub, willow riparian, disturbed/remnant upland sage scrub and wetland.

Riversidian Alluvial Fan Scrub

The dominant species in the Riversidian alluvial fan scrub on site are scale-broom (*Lepidospartum squamatum*), and California sagebrush (*Artemisia californica*).

Upland Sage Scrub

The dominant species in this community are California buckwheat (*Eriogonum fasciculatum),* Graceful buckwheat *(Eriogonum gracile).* This plant community is found on the upper benches mostly along the southern bank and is inter-mixed with the alluvial fan.

Willow Riparian

The willow riparian area is dominated by arroyo willows (*Salix lasiolepis*). Wetlands occur at the water retaining/pooling areas.

A detailed list of plant species observed is provided in Appendix A.

Disturbances

Trails, dirt/gravel roads, power easement, flood control berms and culverts, and chain link fencing occur on site. A makeshift encampment is located within the willow community.

Wildlife

Wildlife activity was moderate. Bird species were the most commonly seen. Reptiles were observed mainly in the open scrub and rocky habitats within the alluvial fan scrub. One amphibian species the California tree frog (*Pseudacris cadaverina*) was observed on the property and suitable habitat occurs on site for other species.

Wildlife observations were based on calls, songs, scat, tracks, burrows and actual sightings of animals. A list of wildlife species observed is found in Appendix A.

Trapping Results

Two San Bernardino kangaroo rats were caught during the trapping surveys and portions of the property are therefore currently occupied by this species. Both SBKR were captured adjacent to the active wash areas.

A total of 82 individual small mammals comprising 6 species were captured as a result of the trapping effort.Two individuals of the endangered San Bernardino Kangaroo rat were captured. Both scrotal males possibly looking for mates. Two sensitive species that were captured are the San Diego pocket mouse (*Chaetodippus fallax fallax*), the Los Angeles pocket mouse (*Perognathus longimembris brevinasus*).

Trapping results are given in Table 2.

TABLE 2- FOCUSED TRAPPING RESULTS FOR THE SANTA ANA RIVER TRAIL III PROJECT

Trap Line	Trap Number	SBKR	DKR	PEMA	PEER	CHFA	PELO
A	150		2	19			4
B	60	1AM		13	1	3	
C	100		1	7	2	2	2
D	125			11		1	
E	90	1AM		4			
F	150			7			1
TOTAL	675	2	3	61	3	6	7

SBKR-San Bernardino Kangaroo Rat *(Dipodomys merriami parvus)* (AM-Adult Male)
DKR-Dulzura Kangaroo Rat *(Dipodomys simulans)*
PEMA-Deer Mouse *(*Peromyscus maniculatis*)*
PEER-Cactus Mouse*(*Peromyscus eremicus*)*
CHFA-Northwestern San Diego Pocket Mouse *(Chaetodipus fallax fallax)*
PELO- Los Angeles pocket mouse (*Perognathus longimembris brevinasus*)

CONCLUSION

Based on the trap results, portions of the wash are currently occupied by SBKR. It is highly likely that trace levels of SBKR could be present within the areas adjacent to the project site. No SBKR were captured within the actual project footprint. Although the active wash area is conducive to periodic small mammal occupancy, seasonal and year to year occupancy and density variations are likely to be affected by rain/flood occurrences. The wash area and adjacent refugia habitat are probably used for foraging and movement of SBKR and other small mammal species.

Medium quality alluvial fan scrub habitat is present within the wash and adjacent to the project footprint. Because of the project's location within critical habitat, alteration of the floodplain habitat due to project development could result in impacts to SBKR due to habitat loss.

Project impacts to SBKR and other sensitive small mammal species may potentially include:

- Loss of mature/disturbed Riversidian alluvial fan sage scrub
- Alteration to potential foraging/corridor habitat
- Loss of wildlife habitat associated with the plant communities described above
- Loss of wildlife either through direct take or as the result of the loss of wildlife habitat

Because of potential use of the site for foraging by SBKR it is recommended that:

- All ground disturbance activities occur during daylight hours
- That access to the site be confined to the limits of the project footprint and away from the occupied areas.
- A biological monitor be present to insure that no take of SBKR or occupied habitat occurs

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* and that surveys were conducted following the approved USFWS protocol for the San Bernardino Kangaroo Rat".

Philippe Jean Vergne

Philippe jean Vergne March 6, 2011

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APPENDIX A - PLANT AND ANIMAL SPECIES OBSERVED

ANGIOSPERMAE: DICOTYLEDONES *DICOT FLOWERING PLANTS*

Amaranthaceae	***Amaranthus family***
Amaranthus albus	Tumbleweed
Asteraceae	***Sunflower family***
Artemisia californica	California sagebrush
Baccharis salicifolia	Mulefat
Helianthus annuus	Annual sunflower
Heterotheca grandiflora	Telegraph weed
Lepidospartum squamatum	Scale-broom
Boraginaceae	***Borage family***
Amsinckia intermedia	Fiddleneck
Cryptantha intermedia	Popcorn flower
Brassicaceae	***Mustard family***
* *Hirschfeldia incana*	Short-podded mustard
Caprifoliaceae	***Honeysuckle family***
Sambucus mexicana	Blue elderberry
Chenopodiaceae	***Saltbush family***
* *Salsola tragus*	Russian thistle
Euphorbiaceae	***Spurge family***
Croton californica	Croton
* *Ricinus communis*	Castor bean
Fabaceae	***Pea family***
Lotus scoparius	Deerweed
Geraniaceae	***Geranium family***
* *Erodium cicutarium*	Red-stemmed filaree
Polygonaceae	***Buckwheat family***
Eriogonum fasciculatum	California buckwheat
Eriogonum gracile	Graceful buckwheat
Solanaceae	***Nightshade family***
Nicotiana glauca	Indian tobacco

ANGIOSPERMAE: MONOCOTYLEDONAE MONOCOT FLOWERING PLANTS

Poaceae	***Grass family***
* *Bromus diandrus*	Ripgut brome
* *Bromus madritensis*	Red brome
* *Schismus barbatus*	Mediterranean grass

Taxonomy and nomenclature follow Hickman 1993 and Munz 1974.

REPTILIA	***REPTILES***
Iguanidae	***Iguanas and their allies***
Uta stansburiana	Side-blotched lizard
AVES	***BIRDS***
Cathartidae	***Vultures***
Cathartes aura	Turkey vulture
Accipitridae	***Kites, hawks and eagles***
Buteo jamaicensis	Red-tailed hawk
Trochlidae	***Hummingbirds***
Calypte anna	Anna's hummingbird
Corvidae	***Crows and ravens***
Corvus brachyrhynchos	American crow
Mimidae	***Mimic thrushes***
Mimus polyglottos	Northern mockingbird
Emberizidae	***Warblers, sparrows, blackbirds and relatives***
Pipilo crissalis	California towhee
MAMMALIA	***MAMMALS***
Leporidae	***Rabbits and hares***
Sylvilagus audubonii	Audubon's cottontail
Sciuridae	***Squirrels, chipmunks and marmots***
Spermophilus beecheyi	California ground squirrel
Geomyidae	***Pocket gophers***
Thomomys umbrinus	Botta's pocket gopher
Heteromyidae	***Pocket mice and kangaroo rats***
Perognathus longimembris brevinasus	Los Angeles pocket mouse
Chaetodippus fallax fallax	Northwestern San Diego pocket mouse
Dipodomys simulans	Dulzura kangaroo rat
Cricetidae	***Cricetine mice and rats***
Peromyscus maniculatus	Deer mouse
Peromyscus eremicus	*Cactus mouse*

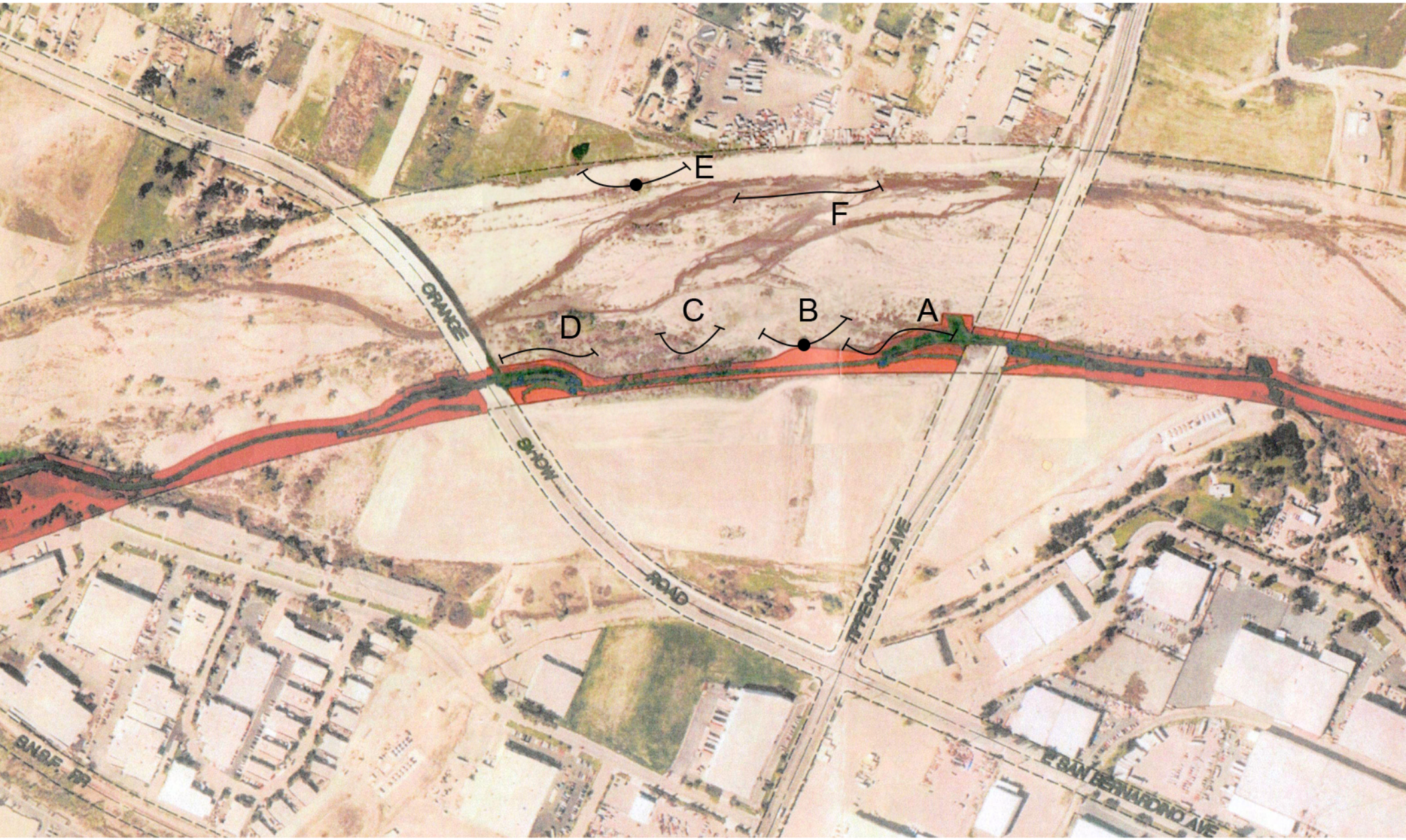
Nomenclature follows Hall 1981, Laudenslayer et al. 1991, and Stebbins 1966.

Exhibit 4: Initial Study and Mitigated Negative Declaration for the "Santa Ana River Trail, Phase III Project"

LEGEND

TRAP LINES A-F

SKR CAPTURES



SBKR CAPTURE LOCATION

ENVIRA
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P.O. Box 2612, Ramona, California, USA 92065
Phone 619-885-0236 E-mail PHVERGNE@AOL.COM

Appendix D

Exhibit 4: Initial Study and Mitigated Negative Declaration for the "Santa Ana River Trail, Phase III Project"

JURISDICTIONAL DELINEATION REPORT

SANTA ANA RIVER TRAIL PHASE III

SAN BERNARDINO COUNTY, CALIFORNIA

DRAFT

Prepared for:

CALTRANS DISTRICT 8

April 11, 2012

Tom Dodson & Associates
2150 North Arrowhead Avenue
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Appendices

Appendix A Site Photographs
Appendix B USACE Wetland Determination Data Forms

List of Abbreviated Terms

ADA	Americans with Disability Act
BNSF	Burlington Northern Santa Fe
Caltrans	California Department of Transportation
CCR	California Code of Regulations
CDFG	California Department of Fish and Game
CFG Code	California Fish and Game Code
CL	Construction Limits
CWA	Clean Water Act
CWC	California Water Code
EPA	U.S. Environmental Protection Agency
ESD	Environmental Services Division
FAC	Facultative
FACU	Facultative Upland
FACW	Facultative Wetland
FEMA	Federal Emergency Management Agency

GIS	Geographic Information Systems
GPS	Global Positioning System
LSAA	Lake and Streambed Alteration Agreement
NI	No Indicator
NRCS	Natural Resources Conservation Service
OBL	Obligate Wetland
OHWM	Ordinary High Water Mark
Porter-Cologne	Porter-Cologne Water Quality Control Act
Project	Mojave Subdivision Tehachapi Pass Double Track Project
Rapanos Decision	*John A. Rapanos v. United States*; and *June Carabel v. United States Army Corps of Engineers*
RPW	Relatively Permanent Water
RWQCB	Regional Water Quality Control Board
SART	Santa Ana River Trail
Study Area	The area in which USACE, RWQCB, and CDFG jurisdiction was assessed and quantified
SWRCB	State Water Resources Control Board
SWANCC	*Solid Waste Agency of Northern Cook County v. U.S. Army Corps of Engineers*
TNW	Traditional Navigable Water
UPL	Obligate Upland
USACE	U.S. Army Corps of Engineers
USDA	U.S. Department of Agriculture
USGS	U.S. Geological Survey
WDR	Waste Discharge Requirements
WoS	Waters of the State
WoUS	Waters of the United States

1.0 INTRODUCTION AND SUMMARY

The proposed project is the design and construction of a 3.8-mile section of the Santa Ana River Trail (SART) in the County of San Bernardino. This segment of the SART is the third phase of the trail within San Bernardino County (Phase III). Phase III begins at Waterman Avenue in the City of San Bernardino and continues easterly to California Street in the City of Redlands, along the southern bank of the Santa Ana River. See Figure 1-1 for a Regional Location Map and Figure 1-2 for a Site Location Map. The SART is a Class I Bikeway which is defined as a shared use path that is physically separated from any street or highway and may be used by pedestrians, skaters, wheelchair users, joggers, and other non-motorized users. This project will be developed to California Department of Transportation (Caltrans) Highway Design Manual Chapter 1000 standards and will comply with the Americans with Disabilities Act (ADA) of 1990, as amended. The SART will be built as a 10-foot wide asphalt trail with an adjacent 4-foot wide unpaved shoulder to accommodate non-motorized modes of transportation and pedestrians.

This report summarizes the findings of: (1) U.S. Army Corps of Engineers' (USACE) jurisdiction pursuant to Section 404 of the Clean Water Act (CWA), (2) Regional Water Quality Control Board's (RWQCB) legal authority in accordance with Section 401 of the CWA and as defined within Section 13050(e) et seq. of the California Water Code (CWC) via the Porter-Cologne Water Quality Control Act (Porter-Cologne), and (3) California Department of Fish and Game's (CDFG) jurisdiction pursuant to Section 1600 et seq. of the California Fish and Game Code (CFG Code) for the SART project.

This report presents our best effort at estimating jurisdictional boundaries using the most up-to-date regulations, written policies, and guidance from the USACE and CDFG. Nonetheless, only the USACE and CDFG can make a final determination of jurisdictional boundaries. The quantity and quality of aquatic resources have been evaluated and are presented in Section 5.0, which is followed by suggested guidance for compliance with state and federal laws concerning these special aquatic resource areas (refer to Section 6.0).

For the purposes of this document, the ***Study Area*** is defined as the area in which USACE, RWQCB, and CDFG jurisdiction was assessed and quantified. The study area includes the Project's proposed physical ground disturbance footprint. The study area was delineated in March 2011. A total of six jurisdictional/Riparian features were identified within the study area. For the purposes of this report, these features are identified as Feature 1 through Feature 6. Of these six features, four are subject to USACE and all six features are subject CDFG jurisdiction (all of which will be temporarily and/or permanently impacted by the Project). See Figure 5-1 Feature location and Figures 5-2 through 5-7 for Feature graphics.

1.1 USACE Jurisdiction Pursuant to Section 404 of the Clean Water Act

The study area traverses the Santa Ana River and contains four features along the river considered Waters of the U.S. (WoUS) because the Santa Ana River is a tributary to Traditional Navigable Waters (TNW). Consequently, these four features within the study area are subject to CWA Section 404 jurisdiction. These four features would be temporarily and/or permanently impacted by Project implementation. Temporary impacts to USACE jurisdiction total 1.47 acres and permanent impacts total 0.20 acres.

1.2 USACE and RWQCB Jurisdiction Pursuant to Sections 404 and 401 of the Clean Water Act

The RWQCB regulates fills to WoUS and Waters of the State (WoS) through the CWA Section 401 Water Quality Certification program and through the Porter-Cologne Water Quality Control Act (Porter-Cologne), respectively. Consequently, all six features within the study area are subject to RWQCB legal authority. All six of the features would be temporarily and/or permanently impacted by Project implementation. Temporary impacts to CWA jurisdiction total 1.39 acres and permanent impacts total 0.30 acres.

1.3 CDFG Jurisdiction Pursuant to Section 1600 et seq. of the CFG Code and RWQCB Jurisdiction Pursuant Porter-Cologne Water Quality Control Act

Six features within the study area are subject to CFG Code Section 1600 et seq. jurisdiction. All six of the features would be temporarily and/or permanently impacted by Project implementation. Temporary impact to CDFG jurisdiction total 1.93 acres and permanent impacts total 1.58 acres. However, only 1.04 acre of the permanent impact area is vegetated and has riparian habitat. The remaining 0.54 acre area of permanent impact is unvegetated hard or rock-sided banks of the channels located under the road bridges. Similarly, 1.46 acres of the total 1.93 acres of temporary impacts is vegetated by riparian habitat.

1.4 Permit Recommendations

A Section 404 Permit for discharge of dredge or fill material and a Section 401 Water Quality Certification pursuant to the CWA will be required. A Lake and Streambed Alteration Agreement (LSAA) from the CDFG will be required to implement the Project for permanent and/or temporary impacts to features within the jurisdiction of Section 1600 et seq. of the CFG Code pending the County Parks ability to minimize impacts along the proposed trail alignment.

Recommendations for Project permitting are provided in Section 6.0.

FIGURE 1-1
Regional Location Map

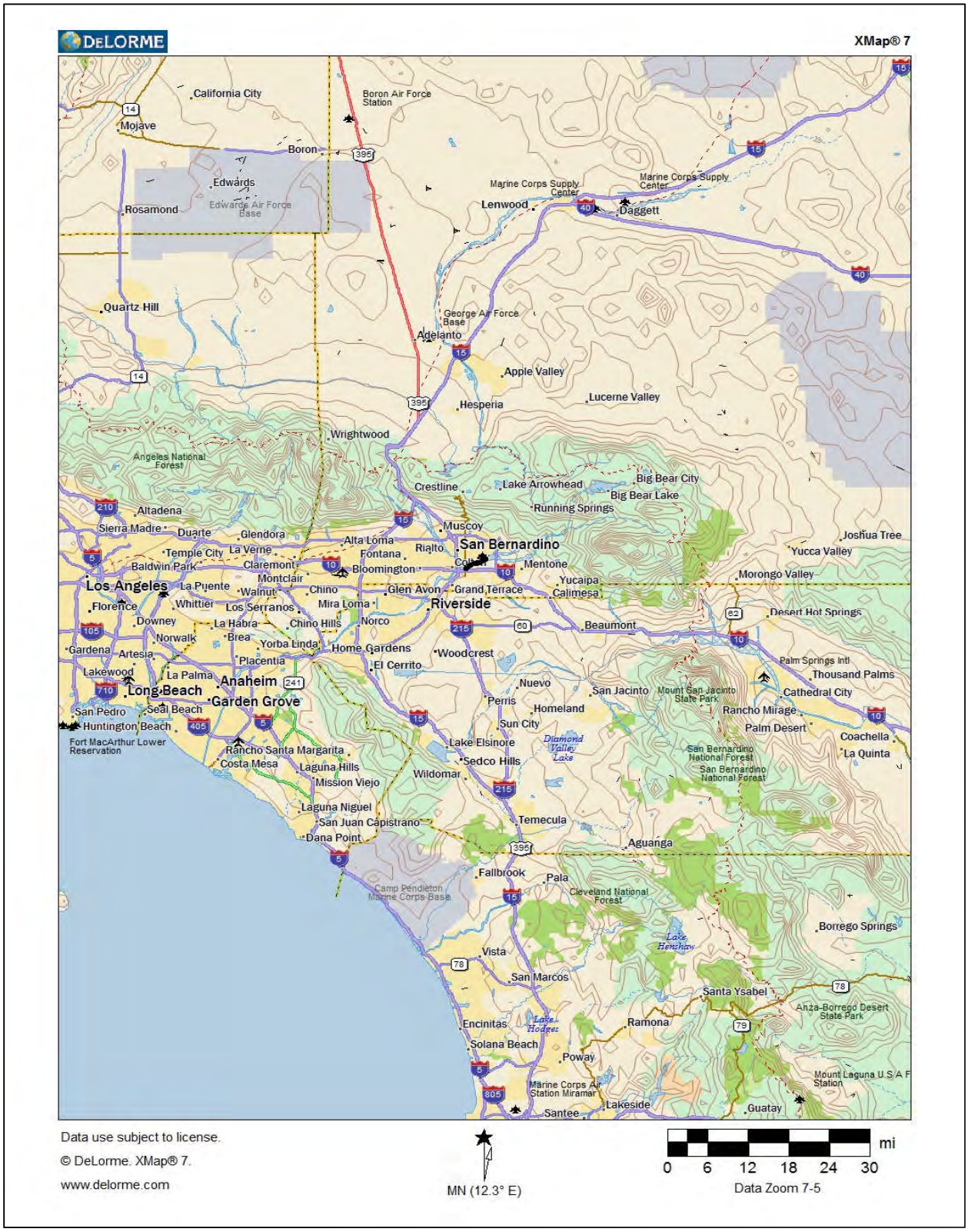
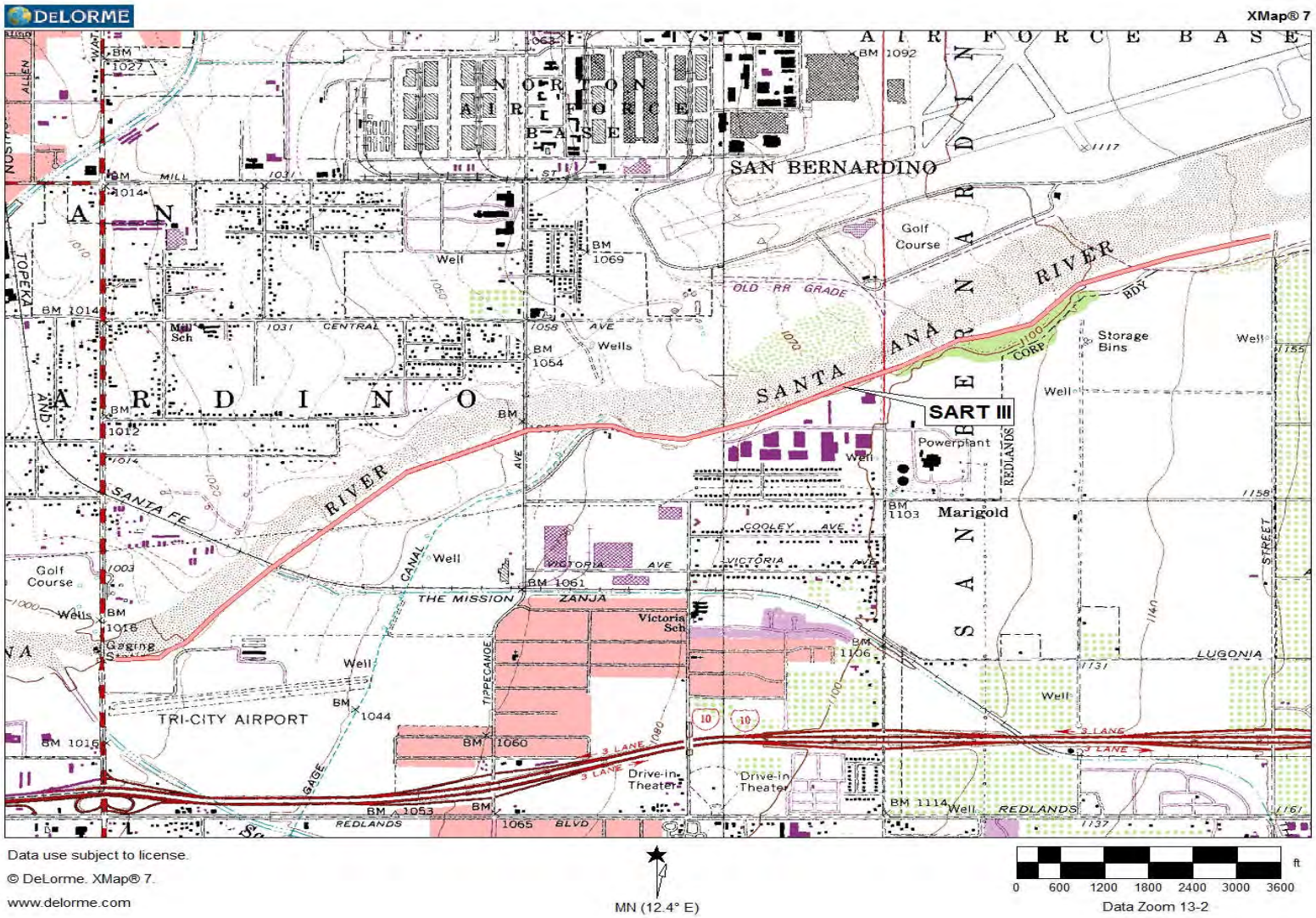


FIGURE 1-2
Vicinity Map



2.0 DESCRIPTION OF PROJECT AND LAND USE WITHIN THE PROJECT VICINITY

2.1 Project Description

The San Bernardino County Parks is proposing to complete phase three of the SART. This phase three alignment will begin at the existing terminus of the trail at Waterman Avenue in the City of San Bernardino, California and continue east approximately 3.8 miles to California Street in the City of Redlands. In general, the project consists of trail, bridge, culvert, and access ramp construction that will include fill and embankment construction; relocating and/or adjusting surface features to grade; subsurface preparation for paving; concrete, asphalt concrete, Portland cement concrete (PCC), and decomposed granite pavement; erosion control with plain riprap stones, grouted riprap, and PCC pavement; reinforced concrete retaining walls; fencing and railing; access gates; protective screens under railroads; storm drain facilities; prefabricated steel, concrete slab bridge and its appurtenances; signage; pavement striping and markings; channelize; and stormwater pollution prevention control.

The SART is a Class I Bikeway which is defined as a shared use path that is physically separated from any street or highway and may be used by pedestrians, skaters, wheelchair users, joggers, and other non-motorized users. This project will be developed to Caltrans Highway Design Manual Chapter 1000 standards and will comply with the ADA of 1990, as amended. The SART will be built as a 10-foot wide asphalt trail with an adjacent 4-foot wide unpaved shoulder to accommodate non-motorized modes of transportation and pedestrians. The majority of the trail will be 14-foot wide with additional total width at turns as indicated on the plan.

The majority of Phase III will be constructed along an existing County of San Bernardino Flood Control levee adjacent to the River corridor. In one area of the alignment (approximately 2,500 linear feet), easterly of Waterman Avenue, from the confluence of Mission Zanja Creek east to Orange Show Road, no levee currently exists and, therefore, in this area of the trail will be developed on the unimproved southern bank of the riverbed within the County Flood Control right-of-way. The remainder of the proposed 3.8-mile SART Phase III will be developed on the existing flood control levee maintenance road. The existing levee maintenance road will be improved and paved as a Class 1 Bikeway.

The proposed project also consists of erecting a prefabricated, fully engineered clear span bridge of steel construction. This bridge will span Mission Zanja Creek adjacent to the BNSF Railroad Bridge east of Waterman Avenue and will be approximately 100 feet in length (Figure 1-2). The bridge will be 14-feet wide consistent with the rest of the SART. The County estimates that the construction of the entire SART Phase III would take approximately 6 to 9 months to complete. It is anticipated that construction will result in approximately 16.6 acres of land disturbance. Of the total area disturbed, 10.4 acres will be temporary construction and staging disturbance and 6.6 acres will be permanent trail facility disturbance (10-foot wide trail plus 4-foot wide shoulder 3.8 miles long).

Disturbance will consist of grading operations; asphalt installation; construction of ramps under Waterman Avenue, Orange Show Road, and Tippecanoe Avenue; and the San Bernardino Association of Governments and Mertolink rail line (currently used by BNSF Railway Company). Additional rip-rap or slope protection will be constructed in these areas. It is anticipated that the construction of the trail on top of the existing levee would take 3 to 6 months. California Street

would be the end of the SART Phase III and would have a 100-foot by 30-foot, paved, turnaround area.

The trail under each of the roads and railroad would consist of a ramp leading from the levee, along the bank of the Santa Ana River, and under the road or railroad. On the other side of the road bridge, the trail goes back up the river bank to the top of the levee. Access ramps will be constructed at each of the road crossings. A typical bikeway underpass is constructed by either creating a roadbed of compacted fill material under the roadway or railroad bridge with a maximum slope of 2:1 (horizontal to vertical); or by cutting into the existing rock rip-rap protected river bank wall or a retaining wall. The roadbed is then finished with grouted rip-rap and concrete. Construction of the underpasses may require engineered fill in the wash.

The proposed project will require temporary fencing to be installed in order to prevent the general public from trespassing onto any excavation, construction, or storage areas.

3.0 REGULATORY OVERVIEW

3.1 Review of USACE Jurisdiction Pursuant to Section 404 of the Clean Water Act

3.1.1 Waters of the United States

The USACE regulates the discharge of dredged and/or fill material into WoUS pursuant to Section 404 of the CWA. The USACE has authority to permit the discharge of dredged or fill material in WoUS under Section 404 of the CWA as well as permit work and the placement of structures in navigable WoUS under Sections 9 and 10 of the Rivers and Harbors Act of 1899.

The term WoUS is defined as follows: all waters that are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters that are subject to the ebb and flow of the tide; all interstate waters, including interstate wetlands; all other waters, such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation, or destruction of which could affect interstate or foreign commerce, including any such waters: (i) which are or could be used by interstate or foreign travelers for recreational or other purposes; or (ii) from which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or (iii) which are used or could be used for industrial purpose by industries in interstate commerce; the territorial seas; and wetlands adjacent to waters (other than waters that are themselves wetlands).

Ordinary High Water Mark

In the absence of wetlands (discussed below), the limits of USACE jurisdiction in non-tidal waters, including intermittent streams, extend to the ordinary high water mark (OHWM). The OHWM is defined as "that line on the shore established by the fluctuation of water and indicated by physical characteristics, such as clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas." In 2005, the USACE issued a Regulatory Guidance Letter (05-05) and added the following additional indicators of an OHWM: changes in plant communities, water staining, scour, wracking, bed and banks, and deposition (USACE, 2005).

USACE-Defined Wetlands

Wetlands are defined in 33 Code of Federal Regulations 328.3(b) as "those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support a prevalence of vegetation typically adapted for life in saturated soil conditions." The methods set forth in the USACE 1987 Wetland Manual generally require that in order to be considered a wetland, the vegetation, soils, and hydrology of an area exhibits minimal hydric characteristics (EL, 1987). While the manual provides great detail in methods and allows for varying special conditions, a wetland should normally meet each of the following three criterions:

(1) More than 50% of the dominant plant species at the site must be typical of wetlands (i.e., rated as facultative or wetter [FAC-OBL] in the National List of Plant Species that Occur in Wetlands [Reed, 1988]).

(2) Soils must exhibit physical and/or chemical characteristics indicative of permanent or periodic saturation (e.g., a gleyed color or redoximorphic features with a matrix of low chroma indicating a relatively consistent fluctuation between aerobic and anaerobic

conditions). Such soils, known as *hydric soils*, have characteristics that indicate they were developed in conditions where soil oxygen is limited by the presence of saturated soil for long periods during the growing season.

(3) Hydrologic characteristics must indicate that the ground is saturated to within 12 inches of the surface for at least 5% of the growing season during a normal rainfall year (Note: for most of low-lying Southern California, 5% of the growing season is equivalent to 18 days).

The following definitions are from the Rapanos Guidance Memorandum (USACE, 2007c; USACE, 2008):

Adjacent, as defined in USACE and U.S. Environmental Protection Agency (EPA) regulations, means "bordering, contiguous, or neighboring." Wetlands separated from other waters of the United States by human-made dikes or barriers, natural river berms, beach dunes, and the like are 'adjacent wetlands.'

A *tributary*, as defined in the Rapanos guidance document, means a natural, human-altered, or human-made water body that carries flow directly or indirectly into traditional navigable waters. For purposes of determining "significant nexus" with TNW, a tributary is the entire reach of the stream that is of the same order (i.e., from the point of confluence, where two lower order streams meet to form the tributary, downstream to the point that such tributary enters a higher order stream).

Wetlands that are not separated from the tributary by an upland feature, such as a berm or dike, are *abutting*.

In the context of CWA jurisdiction post-Rapanos, a water body is "relatively permanent" if its flow is year round or its flow is continuous at least "seasonally," (e.g., typically 3 months). Wetlands adjacent to a "relatively permanent" tributary are also jurisdictional if those wetlands directly abut such a tributary.

A water body is considered to have a "significant nexus" with TNW if its flow characteristics and functions, in combination with the ecologic and hydrologic functions performed by all wetlands adjacent to such a tributary, affect the chemical, physical, and biological integrity of a downstream traditional navigable water.

3.2 Review of RWQCB Jurisdiction Pursuant to Section 401 of the Clean Water Act and Section 13000 et Seq. of the California Water Code

The RWQCB regulates fills to WoUS under the Section 401 Water Quality Certification program, which in most instances, mirrors CWA Section 404 compliance. In the absence of CWA Section 404 jurisdiction over isolated waters or WoS, RWQCB jurisdiction over WoS is extended through the Porter-Cologne Act. WoS are defined at Section 13050(e) of the CWC as, "any surface or ground water, including saline waters, within the boundary of the state." Thus, WoS include surface or groundwater, which includes isolated and ephemeral special aquatic resources. Porter-Cologne provides a comprehensive framework to protect water quality in California. It requires that any entity that plans to discharge waste where it might adversely affect WoS must first notify the RWQCB, which may impose requirements to protect water quality (CWC § 13000 et seq.).

The *Solid Waste Agency of Northern Cook County v. United States Army Corps of Engineers* (SWANCC) decision created "gaps" relating to isolated waters that were no longer subject to the CWA. In response, the State Water Regional Control Board (SWRCB) issued a 2004 Memorandum (SWRCB, 2004) stating that RWQCBs should consider setting a higher regulatory priority on discharges to "isolated waters" than to similar discharges to federally-protected waters of similar value. The 2004 Memorandum further stated that "dredging, filling, or excavation of 'isolated' waters constitutes a discharge of waste to waters of the State, and prospective dischargers are required to submit a Waste Discharge Report (WDR) to the RWQCB and comply with other requirements of Porter-Cologne. Among the procedures recommended in the Memorandum was that the RWQCB refer to the same regulatory considerations generally applied to the issuance of Section 401 permits when issuing a WDR (SWRCB, 2004).

According to the SWRCB, the SWANCC decision did not affect the state's authority to regulate discharges to isolated, non-navigable waters of the state and had no impact upon the RWQCB's authority to act under state law (SWRCB, 2001). Simply because RWQCBs often opted to regulate discharges in the past through Section 401 in lieu of, or in addition to, issuing WDRs does not preclude RWQCBs from issuing WDRs in the absence of Section 401 certification (SWRCB, 2001). The State's position is that these general WDRs will continue to apply to certain discharges to non-federal waters.

3.3 Review of CDFG Jurisdiction Pursuant to Section 1600 et seq. of the California Fish and Game Code

Pursuant to Division 2, Chapter 6, Sections 1600-1602 of the CFG Code, CDFG regulates all diversions, obstructions or changes to the natural flow or bed, channel or bank of any river, stream or lake that supports fish or wildlife. Pursuant to the California Code of Regulations, CDFG defines a *stream* (including creeks and rivers) as "a body of water that flows at least periodically or intermittently through a bed or channel having banks and supports fish or other aquatic life. This includes watercourses having surface or subsurface flow that supports or has supported riparian vegetation." CDFG's definition of *lake* includes "natural lakes or man-made reservoirs."

CDFG jurisdiction within altered or artificial waterways is based upon the value of those waterways to fish and wildlife. CDFG's Legal Advisor has prepared the following opinion (Environmental Services Division [ESD]-CDFG, 1994):

- Natural waterways that have been subsequently modified and which have the potential to contain fish, aquatic insects, and riparian vegetation will be treated like natural waterways.

- Artificial waterways that have acquired the physical attributes of natural stream courses and which have been viewed by the community as natural stream courses should be treated as natural waterways.

- Artificial waterways without the attributes of natural waterways should generally not be subject to CFG Code provisions.

CDFG jurisdictional limits often overlap with those of the USACE. Exceptions are CDFG's addition of artificial stock ponds and irrigation ditches constructed on uplands and the addition of adjacent riparian habitat supported by a river, stream, or lake regardless of the riparian area's

federal wetland status or its location beyond the defined bed, bank, or channel. The extent of CDFG jurisdictional streambeds was evaluated according to CDFG Code 1600 et seq. and guidance from ESD-CDFG (1994). With regards to federally-isolated features, the CDFG does not regulate isolated wetlands that do not contain a bed, bank, and channel.

4.0 METHODS

The following section is organized into three segments: literature review; procedures and field data collection techniques (pursuant to CWA and CDFG professional standards and publications); and analysis parameters (CWA and CDFG protocols for assessing potential jurisdiction). These three activities were performed within the study area. For the purposes of this document, the *study area* is defined as the area within the Construction Limits (CL) as defined in the Caltrans (NES) and within the CL those areas in which USACE, RWQCB, and CDFG jurisdiction was assessed and quantified. The study area includes the Project's proposed physical ground disturbance footprint for both temporary and permanent project impacts.

4.1 Literature Review

Prior to conducting fieldwork, the following literature review supported the evaluation and analysis of all potential special aquatic resource areas within the study area. Resource databases, local resource management plans, aerial photos, and other readily available and relevant commercial data were reviewed to determine watershed characteristics and the locations/types of special aquatic resource areas that may be present. The following sources were used the U.S. Geological Survey (USGS) 7.5-minute topographic map for San Bernardino, South and Redlands quadrangles, 1972; USDA, 1981; Federal Emergency Management Agency (FEMA), color aerial photographs USDA-Natural Resources Conservation Service (NRCS), 2007; USFWS National Wetlands Inventory, 2010; and USGS.

4.2 CWA Specific Procedures and Data Collection Techniques

In March 2011 the trail centerline was surveyed and staked. The study area was surveyed in March 2011 to determine the presence/absence of potential special aquatic resources and their boundaries. Data related to USACE-defined WoUS, including wetlands, were recorded on the engineered drawings by locating the resource areas using the station numbers and measuring tape. Field notebooks, and wetland data sheets, were used where applicable (Appendix B). The evaluation process initially looked at vegetation, soils, and hydrology parameters (in that order) of potential wetland habitats within the study area using the methodology for routine determinations set forth in the USACE Wetland Delineation Manual and the Arid West Regional Supplement (EL, 1987; Reed, 1988; USACE, 2001a, 2001b, 2008). Drainage features were evaluated using the methodology set forth in the USACE and EPA Clean Water Act jurisdiction guidance documents following the U.S. Supreme Court's Decision in *Rapanos v. United States* and *Carabell v. United States* (USACE, 2007; USACE, 2007a; USACE, 2007c; USACE, 2008).

4.2.1 Hydrology

Hydrology was evaluated in areas suspected of being seasonally inundated and/or saturated to the surface during the growing season,[1] provided the soil and vegetation parameters were met as defined in the Wetlands Delineation Manual (EL, 1987). Recent precipitation data were analyzed to evaluate the frequency and amount of rainfall events within the study area and on surrounding lands (NWS, 2008). Additional hydrological information for the features was determined by signatures on aerial photographs, landscape positions, and/or presence of

[1] For the purposes of this analysis, the growing season is defined as the period of the year when soil temperature at 20 inches below the surface is roughly 5 degrees Celsius [°C] In the study area, the growing season is year round.

other field indicators such as surface scour marks, vegetation and debris drift lines, sediment deposits, watermarks, and oxidized root channels in the soil samples.

Each feature was classified as perennial (flowing water year round), intermittent (water flows seasonally), ephemeral (water flows only during and immediately following rain events), relatively permanent water (RPW) (flowing for more than 3 months per year), and non-RPW (seasonal, flowing fewer than or equal to 3 months). Average width(s) for the OHWM within each feature was documented, and acreages of USACE jurisdiction were determined using field data, and aerial maps.

4.2.2 Vegetation

The prevalence of hydrophytic vegetation was recorded on Wetland Determination Data Forms (Arid West Region) determined by using USACE methods. Plant species were determined based on the *Jepson Manual, Higher Plants of California* (Hickman, 1993), and the wetland indicator status of plant species was based on the *National List of Plant Species that Occur in Wetlands, California Region 0* (Reed, 1988). Table 1 below summarizes wetland plant indicator status.

The wetland vegetation criterion was assumed to be met if the Dominance Test using the 50/20 rule was satisfied (e.g., more than 50% of the dominant plants [plants with 20% or more absolute cover] were wetland indicators). Absolute, rather than relative, vegetation cover was used in determining dominant species. Areas supporting a prevalence of hydrophytes were further examined for indicators of hydric soils.

Table 1. Summary of Wetland Indicator Status

Category	Probability
Obligate Wetland (OBL)	Almost always occur in wetlands (>99% probability).
Facultative Wetland (FACW)	Usually occur in wetlands (estimated probability 67 to 99%).
Facultative (FAC)	Equally likely to occur in wetlands/non-wetlands (estimated probability 34 to 66%).
Facultative Upland (FACU)	Usually occur in non-wetlands (estimated probability 67-99%).
Obligate Upland (UPL)	Almost always occur in non-wetlands (estimated probability >99%).
No Indicator (NI)	Wetland indicator status not assigned. Species is assumed to be upland.

4.2.3 Soils

Soil texture, matrix, redoximorphic features, and the presence of subsoil layers impervious to water infiltration were documented from soil pits. Soils were examined for positive hydric soil indicators such as low chromas, redoximorphic features (e.g., mottles, manganese concretions), histic epipedons, organic layers, gleization, and sulfidic odor. The color and texture of the soil layers encountered were recorded on wetland data sheets (Appendix B). Soils were evaluated using Field Indicators of Hydric Soils in the United States, Version 6.0 (USDA-NRCS, 2006). Soil color and characteristics were determined from moist soil beds using Munsell Soil Color Charts (Munsell, 1994). Soil types were determined based on the Soil Survey from the Web Soil Survey for San Bernardino County, Western Part Part, (USDA-NRCS, 2007

4.2.4 Interstate or Foreign Commerce Connection

Areas that were identified as wetlands or other WoUS were then further evaluated to determine if they have an Interstate or Foreign Commerce Connection. Any areas that met the USACE's three technical criterions for wetlands and that have an Interstate or Foreign Commerce Connection was determined to be WoUS subject to USACE jurisdiction.

The following water types are assumed to have an Interstate or Foreign Commerce Connection:

- Navigable waters
- Wetlands adjacent to navigable waters
- Non-navigable tributaries of navigable waters that are relatively permanent, where the tributaries typically flow year-round or have continuous flow at least seasonally (e.g., typically three months)
- Wetlands that directly abut such tributaries

4.2.5 Significant Nexus with Traditional Navigable Water

The USACE will decide jurisdiction over the following water types based on a fact-specific analysis to determine whether they have a significant nexus with traditional navigable water:

- Non-navigable tributaries that are not relatively permanent
- Wetlands adjacent to non-navigable tributaries that are not relatively permanent
- Wetlands adjacent to, but that do not directly abut, a relatively permanent non-navigable tributary

In general, the USACE does not assert jurisdiction over the following features (USACE, 2007b):

- *Ditches*. "Ditches (including roadside ditches) excavated wholly in and draining only uplands and that do not carry a relatively permanent flow of water (greater than three months) generally are not jurisdictional under the CWA, because they are not tributaries or they do not have a significant nexus to TNWs."

- *Swales*. "Swales are generally shallow features in the landscape that may convey water across upland areas during and following storm events. Swales usually occur on relatively flat slopes and typically have grass or other low-lying vegetation throughout the swale. Swales are generally not waters of the U.S. because they are not tributaries or they do not have a significant nexus to TNWs."

The USACE will apply the significant nexus standard as follows:

- A significant nexus analysis will assess the flow characteristics and functions of the tributary itself and the functions performed by all wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical, and biological integrity of downstream traditional navigable waters. Significant nexus includes consideration of hydrologic and ecologic factors.

4.3 CDFG-Specific Procedures and Data Collection Techniques

Suspected CDFG jurisdictional areas were field checked for the presence of definable streambeds (bed, bank, and channel) and any associated riparian habitat. Streambeds and suspected riparian habitats were evaluated using the CFG Code (Section 1600 et seq.) and guidance described in *A Field Guide to Lake and Streambed Alteration Agreements Sections 1600-1607* (ESD-CDFG, 1994). The width(s) across both the bed and banks (top-of-bank to top-of-bank) for each feature was determined, and the results were noted on the engineered drawings and field notebook. If adjacent floodplain and/or terrace areas were vegetated with riparian vegetation, then these features were mapped on aerial maps and included as part of CDFG jurisdiction.

4.4 Analysis Parameters

Figure 5-1 through 5-7 depict current conditions (i.e., existing levee and access roads), existing aquatic features, and proposed permanent and temporary impact areas within the study area boundaries. To determine impact acreages, calculations of the quantity of permanent and temporary impacts were generated by superimposing the cut and fill limits presented in the Project's design plans over topographic maps that detailed the study area's special aquatic resource area limits. Any placement of culvert, rip-rap, bridge supports, or other permanent cut and/or fill within special aquatic resource areas was considered a permanent impact and was depicted by a polygon on the figures.

- Total CWA jurisdiction was determined for wetlands and other waters for each feature. The dimensions (linear length and width) of each feature within the study area were then determined based on the OHWM (for other WoUS) and wetland boundaries to assess Project impacts to each feature.

- Total CDFG jurisdiction was determined for each feature within the study area containing a defined bed, bank, and channel. The dimensions (linear length and widths) of each feature within the study area were then determined based on bank widths and outer limits of any associated riparian vegetation to assess Project impacts to each feature within the jurisdiction of the CDFG.

5.0 RESULTS

This section presents the delineation results of USACE jurisdiction pursuant to Section 404 of the CWA; RWQCB legal authority in accordance with CWA Section 401 and as defined within Section 13050(e) et seq. of the CWC; and CDFG jurisdiction pursuant to Section 1600 et seq. of the CFG Code. Six aquatic features were identified within the Project study area (Figure 5-1) and are described in detail in Section 5.5. Features that have similar characteristics are assessed collectively; similarly, the regional watershed context and hydrological discussions associated with Features 1-6 are evaluated collectively. Wetland Determination Data Forms are included in Appendix B and feature photographs are included in Appendix A. Linear distance and spatial area data, including permanent and temporary impacts to special aquatic resources, are presented in Tables 2 and 3.

5.1 Watershed Analysis

The majority of land within the study area is a manufactured levee road. The Santa Ana River Wash elevation ranges between 1,000 feet above sea level within the study area and extend upstream to 1,150 feet at the eastern extent of the study area.

The study area is located within the RWQCB's Santa Ana River Basin Plan within the Santa Ana River Watershed. The project encompasses two reaches identified in the Santa Ana River Basin Plan, Reach 5 and Reach 6. Reach 5: extends from Seven Oaks Dam to San Bernardino, to the San Jacinto Fault (Bunker Hill Dike), which marks the downstream edge of the Bunker Hill groundwater basin. Most of this reach tends to be dry, except as a result of storm flows, and the channel is largely operated as a flood control facility. The extreme lower end of this reach includes rising water and intermittently, San Timoteo Creek flows. Reach 4 includes the river from the Bunker Hill Dike down to Mission Boulevard Bridge in Riverside. Much of this reach is also operated as a flood control facility.

The trail alignment generally parallels, and occasionally enters into the Santa Ana River channel bottom. The SART III will end on the west side of the Mission-Zanja creek channel. The rail will begin again on the west side of the Metrolink bridge just east of the Mission-Zanja and Santa Ana River confluence.

According to the USDA soil survey, this area of the Santa Ana River is dry for most of the year; however currently the river is characterized as intermittent river.

The FEMA 100-Year Floodplain map illustrates the aerial extent of the floodplain, which courses Santa Ana River and Mission-Zanja creek within the study area (FEMA, 1998). The entire project occurs within the 100-year floodplain.

5.2 Surface Hydrology and Soils

The elevation changes gradually between the study area's western and eastern ends; therefore, the regional climate can be best characterized as low valley floor. The climate within low valley floor near the study area (i.e., San Bernardino) is characteristic of Mediterranean regions, with hot and dry summer months and cooler, wetter winters. The average high temperature in July is 83°F; the average low temperature in January is 48°F (NWS, 2008). Seasonal rainfall averages 10-25 inches per year.

Rainfall was above average prior to the 2011 field evaluations, the average rainfall was 9.43 inches for the period December 2010 through March 2011 in San Bernardino. Despite the greater than average rains and large flows in the Santa Ana River, only the areas within the channel bottom were inundated.

Soil types are not diverse within the study area, given they derive from one a single source, alluvium deposits primarily derived from granitic material. As a result, only 6 soil types occur within the study area (USDA, 1981; USDA-NRCS, 2008), all of which are considered to be well drained and non-hydric. Soils within the study area include the following:

- Gr - Grangeville fine sandy loam, 0% to 2% slopes
- Gs - Grangeville fine sandy loam, saline-alkali , 0% to 2% slopes
- Hba - Hanford sandy loam, 0 to 2 percent slopes
- Ps - Psamments and fluvents, frequently flooded
- SpC - Soboba stony loamy sand, 2 to 9 percent slopes
- TuB - Tujunga loamy sand, 0 to 5 percent slopes

5.3 Determination of USACE Jurisdiction Subject to Section 404 of the Clean Water Act

Features present within the study area are categorized as follows (USACE, 2007b): (1) TNW - Santa Ana River bottom within the OHWM, (2) tributary channels to TNW, and (3) swales, ditches, and topographic depressions. Photographs of each feature are included within Appendix A and wetland determination data forms are included in Appendix B.

5.3.1 TNW - Santa Ana River bottom within the Ordinary High Water Mark

The following features are characterized as areas where the proposed trail will encroach into the Santa Ana River within the OHWM: Features 1-4, and features 5-6 are unnamed swales were generally defined as shallow features that appeared to convey ephemeral flows across upland areas during and following storm events and did not contain an OHWM or a connection to a TNW (USACE, 2007b). Ditches were defined as features excavated wholly in, and draining only, uplands and did not contain an OHWM or a connection to a TNW (USACE, 2007b). Topographic depressions were features that were limited to isolated topographic low areas where water occasionally pooled. Topographic depressional features within the study area did not contain OHWMs. These swale, ditch, and depressional features were generally vegetated with upland grasses (and occasionally upland shrubs) and were not tributaries to, or had no significant nexus to TNWs. Consequently, none of these feature types was considered to be CWA Section 404 jurisdictional.

5.3.2 Tributary Channels to TNW

Erosional features were considered to be non-RPWs (i.e., flow fewer than 3 months per year) due to the presence of well-drained soils and low precipitation within the region. In addition, erosional features did not contain an OHWM and were not tributary to or had no significant nexus to, a TNW (USACE, 2007b). Therefore, these features were considered to be isolated, non-RPWs without a direct or indirect connection to a TNW. Consequently, none of these erosional features is considered to be CWA Section 404 jurisdictional.

5.3.3 Swales, Ditches and Topographic Depressions

Swales were generally defined as shallow features that appeared to convey ephemeral flows across upland areas during and following storm events and did not contain an OHWM or a connection to a TNW (USACE, 2007b). Ditches were defined as features excavated wholly in, and draining only, uplands and did not contain an OHWM or a connection to a TNW (USACE, 2007b). Topographic depressions were features that were limited to isolated topographic low areas where water occasionally pooled. Topographic depressional features within the study area did not contain OHWMs. These swale, ditch, and depressional features were generally vegetated with upland grasses (and occasionally upland shrubs) and were not tributaries to, or had no significant nexus to TNWs. Consequently, none of these feature types was considered to be CWA Section 404 jurisdictional.

The following features are characterized as ephemeral or intermittent drainages within the study area: Features 5 and 6. Ephemeral and intermittent features were defined as water conveyance features that are non-RPWs. They appeared to contain flow only occasionally, whereas intermittent features contained flow for a substantially longer period than that of ephemeral features. Ephemeral and intermittent features delineated within the study area were not tributary to, or had no significant nexus to, a TNW. Therefore, these features were considered to be isolated features without a direct or indirect connection to a TNW. Consequently, none of these ephemeral or intermittent features was considered to be CWA Section 404 jurisdictional.

5.4 Determination of USACE and RWQCB Jurisdiction Subject to Section(s) 404 and 401 of the Clean Water Act

In the absence of CWA Section 404 jurisdiction, RWQCB jurisdiction is extended to WoS via the Porter-Cologne Act, which includes the same features subject to CDFG jurisdiction as those described below in Section 5.5. Temporary and permanent impacts to RWQCB jurisdictional features are provided in Section 5.7 (Table 3).

5.5 Determination of CDFG Jurisdiction Subject to Section 1600 et seq. of the CFG Code and RWQCB Jurisdiction to Section 13000 et seq. of the Porter-Cologne Water Quality Control Act

This section provides detailed descriptions of each feature identified within the study area in terms of its applicability to jurisdiction. Permanent and temporary impacts to features subject in Section 5.6 below.

Feature 1 is an emergent, riparian-vegetated portion of the Santa Ana River that possesses attributes of a natural waterway (see Figure 5-2 and Photograph 1). This feature is located where the proposed SART III trail crosses under the Waterman Avenue bridge over the Santa Ana River. The Santa Ana River collects ephemeral flows and directs them west to the Pacific Ocean. This drainage has an approximately 400-feet wide at this crossing, and the dominant vegetation consisting of moderate to low-density riparian species. The riparian habitat associated with this feature is in various seral stages and generally consists of tall, multilayered, open canopy riparian woodland. The characteristic vegetative species within this riparian habitat include; Freemont cottonwood (*Populus fremontii),* black willow (*Salix goodingii*), sandbar willow (*S. hindsiana*), mule fat (*Baccharis salicifolia*), and sycamore (*Platanus racemosa).* In the absence of flooding, this riparian woodland has emerged with a complex

canopy structure of varying layers of trees, shrubs, herbs and vines. The overstory averages over 35 feet in height. This feature is a TNW, and is therefore a WoUS, a WoS, and a Streambed. This feature is subject to jurisdiction of the USACE and RWQCB pursuant to Section 404 and 401 of the CWA, and to CDFG jurisdiction pursuant to Section 1600 et seq. of the CFG Code. This feature will have both permanent and temporary impacts associated with the project (Tables 2 and 3).

Feature 2 is an emergent, riparian-vegetated portion of the Santa Ana River that possesses attributes of a natural waterway (see Figure 5-3 and Photograph 2). This feature is located where the proposed SART III trail alignment runs parallel to the Santa Ana River just east of the Mission-Zanja Creek and the Metrolink Bridge. In this area the upper bench of the Santa Ana River Floodplain is characterized by riparian vegetation. The Santa Ana River has intermittent flows and collects intermittent/ephemeral flows from tributary sources, and directs them west to the Pacific Ocean. This Feature is characterized by the SART III trail running parallel to the river in a section where there is no San Bernardino County Flood Control Levee bank road already established. Portions of this Feature will be impacted within the OHWM for both permanent and temporary impacts; however there is also a narrow section that is outside the OHWM, but is still within the bed and bank. The vegetation within this Feature is in various seral stages and generally consists of tall, multilayered, open canopy riparian woodland. The characteristic vegetative species within this riparian habitat include; Freemont cottonwood (*Populus fremontii),* black willow (*Salix goodingii*), sandbar willow (*S. hindsiana*), mule fat (*Baccharis salicifolia*), and sycamore (*Platanus racemosa).* In the absence of flooding, this riparian woodland has emerged with a complex canopy structure of varying layers of trees, shrubs, herbs and vines. The overstory averages over 35 feet in height. This feature is a TNW, and is therefore a WoUS, a WoS, and a Streambed. This feature is subject to jurisdiction or the USACE and RWQCB pursuant to Section 404 and 401 of the CWA, and to CDFG jurisdiction pursuant to Section 1600 et seq. of the CFG Code. This feature will have both permanent and temporary impacts associated with the project (Tables 2 and 3).

Feature 3 is an unvegetated portion of the Santa Ana River. This Feature is located where the SART III trail goes under the Orange Show Road bridge which spans the Santa Ana River. The SART III trail has been designed to avoid the area of the Santa Ana River that is within OHWM. The trail will be cut into the hard-sided and rock-slope protected upper bank of the channel. The feature is completely unvegetated (see Figure 5-4 and Photograph 3). Although the Santa Ana River is a TNW, the impacts associated with this Feature are outside the OWHM. Therefore they are not subject to jurisdiction of the USACE and RWQCB pursuant to Section 404 and 401 of the CWA. This feature is within the discernible bed and bank of the river channel, and therefore subject to CDFG jurisdiction pursuant to Section 1600 et seq. of the CFG Code. This feature will have both permanent and temporary impacts associated with the project (Tables 2 and 3).

Feature 4 is an unvegetated portion of the Santa Ana River. This Feature is located where the SART III trail goes under the Tippecanoe Avenue bridge which spans the Santa Ana River. The SART III trail has been designed to avoid the area of the Santa Ana River that is within OHWM. The trail will be cut into the hard-sided and rock-slope protected upper bank of the channel. The feature is completely unvegetated (see Figure 5-5 and Photograph 4). Although the Santa Ana River is a TNW, the impacts associated with this Feature are outside the OWHM. Therefore they are not subject to jurisdiction or the USACE and RWQCB pursuant to Section 404 and 401 of the CWA. This feature is within the discernible bed and bank of the river channel, and therefore subject to CDFG

jurisdiction pursuant to Section 1600 et seq. of the CFG Code. This feature will have both permanent and temporary impacts associated with the project (Tables 2 and 3).

Feature 5 is an emergent, riparian-vegetated portion of the Santa Ana River that possesses attributes of a natural waterway (see Figure 5-6 and Photograph 5). This Feature is located just east of the Tippecanoe Avenue Bridge, where the existing San Bernardino Flood Control levee road crosses a culvert that is conveying flows into the Santa Ana River. These flows appear to be conveying urban runoff from a developed area to the south. The Santa Ana River collects the ephemeral flows from this Feature. The dominant vegetation consists of low-density riparian species. The riparian habitat associated with this feature is sparse and relatively low growing. Characteristic vegetative species within this Feature include; Freemont cottonwood (*Populus fremontii),* black willow (*Salix goodingii*), sandbar willow (*S. hindsiana*), and mule fat (*Baccharis salicifolia*). This feature is a tributary to a TNW, and is therefore a WoUS, a WoS, and a Streambed. This feature is subject to jurisdiction of the USACE and RWQCB pursuant to Section 404 and 401 of the CWA, and to CDFG jurisdiction pursuant to Section 1600 et seq. of the CFG Code. This feature will have temporary impacts only associated with the project (Tables 2 and 3).

Feature 6 is an emergent, riparian-vegetated portion of the Santa Ana River that possesses attributes of a natural waterway (see Figure 5-7 and Photograph 6). This Feature is located just east of the Tippecanoe Avenue Bridge, where the existing San Bernardino Flood Control levee road crosses a culvert that is conveying flows into the Santa Ana River. These flows appear to be conveying urban runoff from a developed are to the south. The Santa Ana River collects the ephemeral flows from this Feature. The dominant vegetation consists of low-density riparian species. The riparian habitat associated with this Feature is sparse and relatively low growing, characteristic vegetative species within this Feature include; Freemont cottonwood (*Populus fremontii),* black willow (*Salix goodingii*), sandbar willow (*S. hindsiana*), and mule fat (*Baccharis salicifolia*). This Feature is a tributary to a TNW, and is therefore a WoUS, a WoS, and a Streambed. This Feature is subject to jurisdiction or the USACE and RWQCB pursuant to Section 404 and 401 of the CWA, and to CDFG jurisdiction pursuant to Section 1600 et seq. of the CFG Code. This Feature will have temporary impacts only associated with the project (Tables 2 and 3).

5.6 Impacts to USACE, RWQCB and CDFG Jurisdiction

Of the six features that exist in the study area, four of them are subject to USACE jurisdiction, and all six are subject to RWQCB and CDFG jurisdiction. The four features will result in 0.30 acre of permanent impacts to USACE jurisdiction and 1.58 acres of permanent impacts to RWQCB and CDFG jurisdiction, of which 1.04 acres consist of riparian habitat (Table 2). In addition, the Project will result in 1.39 acres of temporary impacts to USACE jurisdiction and 1.93 acres of temporary impacts to RWQCB and CDFG jurisdiction, 0.47 acres of which consist of riparian habitat (Table 3).

Table 2. Impacts to CDFG and RWQCB Jurisdiction

Feature Name	Total Non-Riparian Bed and Bank (acres)	Total Native Riparian Vegetation (acres)	Total CDFG and RWQCB Jurisdiction (acres)			
			Permanent (Vegetated)	Permanent (Unvegetated)	Temporary (Vegetated)	Temporary (Unvegetated)
Feature 1	0.38	0.59	0.10	0.04	0.97	0.00
Feature 2	0.00	1.29	0.94	0.00	0.35	0.00
Feature 3	0.50	0.00	0.00	0.27	0.00	0.23
Feature 4	0.47	0.00	0.00	0.23	0.00	0.24
Feature 5	0.00	0.12	0.00	0.00	0.12	0.00
Feature 6	0.00	0.02	0.00	0.00	0.02	0.00
TOTAL	**1.35**	**2.02**	**1.04**	**0.54**	**1.46**	**0.47**

Table 3. Impacts to USACE Jurisdiction

Feature Name	Total Native Riparian Vegetation (acres)	Total USACE/RWQCB (acres)	
		Permanent	Temporary
Feature 1	0.59	0.10	0.49
Feature 2	1.29	0.20	0.76
Feature 3	0.00	0.00	0.00
Feature 4	0.00	0.00	0.00
Feature 5	0.12	0.00	0.12
Feature 6	0.02	0.00	0.02
TOTAL	**2.02**	**0.30**	**1.39**

FIGURE 5-1
FEATURE LOCATION MAP

FIGURE 5-2
FEATURE 1

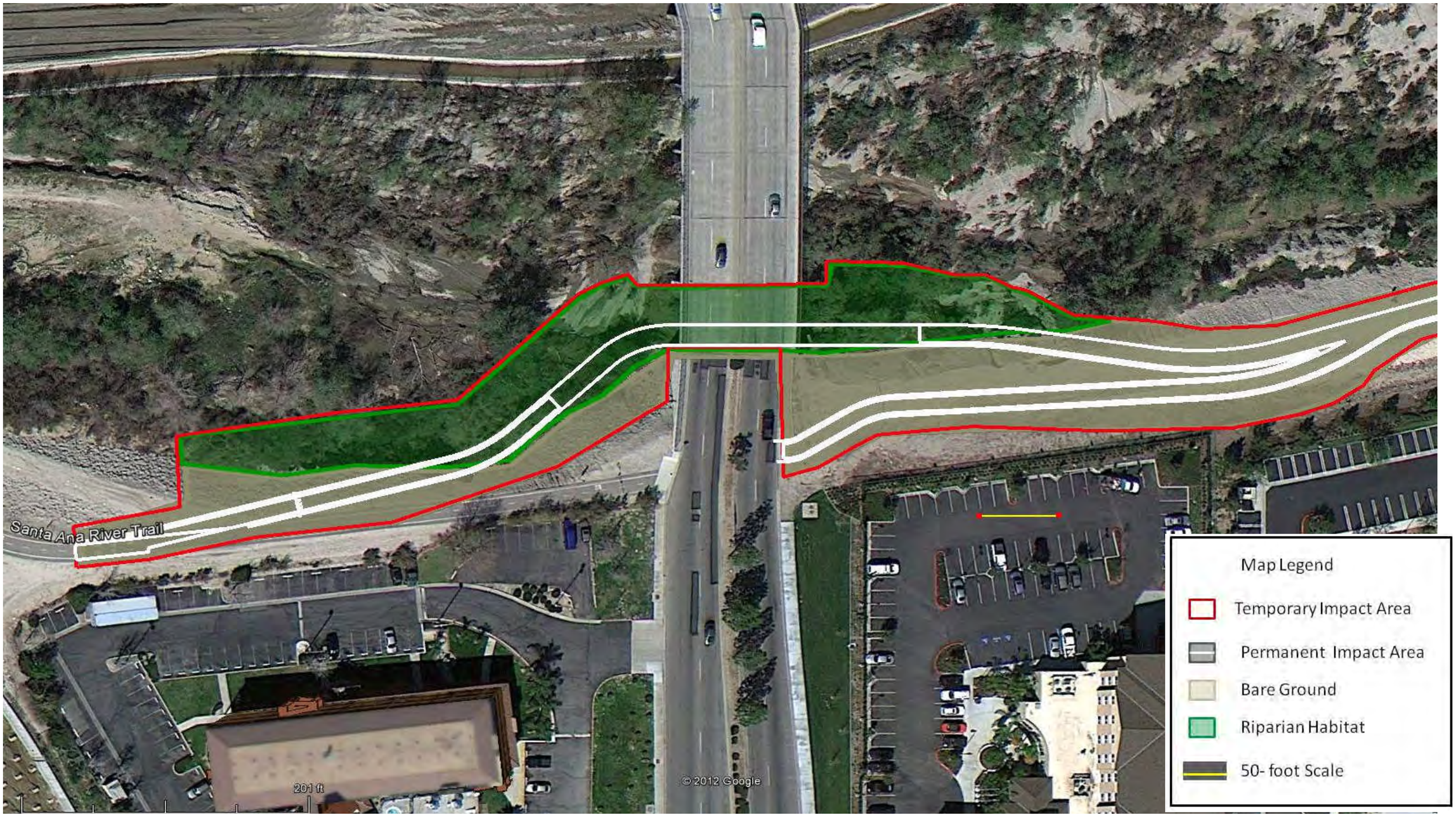


FIGURE 5-3
FEATURE 2

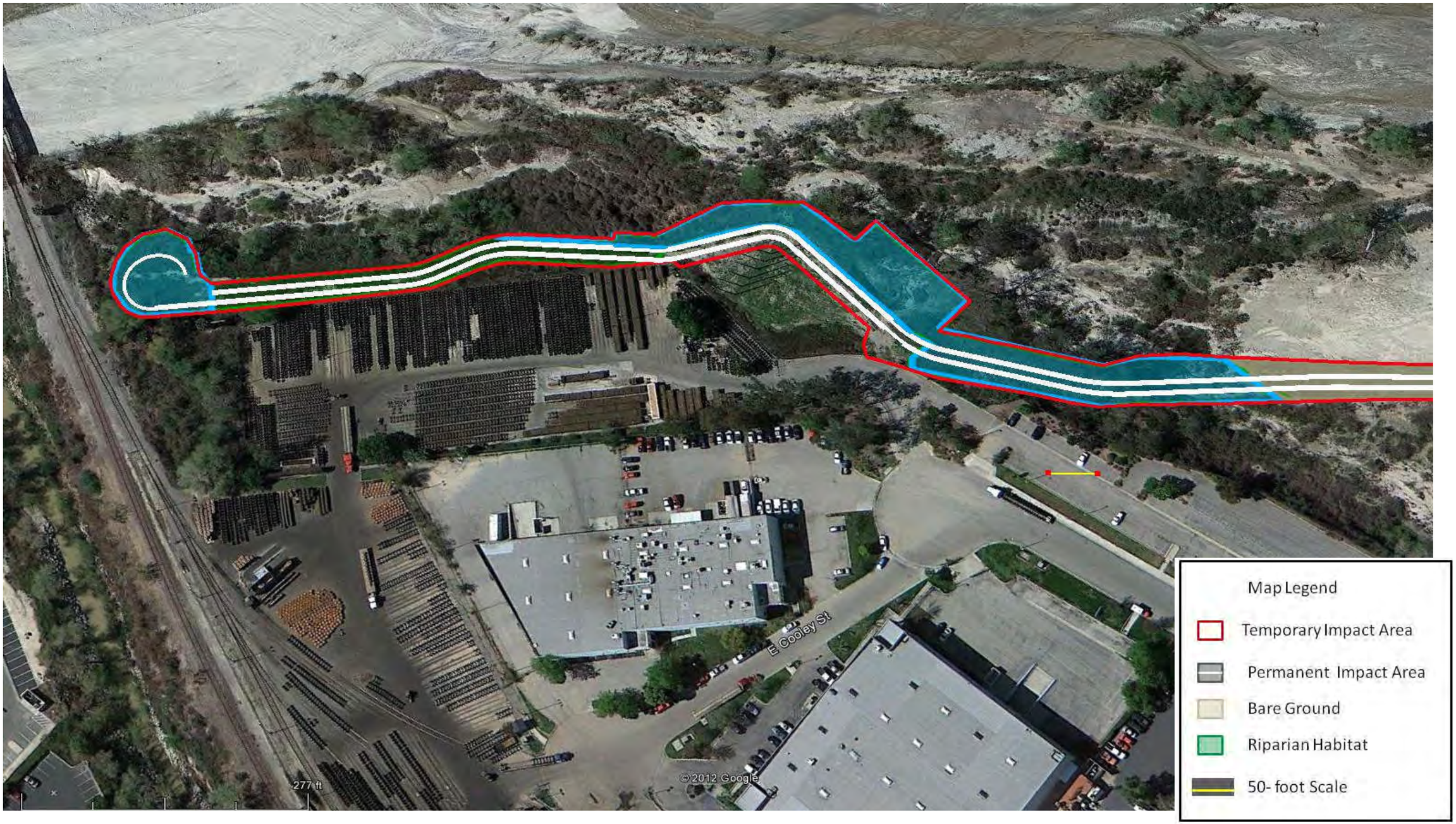


FIGURE 5-4
FEATURE 3

FIGURE 5-5
FEATURE 4

FIGURE 5-6
FEATURE 5

FIGURE 5-7
FEATURE 6

6.0 RECOMMENDATIONS

The following compliance implementation guidance is provided as a means of avoiding and minimizing adverse impacts to special aquatic resource areas that occur or have the potential to occur within the study area.

1. Prior to undertaking ground-disturbing activities within the study area, within or immediately adjacent to, Porter-Cologne or CFG Code Section 1600 et seq. jurisdictional features, San Bernardino County should consult with the appropriate responsible resource agency (i.e., RWQCB, USACE, and CDFG) to verify delineation results and secure all obligatory discretionary permits/authorizations.

2. San Bernardino County should develop an informal plan to offset or compensate for impacts to RWQCB and/or CDFG jurisdictional areas to ensure rapid and favorable action during the discretionary permitting process.

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8.0 PERSONAL COMMUNICATIONS

There were no personal communications in the preparation of this document.

APPENDIX A

SITE PHOTOGRAPHS

Photograph: 1

Location: Feature 1

Direction: Facing north

Comment: This photograph illustrates Feature 1. See Figure 5-2 for photograph location and direction.

Photograph: 2

Location: Feature 2

Direction: Facing northwest

Comment: This photograph illustrates Feature 2 just down slope from the railroad grade. See Figure 5-3 for photograph location and direction.

Photograph: 3

Location: Feature 3

Direction: Facing northwest

Comment: This photograph illustrates Feature 3. See Figure 5-4 for photograph location and direction.

Photograph: 4

Location: Feature 4

Direction: Facing west

Comment: This photograph illustrates Feature 4. See Figure 5-5 for photograph location and direction.

Photograph: 5

Location: Feature 5

Direction: Facing north

Comment: This photograph illustrates Feature 5. See Figure 5-6 for photograph location and direction.

Photograph: 5

Location: Feature 5

Direction: Facing south

Comment: This photograph illustrates Feature 3. See Figure 5-7 for photograph location and direction.

Photograph: 6

Location: Feature 6

Direction: Facing west

Comment: This photograph illustrates Feature 3. See Figure 5-7 for photograph location and direction.

APPENDIX B

USACE WETLAND DETERMINATION DATA FORMS

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: SARTIII Sampling Date: [illegible]

Applicant/Owner: S.B. County Regional Parks State: CA Sampling Point: Feature 1

Investigator(s): Shay Lawrey + Lisa Patterson Section, Township, Range: _____

Landform (hillslope, terrace, etc.): River Local relief (concave, convex, none): Concave Slope (%): 0-2%

Subregion (LRR): _____ Lat: 34°04'12.57" N Long: 117°16'43.53" W Datum: _____

Soil Map Unit Name: Wet Soil (Riverine) NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✓	No _____	**Is the Sampled Area within a Wetland?** Yes ✓ No _____
Hydric Soil Present?	Yes ✓	No _____	
Wetland Hydrology Present?	Yes ✓	No _____	

Remarks: The area under the bridge and adj is w/in ottum and is characterized by Rip - obl wet vegetation.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 10'x10')	Absolute % Cover	Dominant Species?	Indicator Status
1. elmwood	≈5	No	obl
2. Salix sp	~90	yes	obl
3.			
4.			
	95% = Total Cover		

Sapling/Shrub Stratum (Plot size: _____)			
1. mulefat	~5%	No	FACW
2.			
3.			
4.			
5.			
	5% = Total Cover		

Herb Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	_____ = Total Cover		

Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

✓ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks: Feature is characterized by Rip overstory - obl.

Approved for public release; distribution is unlimited.

SOIL

Sampling Point: FEATURE 1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: ___

Depth (inches): ___

Hydric Soil Present? Yes ✓ No ___

Remarks:

In A River Bed / Sandy w/ Plants

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ✓ Surface Water (A1)
- ___ High Water Table (A2)
- ✓ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ✓ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ✓ No ___ Depth (inches): ___

Water Table Present? Yes ✓ No ___ Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ✓ No ___ Depth (inches): ___

Wetland Hydrology Present? Yes ✓ No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: In a River Bottom.

Project/Site: SART III City/County: San Bernardino County Sampling Date: [illegible]
Applicant/Owner: San Bernardino County Parks State: CA Sampling Point: Points 2
Investigator(s): Shay Lawrey & Lisa Patterson Section, Township, Range: _____
Landform (hillslope, terrace, etc.): River Local relief (concave, convex, none): concave Slope (%): _____
Subregion (LRR): _____ Lat: 34° 04' 32.24" N Long: 117° 16' 17.07 W Datum: _____
Soil Map Unit Name: web soils – NWI classification: _____
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)
Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____
Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✓	No _____	**Is the Sampled Area within a Wetland?** Yes ✓ No _____
Hydric Soil Present?	Yes ✓	No _____	
Wetland Hydrology Present?	Yes ✓	No _____	

Remarks: Areas below the terrace are wet. saturated & dom by wetland vg.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 50' x 50')	Absolute % Cover	Dominant Species?	Indicator Status
1. eucalyptus sp			upl
2. Salix sp		Y	obl
3.			
4.			
		= Total Cover	

Sapling/Shrub Stratum (Plot size: _____)			
1. MF		Y	FACW
2.			
3.			
4.			
5.			
		= Total Cover	

Herb Stratum (Plot size: _____)			
1. cattails		N	obl
2. NNG		Y	upl
3.			
4.			
5.			
6.			
7.			
8.			
		= Total Cover	

Woody Vine Stratum (Plot size: _____)			
1. brome			FACW
2.			
		= Total Cover	

% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)
Total Number of Dominant Species Across All Strata: 4 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 75% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:
___ Dominance Test is >50%
___ Prevalence Index is ≤3.0[1]
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks: Areas on the lower shelf are wetlands areas on upper terrace are upl.

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SOIL

Sampling Point: Plot 2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: ___

Depth (inches): ___

Hydric Soil Present? Yes ✓ No ___

Remarks: saturation in upper part > 35 days.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ✓ Surface Water (A1)
- ✓ High Water Table (A2)
- ✓ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ✓ No ___ Depth (inches): ___

Water Table Present? Yes ✓ No ___ Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ✓ No ___ Depth (inches): ___

Wetland Hydrology Present? Yes ✓ No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Project/Site: SART III Sampling Date: ____

Applicant/Owner: SB County Regional Parks State: CA Sampling Point: Frame 3

Investigator(s): Shay Lawley + Lisa Patterson Section, Township, Range: ____

Landform (hillslope, terrace, etc.): Riverine Local relief (concave, convex, none): Slope Slope (%): 10%

Subregion (LRR): ____ Lat: 34°04'43.08" N Long: 117°15'53.08" W Datum: ____

Soil Map Unit Name: ____ NWI classification: ____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ____ No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area within a Wetland?** Yes ____ No X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes ____	No X	

Remarks: the site is on the Grouted Rock slope of the River under the bridge.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.	0		
2.			
3.			
4.			
	____ = Total Cover		

Sapling/Shrub Stratum (Plot size: ____)			
1.	0		
2.			
3.			
4.			
5.			
	____ = Total Cover		

Herb Stratum (Plot size: ____)			
1.	0		
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	0 = Total Cover		

Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	____ = Total Cover		

% Bare Ground in Herb Stratum 100% % Cover of Biotic Crust ____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: ____ (A)

Total Number of Dominant Species Across All Strata: ____ (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: ____ (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	____	x 1 = ____
FACW species	____	x 2 = ____
FAC species	____	x 3 = ____
FACU species	____	x 4 = ____
UPL species	____	x 5 = ____
Column Totals:	____ (A)	____ (B)

Prevalence Index = B/A = ____

Hydrophytic Vegetation Indicators:

- ___ Dominance Test is >50%
- ___ Prevalence Index is ≤3.0[1]
- ___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ____ No X

Remarks: Unvegetated Grouted Rock

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SOIL

Sampling Point: Point 3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks: Rock slope w/ brow

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No _____ Depth (inches): _____

Water Table Present? Yes _____ No _____ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No _____ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Slope of the channel under bridge

Project/Site: SART III City/County: [illegible] Sampling Date: [illegible]

Applicant/Owner: SB County Regional Parks State: CA Sampling Point: Feature 4

Investigator(s): Shay Lawrey + Lisa Patterson Section, Township, Range: _____

Landform (hillslope, terrace, etc.): Riverine Local relief (concave, convex, none): Slope Slope (%): 10%

Subregion (LRR): _____ Lat: 34°04' 51.34" N Long: 117°15' 34.37" W Datum: _____

Soil Map Unit Name: Wb / WA NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes _____ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No ✓	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes _____	No ✓	

Remarks: Greater than slope of channel under bridge

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.	0		
2.			
3.			
4.			
	= Total Cover		

Sapling/Shrub Stratum (Plot size: _____)			
1.	0		
2.			
3.			
4.			
5.			
	= Total Cover		

Herb Stratum (Plot size: _____)			
1.	0		
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	= Total Cover		

Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum 0 % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A)

Total Number of Dominant Species Across All Strata: _____ (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species		x 1 =
FACW species		x 2 =
FAC species		x 3 =
FACU species		x 4 =
UPL species		x 5 =
Column Totals:	(A)	(B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes _____ No ✓

Remarks: Unvegetated.

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SOIL

Sampling Point: Frame 4

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: ___

Depth (inches): ___

Hydric Soil Present? Yes ___ No X

Remarks: Gravel Road -

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No ___ Depth (inches): ___

Water Table Present? Yes ___ No ___ Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ___ No ___ Depth (inches): ___

Wetland Hydrology Present? Yes ___ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: 10% Slope - Gravel Road

Project/Site: Part III City/County: [illegible] Sampling Date: [illegible]

Applicant/Owner: SB County Regional Parks State: CA Sampling Point: Features 5

Investigator(s): Shay Lanny + Lisa Patterson Section, Township, Range: _____

Landform (hillslope, terrace, etc.): Riverine Local relief (concave, convex, none): _____ Slope (%): _____

Subregion (LRR): _____ Lat: 34°04' 59.96"N Long: 117° 14' 34.55"W Datum: _____

Soil Map Unit Name: Wub soil NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No _____	**Is the Sampled Area within a Wetland?** Yes X No _____
Hydric Soil Present?	Yes X	No _____	
Wetland Hydrology Present?	Yes X	No _____	

Remarks: Riparian area in side channel

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 10'x10')	Absolute % Cover	Dominant Species?	Indicator Status
1. Cottonwood	10%		obl
2. Salix	40%	yes	obl
3.			
4.			
	_____ = Total Cover		

Sapling/Shrub Stratum (Plot size: _____)			
1. mulefat	20%	yes	FACW
2.			
3.			
4.			
5.			
	_____ = Total Cover		

Herb Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	_____ = Total Cover		

Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	70 = Total Cover		

% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 % (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No _____

Remarks: wetland species

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SOIL

Sampling Point: Feature 5

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: ___

Depth (inches): ___

Hydric Soil Present? Yes X No ___

Remarks:

Saturated > 30 days

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- X Water Marks (B1) (**Riverine**)
- X Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- X Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No ___ Depth (inches): ___

Water Table Present? Yes ___ No ___ Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes X No ___ Depth (inches): ___

Wetland Hydrology Present? Yes X No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Only gets when Raining –

Project/Site: Phase III Sampling Date: [illegible]
Applicant/Owner: SB County Regional Parks State: _____ Sampling Point: Feature 6
Investigator(s): Shay Lawrey + Lisa Pottes Section, Township, Range: _____
Landform (hillslope, terrace, etc.): Riverine Local relief (concave, convex, none): concave Slope (%): _____
Subregion (LRR): _____ Lat: 34°04'59.96"N Long: 117° 14'34.55"W Datum: _____
Soil Map Unit Name: web soil unit NWI classification: _____
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No _____	**Is the Sampled Area within a Wetland?** Yes X No _____
Hydric Soil Present?	Yes X	No _____	
Wetland Hydrology Present?	Yes X	No _____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. Salix sp	100%	Y	OBL
2.			
3.			
4.			
	_____ = Total Cover		

Sapling/Shrub Stratum (Plot size: _____)			
1. mulfat	40%	Y	FACW
2.			
3.			
4.			
5.			
	_____ = Total Cover		

Herb Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	_____ = Total Cover		

Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
Total Number of Dominant Species Across All Strata: 2 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:
___ Dominance Test is >50%
___ Prevalence Index is ≤3.0[1]
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No _____

Remarks:

Approved for public release; distribution is unlimited.

SOIL

Sampling Point: _____

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- X Other (Explain in Remarks)

Sat < 30 days in upper part

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- X Water Marks (B1) (**Riverine**)
- X Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No ___ Depth (inches): _____

Water Table Present? Yes ___ No ___ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ___ No ___ Depth (inches): _____

Wetland Hydrology Present? Yes X No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Riparian habitat

Exhibit 4: Initial Study and Mitigated Negative Declaration for the "Santa Ana River Trail, Phase III Project"

Appendix E

Exhibit 4: Initial Study and Mitigated Negative Declaration for the "Santa Ana River Trail, Phase III Project"

STATE OF CALIFORNIA—BUSINESS, TRANSPORTATION AND HOUSING AGENCY ARNOLD SCHWARZENEGGER, Governor

DEPARTMENT OF TRANSPORTATION
DISTRICT 8
ENVIRONMENTAL PLANNING (MS 822)
464 W. FOURTH STREET, 6TH FLOOR
SAN BERNARDINO, CA 92401-1400
PHONE (909) 383-6936
FAX (909) 383-6494
TTY (909) 383-6300

Flex your power!
Be energy efficient!

November 15, 2010

Ms. Felicia Sirchia
Fish and Wildlife Biologist
Carlsbad Fish & Wildlife Office
6010 Hidden Valley Road, Suite 101
Carlsbad, California 92011

Dear Ms. Sirchia:

Request of Species List for the Santa Ana River Trail (SART) Phase III Project (Project).

The California Department of Transportation (Department), acting on behalf of FHWA as a federal lead agency, in conjunction with San Bernardino County Regional Parks; is proposing to construct the Santa Ana River Trail (SART) Phase III Project (Project).

The SART will follow the top of the south levee of the Santa Ana River between Waterman Avenue and California Street in eastern San Bernardino County. The project area can be found within un-sectioned portions of Township 1 South, Range 4 West (R3W Redlands) of the U.S. Geological Survey (USGS) – San Bernardino South and Redlands Quadrangles, 7.5 Minute Series topographic maps.

The Department requests from the United States Fish and Wildlife Service a Species List from your office of the endangered, threatened, proposed and sensitive species, and critical habitat that may occur within the vicinity of the proposed project. Enclosed is a project vicinity map depicting the project location.

If you have any questions, please contact Juan Lopez Torres, Environmental Planner (Biologist), at (909) 388-2070.

Sincerely,

CRAIG WENTWORTH, Office Chief
Biological Studies and Permits Branch

Enclosure
Location Maps

Exhibit 4: Initial Study and Mitigated Negative Declaration for the
"Santa Ana River Trail, Phase III Project"

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Ecological Services
Carlsbad Fish and Wildlife Office
6010 Hidden Valley Road, Suite 101
Carlsbad, California 92011

In Reply Refer To:
FWS-SB-09B0287-11SL0104

DEC 06 2010

Craig Wentworth
Senior Environmental Planner
Department of Transportation - District 8
Environmental Planning (MS 822)
464 West 4th Street, 6th Floor
San Bernardino, California 92401

Attention: Juan Lopez Torres, Environmental Planner, California Department of Transportation

Subject: Request for a List of Proposed, Threatened, or Endangered Species Potentially Occurring in the Vicinity of the Santa Ana River Trail Phase III Project, San Bernardino County, California

Dear Mr. Wentworth:

This letter is in response to your request, received by our office on November 18, 2010, for information on federally endangered, threatened, proposed, and candidate species that may occur in the vicinity of the Santa Ana River Trail Phase III Project. The proposed project will follow the top of the south levee of the Santa Ana River between Waterman Avenue and California Street in eastern San Bernardino County, California. To assist you in evaluating the potential occurrence of federally listed endangered, threatened, proposed, and candidate species that may occur in the vicinity of the proposed action, we are providing the enclosed list.

Because we do not have site-specific information for the proposed project area, we recommend that you seek assistance from a biologist familiar with the habitat conditions and associated species in and around the project site to assess the actual potential for direct, indirect, and cumulative impacts likely to result from the proposed activity. We also suggest that you contact the California Department of Fish and Game regarding State-listed and sensitive species that may occur within the project area. Please note that State-listed species are protected under the provisions of the California Endangered Species Act.

As a reminder, if a proposed project is authorized, funded, or carried out by a Federal agency and may affect a federally listed species, then section 7 consultation pursuant to the Endangered Species Act of 1973 (Act), as amended, is required. If a proposed project does not involve a Federal agency, but is likely to result in the take of a listed animal species, then the project proponent should apply for an incidental take permit, pursuant to section 10 of the Endangered Species Act of 1973 (Act), as amended (16 U.S.C. 1531 *et seq.*).

TAKE PRIDE IN AMERICA

Please note that due to out-of-date data on the U.S. Fish and Wildlife Service Critical Habitat Portal, the Carlsbad Fish and Wildlife Office is now hosting all critical habitat GIS data within our jurisdictional area on our website at http://www.fws.gov/carlsbad. Select the GIS DATA link to access current critical habitat layers.

Should you have any questions regarding the species listed or your responsibilities under the Act, please contact Felicia Sirchia of this office at (760) 431-9440, extension 231.

Sincerely,

for

Kennon A. Corey
Assistant Field Supervisor

Enclosure

Federally Endangered, Threatened, Proposed, and Candidate Species and Critical Habitat that May Occur in the Vicinity of the Santa Ana River Trial Phase III Project, San Bernardino County, California

Common Name	Scientific Name	Federal Status	Critical Habitat in Vicinity
Plants			
Slender-horned spine flower	*Dodecahema leptoceras*	Endangered	N/A
Santa Ana River woolly-star	*Eriastrum densifolium subsp. sanctorum*	Endangered	N/A
Nevin's barberry	*Berberis nevinii*	Endangered	None
Fish			
Santa Ana sucker	*Catostomus santaanae*	Threatened	Present (Proposed)
Birds			
Least Bell's vireo	*Vireo bellii pusillus*	Endangered	None
Southwestern willow flycatcher	*Empidonax traillii extimus*	Endangered	Present
yellow-billed cuckoo	*Coccyzus americanus*	Candidate	N/A
Mammals			
San Bernardino kangaroo rat	*Dipodomys merriami parvus*	Endangered	Present

* N/A = Not applicable because critical habitat is not designated for the species

APPENDIX 2B

Exhibit 4: Initial Study and Mitigated Negative Declaration for the "Santa Ana River Trail, Phase III Project"

JURISDICTIONAL DELINEATION REPORT

SANTA ANA RIVER TRAIL PHASE III

SAN BERNARDINO COUNTY, CALIFORNIA

DRAFT

Prepared for:

CALTRANS DISTRICT 8

April 11, 2012

Tom Dodson & Associates
2150 North Arrowhead Avenue
San Bernardino, CA 92405

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List of Abbreviated Terms

ADA	Americans with Disability Act
BNSF	Burlington Northern Santa Fe
Caltrans	California Department of Transportation
CCR	California Code of Regulations
CDFG	California Department of Fish and Game
CFG Code	California Fish and Game Code
CL	Construction Limits
CWA	Clean Water Act
CWC	California Water Code
EPA	U.S. Environmental Protection Agency
ESD	Environmental Services Division
FAC	Facultative
FACU	Facultative Upland
FACW	Facultative Wetland
FEMA	Federal Emergency Management Agency

GIS	Geographic Information Systems
GPS	Global Positioning System
LSAA	Lake and Streambed Alteration Agreement
NI	No Indicator
NRCS	Natural Resources Conservation Service
OBL	Obligate Wetland
OHWM	Ordinary High Water Mark
Porter-Cologne	Porter-Cologne Water Quality Control Act
Project	Mojave Subdivision Tehachapi Pass Double Track Project
Rapanos Decision	*John A. Rapanos v. United States*; and *June Carabel v. United States Army Corps of Engineers*
RPW	Relatively Permanent Water
RWQCB	Regional Water Quality Control Board
SART	Santa Ana River Trail
Study Area	The area in which USACE, RWQCB, and CDFG jurisdiction was assessed and quantified
SWRCB	State Water Resources Control Board
SWANCC	*Solid Waste Agency of Northern Cook County v. U.S. Army Corps of Engineers*
TNW	Traditional Navigable Water
UPL	Obligate Upland
USACE	U.S. Army Corps of Engineers
USDA	U.S. Department of Agriculture
USGS	U.S. Geological Survey
WDR	Waste Discharge Requirements
WoS	Waters of the State
WoUS	Waters of the United States

1.0 INTRODUCTION AND SUMMARY

The proposed project is the design and construction of a 3.8-mile section of the Santa Ana River Trail (SART) in the County of San Bernardino. This segment of the SART is the third phase of the trail within San Bernardino County (Phase III). Phase III begins at Waterman Avenue in the City of San Bernardino and continues easterly to California Street in the City of Redlands, along the southern bank of the Santa Ana River. See Figure 1-1 for a Regional Location Map and Figure 1-2 for a Site Location Map. The SART is a Class I Bikeway which is defined as a shared use path that is physically separated from any street or highway and may be used by pedestrians, skaters, wheelchair users, joggers, and other non-motorized users. This project will be developed to California Department of Transportation (Caltrans) Highway Design Manual Chapter 1000 standards and will comply with the Americans with Disabilities Act (ADA) of 1990, as amended. The SART will be built as a 10-foot wide asphalt trail with an adjacent 4-foot wide unpaved shoulder to accommodate non-motorized modes of transportation and pedestrians.

This report summarizes the findings of: (1) U.S. Army Corps of Engineers' (USACE) jurisdiction pursuant to Section 404 of the Clean Water Act (CWA), (2) Regional Water Quality Control Board's (RWQCB) legal authority in accordance with Section 401 of the CWA and as defined within Section 13050(e) et seq. of the California Water Code (CWC) via the Porter-Cologne Water Quality Control Act (Porter-Cologne), and (3) California Department of Fish and Game's (CDFG) jurisdiction pursuant to Section 1600 et seq. of the California Fish and Game Code (CFG Code) for the SART project.

This report presents our best effort at estimating jurisdictional boundaries using the most up-to-date regulations, written policies, and guidance from the USACE and CDFG. Nonetheless, only the USACE and CDFG can make a final determination of jurisdictional boundaries. The quantity and quality of aquatic resources have been evaluated and are presented in Section 5.0, which is followed by suggested guidance for compliance with state and federal laws concerning these special aquatic resource areas (refer to Section 6.0).

For the purposes of this document, the ***Study Area*** is defined as the area in which USACE, RWQCB, and CDFG jurisdiction was assessed and quantified. The study area includes the Project's proposed physical ground disturbance footprint. The study area was delineated in March 2011. A total of six jurisdictional/Riparian features were identified within the study area. For the purposes of this report, these features are identified as Feature 1 through Feature 6. Of these six features, four are subject to USACE and all six features are subject CDFG jurisdiction (all of which will be temporarily and/or permanently impacted by the Project). See Figure 5-1 Feature location and Figures 5-2 through 5-7 for Feature graphics.

1.1 USACE Jurisdiction Pursuant to Section 404 of the Clean Water Act

The study area traverses the Santa Ana River and contains four features along the river considered Waters of the U.S. (WoUS) because the Santa Ana River is a tributary to Traditional Navigable Waters (TNW). Consequently, these four features within the study area are subject to CWA Section 404 jurisdiction. These four features would be temporarily and/or permanently impacted by Project implementation. Temporary impacts to USACE jurisdiction total 1.47 acres and permanent impacts total 0.20 acres.

1.2 USACE and RWQCB Jurisdiction Pursuant to Sections 404 and 401 of the Clean Water Act

The RWQCB regulates fills to WoUS and Waters of the State (WoS) through the CWA Section 401 Water Quality Certification program and through the Porter-Cologne Water Quality Control Act (Porter-Cologne), respectively. Consequently, all six features within the study area are subject to RWQCB legal authority. All six of the features would be temporarily and/or permanently impacted by Project implementation. Temporary impacts to CWA jurisdiction total 1.39 acres and permanent impacts total 0.30 acres.

1.3 CDFG Jurisdiction Pursuant to Section 1600 et seq. of the CFG Code and RWQCB Jurisdiction Pursuant Porter-Cologne Water Quality Control Act

Six features within the study area are subject to CFG Code Section 1600 et seq. jurisdiction. All six of the features would be temporarily and/or permanently impacted by Project implementation. Temporary impact to CDFG jurisdiction total 1.93 acres and permanent impacts total 1.58 acres. However, only 1.04 acre of the permanent impact area is vegetated and has riparian habitat. The remaining 0.54 acre area of permanent impact is unvegetated hard or rock-sided banks of the channels located under the road bridges. Similarly, 1.46 acres of the total 1.93 acres of temporary impacts is vegetated by riparian habitat.

1.4 Permit Recommendations

A Section 404 Permit for discharge of dredge or fill material and a Section 401 Water Quality Certification pursuant to the CWA will be required. A Lake and Streambed Alteration Agreement (LSAA) from the CDFG will be required to implement the Project for permanent and/or temporary impacts to features within the jurisdiction of Section 1600 et seq. of the CFG Code pending the County Parks ability to minimize impacts along the proposed trail alignment.

Recommendations for Project permitting are provided in Section 6.0.

FIGURE 1-1
Regional Location Map

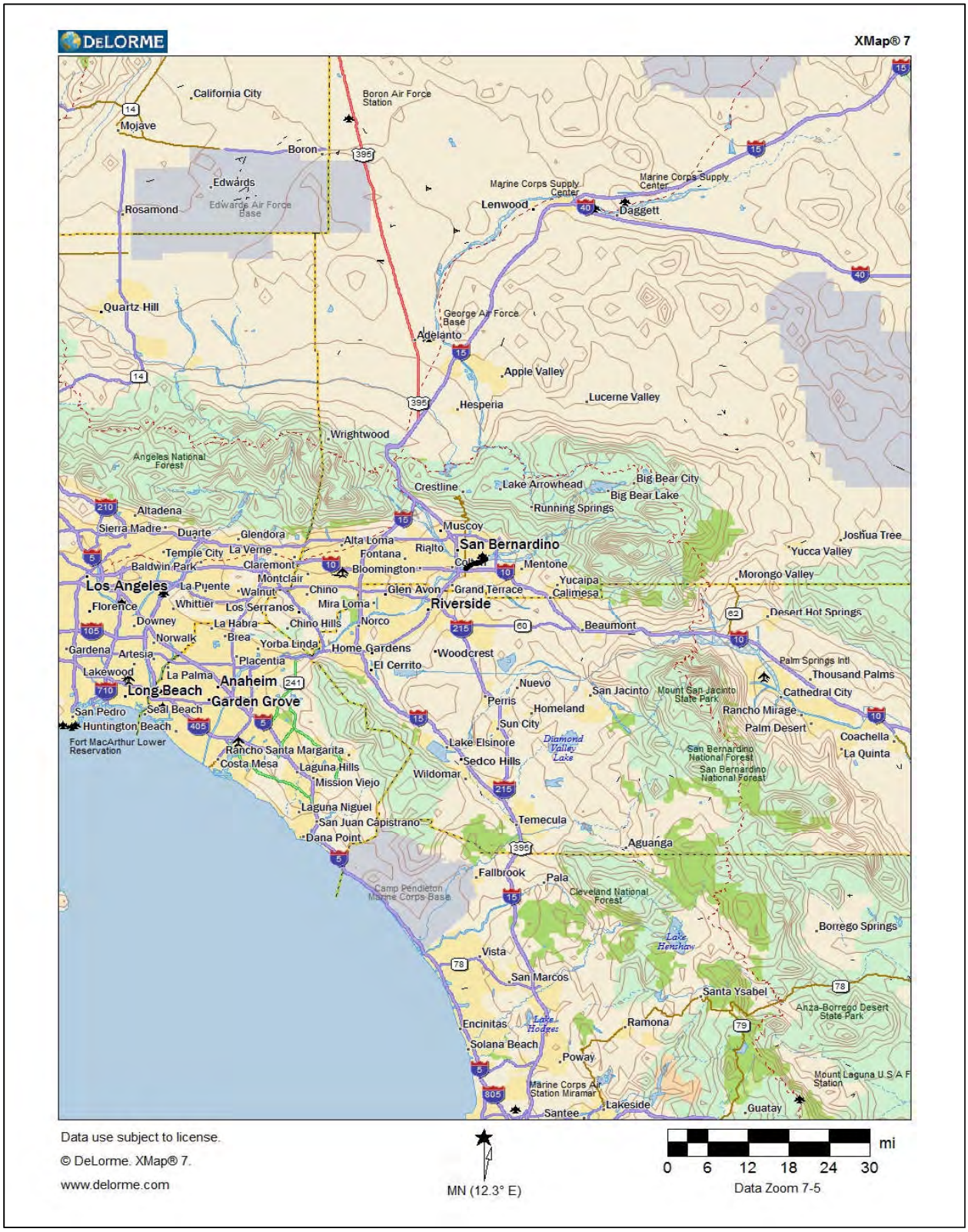
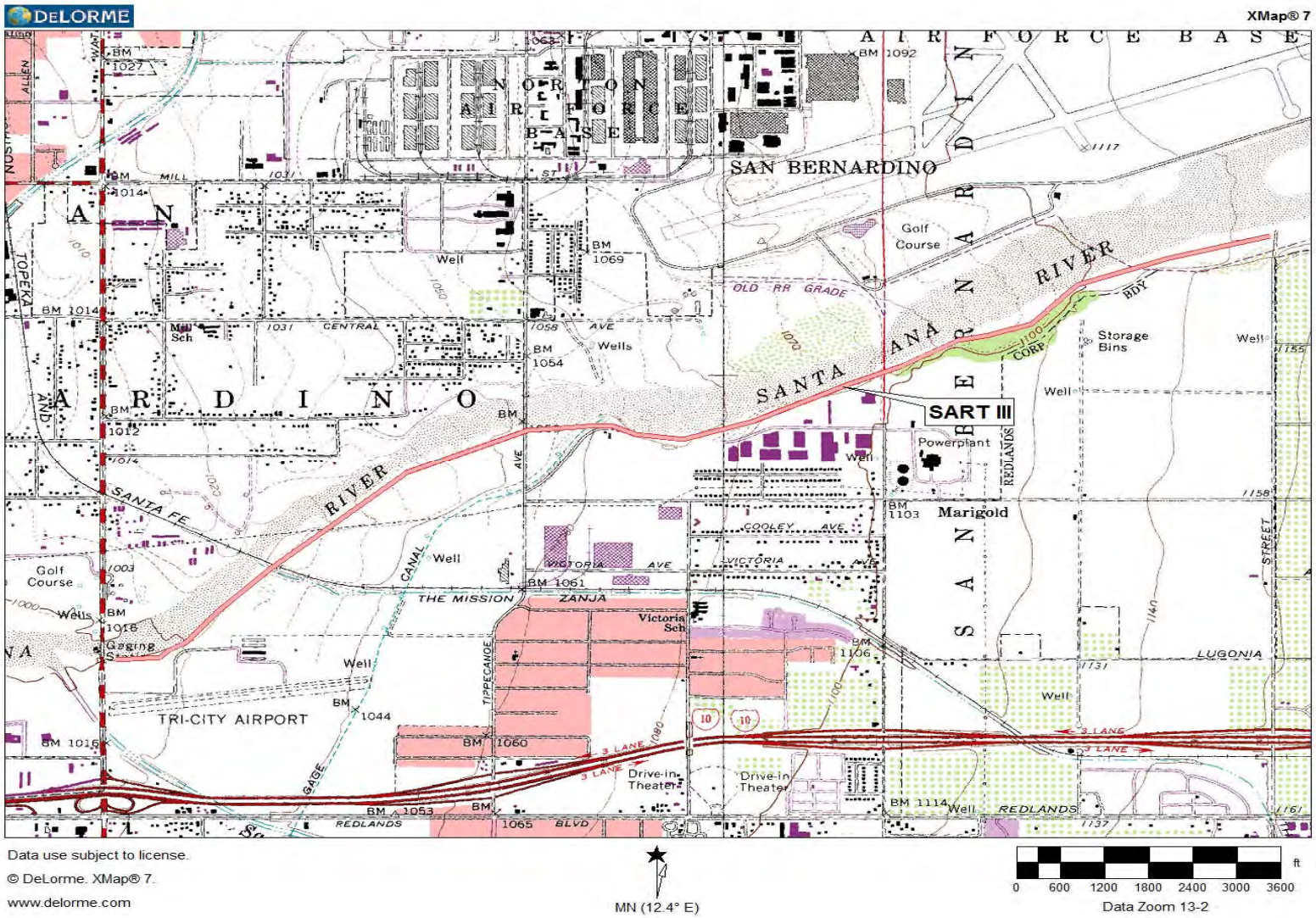


FIGURE 1-2
Vicinity Map



2.0 DESCRIPTION OF PROJECT AND LAND USE WITHIN THE PROJECT VICINITY

2.1 Project Description

The San Bernardino County Parks is proposing to complete phase three of the SART. This phase three alignment will begin at the existing terminus of the trail at Waterman Avenue in the City of San Bernardino, California and continue east approximately 3.8 miles to California Street in the City of Redlands. In general, the project consists of trail, bridge, culvert, and access ramp construction that will include fill and embankment construction; relocating and/or adjusting surface features to grade; subsurface preparation for paving; concrete, asphalt concrete, Portland cement concrete (PCC), and decomposed granite pavement; erosion control with plain riprap stones, grouted riprap, and PCC pavement; reinforced concrete retaining walls; fencing and railing; access gates; protective screens under railroads; storm drain facilities; prefabricated steel, concrete slab bridge and its appurtenances; signage; pavement striping and markings; channelize; and stormwater pollution prevention control.

The SART is a Class I Bikeway which is defined as a shared use path that is physically separated from any street or highway and may be used by pedestrians, skaters, wheelchair users, joggers, and other non-motorized users. This project will be developed to Caltrans Highway Design Manual Chapter 1000 standards and will comply with the ADA of 1990, as amended. The SART will be built as a 10-foot wide asphalt trail with an adjacent 4-foot wide unpaved shoulder to accommodate non-motorized modes of transportation and pedestrians. The majority of the trail will be 14-foot wide with additional total width at turns as indicated on the plan.

The majority of Phase III will be constructed along an existing County of San Bernardino Flood Control levee adjacent to the River corridor. In one area of the alignment (approximately 2,500 linear feet), easterly of Waterman Avenue, from the confluence of Mission Zanja Creek east to Orange Show Road, no levee currently exists and, therefore, in this area of the trail will be developed on the unimproved southern bank of the riverbed within the County Flood Control right-of-way. The remainder of the proposed 3.8-mile SART Phase III will be developed on the existing flood control levee maintenance road. The existing levee maintenance road will be improved and paved as a Class 1 Bikeway.

The proposed project also consists of erecting a prefabricated, fully engineered clear span bridge of steel construction. This bridge will span Mission Zanja Creek adjacent to the BNSF Railroad Bridge east of Waterman Avenue and will be approximately 100 feet in length (Figure 1-2). The bridge will be 14-feet wide consistent with the rest of the SART. The County estimates that the construction of the entire SART Phase III would take approximately 6 to 9 months to complete. It is anticipated that construction will result in approximately 16.6 acres of land disturbance. Of the total area disturbed, 10.4 acres will be temporary construction and staging disturbance and 6.6 acres will be permanent trail facility disturbance (10-foot wide trail plus 4-foot wide shoulder 3.8 miles long).

Disturbance will consist of grading operations; asphalt installation; construction of ramps under Waterman Avenue, Orange Show Road, and Tippecanoe Avenue; and the San Bernardino Association of Governments and Mertolink rail line (currently used by BNSF Railway Company). Additional rip-rap or slope protection will be constructed in these areas. It is anticipated that the construction of the trail on top of the existing levee would take 3 to 6 months. California Street

would be the end of the SART Phase III and would have a 100-foot by 30-foot, paved, turnaround area.

The trail under each of the roads and railroad would consist of a ramp leading from the levee, along the bank of the Santa Ana River, and under the road or railroad. On the other side of the road bridge, the trail goes back up the river bank to the top of the levee. Access ramps will be constructed at each of the road crossings. A typical bikeway underpass is constructed by either creating a roadbed of compacted fill material under the roadway or railroad bridge with a maximum slope of 2:1 (horizontal to vertical); or by cutting into the existing rock rip-rap protected river bank wall or a retaining wall. The roadbed is then finished with grouted rip-rap and concrete. Construction of the underpasses may require engineered fill in the wash.

The proposed project will require temporary fencing to be installed in order to prevent the general public from trespassing onto any excavation, construction, or storage areas.

3.0 REGULATORY OVERVIEW

3.1 Review of USACE Jurisdiction Pursuant to Section 404 of the Clean Water Act

3.1.1 Waters of the United States

The USACE regulates the discharge of dredged and/or fill material into WoUS pursuant to Section 404 of the CWA. The USACE has authority to permit the discharge of dredged or fill material in WoUS under Section 404 of the CWA as well as permit work and the placement of structures in navigable WoUS under Sections 9 and 10 of the Rivers and Harbors Act of 1899.

The term WoUS is defined as follows: all waters that are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters that are subject to the ebb and flow of the tide; all interstate waters, including interstate wetlands; all other waters, such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation, or destruction of which could affect interstate or foreign commerce, including any such waters: (i) which are or could be used by interstate or foreign travelers for recreational or other purposes; or (ii) from which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or (iii) which are used or could be used for industrial purpose by industries in interstate commerce; the territorial seas; and wetlands adjacent to waters (other than waters that are themselves wetlands).

Ordinary High Water Mark

In the absence of wetlands (discussed below), the limits of USACE jurisdiction in non-tidal waters, including intermittent streams, extend to the ordinary high water mark (OHWM). The OHWM is defined as "that line on the shore established by the fluctuation of water and indicated by physical characteristics, such as clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas." In 2005, the USACE issued a Regulatory Guidance Letter (05-05) and added the following additional indicators of an OHWM: changes in plant communities, water staining, scour, wracking, bed and banks, and deposition (USACE, 2005).

USACE-Defined Wetlands

Wetlands are defined in 33 Code of Federal Regulations 328.3(b) as "those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support a prevalence of vegetation typically adapted for life in saturated soil conditions." The methods set forth in the USACE 1987 Wetland Manual generally require that in order to be considered a wetland, the vegetation, soils, and hydrology of an area exhibits minimal hydric characteristics (EL, 1987). While the manual provides great detail in methods and allows for varying special conditions, a wetland should normally meet each of the following three criterions:

(1) More than 50% of the dominant plant species at the site must be typical of wetlands (i.e., rated as facultative or wetter [FAC-OBL] in the National List of Plant Species that Occur in Wetlands [Reed, 1988]).

(2) Soils must exhibit physical and/or chemical characteristics indicative of permanent or periodic saturation (e.g., a gleyed color or redoximorphic features with a matrix of low chroma indicating a relatively consistent fluctuation between aerobic and anaerobic

conditions). Such soils, known as *hydric soils*, have characteristics that indicate they were developed in conditions where soil oxygen is limited by the presence of saturated soil for long periods during the growing season.

(3) Hydrologic characteristics must indicate that the ground is saturated to within 12 inches of the surface for at least 5% of the growing season during a normal rainfall year (Note: for most of low-lying Southern California, 5% of the growing season is equivalent to 18 days).

The following definitions are from the Rapanos Guidance Memorandum (USACE, 2007c; USACE, 2008):

Adjacent, as defined in USACE and U.S. Environmental Protection Agency (EPA) regulations, means "bordering, contiguous, or neighboring." Wetlands separated from other waters of the United States by human-made dikes or barriers, natural river berms, beach dunes, and the like are 'adjacent wetlands.'

A *tributary*, as defined in the Rapanos guidance document, means a natural, human-altered, or human-made water body that carries flow directly or indirectly into traditional navigable waters. For purposes of determining "significant nexus" with TNW, a tributary is the entire reach of the stream that is of the same order (i.e., from the point of confluence, where two lower order streams meet to form the tributary, downstream to the point that such tributary enters a higher order stream).

Wetlands that are not separated from the tributary by an upland feature, such as a berm or dike, are *abutting*.

In the context of CWA jurisdiction post-Rapanos, a water body is "relatively permanent" if its flow is year round or its flow is continuous at least "seasonally," (e.g., typically 3 months). Wetlands adjacent to a "relatively permanent" tributary are also jurisdictional if those wetlands directly abut such a tributary.

A water body is considered to have a "significant nexus" with TNW if its flow characteristics and functions, in combination with the ecologic and hydrologic functions performed by all wetlands adjacent to such a tributary, affect the chemical, physical, and biological integrity of a downstream traditional navigable water.

3.2 Review of RWQCB Jurisdiction Pursuant to Section 401 of the Clean Water Act and Section 13000 et Seq. of the California Water Code

The RWQCB regulates fills to WoUS under the Section 401 Water Quality Certification program, which in most instances, mirrors CWA Section 404 compliance. In the absence of CWA Section 404 jurisdiction over isolated waters or WoS, RWQCB jurisdiction over WoS is extended through the Porter-Cologne Act. WoS are defined at Section 13050(e) of the CWC as, "any surface or ground water, including saline waters, within the boundary of the state." Thus, WoS include surface or groundwater, which includes isolated and ephemeral special aquatic resources. Porter-Cologne provides a comprehensive framework to protect water quality in California. It requires that any entity that plans to discharge waste where it might adversely affect WoS must first notify the RWQCB, which may impose requirements to protect water quality (CWC § 13000 et seq.).

The *Solid Waste Agency of Northern Cook County v. United States Army Corps of Engineers* (SWANCC) decision created "gaps" relating to isolated waters that were no longer subject to the CWA. In response, the State Water Regional Control Board (SWRCB) issued a 2004 Memorandum (SWRCB, 2004) stating that RWQCBs should consider setting a higher regulatory priority on discharges to "isolated waters" than to similar discharges to federally-protected waters of similar value. The 2004 Memorandum further stated that "dredging, filling, or excavation of 'isolated' waters constitutes a discharge of waste to waters of the State, and prospective dischargers are required to submit a Waste Discharge Report (WDR) to the RWQCB and comply with other requirements of Porter-Cologne. Among the procedures recommended in the Memorandum was that the RWQCB refer to the same regulatory considerations generally applied to the issuance of Section 401 permits when issuing a WDR (SWRCB, 2004).

According to the SWRCB, the SWANCC decision did not affect the state's authority to regulate discharges to isolated, non-navigable waters of the state and had no impact upon the RWQCB's authority to act under state law (SWRCB, 2001). Simply because RWQCBs often opted to regulate discharges in the past through Section 401 in lieu of, or in addition to, issuing WDRs does not preclude RWQCBs from issuing WDRs in the absence of Section 401 certification (SWRCB, 2001). The State's position is that these general WDRs will continue to apply to certain discharges to non-federal waters.

3.3 Review of CDFG Jurisdiction Pursuant to Section 1600 et seq. of the California Fish and Game Code

Pursuant to Division 2, Chapter 6, Sections 1600-1602 of the CFG Code, CDFG regulates all diversions, obstructions or changes to the natural flow or bed, channel or bank of any river, stream or lake that supports fish or wildlife. Pursuant to the California Code of Regulations, CDFG defines a *stream* (including creeks and rivers) as "a body of water that flows at least periodically or intermittently through a bed or channel having banks and supports fish or other aquatic life. This includes watercourses having surface or subsurface flow that supports or has supported riparian vegetation." CDFG's definition of *lake* includes "natural lakes or man-made reservoirs."

CDFG jurisdiction within altered or artificial waterways is based upon the value of those waterways to fish and wildlife. CDFG's Legal Advisor has prepared the following opinion (Environmental Services Division [ESD]-CDFG, 1994):

- Natural waterways that have been subsequently modified and which have the potential to contain fish, aquatic insects, and riparian vegetation will be treated like natural waterways.

- Artificial waterways that have acquired the physical attributes of natural stream courses and which have been viewed by the community as natural stream courses should be treated as natural waterways.

- Artificial waterways without the attributes of natural waterways should generally not be subject to CFG Code provisions.

CDFG jurisdictional limits often overlap with those of the USACE. Exceptions are CDFG's addition of artificial stock ponds and irrigation ditches constructed on uplands and the addition of adjacent riparian habitat supported by a river, stream, or lake regardless of the riparian area's

federal wetland status or its location beyond the defined bed, bank, or channel. The extent of CDFG jurisdictional streambeds was evaluated according to CDFG Code 1600 et seq. and guidance from ESD-CDFG (1994). With regards to federally-isolated features, the CDFG does not regulate isolated wetlands that do not contain a bed, bank, and channel.

4.0 METHODS

The following section is organized into three segments: literature review; procedures and field data collection techniques (pursuant to CWA and CDFG professional standards and publications); and analysis parameters (CWA and CDFG protocols for assessing potential jurisdiction). These three activities were performed within the study area. For the purposes of this document, the *study area* is defined as the area within the Construction Limits (CL) as defined in the Caltrans (NES) and within the CL those areas in which USACE, RWQCB, and CDFG jurisdiction was assessed and quantified. The study area includes the Project's proposed physical ground disturbance footprint for both temporary and permanent project impacts.

4.1 Literature Review

Prior to conducting fieldwork, the following literature review supported the evaluation and analysis of all potential special aquatic resource areas within the study area. Resource databases, local resource management plans, aerial photos, and other readily available and relevant commercial data were reviewed to determine watershed characteristics and the locations/types of special aquatic resource areas that may be present. The following sources were used the U.S. Geological Survey (USGS) 7.5-minute topographic map for San Bernardino, South and Redlands quadrangles, 1972; USDA, 1981; Federal Emergency Management Agency (FEMA), color aerial photographs USDA-Natural Resources Conservation Service (NRCS), 2007; USFWS National Wetlands Inventory, 2010; and USGS.

4.2 CWA Specific Procedures and Data Collection Techniques

In March 2011 the trail centerline was surveyed and staked. The study area was surveyed in March 2011 to determine the presence/absence of potential special aquatic resources and their boundaries. Data related to USACE-defined WoUS, including wetlands, were recorded on the engineered drawings by locating the resource areas using the station numbers and measuring tape. Field notebooks, and wetland data sheets, were used where applicable (Appendix B). The evaluation process initially looked at vegetation, soils, and hydrology parameters (in that order) of potential wetland habitats within the study area using the methodology for routine determinations set forth in the USACE Wetland Delineation Manual and the Arid West Regional Supplement (EL, 1987; Reed, 1988; USACE, 2001a, 2001b, 2008). Drainage features were evaluated using the methodology set forth in the USACE and EPA Clean Water Act jurisdiction guidance documents following the U.S. Supreme Court's Decision in *Rapanos v. United States* and *Carabell v. United States* (USACE, 2007; USACE, 2007a; USACE, 2007c; USACE, 2008).

4.2.1 Hydrology

Hydrology was evaluated in areas suspected of being seasonally inundated and/or saturated to the surface during the growing season,[1] provided the soil and vegetation parameters were met as defined in the Wetlands Delineation Manual (EL, 1987). Recent precipitation data were analyzed to evaluate the frequency and amount of rainfall events within the study area and on surrounding lands (NWS, 2008). Additional hydrological information for the features was determined by signatures on aerial photographs, landscape positions, and/or presence of

[1] For the purposes of this analysis, the growing season is defined as the period of the year when soil temperature at 20 inches below the surface is roughly 5 degrees Celsius [°C] In the study area, the growing season is year round.

other field indicators such as surface scour marks, vegetation and debris drift lines, sediment deposits, watermarks, and oxidized root channels in the soil samples.

Each feature was classified as perennial (flowing water year round), intermittent (water flows seasonally), ephemeral (water flows only during and immediately following rain events), relatively permanent water (RPW) (flowing for more than 3 months per year), and non-RPW (seasonal, flowing fewer than or equal to 3 months). Average width(s) for the OHWM within each feature was documented, and acreages of USACE jurisdiction were determined using field data, and aerial maps.

4.2.2 Vegetation

The prevalence of hydrophytic vegetation was recorded on Wetland Determination Data Forms (Arid West Region) determined by using USACE methods. Plant species were determined based on the *Jepson Manual, Higher Plants of California* (Hickman, 1993), and the wetland indicator status of plant species was based on the *National List of Plant Species that Occur in Wetlands, California Region 0* (Reed, 1988). Table 1 below summarizes wetland plant indicator status.

The wetland vegetation criterion was assumed to be met if the Dominance Test using the 50/20 rule was satisfied (e.g., more than 50% of the dominant plants [plants with 20% or more absolute cover] were wetland indicators). Absolute, rather than relative, vegetation cover was used in determining dominant species. Areas supporting a prevalence of hydrophytes were further examined for indicators of hydric soils.

Table 1. Summary of Wetland Indicator Status

Category	Probability
Obligate Wetland (OBL)	Almost always occur in wetlands (>99% probability).
Facultative Wetland (FACW)	Usually occur in wetlands (estimated probability 67 to 99%).
Facultative (FAC)	Equally likely to occur in wetlands/non-wetlands (estimated probability 34 to 66%).
Facultative Upland (FACU)	Usually occur in non-wetlands (estimated probability 67-99%).
Obligate Upland (UPL)	Almost always occur in non-wetlands (estimated probability >99%).
No Indicator (NI)	Wetland indicator status not assigned. Species is assumed to be upland.

4.2.3 Soils

Soil texture, matrix, redoximorphic features, and the presence of subsoil layers impervious to water infiltration were documented from soil pits. Soils were examined for positive hydric soil indicators such as low chromas, redoximorphic features (e.g., mottles, manganese concretions), histic epipedons, organic layers, gleization, and sulfidic odor. The color and texture of the soil layers encountered were recorded on wetland data sheets (Appendix B). Soils were evaluated using Field Indicators of Hydric Soils in the United States, Version 6.0 (USDA-NRCS, 2006). Soil color and characteristics were determined from moist soil beds using Munsell Soil Color Charts (Munsell, 1994). Soil types were determined based on the Soil Survey from the Web Soil Survey for San Bernardino County, Western Part Part, (USDA-NRCS, 2007

4.2.4 Interstate or Foreign Commerce Connection

Areas that were identified as wetlands or other WoUS were then further evaluated to determine if they have an Interstate or Foreign Commerce Connection. Any areas that met the USACE's three technical criterions for wetlands and that have an Interstate or Foreign Commerce Connection was determined to be WoUS subject to USACE jurisdiction.

The following water types are assumed to have an Interstate or Foreign Commerce Connection:

- Navigable waters
- Wetlands adjacent to navigable waters
- Non-navigable tributaries of navigable waters that are relatively permanent, where the tributaries typically flow year-round or have continuous flow at least seasonally (e.g., typically three months)
- Wetlands that directly abut such tributaries

4.2.5 Significant Nexus with Traditional Navigable Water

The USACE will decide jurisdiction over the following water types based on a fact-specific analysis to determine whether they have a significant nexus with traditional navigable water:

- Non-navigable tributaries that are not relatively permanent
- Wetlands adjacent to non-navigable tributaries that are not relatively permanent
- Wetlands adjacent to, but that do not directly abut, a relatively permanent non-navigable tributary

In general, the USACE does not assert jurisdiction over the following features (USACE, 2007b):

- *Ditches*. "Ditches (including roadside ditches) excavated wholly in and draining only uplands and that do not carry a relatively permanent flow of water (greater than three months) generally are not jurisdictional under the CWA, because they are not tributaries or they do not have a significant nexus to TNWs."

- *Swales*. "Swales are generally shallow features in the landscape that may convey water across upland areas during and following storm events. Swales usually occur on relatively flat slopes and typically have grass or other low-lying vegetation throughout the swale. Swales are generally not waters of the U.S. because they are not tributaries or they do not have a significant nexus to TNWs."

The USACE will apply the significant nexus standard as follows:

- A significant nexus analysis will assess the flow characteristics and functions of the tributary itself and the functions performed by all wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical, and biological integrity of downstream traditional navigable waters. Significant nexus includes consideration of hydrologic and ecologic factors.

4.3 CDFG-Specific Procedures and Data Collection Techniques

Suspected CDFG jurisdictional areas were field checked for the presence of definable streambeds (bed, bank, and channel) and any associated riparian habitat. Streambeds and suspected riparian habitats were evaluated using the CFG Code (Section 1600 et seq.) and guidance described in *A Field Guide to Lake and Streambed Alteration Agreements Sections 1600-1607* (ESD-CDFG, 1994). The width(s) across both the bed and banks (top-of-bank to top-of-bank) for each feature was determined, and the results were noted on the engineered drawings and field notebook. If adjacent floodplain and/or terrace areas were vegetated with riparian vegetation, then these features were mapped on aerial maps and included as part of CDFG jurisdiction.

4.4 Analysis Parameters

Figure 5-1 through 5-7 depict current conditions (i.e., existing levee and access roads), existing aquatic features, and proposed permanent and temporary impact areas within the study area boundaries. To determine impact acreages, calculations of the quantity of permanent and temporary impacts were generated by superimposing the cut and fill limits presented in the Project's design plans over topographic maps that detailed the study area's special aquatic resource area limits. Any placement of culvert, rip-rap, bridge supports, or other permanent cut and/or fill within special aquatic resource areas was considered a permanent impact and was depicted by a polygon on the figures.

- Total CWA jurisdiction was determined for wetlands and other waters for each feature. The dimensions (linear length and width) of each feature within the study area were then determined based on the OHWM (for other WoUS) and wetland boundaries to assess Project impacts to each feature.

- Total CDFG jurisdiction was determined for each feature within the study area containing a defined bed, bank, and channel. The dimensions (linear length and widths) of each feature within the study area were then determined based on bank widths and outer limits of any associated riparian vegetation to assess Project impacts to each feature within the jurisdiction of the CDFG.

5.0 RESULTS

This section presents the delineation results of USACE jurisdiction pursuant to Section 404 of the CWA; RWQCB legal authority in accordance with CWA Section 401 and as defined within Section 13050(e) et seq. of the CWC; and CDFG jurisdiction pursuant to Section 1600 et seq. of the CFG Code. Six aquatic features were identified within the Project study area (Figure 5-1) and are described in detail in Section 5.5. Features that have similar characteristics are assessed collectively; similarly, the regional watershed context and hydrological discussions associated with Features 1-6 are evaluated collectively. Wetland Determination Data Forms are included in Appendix B and feature photographs are included in Appendix A. Linear distance and spatial area data, including permanent and temporary impacts to special aquatic resources, are presented in Tables 2 and 3.

5.1 Watershed Analysis

The majority of land within the study area is a manufactured levee road. The Santa Ana River Wash elevation ranges between 1,000 feet above sea level within the study area and extend upstream to 1,150 feet at the eastern extent of the study area.

The study area is located within the RWQCB's Santa Ana River Basin Plan within the Santa Ana River Watershed. The project encompasses two reaches identified in the Santa Ana River Basin Plan, Reach 5 and Reach 6. Reach 5: extends from Seven Oaks Dam to San Bernardino, to the San Jacinto Fault (Bunker Hill Dike), which marks the downstream edge of the Bunker Hill groundwater basin. Most of this reach tends to be dry, except as a result of storm flows, and the channel is largely operated as a flood control facility. The extreme lower end of this reach includes rising water and intermittently, San Timoteo Creek flows. Reach 4 includes the river from the Bunker Hill Dike down to Mission Boulevard Bridge in Riverside. Much of this reach is also operated as a flood control facility.

The trail alignment generally parallels, and occasionally enters into the Santa Ana River channel bottom. The SART III will end on the west side of the Mission-Zanja creek channel. The rail will begin again on the west side of the Metrolink bridge just east of the Mission-Zanja and Santa Ana River confluence.

According to the USDA soil survey, this area of the Santa Ana River is dry for most of the year; however currently the river is characterized as intermittent river.

The FEMA 100-Year Floodplain map illustrates the aerial extent of the floodplain, which courses Santa Ana River and Mission-Zanja creek within the study area (FEMA, 1998). The entire project occurs within the 100-year floodplain.

5.2 Surface Hydrology and Soils

The elevation changes gradually between the study area's western and eastern ends; therefore, the regional climate can be best characterized as low valley floor. The climate within low valley floor near the study area (i.e., San Bernardino) is characteristic of Mediterranean regions, with hot and dry summer months and cooler, wetter winters. The average high temperature in July is 83°F; the average low temperature in January is 48°F (NWS, 2008). Seasonal rainfall averages 10-25 inches per year.

Rainfall was above average prior to the 2011 field evaluations, the average rainfall was 9.43 inches for the period December 2010 through March 2011 in San Bernardino. Despite the greater than average rains and large flows in the Santa Ana River, only the areas within the channel bottom were inundated.

Soil types are not diverse within the study area, given they derive from one a single source, alluvium deposits primarily derived from granitic material. As a result, only 6 soil types occur within the study area (USDA, 1981; USDA-NRCS, 2008), all of which are considered to be well drained and non-hydric. Soils within the study area include the following:

- Gr - Grangeville fine sandy loam, 0% to 2% slopes
- Gs - Grangeville fine sandy loam, saline-alkali , 0% to 2% slopes
- Hba - Hanford sandy loam, 0 to 2 percent slopes
- Ps - Psamments and fluvents, frequently flooded
- SpC - Soboba stony loamy sand, 2 to 9 percent slopes
- TuB - Tujunga loamy sand, 0 to 5 percent slopes

5.3 Determination of USACE Jurisdiction Subject to Section 404 of the Clean Water Act

Features present within the study area are categorized as follows (USACE, 2007b): (1) TNW - Santa Ana River bottom within the OHWM, (2) tributary channels to TNW, and (3) swales, ditches, and topographic depressions. Photographs of each feature are included within Appendix A and wetland determination data forms are included in Appendix B.

5.3.1 TNW - Santa Ana River bottom within the Ordinary High Water Mark

The following features are characterized as areas where the proposed trail will encroach into the Santa Ana River within the OHWM: Features 1-4, and features 5-6 are unnamed swales were generally defined as shallow features that appeared to convey ephemeral flows across upland areas during and following storm events and did not contain an OHWM or a connection to a TNW (USACE, 2007b). Ditches were defined as features excavated wholly in, and draining only, uplands and did not contain an OHWM or a connection to a TNW (USACE, 2007b). Topographic depressions were features that were limited to isolated topographic low areas where water occasionally pooled. Topographic depressional features within the study area did not contain OHWMs. These swale, ditch, and depressional features were generally vegetated with upland grasses (and occasionally upland shrubs) and were not tributaries to, or had no significant nexus to TNWs. Consequently, none of these feature types was considered to be CWA Section 404 jurisdictional.

5.3.2 Tributary Channels to TNW

Erosional features were considered to be non-RPWs (i.e., flow fewer than 3 months per year) due to the presence of well-drained soils and low precipitation within the region. In addition, erosional features did not contain an OHWM and were not tributary to or had no significant nexus to, a TNW (USACE, 2007b). Therefore, these features were considered to be isolated, non-RPWs without a direct or indirect connection to a TNW. Consequently, none of these erosional features is considered to be CWA Section 404 jurisdictional.

5.3.3 Swales, Ditches and Topographic Depressions

Swales were generally defined as shallow features that appeared to convey ephemeral flows across upland areas during and following storm events and did not contain an OHWM or a connection to a TNW (USACE, 2007b). Ditches were defined as features excavated wholly in, and draining only, uplands and did not contain an OHWM or a connection to a TNW (USACE, 2007b). Topographic depressions were features that were limited to isolated topographic low areas where water occasionally pooled. Topographic depressional features within the study area did not contain OHWMs. These swale, ditch, and depressional features were generally vegetated with upland grasses (and occasionally upland shrubs) and were not tributaries to, or had no significant nexus to TNWs. Consequently, none of these feature types was considered to be CWA Section 404 jurisdictional.

The following features are characterized as ephemeral or intermittent drainages within the study area: Features 5 and 6. Ephemeral and intermittent features were defined as water conveyance features that are non-RPWs. They appeared to contain flow only occasionally, whereas intermittent features contained flow for a substantially longer period than that of ephemeral features. Ephemeral and intermittent features delineated within the study area were not tributary to, or had no significant nexus to, a TNW. Therefore, these features were considered to be isolated features without a direct or indirect connection to a TNW. Consequently, none of these ephemeral or intermittent features was considered to be CWA Section 404 jurisdictional.

5.4 Determination of USACE and RWQCB Jurisdiction Subject to Section(s) 404 and 401 of the Clean Water Act

In the absence of CWA Section 404 jurisdiction, RWQCB jurisdiction is extended to WoS via the Porter-Cologne Act, which includes the same features subject to CDFG jurisdiction as those described below in Section 5.5. Temporary and permanent impacts to RWQCB jurisdictional features are provided in Section 5.7 (Table 3).

5.5 Determination of CDFG Jurisdiction Subject to Section 1600 et seq. of the CFG Code and RWQCB Jurisdiction to Section 13000 et seq. of the Porter-Cologne Water Quality Control Act

This section provides detailed descriptions of each feature identified within the study area in terms of its applicability to jurisdiction. Permanent and temporary impacts to features subject in Section 5.6 below.

Feature 1 is an emergent, riparian-vegetated portion of the Santa Ana River that possesses attributes of a natural waterway (see Figure 5-2 and Photograph 1). This feature is located where the proposed SART III trail crosses under the Waterman Avenue bridge over the Santa Ana River. The Santa Ana River collects ephemeral flows and directs them west to the Pacific Ocean. This drainage has an approximately 400-feet wide at this crossing, and the dominant vegetation consisting of moderate to low-density riparian species. The riparian habitat associated with this feature is in various seral stages and generally consists of tall, multilayered, open canopy riparian woodland. The characteristic vegetative species within this riparian habitat include; Freemont cottonwood (*Populus fremontii),* black willow (*Salix goodingii*), sandbar willow (*S. hindsiana*), mule fat (*Baccharis salicifolia*), and sycamore (*Platanus racemosa).* In the absence of flooding, this riparian woodland has emerged with a complex

canopy structure of varying layers of trees, shrubs, herbs and vines. The overstory averages over 35 feet in height. This feature is a TNW, and is therefore a WoUS, a WoS, and a Streambed. This feature is subject to jurisdiction of the USACE and RWQCB pursuant to Section 404 and 401 of the CWA, and to CDFG jurisdiction pursuant to Section 1600 et seq. of the CFG Code. This feature will have both permanent and temporary impacts associated with the project (Tables 2 and 3).

Feature 2 is an emergent, riparian-vegetated portion of the Santa Ana River that possesses attributes of a natural waterway (see Figure 5-3 and Photograph 2). This feature is located where the proposed SART III trail alignment runs parallel to the Santa Ana River just east of the Mission-Zanja Creek and the Metrolink Bridge. In this area the upper bench of the Santa Ana River Floodplain is characterized by riparian vegetation. The Santa Ana River has intermittent flows and collects intermittent/ephemeral flows from tributary sources, and directs them west to the Pacific Ocean. This Feature is characterized by the SART III trail running parallel to the river in a section where there is no San Bernardino County Flood Control Levee bank road already established. Portions of this Feature will be impacted within the OHWM for both permanent and temporary impacts; however there is also a narrow section that is outside the OHWM, but is still within the bed and bank. The vegetation within this Feature is in various seral stages and generally consists of tall, multilayered, open canopy riparian woodland. The characteristic vegetative species within this riparian habitat include; Freemont cottonwood (*Populus fremontii),* black willow (*Salix goodingii*), sandbar willow (*S. hindsiana*), mule fat (*Baccharis salicifolia*), and sycamore (*Platanus racemosa).* In the absence of flooding, this riparian woodland has emerged with a complex canopy structure of varying layers of trees, shrubs, herbs and vines. The overstory averages over 35 feet in height. This feature is a TNW, and is therefore a WoUS, a WoS, and a Streambed. This feature is subject to jurisdiction or the USACE and RWQCB pursuant to Section 404 and 401 of the CWA, and to CDFG jurisdiction pursuant to Section 1600 et seq. of the CFG Code. This feature will have both permanent and temporary impacts associated with the project (Tables 2 and 3).

Feature 3 is an unvegetated portion of the Santa Ana River. This Feature is located where the SART III trail goes under the Orange Show Road bridge which spans the Santa Ana River. The SART III trail has been designed to avoid the area of the Santa Ana River that is within OHWM. The trail will be cut into the hard-sided and rock-slope protected upper bank of the channel. The feature is completely unvegetated (see Figure 5-4 and Photograph 3). Although the Santa Ana River is a TNW, the impacts associated with this Feature are outside the OWHM. Therefore they are not subject to jurisdiction of the USACE and RWQCB pursuant to Section 404 and 401 of the CWA. This feature is within the discernible bed and bank of the river channel, and therefore subject to CDFG jurisdiction pursuant to Section 1600 et seq. of the CFG Code. This feature will have both permanent and temporary impacts associated with the project (Tables 2 and 3).

Feature 4 is an unvegetated portion of the Santa Ana River. This Feature is located where the SART III trail goes under the Tippecanoe Avenue bridge which spans the Santa Ana River. The SART III trail has been designed to avoid the area of the Santa Ana River that is within OHWM. The trail will be cut into the hard-sided and rock-slope protected upper bank of the channel. The feature is completely unvegetated (see Figure 5-5 and Photograph 4). Although the Santa Ana River is a TNW, the impacts associated with this Feature are outside the OWHM. Therefore they are not subject to jurisdiction or the USACE and RWQCB pursuant to Section 404 and 401 of the CWA. This feature is within the discernible bed and bank of the river channel, and therefore subject to CDFG

jurisdiction pursuant to Section 1600 et seq. of the CFG Code. This feature will have both permanent and temporary impacts associated with the project (Tables 2 and 3).

Feature 5 is an emergent, riparian-vegetated portion of the Santa Ana River that possesses attributes of a natural waterway (see Figure 5-6 and Photograph 5). This Feature is located just east of the Tippecanoe Avenue Bridge, where the existing San Bernardino Flood Control levee road crosses a culvert that is conveying flows into the Santa Ana River. These flows appear to be conveying urban runoff from a developed area to the south. The Santa Ana River collects the ephemeral flows from this Feature. The dominant vegetation consists of low-density riparian species. The riparian habitat associated with this feature is sparse and relatively low growing. Characteristic vegetative species within this Feature include; Freemont cottonwood (*Populus fremontii),* black willow (*Salix goodingii*), sandbar willow (*S. hindsiana*), and mule fat (*Baccharis salicifolia*). This feature is a tributary to a TNW, and is therefore a WoUS, a WoS, and a Streambed. This feature is subject to jurisdiction of the USACE and RWQCB pursuant to Section 404 and 401 of the CWA, and to CDFG jurisdiction pursuant to Section 1600 et seq. of the CFG Code. This feature will have temporary impacts only associated with the project (Tables 2 and 3).

Feature 6 is an emergent, riparian-vegetated portion of the Santa Ana River that possesses attributes of a natural waterway (see Figure 5-7 and Photograph 6). This Feature is located just east of the Tippecanoe Avenue Bridge, where the existing San Bernardino Flood Control levee road crosses a culvert that is conveying flows into the Santa Ana River. These flows appear to be conveying urban runoff from a developed are to the south. The Santa Ana River collects the ephemeral flows from this Feature. The dominant vegetation consists of low-density riparian species. The riparian habitat associated with this Feature is sparse and relatively low growing, characteristic vegetative species within this Feature include; Freemont cottonwood (*Populus fremontii),* black willow (*Salix goodingii*), sandbar willow (*S. hindsiana*), and mule fat (*Baccharis salicifolia*). This Feature is a tributary to a TNW, and is therefore a WoUS, a WoS, and a Streambed. This Feature is subject to jurisdiction or the USACE and RWQCB pursuant to Section 404 and 401 of the CWA, and to CDFG jurisdiction pursuant to Section 1600 et seq. of the CFG Code. This Feature will have temporary impacts only associated with the project (Tables 2 and 3).

5.6 Impacts to USACE, RWQCB and CDFG Jurisdiction

Of the six features that exist in the study area, four of them are subject to USACE jurisdiction, and all six are subject to RWQCB and CDFG jurisdiction. The four features will result in 0.30 acre of permanent impacts to USACE jurisdiction and 1.58 acres of permanent impacts to RWQCB and CDFG jurisdiction, of which 1.04 acres consist of riparian habitat (Table 2). In addition, the Project will result in 1.39 acres of temporary impacts to USACE jurisdiction and 1.93 acres of temporary impacts to RWQCB and CDFG jurisdiction, 0.47 acres of which consist of riparian habitat (Table 3).

Table 2. Impacts to CDFG and RWQCB Jurisdiction

Feature Name	Total Non-Riparian Bed and Bank (acres)	Total Native Riparian Vegetation (acres)	Total CDFG and RWQCB Jurisdiction (acres)			
			Permanent (Vegetated)	Permanent (Unvegetated)	Temporary (Vegetated)	Temporary (Unvegetated)
Feature 1	0.38	0.59	0.10	0.04	0.97	0.00
Feature 2	0.00	1.29	0.94	0.00	0.35	0.00
Feature 3	0.50	0.00	0.00	0.27	0.00	0.23
Feature 4	0.47	0.00	0.00	0.23	0.00	0.24
Feature 5	0.00	0.12	0.00	0.00	0.12	0.00
Feature 6	0.00	0.02	0.00	0.00	0.02	0.00
TOTAL	**1.35**	**2.02**	**1.04**	**0.54**	**1.46**	**0.47**

Table 3. Impacts to USACE Jurisdiction

Feature Name	Total Native Riparian Vegetation (acres)	Total USACE/RWQCB (acres)	
		Permanent	Temporary
Feature 1	0.59	0.10	0.49
Feature 2	1.29	0.20	0.76
Feature 3	0.00	0.00	0.00
Feature 4	0.00	0.00	0.00
Feature 5	0.12	0.00	0.12
Feature 6	0.02	0.00	0.02
TOTAL	**2.02**	**0.30**	**1.39**

FIGURE 5-1
FEATURE LOCATION MAP

FIGURE 5-2
FEATURE 1

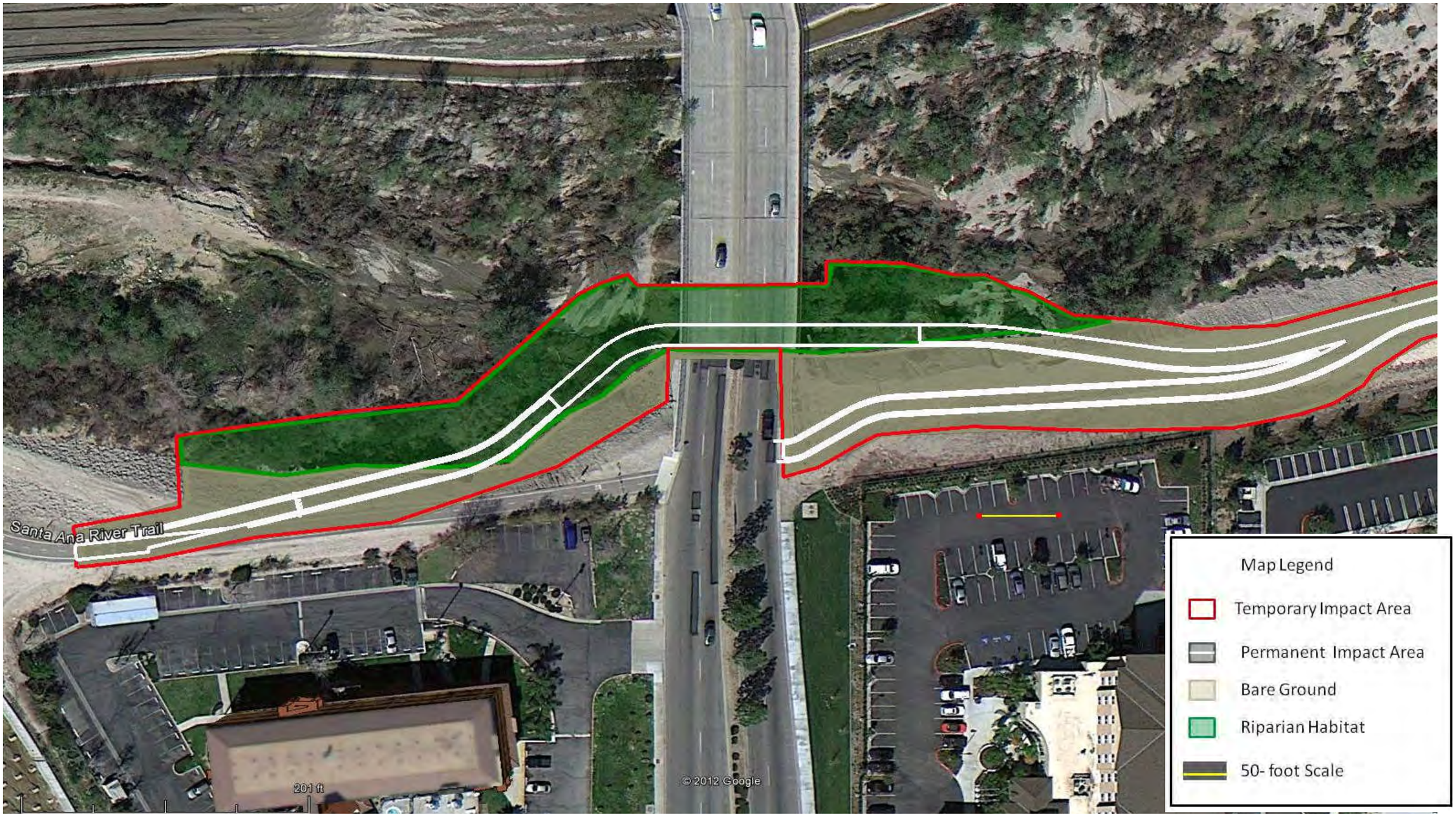


FIGURE 5-3
FEATURE 2

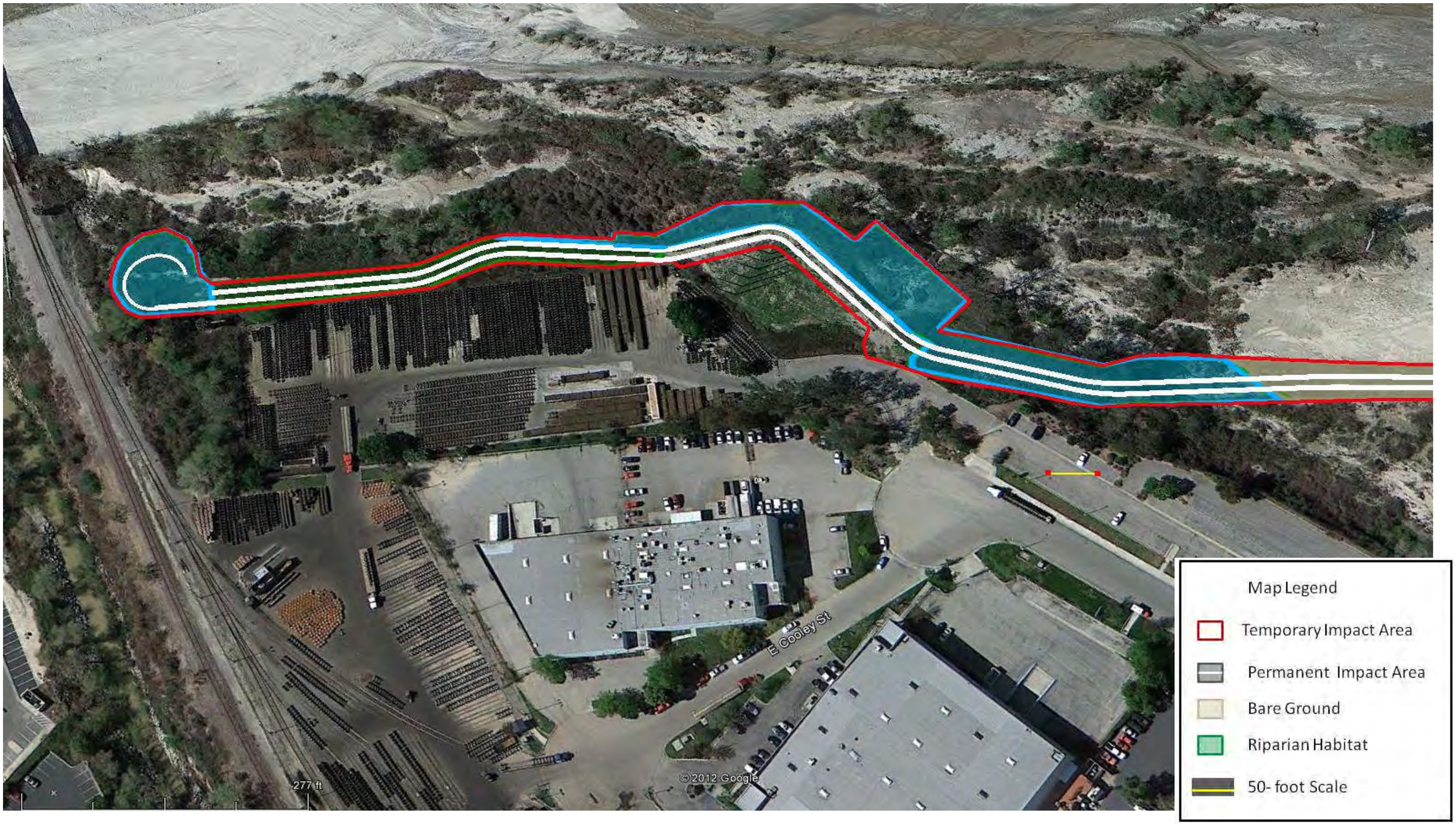


FIGURE 5-4
FEATURE 3

FIGURE 5-5
FEATURE 4

FIGURE 5-6
FEATURE 5

FIGURE 5-7
FEATURE 6

6.0 RECOMMENDATIONS

The following compliance implementation guidance is provided as a means of avoiding and minimizing adverse impacts to special aquatic resource areas that occur or have the potential to occur within the study area.

1. Prior to undertaking ground-disturbing activities within the study area, within or immediately adjacent to, Porter-Cologne or CFG Code Section 1600 et seq. jurisdictional features, San Bernardino County should consult with the appropriate responsible resource agency (i.e., RWQCB, USACE, and CDFG) to verify delineation results and secure all obligatory discretionary permits/authorizations.

2. San Bernardino County should develop an informal plan to offset or compensate for impacts to RWQCB and/or CDFG jurisdictional areas to ensure rapid and favorable action during the discretionary permitting process.

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8.0 PERSONAL COMMUNICATIONS

There were no personal communications in the preparation of this document.

APPENDIX A

SITE PHOTOGRAPHS

Photograph: 1

Location: Feature 1

Direction: Facing north

Comment: This photograph illustrates Feature 1. See Figure 5-2 for photograph location and direction.

Photograph: 2

Location: Feature 2

Direction: Facing northwest

Comment: This photograph illustrates Feature 2 just down slope from the railroad grade. See Figure 5-3 for photograph location and direction.

Photograph: 3

Location: Feature 3

Direction: Facing northwest

Comment: This photograph illustrates Feature 3. See Figure 5-4 for photograph location and direction.

Photograph: 4

Location: Feature 4

Direction: Facing west

Comment: This photograph illustrates Feature 4. See Figure 5-5 for photograph location and direction.

Photograph: 5

Location: Feature 5

Direction: Facing north

Comment: This photograph illustrates Feature 5. See Figure 5-6 for photograph location and direction.

Photograph: 5

Location: Feature 5

Direction: Facing south

Comment: This photograph illustrates Feature 3. See Figure 5-7 for photograph location and direction.

Photograph: 6

Location: Feature 6

Direction: Facing west

Comment: This photograph illustrates Feature 3. See Figure 5-7 for photograph location and direction.

APPENDIX B

USACE WETLAND DETERMINATION DATA FORMS

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: SARTIII Sampling Date: [illegible]

Applicant/Owner: S.B. County Regional Parks State: CA Sampling Point: Feature 1

Investigator(s): Shay Lawrey + Lisa Patterson Section, Township, Range: _____

Landform (hillslope, terrace, etc.): River Local relief (concave, convex, none): Concave Slope (%): 0-2%

Subregion (LRR): _____ Lat: 34°04'12.57" N Long: 117°16'43.53" W Datum: _____

Soil Map Unit Name: Wet Soil (Riverine) NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✓	No _____	**Is the Sampled Area within a Wetland?** Yes ✓ No _____
Hydric Soil Present?	Yes ✓	No _____	
Wetland Hydrology Present?	Yes ✓	No _____	

Remarks: The area under the bridge and adj is w/in ottum and is characterized by Rip - obl wet vegetation.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 10'x10')	Absolute % Cover	Dominant Species?	Indicator Status
1. elmwood	≈5	No	obl
2. Salix sp	~90	yes	obl
3.			
4.			
	95% = Total Cover		

Sapling/Shrub Stratum (Plot size: _____)			
1. mulefat	~5%	No	FACW
2.			
3.			
4.			
5.			
	5% = Total Cover		

Herb Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	_____ = Total Cover		

Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

✓ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks: Feature is characterized by Rip overstory - obl.

Approved for public release; distribution is unlimited.

SOIL

Sampling Point: FEATURE 1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: ___

Depth (inches): ___

Hydric Soil Present? Yes ✓ No ___

Remarks:

In A River Bed / Sandy w/ Plants

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ✓ Surface Water (A1)
- ___ High Water Table (A2)
- ✓ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ✓ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ✓ No ___ Depth (inches): ___

Water Table Present? Yes ✓ No ___ Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ✓ No ___ Depth (inches): ___

Wetland Hydrology Present? Yes ✓ No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: In a River Bottom.

Project/Site: SART III City/County: San Bernardino County Sampling Date: [illegible]
Applicant/Owner: San Bernardino County Parks State: CA Sampling Point: Points 2
Investigator(s): Shay Lawrey & Lisa Patterson Section, Township, Range: _____
Landform (hillslope, terrace, etc.): River Local relief (concave, convex, none): concave Slope (%): _____
Subregion (LRR): _____ Lat: 34° 04' 32.24" N Long: 117° 16' 17.07 W Datum: _____
Soil Map Unit Name: web soils – NWI classification: _____
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)
Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____
Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✓	No _____	**Is the Sampled Area within a Wetland?** Yes ✓ No _____
Hydric Soil Present?	Yes ✓	No _____	
Wetland Hydrology Present?	Yes ✓	No _____	

Remarks: Areas below the terrace are wet. saturated & dom by wetland vg.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 50' x 50')	Absolute % Cover	Dominant Species?	Indicator Status
1. eucalyptus sp			upl
2. Salix sp		Y	obl
3.			
4.			
		= Total Cover	

Sapling/Shrub Stratum (Plot size: _____)			
1. MF		Y	FACW
2.			
3.			
4.			
5.			
		= Total Cover	

Herb Stratum (Plot size: _____)			
1. cattails		N	obl
2. NNG		Y	upl
3.			
4.			
5.			
6.			
7.			
8.			
		= Total Cover	

Woody Vine Stratum (Plot size: _____)			
1. brome			FACW
2.			
		= Total Cover	

% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)
Total Number of Dominant Species Across All Strata: 4 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 75% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:
___ Dominance Test is >50%
___ Prevalence Index is ≤3.0[1]
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks: Areas on the lower shelf are wetlands areas on upper terrace are upl.

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SOIL

Sampling Point: Plot 2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: ___

Depth (inches): ___

Hydric Soil Present? Yes ✓ No ___

Remarks: saturation in upper part > 35 days.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ✓ Surface Water (A1)
- ✓ High Water Table (A2)
- ✓ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ✓ No ___ Depth (inches): ___

Water Table Present? Yes ✓ No ___ Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ✓ No ___ Depth (inches): ___

Wetland Hydrology Present? Yes ✓ No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Project/Site: SART III Sampling Date: ____

Applicant/Owner: SB County Regional Parks State: CA Sampling Point: Frame 3

Investigator(s): Shay Lawley + Lisa Patterson Section, Township, Range: ____

Landform (hillslope, terrace, etc.): Riverine Local relief (concave, convex, none): Slope Slope (%): 10%

Subregion (LRR): ____ Lat: 34°04'43.08" N Long: 117°15'53.08" W Datum: ____

Soil Map Unit Name: ____ NWI classification: ____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ____ No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area within a Wetland?** Yes ____ No X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes ____	No X	

Remarks: the site is on the Grouted Rock slope of the River under the bridge.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.	0		
2.			
3.			
4.			
	____ = Total Cover		

Sapling/Shrub Stratum (Plot size: ____)			
1.	0		
2.			
3.			
4.			
5.			
	____ = Total Cover		

Herb Stratum (Plot size: ____)			
1.	0		
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	0 = Total Cover		

Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	____ = Total Cover		

% Bare Ground in Herb Stratum 100% % Cover of Biotic Crust ____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: ____ (A)

Total Number of Dominant Species Across All Strata: ____ (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: ____ (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	____	x 1 = ____
FACW species	____	x 2 = ____
FAC species	____	x 3 = ____
FACU species	____	x 4 = ____
UPL species	____	x 5 = ____
Column Totals:	____ (A)	____ (B)

Prevalence Index = B/A = ____

Hydrophytic Vegetation Indicators:

- ___ Dominance Test is >50%
- ___ Prevalence Index is ≤3.0[1]
- ___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ____ No X

Remarks: Unvegetated Grouted Rock

Approved for public release; distribution is unlimited.

SOIL

Sampling Point: Point 3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks: Rock slope w/ brow

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No _____ Depth (inches): _____

Water Table Present? Yes _____ No _____ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No _____ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Slope of the channel under bridge

Project/Site: SART III City/County: [illegible] Sampling Date: [illegible]

Applicant/Owner: SB County Regional Parks State: CA Sampling Point: Feature 4

Investigator(s): Shay Lawrey + Lisa Patterson Section, Township, Range: _____

Landform (hillslope, terrace, etc.): Riverine Local relief (concave, convex, none): Slope Slope (%): 10%

Subregion (LRR): _____ Lat: 34°04' 51.34" N Long: 117°15' 34.37" W Datum: _____

Soil Map Unit Name: Wb / WA NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes _____ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No ✓	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes _____	No ✓	

Remarks: Greater than slope of channel under bridge

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.	0		
2.			
3.			
4.			
	= Total Cover		

Sapling/Shrub Stratum (Plot size: _____)			
1.	0		
2.			
3.			
4.			
5.			
	= Total Cover		

Herb Stratum (Plot size: _____)			
1.	0		
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	= Total Cover		

Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum 0 % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A)

Total Number of Dominant Species Across All Strata: _____ (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species		x 1 =
FACW species		x 2 =
FAC species		x 3 =
FACU species		x 4 =
UPL species		x 5 =
Column Totals:	(A)	(B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes _____ No ✓

Remarks: Unvegetated.

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SOIL

Sampling Point: Frame 4

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: ___

Depth (inches): ___

Hydric Soil Present? Yes ___ No X

Remarks: Gravel Road -

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No ___ Depth (inches): ___

Water Table Present? Yes ___ No ___ Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ___ No ___ Depth (inches): ___

Wetland Hydrology Present? Yes ___ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: 10% Slope - Gravel Road

Project/Site: Part III City/County: [illegible] Sampling Date: [illegible]

Applicant/Owner: SB County Regional Parks State: CA Sampling Point: Features 5

Investigator(s): Shay Lanny + Lisa Patterson Section, Township, Range: _____

Landform (hillslope, terrace, etc.): Riverine Local relief (concave, convex, none): _____ Slope (%): _____

Subregion (LRR): _____ Lat: 34°04' 59.96"N Long: 117° 14' 34.55"W Datum: _____

Soil Map Unit Name: Wub soil NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No _____	**Is the Sampled Area within a Wetland?** Yes X No _____
Hydric Soil Present?	Yes X	No _____	
Wetland Hydrology Present?	Yes X	No _____	

Remarks: Riparian area in side channel

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 10'x10')	Absolute % Cover	Dominant Species?	Indicator Status
1. Cottonwood	10%		obl
2. Salix	40%	yes	obl
3.			
4.			
	_____ = Total Cover		

Sapling/Shrub Stratum (Plot size: _____)			
1. mulefat	20%	yes	FACW
2.			
3.			
4.			
5.			
	_____ = Total Cover		

Herb Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	_____ = Total Cover		

Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	70 = Total Cover		

% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 % (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No _____

Remarks: wetland species

Approved for public release; distribution is unlimited.

SOIL

Sampling Point: Feature 5

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: ___

Depth (inches): ___

Hydric Soil Present? Yes X No ___

Remarks:

Saturated > 30 days

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- X Water Marks (B1) (**Riverine**)
- X Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- X Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No ___ Depth (inches): ___

Water Table Present? Yes ___ No ___ Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes X No ___ Depth (inches): ___

Wetland Hydrology Present? Yes X No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Only gets when Raining –

Project/Site: Phase III Sampling Date: [illegible]
Applicant/Owner: SB County Regional Parks State: _____ Sampling Point: Feature 6
Investigator(s): Shay Lawrey + Lisa Pottes Section, Township, Range: _____
Landform (hillslope, terrace, etc.): Riverine Local relief (concave, convex, none): concave Slope (%): _____
Subregion (LRR): _____ Lat: 34°04'59.96"N Long: 117° 14'34.55"W Datum: _____
Soil Map Unit Name: web soil unit NWI classification: _____
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No _____	**Is the Sampled Area within a Wetland?** Yes X No _____
Hydric Soil Present?	Yes X	No _____	
Wetland Hydrology Present?	Yes X	No _____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. Salix sp	100%	Y	OBL
2.			
3.			
4.			
	_____ = Total Cover		

Sapling/Shrub Stratum (Plot size: _____)			
1. mulfat	40%	Y	FACW
2.			
3.			
4.			
5.			
	_____ = Total Cover		

Herb Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	_____ = Total Cover		

Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
Total Number of Dominant Species Across All Strata: 2 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:
___ Dominance Test is >50%
___ Prevalence Index is ≤3.0[1]
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No _____

Remarks:

Approved for public release; distribution is unlimited.

SOIL

Sampling Point: _____

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- X Other (Explain in Remarks)

Sat < 30 days in upper part

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- X Water Marks (B1) (**Riverine**)
- X Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No ___ Depth (inches): _____

Water Table Present? Yes ___ No ___ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ___ No ___ Depth (inches): _____

Wetland Hydrology Present? Yes X No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Riparian habitat

APPENDIX 3

Exhibit 4: Initial Study and Mitigated Negative Declaration for the "Santa Ana River Trail, Phase III Project"

LOR GEOTECHNICAL GROUP, INC.
Soil Engineering ▲ Geology ▲ Environmental

INITIAL SITE ASSESSMENT
PROPOSED SART-PHASE III
WATERMAN AVENUE TO CALIFORNIA STREET
CITIES OF SAN BERNARDINO & REDLANDS
SAN BERNARDINO COUNTY, CALIFORNIA

PROJECT NO. 62778.2
FEBRUARY 25, 2011

Prepared For:

Tom Dodson & Associates
2150 North Arrowhead Avenue
San Bernardino, California 92405

Attention: Mr. Tom Dodson

6121 Quail Valley Court ▲ Riverside, CA 92507 ▲ (951) 653-1760 ▲ (951) 653-1741 (Fax) ▲ www.lorgeo.com
19-438 Ruppert Street ▲ P.O. Box 580799 ▲ N. Palm Springs, CA 92258 ▲ (760) 329-2727 ▲ (760) 329-2626 (Fax)

LOR GEOTECHNICAL GROUP, INC.
Soil Engineering ▲ Geology ▲ Environmental

February 28, 2011

Tom Dodson & Associates
2150 North Arrowhead Avenue
San Bernardino, California 92405

Project No. 62778.2

Attention: Mr. Tom Dodson

Subject: Initial Site Assessment, Proposed Santa Ana River Trail- Phase III, Waterman Avenue to California Street, Cities of San Bernardino and Redlands, San Bernardino County, California

Attached herewith is the Initial Site Assessment (ISA) conducted by this firm for the Santa Ana River Trail-Phase III project. The project extends along the south side of the Santa Ana River from Waterman Avenue in the City of San Bernardino to California Street in the City of Redlands, San Bernardino County, California.

Our ISA was planned and executed based upon a scope of services generally outlined in our Work Authorization Agreement, dated January 25, 2011.

We appreciate the opportunity to provide this Initial Site Assessment for this project. If you have any questions or comments regarding this assessment, please do not hesitate to contact this firm at your convenience.

LOR Geotechnical Group, Inc.

6121 Quail Valley Court ▲ Riverside, CA 92507 ▲ (951) 653-1760 ▲ (951) 653-1741 (Fax) ▲ www.lorgeo.com
19-438 Ruppert Street ▲ P.O. Box 580799 ▲ N. Palm Springs, CA 92258 ▲ (760) 329-2727 ▲ (760) 329-2626 (Fax)

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Appendix A - Index Map, SART-Phase III Proposed Alignment, and Color Photographs

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Appendix C - Certified Sanborn®Map Report

Appendix D - EDR DataMap™Corridor Study and EDR Site Reports™

Appendix E - Initial Site Assessment Checklist

Tom Dodson & Associates Project No. 62778.2
February 25, 2011

EXECUTIVE SUMMARY

This firm has conducted a Initial Site Assessment (ISA) for the proposed Santa Ana River Trail-Phase III Project. This ISA was performed in general accordance with ASTM E 1527-05 and AAI set forth in 40 CFR part 312.

The Santa Ana River Trail (SART) is a regional pedestrian and bicycle trail, that is proposed to extend from the Pacific Ocean to the San Bernardino Mountains. The proposed project is the Phase III installation of an approximate 3.8 mile segment of the SART through the City of San Bernardino to the City of Redlands in San Bernardino County. This Phase III of the SART will be located on the south side of the Santa Ana River channel, between Waterman Avenue in the City of San Bernardino and California Street in the City of Redlands. The Federal Highway Administration (FHWA) is the lead agency for compliance with the National Environmental Policy Act (NEPA). FHWA has delegated NEPA compliance to the California Department of Transportation (Caltrans).

In general, the SART-Phase III project consists of installing a 3.8 mile long regional trail that will be 10 feet wide with 4-foot wide shoulders. For most of the alignment the SART-Phase III project will be up on the existing San Bernardino County Flood Control levee. This regional trail will consist of the trail, bridges, culverts, and access ramps. These improvements will include fill and embankment construction; relocating and/or adjusting surface features to grade; subsurface preparation for paving the trail; erosion control measures; reinforced concrete retaining walls; fencing and railing; access gates; protective screens under railroads; storm drain facilities; concrete slab bridge and its appurtenances; signage; striping and markings; channelizer/delineator; and stormwater pollution prevention control.

There are no environmentally impaired sites on the proposed SART-Phase III alignment. No significant amounts of trash and debris were noted. No stained soils or unusual odors were detected during this ISA. There are adjacent properties with environmental impairments; however, these are either regional groundwater issues or sites that are undergoing remediation/cleanup. Based on our review of the regulatory information for the sites with contamination of soil and/or groundwater, there do not appear to be any sites that present an adverse environmental impact to the proposed SART-Phase III project.

Except for the regional groundwater contamination plumes that are present under portions of the SART-Phase III alignment, this ISA has revealed no evidence of recognized environmental conditions indicative of releases or threatened releases of hazardous substances on, at, in, or to the proposed SART-Phase III alignment.

INTRODUCTION

During February of 2011, LOR Geotechnical Group, Inc., performed a Initial Site Assessment (ISA) for the SART-Phase III project alignment. The proposed project is the Phase III installation of the approximate 3.8-mile segment of the Santa Ana River Trail (SART) in San Bernardino County. This Phase III of the SART will be located on the south side of the Santa Ana River channel, between Waterman Avenue in the City of San Bernardino and California Street in the City of Redlands. The project alignment is located within the County of San Bernardino Flood Control Easement, specifically along the south side of the Santa Ana River.

This ISA was conducted for Tom Dodson & Associates in general accordance with the Standard Practice for Environmental Site Assessments, American Society of Testing Materials (ASTM) E 1527-05 and All Appropriate Inquiries (AAI) set forth in 40 CFR (Code of Federal Regulations) Part 312.

The purpose of this ISA was to identify recognized environmental conditions associated with the property. A recognized environmental condition (REC) is defined as the presence or likely presence of any hazardous substances or petroleum products on a property under conditions that indicate an existing release, a past release, or a material threat of a release of any hazardous substance or petroleum products into structures on the property or into the ground, groundwater, or surface water of the property. This does not include *de minimis* conditions, that generally, do not present a threat to human health or the environment, and generally would not be the subject of an enforcement action if brought to the attention of the appropriate government agency.

The approximate location of the SART-Phase III project, within its regional setting, is presented on the enclosed Index Map, Enclosures A-1, within Appendix A.

The scope of this assessment included: 1) A general reconnaissance along the SART-Phase III proposed alignment and immediate vicinity; 2) A compilation, review, and interpretation of published reports available from various private, public, and regulatory agencies; 3) A review of historical Aerial photographs and topographic maps; 4) Regulatory database review; and 5) Preparation of this report.

The findings of our ISA, as well as our conclusions and recommendations, are presented in the following sections of this report.

NON-SCOPE CONSIDERATIONS

The following environmental issues are outside the scope of ASTM E 1527-05 and 40 CFR Part 312, and were not addressed in this report:

- Radon
- Lead in Drinking Water
- Lead-Based Paint
- Wetlands
- Methane
- Cultural Land Historical Resources
- Industrial Hygiene
- Health and Safety
- Ecological Resources
- Endangered Species
- Indoor Air Quality
- Mold and Mildew
- Asbestos-Containing Materials
- Regulatory Compliance
- Mineral Resources
- Natural Hazards
- High Voltage Power Lines
- Vapor Intrusion

METHODOLOGY AND PROCEDURES

During our research for this ISA, public agency databases were reviewed in order to provide insight into the previous and current uses of the site with respect to environmental impairments and conditions.

Federal, state, local, tribal, and proprietary lists and databases were reviewed to ascertain the presence of known environmentally impaired sites within the immediate area, and to determine their impact, if any, to the subject site.

Aerial photographs, and historical topographic maps were examined at various time intervals from 1901 through 1996, to investigate the past use of the subject site and the surrounding region.

Concurrent with the above, a site reconnaissance of the proposed alignment was conducted. The site reconnaissance was conducted in order to determine current uses of the proposed alignment and adjacent properties and the potential for soil and/or possible groundwater contamination based on aboveground visual observation.

USER PROVIDED INFORMATION

Under ASTM E 1527-05 and AAI, specific tasks are assigned to the User that will help identify potential RECs associated with the subject property. These tasks do not require the technical expertise of an environmental professional and are generally not performed by environmental professionals performing a ISA. The User may provide the information gathered from these tasks, including the following:

- Review title and judicial records for environmental liens or activity and use limitations (AULs);
- Specialized knowledge or experience (that is material to RECs in connection with the property) of the User;
- Actual knowledge (of environmental liens or AULs) of the User;
- Reason for significantly lower purchase price;
- Commonly known or reasonably ascertainable information (that is material to RECs in connection with the property); and
- Other information, including the purpose for performing the ISA.

The only information provided by the User with regard to the above list, was the purpose for performing the ISA, which is to evaluate the subject site for RECs, prior to construction of the proposed SART-Phase III.

GEOLOGIC AND HYDROLOGIC SETTING

Regionally, the site lies within a natural geomorphic province known as the Peninsular Ranges. This province is characterized by northwest trending valleys and mountains that are, in part, due to the tectonic framework of this area, which is also dominated by a northwest trending structure.

Locally, the site is located within a structural, sedimentary mass known as the Bunker Hill - San Timoteo basin. This basin formed as a rift zone between the active San Andreas fault on the northeast and the active San Jacinto fault on the southwest. The southern boundary of the basin is less well defined, but is generally believed to coincide with the Banning fault zone. Sediment within the basin is derived mainly from City Creek and the Santa Ana River and also from lesser tributaries. Geologic mapping and subsurface exploration within the area indicates that the site is underlain by Pleistocene and Holocene alluvial sediments overlying crystalline bedrock at depth. The alluvial sediments consist mainly of sand, gravel, cobbles and boulders with interspersed layers of silts and clays. Near the eastern end of the project area, the sediments are approximately 800 feet in thickness and these thicken to approximately 1,100 feet at the westerly end of the project area.

Groundwater Hydrology

The project site is located within the Bunker Hill sub-basin of the Upper Santa Ana Valley Groundwater Basin. This groundwater basin is bounded by the Loma Linda and San Jacinto faults on the southwest, by the San Bernardino Mountains on the northeast, by non-marine sedimentary hills (Badlands) on the south, and by the Crafton Hills, which consist of metamorphic bedrock, on the east. Depth to first groundwater varies along the proposed alignment, but generally is about 20 feet below the ground surface near Waterman Avenue and increases to the east-northeast. In general, the depth to groundwater has increased since early development within the San Bernardino Valley. Data presented by Fife, et al. (1976) indicate that artesian conditions existed in areas around the eastern portion of the site and areas to the north in the early 1900s and that bogs, swamps, and marsh lands were present across portions of the southwest half of the site during the 1880s.

The Bunker Hill groundwater basin has extensively documented groundwater contamination plumes within the area of the site. One contamination plume originates from the former Norton Air Force Base (AFB), and is moving in a southwest direction. The groundwater contamination is chiefly comprised of volatile organic compounds (VOCs), including trichloroethene (TCE) and tetrachloroethene (PCE). A map of the plume of contamination from the former Norton AFB shows the plume is probably located under the site west of Tippecanoe Avenue. The second groundwater contamination plume is the Redlands-Crafton Hills plume which originates from the former Lockheed Martin facility. A recent plume map indicates the plume extends westerly under the project alignment from approximately California Street past Waterman Avenue. This is further evidenced by two Lockheed Martin groundwater monitoring wells located adjacent to the proposed SART-Phase III alignment.

Based on the depth-to-groundwater and clean up efforts, no adverse environmental impact to the proposed SART-Phase III project is anticipated.

HISTORY OF SITE USAGE

To obtain a history of previous site usage, the following resources were searched, aerial photographs from the County of San Bernardino Flood Control District (SBCFCD), historical topographic maps and Sanborn Fire Insurance Maps. Environmental Data Resources, Inc. (EDR) provided the Sanborn Fire Insurance Map and historical topographic map search.

Aerial Photograph Review

A search was conducted for available stereo pairs of aerial photographs of the area on file at the SBCFCD collection by a representative from this firm. The search provided aerial photographs taken of the subject site and surrounding area in 1938, 1955, 1969, 1972, 1978, 1986, 1991, 1996, 2001, and 2005, the latest photographs available.

The aerial photographs reviewed at the SBCFCD consisted of vertical aerial stereographic photograph pairs of varying scales, as available on file. These photographs were viewed using stereoscopes with magnifications of 2X and 4X for three-dimensional enhancement. Due to the relatively large photographic scales involved, the analysis and subsequent interpretation of detail from aerial photographs

sometimes required a degree of subjective judgement. The degree of certainty for the interpretation of details depends upon such factors as the scale and the quality of the photograph. However, an analysis of aerial photographs will reveal the general site history as to the relative use of the land, possible ground disturbance, activities, etc.

A brief summary of the site and surround conditions during the various times, as reflected in the photographs is given below.

1. 1938, Photo Nos. AXL-60-106 through AXL-60-111 & AXL-61-24, -25, Scale 1"= 1,850'

The major roads that cross or nearly intersect the river, including Waterman Avenue, Tippecanoe Avenue, Mountain View Avenue, and California Street, are all small paved roads. Due to recent heavy precipitation and flooding, the Santa Ana River has left sediment deposited across Waterman. Just east of Waterman, south of the river, along the northeast side of San Timoteo Creek, is what appears to be a horse track. Railroad tracks cross the Santa Ana River between the Gage Canal and Waterman Avenue and also at Mountain View Avenue.

The region near the Santa Ana River is largely agricultural with relatively little development. Areas of more dense development, including residential, commercial, and/or industrial, are located over a mile from the river to the northwest in San Bernardino and to the south in Loma Linda. The agricultural land south of the railroad tracks in Loma Linda and east of California Street in the City of Redlands is dominated by citrus groves.

Due to the lack of modern development, the exact alignment of the SART-Phase III is difficult to determine. However, it appears the alignment, as it traverses the south trail of the Santa Ana River, crosses parts of the river bed, flood plain, and adjoining terrace. The properties adjacent to the south side of the river are largely vacant. On the south side of the river, between Waterman and Tippecanoe Avenues, the properties are in a native state with vegetation. Between Tippecanoe Avenue and California Street, the properties adjacent to the south side of the river are dry and irrigated farm land. The irrigated farm land appears to include alfalfa and vegetable or fruit row crops. There are stretches along the south side of the river where planted rows of mature trees separate the river from the farm land. A group of around half a dozen structures is present along the south side of the river, approximately 1,100 feet

east of Tippecanoe, just southeast of the Gage Canal. These structures appear to include one or two residences and associated garages, outbuildings, and/or barns. Just south of the river, along the west side of Bryn Mawr Avenue, is a structure that appears to be a residence. There appear to be several horse corrals associated with this residence. Just east of this residence, beyond a dense group of mature trees, are three open top round tanks, possibly used for water storage.

2. November 9, 1955, Flight No. F-35, Photo Nos. 4-33 through 4-38 & 4-78, Scale 1"= 1,300'

Waterman, Tippecanoe, and Mountain View Avenues have been improved as 2-lane roads. Norton Air Force Base (NAFB) is fully developed. The horse track east of Waterman Avenue is absent, replaced by the Tri-City Airport, which includes runways, taxiways, structures, and airplanes. The Blacklands and Waterman landfill operations are visible, east of Waterman Avenue, south of the river, and north of the Tri-City Airport. Construction vehicles, equipment, and stockpiled soil are visible.

There has been a fair amount of residential development just north and south of the river, including south of the river between Richardson Street and Mountain View Avenue. There is a dairy or horse ranch on the east side of Waterman, just northwest of the river, along the southwest side of the railroad tracks.

The residence and dense group of mature trees at Bryn Mawr Avenue are absent, however the corrals, now overgrown with vegetation and the tank are still present. At the area of structures east of Tippecanoe Avenue and southeast of Gage Canal, some structures are absent with what appear to be one or two storage yards/areas that appear to include materials and/or equipment. These storage areas may be commercial or farm related.

3. February, 1969, Flight No. C-295, Photo Nos. 56 through 58 & 78 through 80, Scale 1"= 2,200'

Partial stereo coverage was available for the subject site and surrounding region. Additional development is evident in the region, especially north of the Santa Ana River. North of the river, on the east side of Waterman Avenue, are two newly developed properties, one or both of which have materials and/or equipment storage yards. The San Bernardino Golf Club (golf course) is present on the west side of

Waterman Avenue, north of the river. The Palm Meadows Golf Course is present on the south side of NAFB, north of the river. East of California Street, between the river to the north and citrus groves to the south, there is an area with disturbed, excavated soil where filling appears to be occurring, beyond which is a sewer treatment plant.

Two areas along the south side of the Santa Ana River, east and west of Tippecanoe Avenue, northwest of the Gage Canal, have been cleared of native vegetation, possibly associated with minor channelization activities along the river. The present day power plant, at the northeast corner of San Bernardino and Mountain View Avenues, has been constructed.

4. <u>October 15 & 30, 1972, Flight No. C-194, Photo Nos. 37 through 39 & 55 through 57, Scale 1"= 2,050'</u>

Partial stereo coverage was available for the subject site and surrounding region. The subject site and surrounding region appear largely as shown in the previous photographs. Most of the area to the east of California Street, on the south side of the river, has been filled in to roughly match the ground surface of the citrus groves to the south. The dairy or horse ranch northwest of the river has expanded. There appears to be some earth work, channelization, and/or berming along the river, possibly in response to the heavy precipitation experienced in 1969.

In the area on the south side of the river that was previously cleared, east of Tippecanoe Avenue, are numerous piles of material, possibly soil. West of Tippecanoe Avenue, in a previously cleared area, are what appear to be numerous parked vehicles in a roughly triangular area that appears to have naturally regrown vegetation.

5. <u>January 21, 1978, Flight No. C-279, Photo Nos. 85 through 89 & 118 through 120, Scale 1"= 2,000'</u>

The area east of California Street, between the river and groves, has more soil that was brought in, which is piled higher than the ground surface of the groves to the south.

Just south of the river, near San Bernardino and Tippecanoe Avenues and north of Hospitality Lane, west of Waterman Avenue, are new commercial or industrial buildings. The buildings near San Bernardino and Tippecanoe Avenues are larger, and may include warehouses or distribution facilities.

The portion of the area east of Tippecanoe Avenue, with numerous piles of material is overgrown with vegetation, which appears to extend just beyond the area previously shown with piles of material. Many more vehicles are now present in the triangular area west of Tippecanoe Avenue. There are numerous small rectangular or square objects south of the river and just west of the north end of California Street. These objects may be groups of beehives.

6. February 25, 1986, Flight No. C-450, Photo Nos. 83 through 86 & 121 through 123, Scale 1"= 2,100'

Additional commercial or industrial development, including roads, is present south of the river, between Waterman and Tippecanoe Avenues. This development has replaced the Tri-City Airport.

The beehives south of the Santa Ana River and just west of California Street are gone. Most of the present day commercial or industrial development south of the Santa Ana River, between Mountain View and Tippecanoe Avenues, has been constructed. The are several commercial or industrial buildings adjoining or just south of the SART-Phase III alignment on the west side of Mountain View Avenue. In the central and east portion of this area of buildings are numerous stacks of material, possibly wood. There are decreased vehicles parked in the triangular area west of Tippecanoe Avenue.

Northwest of the river and north of the railroad tracks that cross Waterman Avenue there appears to be a commercial yard, possibly related to construction.

The present day hotel has been constructed south of the river along the west side of Waterman Avenue. Additional commercial or industrial development is now present south of the river and west of Waterman Avenue. At the northwest corner of Waterman Avenue and Hospitality Lane, there appears to be a gasoline station.

7. July 1, 1991, Flight No. C-487, Photo Nos. 98 through 101 & 136 through 138, Scale 1"= 2,100'

Additional commercial or industrial development has occurred south of the Santa Ana River, between Tippecanoe and Waterman Avenues. The present day employment training center building and rail services yard along the south side of the river have been constructed. These operations border the proposed SART-Phase III alignment to the south.

Just south and southeast of the river, along Brier Drive, two buildings for Argosy University have been built. Other nearby commercial buildings have been built.

8. April 20 & May 31, 1996, Flight No. C-528, Photo Nos. 118 through 121, 155, & 156, Scale 1"= 2,200'

In the area east of California Street, the City of Redlands Brine Facility has had the central and north portions of the west end filled in, with an area excavated along the south side.

The proposed SART-Phase III alignment and surrounding region are largely the same as shown in the previous photographs. The triangular area west of Tippecanoe Avenue is largely vacant. Another building has been added to Argosy University.

9. June 15, 2001, Flight No. C-541, Photo Nos. 129 through 132, Scale 1"= 2,200'

San Bernardino Avenue has been extended to the west and northwest, crossing the Santa Ana River and the subject site as Orange Show Road. In the cleared area south of the river and east of Tippecanoe Avenue, there are two fenced enclosures that appear to include numerous aboveground tanks, possibly for groundwater treatment.

A large building, possibly industrial or a warehouse or distribution facility, is being constructed adjacent to the east of the power plant, along the north side of San Bernardino Avenue. Just north of this building and south of the river appears to be a recently excavated storm water retention basin.

New commercial buildings have been added southeast and east of Argosy University along Brier Drive.

10. January 18, 2005, Flight No. C-553, Photo Nos. 11-40 through 11-43 & 12-42 through 12-47, Scale 1"= 1,100'

A few commercial or industrial buildings have been added at/near the northeast corner of San Bernardino and Tippecanoe Avenues. More commercial buildings have been added near or adjacent to Argosy University. The California Street Landfill, east of California Street, is now operating. The dairy or horse ranch northwest of the river appears to have ended operation, and is partially demolished. The nearby businesses appear to be related to construction or transportation.

Several large buildings, possibly warehouse or distribution facilities, have been constructed west of California Street, north of San Bernardino Avenue, and south of the river. The building, or possibly two adjoining buildings, previously under construction to the east of the power plant has been completed. The storm water retention basin to the north has been filled in, and is being farmed. It appears that the power plant has expanded to the northeast, and has greatly increased activity. Just east of Waterman Avenue and south of the river is a vacant property under grading for commercial development.

Sanborn Fire Insurance Maps

Sanborn Fire Insurance Map coverage was not available for the proposed SART-Phase III project alignment. A copy of the Certified Sanborn Map report, provided by EDR, is presented in Appendix C.

Historic Topographic Maps

The 1901 San Bernardino and Redlands topographic maps show very little development in the region. Two railroad crossings, over the Santa Ana River, are visible east of Waterman Avenue. They are the Southern California Railroad, Highland Division and the Redlands Motor Line. No other significant features were noted.

The 1942 San Bernardino topographic map shows the area of the Santa Ana River essentially the same; however, significant development in the downtown areas of the Cities of San Bernardino and Colton are evident. Tri-City Airport is visible south of the Santa Ana River and between Waterman and Tippecanoe Avenues. The Southern California rail crossing is now labeled Topeka and Santa Fe. No other significant

features were noted. Several structures are now present north of the Santa Ana River at Waterman Avenue. There are water wells now present east of Tippecanoe Avenue at the river. These wells appear to supply the Gage Canal. No other significant features were noted.

The 1954 San Bernardino South and Redlands topographic maps are at a larger scale. Additional buildings and a well are shown north of the river at Waterman Avenue. The Redlands topographic map shows Norton Air Force Base (NAFB), north of the river.

The 1967 San Bernardino South and Redlands topographic maps show increased development along the river, especially at major roads. Power lines, from the San Bernardino substation, cross the river west of Tippecanoe Avenue. The Power plant at Mountain View Avenue south of the river, is visible. No other significant features were noted.

The 1973 San Bernardino South and 1975 San Bernardino topographic maps did not show any significant changes to the area.

The 1980 San Bernardino South and Redlands topographic maps show increased development in the area, both residential and commercial. The railroad crossing at Mountain View Avenue (Redlands Motor Line) is now shown as being abandoned. The power plant has expanded at Mountain View Avenue has expanded.

The 1988 and 1996 Redlands topographic maps show the commercial development adjacent to the river at Mountain View Avenue, across from the power plant. No other significant changes were noted.

A copy of the Historic Topographic Map report, provided by EDR, is presented in Appendix B.

City Directory Information

Because of the lack of businesses and associated addresses along the project alignment, a search of city directory information was not conducted.

Site History Summary

Based on our review of available historical topographic maps and aerial photographs from 1938 through 2005, depicting the Santa Ana River and adjacent properties, it appears that the area of the proposed SART-Phase III alignment was vacant land since 1901. The proposed SART-Phase III alignment through its history traversed across river channel, flood plain or terrace, associated with the different flows of the Santa Ana River. After the flooding of 1969, control of the Santa Ana River through dams and other flood control measures have left the proposed SART-Phase III alignment within the flood control berm or south bank of the river. The adjacent properties were initially vacant, or agricultural properties. The number of commercial and/or industrial businesses and associated development increased over time.

SITE RECONNAISSANCE

A site reconnaissance was conducted on February 14, 2011 by Mr. M. Kevin Osmun of this firm. To orient our site reconnaissance, a set of color aerial photographs were provided to this firm.

The SART-Phase III project alignment is 3.8 miles in length, extending from Waterman Avenue, in the City of San Bernardino, to California Street, in the City of Redlands. The project alignment is generally within the County of San Bernardino Flood Control easement, on top of a levee, adjacent to the south side of the Santa Ana River. However, as the SART Phase III alignment approaches existing railroad and street crossings, it detours under the bridges and enters into the Santa Ana River bed then back onto the levee. The levee is fill and consists of soil, gravel, boulders, and inert materials such as broken concrete roofing tile. Typically there is fencing concrete or rock slope protection along the north or river side of the levee. The width of the levee varies along the project alignment from several feet to several tens of feet. The height of the levee is also variable but it generally rises above the adjacent riverbed on the order of 10 feet. The sides of the levee vary and are generally two horizontal to one vertical (2:1) slopes or steeper.

For ease of description the SART-Phase III project alignment is discussed in segments.

Waterman Avenue to BNSF Railroad Crossing

The SART-Phase III project begins on the west side of Waterman Avenue, where it leaves the existing SART-Phase II portion and crosses over existing rock slope protection. There were three capped pipes, 8 to 12 inches in diameter, and a storm drain pipe within the slope. The alignment then goes under the Waterman Avenue bridge and back up to the levee on the east side of Waterman Avenue. Moving east along the levee, the adjacent property to the south is the Hilton Garden Hotel, followed by commercial buildings. This area was once the Blacklands landfill. Little is know about the Blacklands Landfill, however, based on the development of this property the landfill materials have been removed. Further east is vacant land The vacant land is the former Waterman Landfill, operated by the City of San Bernardino under lease from the Tri-City Airport. This landfill operated from 1950 through 1960. The landfill was a "trench and fill" operation. The facility accepted non-hazardous residential, commercial, industrial, and agricultural waste. Several groundwater monitoring wells and methane gas collection wells are present at this site. A methane gas scrubber unit is located near a heli-pad, fire station, and Carnegie Drive. One groundwater monitoring well (Well No.6) is located just south of the proposed SART-Phase III alignment. Further east is the Argosy University buildings, an ephemeral stream, and the Burlington Northern Santa Fe (BNSF) Railroad. The proposed alignment leaves the levee and crosses the ephemeral stream going under the BNSF railroad bridge along the river bed where it heads back toward the levee. A sign adjacent to the BNSF railroad indicated the Mountain View Power Plant wastewater line is buried in this area.

BNSF Railroad to Orange Show Road

Once under the BNSF railroad bridge, the project alignment traverses the river bed through moderate vegetation. The levee is not well defined in this area and is heavily vegetated. The first break in the vegetation is a clearing for high voltage power lines which cross over the project alignment. Five wood power poles are present on the levee. As you move further east, the levee becomes well established again. There are concrete poles and other inert items stored along the north side of the levee as you approach Orange Show Road.

The closest commercial/industrial building to the project is the CET (Center for Employment Training) building and railroad services yard within an industrial park.

Orange Show Road to Tippecanoe Avenue

After crossing under the Orange Show Road bridge, the project alignment follows along the levee. A Lockheed Martin groundwater monitoring well is located north of the proposed SART-Phase III alignment in the river bed. The property to the south consists of three recently constructed commercial or industrial buildings. These appear to be unoccupied, with just some site improvements to the buildings occurring. A stockpile of soil is present as you approach Tippecanoe Avenue. It has the same makeup of other fills with numerous broken concrete roof tiles. Rip-rap is present along the slope in this area.

Tippecanoe Avenue to Mountain View Avenue

After crossing under the Tippecanoe Avenue bridge, the project alignment continues up on the well established levee. The levee has rip-rap on the slopes near Tippecanoe. As you move further east, the rip rap disappears and there is concrete sporadically along the north side. On the south side of the levee, at Tippecanoe, there is a minor amount of end-dumped fill, with soil, rock, and concrete. South of the levee is a RV and boat storage facility followed by a water treatment facility. As you move further east along the project alignment, there is some vacant land to the south, then a residential property. As you continue east, the vacant land adjacent to the south side of the project alignment (levee) increases, and there are no structures, only Riverview Drive. Commercial/industrial buildings are present south of Riverview Drive. The levee is wide along this segment. Near the middle of this segment, from Tippecanoe to Mountain View Avenues, there is a set of high voltage power lines crossing north to south over the project alignment. The wood poles and anchor wires are encased in concrete for erosion control. Continuing east, toward Mountain View Avenue, the vacant land adjacent to the south decreases. Harbor Construction, and two multi-tenant commercial buildings are on the other side of the vacant land. Monier Lifetile, a concrete roof tile manufacturer, is adjacent to the south side of the levee at Mountain View Avenue. There is very little activity at the Monier Lifetile facility, and it may not be operating anymore.

Mountain View Avenue does not extend to the north across the Santa Ana River, so the project alignment continues along the levee. Crossing the Santa Ana River at Mountain View Avenue is an old railroad wooden trestle.

Mountain View Avenue to California Street

Immediately south of the levee, on the east side of Mountain View Avenue, is the Mountain View Power Plant, a Southern California Edison gas-powered electrical generation facility. A Lockheed Martin groundwater monitoring well is located just south of the proposed SART-Phase III alignment, north of the power plant.

The staking of the alignment stops past the power plant. Some small piles of rock and soil are present along the north side of the levee. The levee is wide through this segment and vacant land is present along the south side, with no buildings present until you approach California Street. Approaching California Street recently constructed warehouse/industrial buildings are present over a hundred feet to the south. A paint ball area has been set up on the southwest corner of California Street and the San Bernardino County Flood Control in a vacant wooded area. East of California Street, and south of the San Bernardino Flood Control easement, is the California Street landfill, as evidenced by the grass covered slopes that extend up to and protect, as well as hide, the landfill activities.

In summary, the proposed SART-Phase III project alignment generally follows along the constructed San Bernardino County Flood Control levee, south of the Santa Ana River. Most of the property adjacent to the San Bernardino County Flood Control easement is vacant land, however, there are several commercial and/or industrial business adjacent to the easement. No aboveground tanks, drums, or other items that may have an adverse environmental impact to the SART-Phase III project were noted. There are several areas of stockpiled fill, pieces of concrete, and other inert materials, placed under agency supervision. There was no evidence of any illegal dumping. No significant trash and debris was noted. No stained soil or unusual odors were noted.

Color photographs of the SART-Phase III project alignment and adjoining properties are presented within Appendix A.

ENVIRONMENTAL DATABASE REVIEW

LOR Geotechnical Group, Inc. contracted with EDR to provide an environmental database search (corridor study) for the SART-Phase III alignment. The database search provides information regarding landfills, USTs, hazardous waste generators, etc., on the alignment and surrounding properties in accordance with ASTM Standards

and All Appropriate Inquiries set forth in 40 CFR part 312. Over one hundred sites, some listed more than once, were found in EDR's search of available government records within a 0.5-mile radius of the proposed SART-Phase III alignment. A copy of the EDR corridor study/database report, which provides a complete list of the federal, state, tribal, and proprietary records searched, is provided in Appendix D. A summary of the databases are tabulated below:

Database	Results
STANDARD ENVIRONMENTAL RECORDS	
NPL	1 Site, See Below
Proposed NPL	None
Delisted NPL	None
NPL Liens	None
CERCLIS	1 Site, See Below
CERC-NFRAP	None
CORRACTS	1 Site, See Below
RCRA TSDF	1 Site, See Below
RCRA Lg. Quantity Generator	None
RCRA Sm. Quantity Generator	8 Sites, See Below
RCRA CESQG	None
RCRA NonGen	2 Sites, See Below
US ENG CONTROL	1 Site, See Below
US INST CONTROL	1 Site, See Below
ERNS	None
HMIRS	None
DOT OPS	None
US CDL	None
US BROWNFIELDS	None
DOD	1 Site, See Below

Database	Results
FUDS	None
LUCIS	None
CONSENT	None
ROD	1 Site, See Below
UMTRA	None
ODI	None
DEBRIS REGION 9	None
MINES	None
TRIS	None
TSCA	None
FTTS	None
HIST FTTS	None
SSTS	None
ICIS	None
PADS	1 Site, See Below
MLTS	None
RADINFO	None
FINDS	8 Sites, See Below
RAATS	None
SCRD Dry Cleaners	None
COAL ASH EPA	None
PCB TRANSFORMER	None
COAL ASH DOE	None
FEDERAL FACILITY	None
FEMA UST	None
US HIST CDL	None

Database	Results
STATE AND LOCAL RECORDS	
Hist Cal-Sites	2 Sites, See Below
CA Bond Exp. Plan	2 Sites, See Below
SCH	None
Toxic Pits	1 Site, See Below
SWF/LF	1 Listed and One Unlisted Site, See Below
WDS	3 Sites, See Below
NPDES	3 Sites, See Below
WMUDS/SWAT	None
Cortese	2 Sites, See Below
Hist Cortese	7 Sites, See Below
SWRCY	None
LUST	11 Sites, See Below
CA FID UST	11 Sites, See Below
SLIC	None
UST	4 Sites, See Below
HIST UST	7 Sites, See Below
LIENS	None
SWEEPS UST	11 Sites, See Below
CHMRS	None
LDS	None
MCS	None
AST	1 Site, See below
Notify 65	None
DEED	1 Site, See Below
VCP	None

Database	Results
DRYCLEANERS	None
WIP	None
CDL	None
RESPONSE	None
HAZNET	25 Sites, See below
EMI	5 Sites, See below
ENVIROSTOR	2 Sites, See below
HAULERS	None
HWT	1 Site, See Below
HWP	2 Sites, See Below
MWMP	None
PROC	None
TRIBAL RECORDS	
INDIAN RESERV	None
INDIAN ODI	None
INDIAN LUST	None
INDIAN UST	None
INDIAN VCP	None
EDR PROPRIETARY RECORDS	
Manufactured Gas Plants	None

There were no listed sites within the San Bernardino County Flood Control easement where the proposed SART-Phase III alignment is proposed. The following table provides information on sites located adjoining or within a few hundred feet of the proposed SART-Phase III project, as these sites may impact the proposed project. The selected sites and their potential environmental impact to the project are based upon professional judgment, the distance from the proposed alignment, and the information provided in the database listings.

Regulatory Agency Database Rankings, SART-Phase III Project, Waterman Avenue, San Bernardino, to California Street, Redlands, California			
EDR Map ID	**Facility Name and Address**	**Listed Database(s)**	**Recognized Environmental Condition (REC) Potential**
1	Norton Air Force Base, (Former) I-10, US 395, San Bernardino, CA 92409	NPL, CERCLIS, CORRACTS, RCRA-TSDF, RCRA-SQG, US ENG CONTROLS, US INST CONTROLS, ROD, PADS, FINDS, MANIFEST, DOD, LUST, CA Bond EXP Plan, Hist Cal-Sites, Toxic Pits, SWF/LF, NPDES, WDS, Cortese, Hist Cortese, LUST, DEED, Envirostor	**Low**, based on the completed site remediation, No further off-site groundwater monitoring.
	Current Agency Status: Norton AFB was closed in March 1994, and was redeveloped into an airport with mixed non-aviation, light industrial land use. Numerous underground storage tanks have been closed . A Phase I Records Search, Phase II Problem Confirmation Study, Remedial Investigation, Feasibility Study, and Plan have been performed for the base. The site is on the Final NPL Site List Norton AFB achieved construction completion in 2006. All remedial actions have been completed for the Record of Decision (ROD). The only ongoing operation and maintenance (O&M) activities are for the groundwater monitoring program and the Site 2 landfill. On base groundwater monitoring continues while monitoring of off base municipal drinking water wells was no longer required as of 2009. Institutional controls are implemented via deed restrictions for groundwater, at the Site 2 landfill, Sites 5 and 19, and Area of Concern 4 to protect human health and the environment. Post-excavation sampling and closure documentation are being completed for two sites formerly associated with the Resource Conservation and Recovery Act (RCRA) interim status permit that the former Norton AFB had for the Industrial Waste Treatment Plant and Industrial Waste Line. Closure of the two sites is expected during 2011. Once these sites are closed, the Air Force and the State will determine requirements, if any, for a post closure permit.		
2	North San Bernardino Area, Bunker Hill Groundwater Basin, San Bernardino, CA 92401	Hist Cal-Sites, CA Bond Exp Plan, Cortese, Hist Cortese, Envirostor	**Low**, based on the location of the plume, which is located north of the site.
	Current Agency Status: The Newmark Groundwater Contamination site underlies approximately eight square miles of the northwestern and west-central portions of San Bernardino. The Newmark Plume area extends for 5 miles on the eastern side of Shandin Hills. The groundwater contamination from Norton Air Force Base is not considered part of this site. On August 18, 2004, the EPA issued an Explanation of Significant Differences to provide notice of changes to the 1993 and 1995 Interim Records of Decision for the site. The purpose was to supplement the existing RODs with an institutional controls program. It will assure that the Newmark (and Muscoy) treatment systems remain effective in meeting the objectives of capturing contaminated groundwater and inhibiting the movement of contaminated water into clean portions of the groundwater.		

Regulatory Agency Database Rankings, SART-Phase III Project, Waterman Avenue, San Bernardino, to California Street, Redlands, California			
EDR Map ID	**Facility Name and Address**	**Listed Database(s)**	**Recognized Environmental Condition (REC) Potential**
3	Unocal 76, 2378 N. Sterling, San Bernardino, CA 92404	CA FID UST, SWEEPS UST	**None**, the facility is mis-plotted on the EDR Database Map.
	Current Agency Status: CA FID UST, SWEEPS UST - The facility is listed as having 4 motor fuel USTs. The facility is mis-plotted on the EDR Database Map and should be well north of Norton AFB. There are no facilities, including gas stations, located south of NAFB, where Sterling is called Mountain View Avenue.		
4	California Steel Services, 1212 S. Mountain View, CA 92408	San Bernardino County Permit	**Low**, based on special generator type permit.
	Current Agency Status: In 1996 the company moved to San Bernardino. They manufacture steel sheets and coils. They are listed as a County hazardous materials handler and special generator.		
4	Monier Lifetile, LLC, 1990 Riverview Dr. San Bernardino, CA 92408	RCRA-SQG, FINDS, WDS, EMI, HAZNET, WDS, San Bernardino County Permit	**Low**, based on business no longer at the facility, permits inactive, and no violations noted during their tenure.
	Current Agency Status: This facility was first occupied in 1980 by Celotex-Marley, followed by Monier Lifetile in 1997, Both these companies were roofing tile manufacturers. In 2008 Zwerner Industries, who is listed as a machining company occupied the property. In 2010 the listed owner is Carlos Mosto, with no company information provided.		
5	Rogers Binding and Mailing, 1905 Riverview Dr., San Bernardino, CA 92408	CA FID UST, SWEEPS UST, San Bernardino County Permit	**Low**, based on business no longer at the facility, permits inactive, and no indication of a leaking UST
	Current Agency Status: HIST UST/SWEEPS UST, The facility was listed as having one historic UST. The date for the UST listing was 1992. The UST capacity or its use was not provided. They are listed as a County hazardous materials handler and a limited quantity generator.		
5	Canam Metal Products, 1795 Riverview Dr., San Bernardino, CA 92408	RCRA-Non Gen, FINDS, HAZNET, EMI, San Bernardino County Permit	**Low**, based on non generation of hazardous waste while operating, and no violations noted.
	Current Agency Status: A metal manufacturing company, which makes USPS mail boxes, truck frames, etc. They were permitted by the South Coast AQMD from 1987 through 2001. The business does not appear to be operating at this location.		
5	National Tele-Communications Systems, 1817-A Riverview Dr., San Bernardino, CA 92408	RCRA-SQG, FINDS	**Low**, based on the lack of violations since the initial violation in 1985.

Regulatory Agency Database Rankings, SART-Phase III Project, Waterman Avenue, San Bernardino, to California Street, Redlands, California			
EDR Map ID	**Facility Name and Address**	**Listed Database(s)**	**Recognized Environmental Condition (REC) Potential**
	Current Agency Status: No information was provided regarding the type of hazardous waste generated; however, the facility was listed as having a generator violation in 1985, which was corrected in 1990. There have been no recent violations at the facility.		
5	Workflow Direct, 1811 Riverview Dr., San Bernardino, CA 92408	San Bernardino County Permit	**Low**, based on business no longer at the facility, and permit inactive.
	Current Agency Status: Permitted as a special generator. Business no longer operating at this address, and the permit expired in 2003.		
5	Haley Bros, 1905 Riverview Dr., San Bernardino, CA 92408	San Bernardino County Permit, HAZNET	**Low**, based on the small quantity of hazardous waste generated, and lack of reported violations.
	Current Agency Status: This facility is also listed under 1575 Riverview Dr. address. Haley Bros. a furniture manufacturer, is a permitted hazardous materials handler. They are a small quantity generator of unspecified oil-containing waste.		
5	Kruger McGrew Construction, 1880 E. Riverview Dr., San Bernardino, CA 92408	CA FID UST, SWEEPS UST, HIST UST, EMI	**Low**, based on company no longer operating at this location.
	Current Agency Status: Former grading contractor, with four historical USTs for motor fuel at this location. EMI listing for motor (equipment) emissions.		
5	Harber Companies, 1880 E. Riverview Dr., San Bernardino, CA 92408	UST, HAZNET, San Bernardino County Permit	**Low**, based on the removal of the USTs and the small quantity of hazardous waste generated.
	The USTs formerly at the above Kruger McGrew Construction site were removed and the site clean closed in 1996. They are a permitted special generator of oil containing waste.		
5	SCC Chemical Company, 1920 Riverview Dr., San Bernardino, CA 92408	San Bernardino County Permit	**Low**, facility is not a hazardous waste generator.
	Current Agency Status: Facility is permitted, hazardous materials handler.		
6	Kleen-Line Corp, 1707 Riverview Dr., San Bernardino, CA 92408	Hist UST	**Low**, apparently the UST has been removed.
	Current Agency Status: Kleen-Line Corp., was listed as having one historical diesel UST at the property. It was installed in 1980.		

Regulatory Agency Database Rankings, SART-Phase III Project, Waterman Avenue, San Bernardino, to California Street, Redlands, California			
EDR Map ID	**Facility Name and Address**	**Listed Database(s)**	**Recognized Environmental Condition (REC) Potential**
6	Waxie's Enterprises, 1707 Riverview Dr., San Bernardino, CA 92408	UST, CA FID UST, SWEEPS UST, San Bernardino County Permit	**Moderate**, Status of USTs is unknown.
	Current Agency Status: Waxie's Enterprises occupied the same property as the above listed Kleen-Line. The data indicates Waxie's Enterprises took over the property in 1990, including the UST. Waxie is no longer in business at this address, as their hazardous materials handler permit expired in 2003. The disposition of the UST is unclear		
7	Parway Distributors 1445 E. Riverview Dr,. San Bernardino, CA 92408	CA FID UST, SWEEPS UST	**Low**, based on company no longer in business at the site. Probable USTs removed.
	Current Agency Status: Three USTs, of unspecified capacity or contents were listed as present on the site in 1992. The company is no longer operating at this address.		
7	Dan McKinney Company, 1445 E. Riverview Dr., San Bernardino, CA 92408	San Bernardino County Permit	**Low**, based on company no longer in business at the site.
	Current Agency Status: Company was a permitted hazardous materials handler. The company is no longer operating at this address, and the permit was inactive in 2008		
7	Ampad, 1445 E. Riverview Dr., San Bernardino, CA 92408	RCRA-SQG, FINDS	**Low**, based on small quantity generator status.
	Current Agency Status: Ampad is a paper and packaging supply company that is a permitted small quantity generator.		
8	Brydenscot Metal Products, 1299 Riverview Dr., San Bernardino, CA 92408	WDS, NPDES, San Bernardino County Permit	**Low**, based on the small quantity of hazardous materials generated.
	Current Agency Status: A custom metal fabricator with outside materials storage, they are required to monitor runoff water from their site. They are a permitted hazardous materials handler and small quantity generator.		
8	Systems Technology Inc. 1351 E. Riverview Dr., San Bernardino, Ca 92408	San Bernardino County Permit, HAZNET	**Low**, based on the nature of the hazardous waste generated.
	Current Agency Status: A custom conveyor systems manufacturer, they are a permitted hazardous materials handler and generator. The wastes generated are aqueous solutions with less than 10 percent total organic residue, other organic solids, and unspecified oil-containing waste.		

Regulatory Agency Database Rankings, SART-Phase III Project, Waterman Avenue, San Bernardino, to California Street, Redlands, California			
EDR Map ID	**Facility Name and Address**	**Listed Database(s)**	**Recognized Environmental Condition (REC) Potential**
8	Hobart Corp. 1350 E. Riverview Dr., San Bernardino, Ca 92408	Hist UST	**Low**, based on probable removal of the UST.
	Current Agency Status: The property had one historic unleaded gasoline UST.		
9	Shell Service Station, 505 Orange Show Road, San Bernardino, CA 92408	UST	**Low**, based on the case closed status of the former USTs, and distance from the project alignment.
	Current Agency Status: An initial LUST case was soil only and closed in 1988. In 2003 a second LUST case was opened for fuel oxygenates in the groundwater. This is currently an ongoing investigation and characterization of the groundwater impact.		
9	Shih-Liav Ham, (Mobil Gas Station) 520 Orange Show Road, San Bernardino, CA	Hist Cortese, LUST, CA FID UST, SWEEPS UST,	**Low**, based on the removal of the leaking USTs and distance from the project alignment.
	Current Agency Status: A former LUST site, which has impacted the groundwater. The leaking USTs have been removed and currently a soil vapor extraction system is operating at the site.		
11	Stock Building Supply , 595 E. Orange Show Rd. San Bernardino, CA 92408	WDS, AST, San Bernardino County Permit, HAZNET	**Low**, based on the business apparently no longer operating at this location.
	Current Agency Status: A building supply company with outside materials storage they are required to monitor storm water runoff water from their site. They are a permitted hazardous materials handler and small quantity generator. Unspecified organic liquid mixtures and oil containing wastes are generated at the facility.		
12	EPTC San Bernardino, 25720 San Bernardino Ave. San Bernardino, CA 92410	RCRA-SQG, San Bernardino County Permit, HAZNET, HWP	**Low**, based on the limited hazardous waste generated.
	Current Agency Status: The Southern California Edison or Mountain View Power Company site is an active natural gas power plant.		

Regulatory Agency Database Rankings, SART-Phase III Project, Waterman Avenue, San Bernardino, to California Street, Redlands, California			
EDR Map ID	**Facility Name and Address**	**Listed Database(s)**	**Recognized Environmental Condition (REC) Potential**
12	Southern California Edison, 25770 San Bernardino Ave. San Bernardino, CA 92408	NPDES, LUST, Hist Cortese, HAZNET, EMI	**Low**, based on the LUST closed in 1987, and limited hazardous waste generated.
	Current Agency Status: The Southern California Edison or Mountain View Power Company site is an active natural gas power plant. The facility is a hazardous materials handler and generates waste oil. A gasoline UST was a LUST soil contamination case that was closed in 1987. The NPDES permit was for construction storm water that ended in 2007. The HAZNET database is for the disposal of asbestos and solvent-containing waste. The EMI is for stack gases.		
16	Meridian Rail Services, 1475 Cooley Ct., San Bernardino, CA 92408	San Bernardino County Permit, HAZNET	**Low**, based on the type of hazardous material generated.
	Current Agency Status: Greenbrier Rail Services, the facility is a hazardous materials handler and generator. It had an above ground petroleum storage tank, but the permit is inactive. It generates waste oil and other solid organics.		
16	CET 1430 Cooley Ct., San Bernardino, CA 92408	San Bernardino County Permit, HAZNET	**Low**, based on the type and limited amount of hazardous material generated
	Current Agency Status: Center for Employment Training (CET) is A hazardous materials handler and limited quantity generator. It generates photochemical waste.		
16	J P Technologies 1430 Cooley Ct., San Bernardino, CA 92408	RCRA-SQG, FINDS, HAZNET	**Low**, based on the amount of material generated and distance from the site.
	Current Agency Status: A measurement instrument manufacturer, it is a small quantity generator. The facility generates liquids with a pH less than 2, hydrocarbon solvents, and laboratory waste chemicals.		
16	Garner Holt Productions 825 E. Cooley Ave., San Bernardino, CA 9240	San Bernardino County Permit, HAZNET	**Low**, based on the type and limited amount of hazardous material generated.
	Current Agency Status: A manufacturer of animatronic characters, and other special effects, it is a hazardous materials handler and limited quantity generator. It generates waste oil and unspecified aqueous solution (tank bottom waste).		

Regulatory Agency Database Rankings, SART-Phase III Project, Waterman Avenue, San Bernardino, to California Street, Redlands, California			
EDR Map ID	**Facility Name and Address**	**Listed Database(s)**	**Recognized Environmental Condition (REC) Potential**
17	Ground Hog, Inc., 1470 S. Victoria Ct. San Bernardino CA 92408	San Bernardino County Permit	**Low**, based on the type and limited amount of hazardous material generated.
	Current Agency Status: A manufacturer of trenchers and small earth drills, it is a hazardous materials handler and limited quantity generator.		
18	Waterman Landfill, North of Carnegie, and Vanderbuilt Roads, San Bernardino, CA 92408	SWF/LF	**Low**, based on the lack of volatile organic components in the groundwater and the continued monitoring of the facility by the RWQCB.
	Current Agency Status: The Waterman Landfill was operated by the city from 1950 through 1960, under lease from the Tri-City airport. It was a "trench and fill" operation. Only non-hazardous household, commercial, industrial and agricultural wastes were accepted. The landfill is bordered on the north by the San Bernardino County Flood Control Easement on the west by a motel (former Blacklands Landfill), and extends east to the BNSF Railroad tracks. Currently, there is methane gas extraction and groundwater monitoring of the landfill. One monitoring well is located south of the proposed SART-Phase III. One landfill site, the California Street Landfill, was not listed in the EDR Database. This landfill is discussed in detail in the following Database Summary section of this report.		
21	Roofers Asphalt Equipment, Co. 9975 Waterman Avenue, San Bernardino, CA 92408	Hist UST	**Low**, based on the removal of the former USTs.
	Current Agency Status: Located north of the Santa Ana River, this facility had two motor fuel USTs. These USTs have been removed.		

Orphan Summary

The orphan summary, is a list of all sites whose location is not readily identified and/or mapped, and may be on or near the project alignment. There were some sites listed which were previously listed in the database search but misaddressed.

We reviewed the orphan summary list and there were no sites listed adjacent to the proposed SART-Phase III project alignment.

Division of Oil, Gas, and Geothermal Resources

The California Division of Oil, Gas, and Geothermal Resources (DOGGR) maintains a list of all producing and abandoned oil and gas wells within the State of California. We reviewed the Well Map W1-7 and California DOGGR Online Mapping System for the subject site and surrounding area, which revealed there are four geothermal wells ("TG"1, "TG"2, "TG4, and "TG5). All four wells are located over 0.25 mile from the proposed SART-Phase III alignment.

Geotracker

The California State Water Resources Control Board maintains an online database for UST, LUST, and SLIC (Spills, Leaks, Investigations, and Cleanups) sites. The proposed SART-Phase III alignment and immediately adjacent properties did not appear in the database as either an UST, LUST, or SLIC site.

Database Summary

There are numerous other listed sites in the EDR Database Report which we have not placed in the above table or discussed, even though they are within one mile of the proposed SART-Phase III project alignment. However, based on their distance from the alignment, case status, or nature of the actual or potential contamination, the likelihood of any adverse environmental impact from these properties to the project is considered to be very low to nil. Further information on these sites is provided within the EDR Corridor Study in Appendix D.

One site, the California Street Landfill, was not listed in the EDR Corridor Study. This landfill is an active Class III landfill located east of the northerly terminus of California Street. This landfill accepts municipal and construction waste and sludge (bio-solids). No adverse environmental impact to the proposed SART-Phase III alignment is anticipated due to its permitted status and regulatory oversight of their operations.

REGULATORY AGENCY RECORDS REVIEW

The San Bernardino County Fire Department, Hazardous Materials Division (SBCFD-HMD) is the local oversight agency for spills, releases, cleanups, site assessments, and permitting. For sites with a larger potential environmental impact, the California

Regional Water Quality Control Board, Santa Ana Region (CRWQCB-SAR) or Department of Toxic Substances Control (DTSC) may be the lead agency for soil and groundwater assessment and/or remediation.

As there were no specific sites on or immediately adjacent to the proposed SART-Phase III alignment, that would have an adverse environmental impact to the project, neither agency was contacted.

ENVIRONMENTAL CLEANUP LIENS AND ACTIVITY OR USE LIMITATIONS

Under AAI and ASTM E 1527-05, a search for environmental cleanup liens and activity or use limitations must be conducted. The EDR database report did not list any recorded environmental cleanup liens or activity or use limitations for the proposed alignment or immediately adjacent properties.

DATA GAPS

Under AAI, data gaps that remain after the conduct of all required activities must be identified. The source of information consulted to address the data gaps should be identified and the significance of the data gaps with respect to our ability to identify conditions indicative of releases or threatened release of hazardous substances on, at, in, or to the property should be addressed. There were no significant data gaps remaining after our conduct of the AAI.

CONCLUSIONS AND RECOMMENDATIONS

There are no environmentally impaired sites on the proposed SART-Phase III alignment. No significant amounts of trash and debris were noted. No stained soils or unusual odors were detected during this ISA. There are adjacent properties with environmental impairments, however, these are either regional groundwater issues or sites that are undergoing remediation/cleanup. Based on our review of the regulatory information for the sites with contamination of soil and/or groundwater, there do not appear to be any sites that will have an adverse environmental impact to the proposed SART-Phase III project.

We have performed this ISA in general accordance with ASTM E 1527-05 and AAI set forth in 40 CFR Part 312 for the SART-Phase III project in San Bernardino County, California. Except for the regional groundwater contamination plumes that are present under portions of the SART-Phase III alignment, this ISA has revealed no evidence of recognized environmental conditions indicative of releases or threatened releases of hazardous substances on, at, in, or to the proposed SART-Phase III alignment.

STATEMENT OF QUALIFICATIONS

We have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the subject property. We have developed and performed the all appropriate inquires in conformance with the standards and practices set forth in 40 CFR Part 312.

Mr. M. Kevin Osmun has over 20 years experience in the environmental field. Mr. Osmun directs LOR Geotechnical Group's environmental operations and has conducted over 800 Phase I Environmental Site Assessments for the private and public sectors. The properties have ranged from agricultural to commercial/industrial. In addition to his experience with environmental assessments for property transfers, he has managed projects that require mitigation prior to and during development. Mr. Osmun is well versed in hazardous waste sampling and characterization methodologies in soil and groundwater regimes and risk assessments. Projects have ranged from leaking USTs, solid waste landfills, TSD facility closures to single spill response. LOR Geotechnical Group, Inc. is one of three firms that provides report review for underground storage tank closure for the County of San Bernardino, Fire Department Hazardous Materials Division.

Mr. Osmun has a B.S. in geology from Wayne State University, Detroit, Michigan. He is a Registered Professional Civil Engineer and Environmental Assessor II in the State of California.

LIMITATIONS

This report was prepared solely for the use and benefit of LOR's client, Tom Dodson & Associates and their designates. They may release this information to third parties, who may use and rely upon this information at their discretion. However, any use of or reliance upon this information by a party other than Tom Dodson & Associates and

their designates, shall be solely at the risk of such third party and without legal recourse against LOR Geotechnical Group, Inc.; its subsidiaries and affiliates; or their respective employees, officers, or directors; regardless of whether the action in which recovery of damages is sought is based upon contract, statute, or otherwise. This information shall not be used or relied upon by a party which does not agree to be bound by the above statement.

The content and conclusions provided by LOR in this assessment are based on information collected during our investigation, which may include, but is not limited to, visual site inspections, interviews with the site owner, regulatory agencies and other pertinent individuals, review of available public documents, subsurface exploration and laboratory testing of soil samples, and our professional judgement based on said information at the time of preparation of this document. Any subsurface samples results and observations presented herein are considered to be representative of the area of investigation; however, soil conditions may vary between sample locations and may not necessarily apply to the general site as a whole. If future subsurface or other conditions are revealed which may vary from these findings, the newly-revealed conditions must be evaluated and may invalidate the conclusions of this report.

This report has been prepared in accordance with generally accepted practices using standards of care and diligence normally practiced by recognized consulting firms performing services of a similar nature. LOR Geotechnical Group, Inc. (LOR) is not responsible for the accuracy of information provided by other individuals or entities which is used in this report. This report presents our professional judgement based upon data and findings identified in this report, and the interpretation of such data based upon our experience and background, and no warranty, either expressed or implied, is made. The conclusions presented are based upon the current regulatory climate and may require revision if future regulatory changes occur.

TIME LIMITATIONS

The findings of this report are valid as of this date. Changes in the condition of a property can, however, occur with the passage of time, whether they be due to natural processes or the work of man on this or adjacent properties. In addition, changes in the Standards-of-Practice and/or Governmental Codes may occur. Due to such changes, the findings of this report may be invalidated wholly or in part by changes beyond our control. Therefore, this report should not be relied upon after a

significant amount of time without a review by LOR Geotechnical Group, Inc., verifying the suitability of the conclusions and recommendations.

CLOSURE

We declare that, to the best of our professional knowledge and belief, we meet the definition of Environmental Professional as defined in § 312.10 of 40 CFR part 312.

We appreciate this opportunity to be of service and trust this report provides the information desired at this time. Should questions arise, please do not hesitate to contact this office.

Respectfully submitted,
LOR Geotechnical Group, Inc.

M. Kevin Osmun, REA II, CE 55116
Vice President

MKO:MLH/mmm

Distribution: Addressee (4)

REFERENCES

1 United States Geological Survey (USGS), 1901, San Bernardino Quadrangle, 15 Minute Series (Topographic), Scale 1:62,500.

2 United States Geological Survey (USGS), 1901, Redlands Quadrangle, 15 Minute Series (Topographic), Scale 1:62,500.

3 United States Geological Survey (USGS), 1901, San Bernardino Quadrangle, 15 Minute Series (Topographic), Scale 1:50000.

4 United States Geological Survey (USGS), 1942, San Bernardino Quadrangle, 15 Minute Series (Topographic), Scale 1:62500.

5 United States Geological Survey (USGS), 1954, San Bernardino Quadrangle, 15 Minute Series (Topographic), Scale 1:62500.

6 United States Geological Survey (USGS), 1954, San Bernardino South Quadrangle, 7.5 Minute Series (Topographic), Scale 1:24000.

7 United States Geological Survey (USGS), 1954, Redlands Quadrangle, 7.5 Minute Series (Topographic), Scale 1:24000.

8 United States Geological Survey (USGS), 1967, San Bernardino South Quadrangle, 7.5 Minute Series (Topographic), Scale 1:24000.

9 United States Geological Survey (USGS), 1967, Redlands Quadrangle, 7.5 Minute Series (Topographic), Scale 1:24000.

10 United States Geological Survey (USGS), 1973, San Bernardino South Quadrangle, 7.5 Minute Series (Topographic), Scale 1:24000 (photo-revised 1967).

11 United States Geological Survey (USGS), 1975, San Bernardino South Quadrangle, 7.5 Minute Series (Topographic), Scale 1:24000.

12 United States Geological Survey (USGS), 1980, San Bernardino South Quadrangle, 7.5 Minute Series (Topographic), Scale 1:24000 (photo-revised 1967).

13 United States Geological Survey (USGS), 1980, Redlands Quadrangle, 7.5 Minute Series (Topographic), Scale 1:24000 (photo-revised 1967).

14 United States Geological Survey (USGS), 1988, Redlands Quadrangle, 7.5 Minute Series (Topographic), Scale 1:24000 (photo-revised 1967).

15 United States Geological Survey (USGS), 1996, Redlands Quadrangle, 7.5 Minute Series (Topographic), Scale 1:24000 (photo-revised 1967).

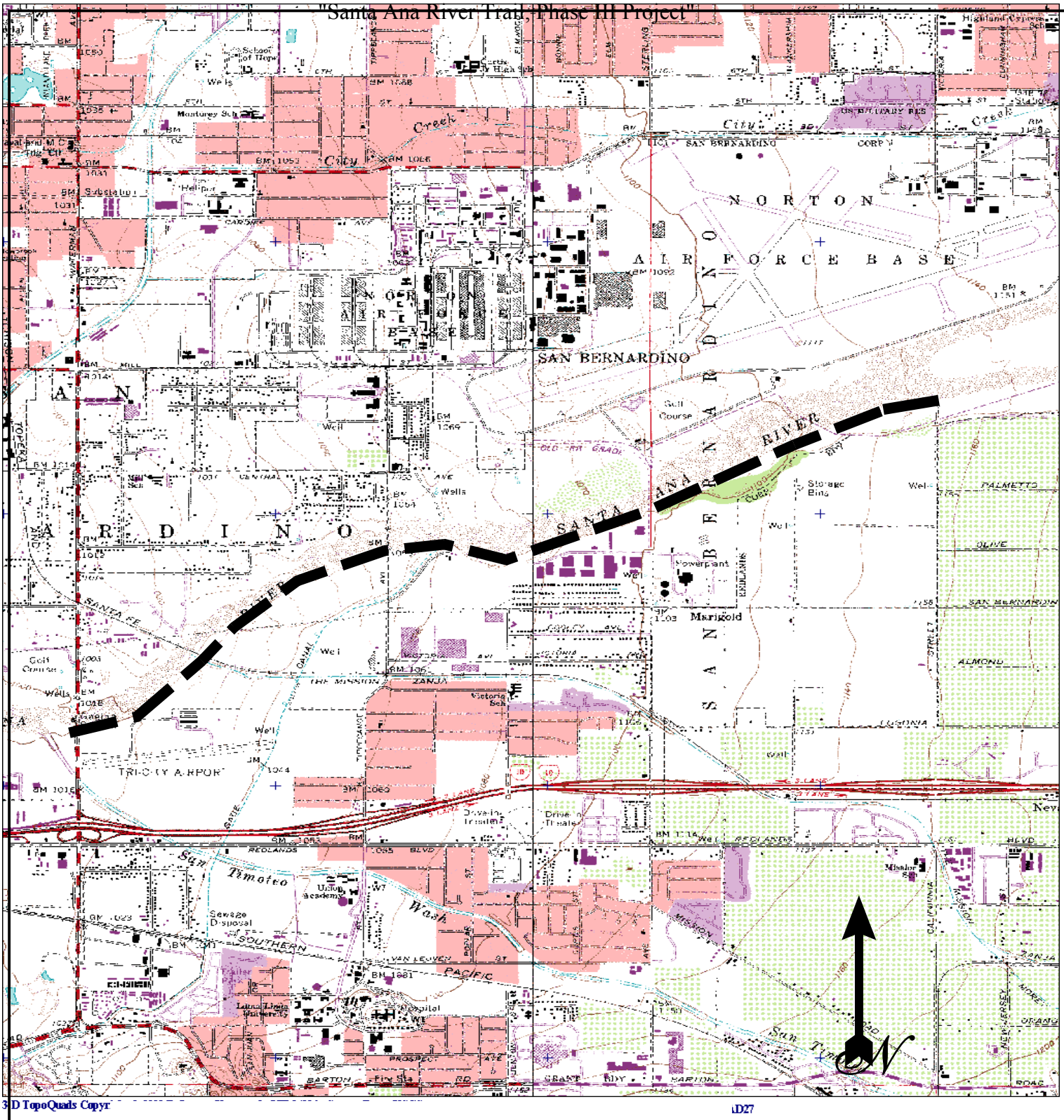
16 California Online Geotracker Database, http://www.geotracker.swrcb.ca.gov/.

17 Fife, D.L. and others, 1976, Geologic Hazards in Southwestern San Bernardino County, California: California Division of Mines and Geology Special Report 113.

APPENDIX A

Index Map, SART-Phase III Proposed Alignment, and Color Photographs

Exhibit 4: Initial Study and Mitigated Negative Declaration for the "Santa Ana River Trail, Phase III Project"



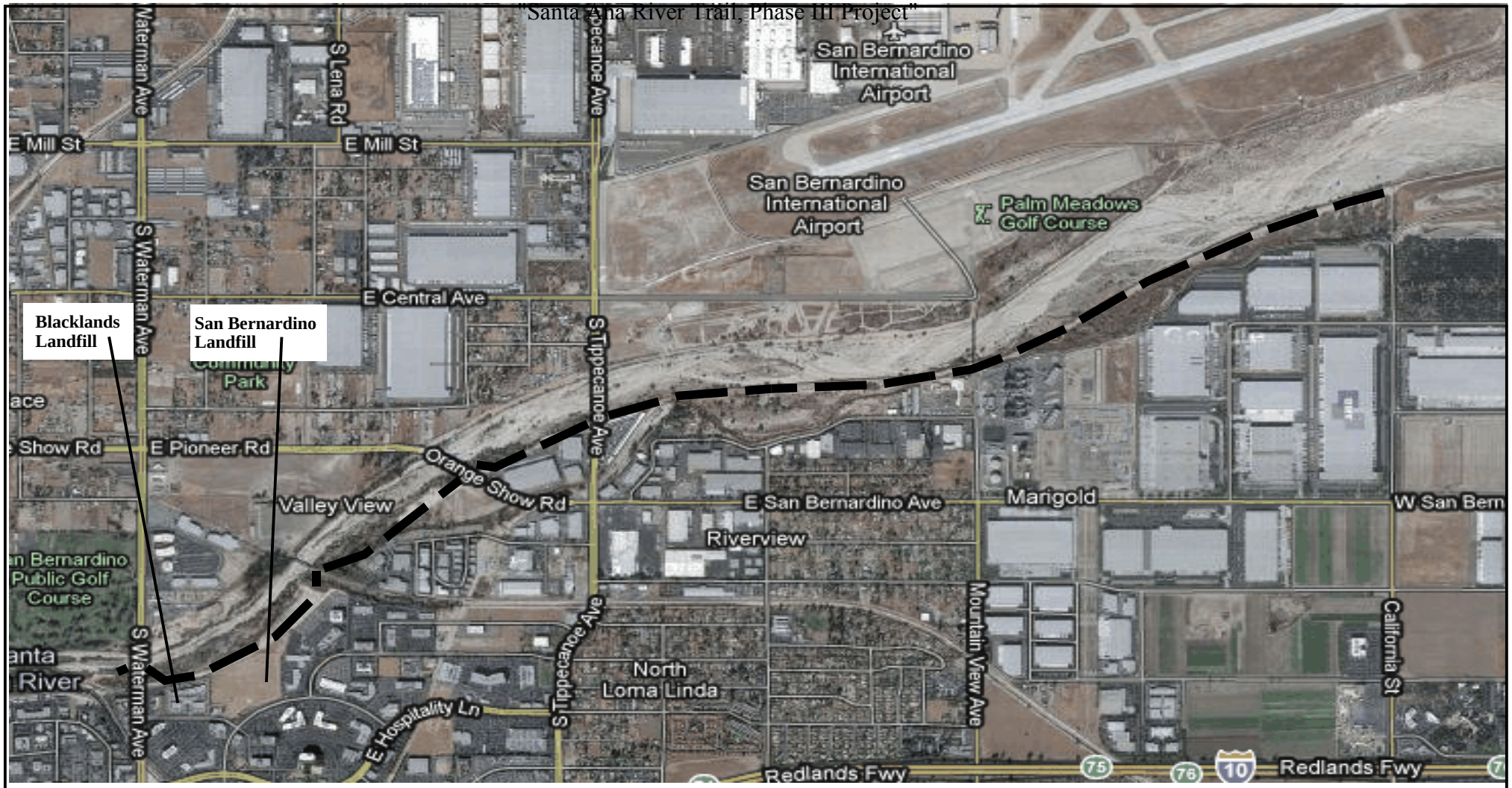
3-D TopoQuads Copyr

D27

INDEX MAP

PROJECT:	**SART-PHASE III, Waterman to California** Avenues, SanBernardino County, CA	**PROJECT NO.:**	**62778.2**
CLIENT:	**Tom Dodson & Associates**	**ENCLOSURE:**	**A-1**
LOR Geotechnical Group, Inc.		**DATE:**	**February, 2011**
		SCALE:	**1" ~3,200'**

Exhibit 4: Initial Study and Mitigated Negative Declaration for the "Santa Ana River Trail, Phase III Project"



LEGEND

Project Alignment

SART-PHASEIII PROPOSED ALIGNMENT

PROJECT:	SART-PHASE III, Waterman to California Avenues, SanBernardino County, CA	PROJECT NO.:	62778.2
CLIENT:	Tom Dodson & Associates	ENCLOSURE:	A-2
LOR Geotechnical Group, Inc.		DATE:	February, 2011
		SCALE:	No Scale

PHOTO 1 VIEW FACING EAST AT THE BEGINNING OF THE SART-PHASE III, WHERE IT LEAVES THE EXISTING PHASE II TO CROSS UNDER WATERMAN AVENUE. THE PHASE III ALIGNMENT IS EVIDENCED BY THE STAKE IN THE SLOPE.

PHOTO 2 VIEW FACING WEST SHOWING THE ALIGNMENT COMMING UP THE SLOPE (STAKE TO RIGHT) ONTO THE FLOOD CONTROL LEVEE. WATERMAN AVENUE AND MOTELS ARE VISIBLE IN THE BACKGROUND.

PHOTO 3 VIEW FACING EAST NEAR WATERMAN SHOWING THE PROJECT ALIGNMENT ALONG THE FLOOD CONTROL LEVEE. IN THE BACKGROUND, TO THE RIGHT (SOUTH) IS A BUSINESS PARK.

PHOTO 4 CONTINUING EAST ALONG THE PROJECT ALIGNMENT WITH THE ARGOSY UNIVERSITY BUILDINGS IN THE BACKGROUND TO THE RIGHT.

PHOTO 5 VIEW OF THE FORMER WATERMAN LANDFILL SHOWING A GROUNDWATER MONITORING WELL SOUTH OF THE PROPOSED PROJECT ALIGNMENT. IN THE BACKGROUND IS THE BLOCK WALL ENCLOSED METHANE SCRUBBER. TO THE RIGHT IS A FIRE STATION, FOLLOWED BY A BUSINESS PARK.

PHOTO 6 VIEW FACING EAST ALONG THE PROJECT ALIGNMENT HEADING TOWARD THE BNSF RAILROAD CROSSING.

PHOTO 7 VIEW FACING WESTERLY SHOWING THE PROJECT ALIGNMENT AS IT CROSSES THROUGH A SMALL EPHEMERAL CREEK BEFORE GOING UNDER THE BNSF RAILROAD CROSSING. IN THE BACKGROUND IS ARGOSY UNIVERSITY BUILDINGS.

PHOTO 8 VIEW FACING WESTERLY SHOWING THE PROJECT ALIGNMENT AS IT EXITS FROM UNDER THE BNSF RAILROAD BRIDGE, HEADING BACK UP TO THE LEVEE.

PHOTO 9 VIEW FACING WEST SHOWING THE PROJECT ALIGNMENT BACK ON THE LEVEE AND THE HIGH VOLTAGE POWER LINES THAT CROSS OVER AT THIS POINT. PROPERTIES SOUTH OF THE FLOOD CONTROL EASEMENT ARE COMMERCIAL/INDUSTRIAL.

PHOTO 10 VIEW FACING EAST SHOWING THE PROJECT ALIGNMENT WITH ORANGE SHOW ROAD IN THE FAR BACKGROUND. TO THE LEFT ARE STORED CONCRETE BEAMS AND OTHER INERT MATERIALS. PROPERTIES SOUTH OF THE FLOOD CONTROL EASEMENT IN THIS AREA ARE VACANT.

PHOTO 11 VIEW FACING WEST FROM NEAR ORANGE SHOW ROAD SHOWING THE PROJECT ALIGNMENT AND IN THE BACKGROUND ARE THE STORED CONCRETE AND OTHER INERT ITEMS.

PHOTO12 VIEW FACING WEST SHOWING THE PROJECT ALIGNMENT WITHIN THE RIVERBED, CROSSING UNDER THE ORANGE SHOW ROAD BRIDGE.

PHOT 13 VIEW FACING EAST NEAR ORANGE SHOW ROAD SHOWING THE ALIGNMENT ON THE LEVEE. TO THE RIGHT (SOUTH) ARE NEWLY CONSTRUCTED AND STILL UNOCCUPIED INDUSTRIAL BUILDINGS.

PHOTO 14 VIEW FACING EAST AS YOU APPROACH TIPPECANOE AVENUE. IN THE BACKGROUND, TO THE LEFT, IS A FILL STOCKPILE AT TIPPECANOE..

PHOTO 15 VIEW FACING EAST AT TIPPECANOE AVENUE SHOWING THE PROJECT ALIGNMENT. TO THE RIGHT (SOUTH) IS A BOAT AND RV STORAGE FOLLOWED BY A WATER TREATMENT FACILITY, THEN RESIDENTIAL PROPERTY.

PHOTO 16 VIEW FACING EAST, CONTINUING ALONG THE PROJECT ALIGNMENT ANOTHER SET OF HIGH VOLTAGE POWER POLES. THE POLES ARE CONCRETE ENCASED FOR EROSION PURPOSES. VACANT LAND THEN COMMERCIAL BUILDINGS ARE SOUTH OF THE LEVEE THROUGH THIS AREA.

PHOTO 17 VIEW FACING SOUTH OF THE LEVEE SHOWING THE VACANT LAND FOLLOWED BY COMMERCIAL BUILDINGS ON THE SEGMENT FROM TIPPECANOE TO MOUNTAIN VIEW AVENUES.

PHOTO 18 VIEW FACING EAST ALONG THE SEGMENT FROM TIPPECANOE TO MOUNTAIN VIEW AVENUES. THE MOUNTAIN VIEW (SCE) POWER PLANT IS IN THE BACKGROUND.

PHOTO 19 VIEW FACING EAST AS YOU APPROACH MOUNTAIN VIEW AVENUE AND THE MOUNTAIN VIEW POWER PLANT.

PHOTO 20 VIEW FACING EAST AT MOUNTAIN VIEW AVENUE AND THE PROJECT ALIGNMENT. TO THE LEFT IS THE MONIER LIFETILE FACILITY, WHICH APPEARS TO BE AT A LIMITED TO NON-OPERATIONAL STATUS.

PHOTO 21 VIEW FACING NORTH AT MOUNTAIN VIEW AVENUE AND THE PROJECT ALIGNMENT, SHOWING THE FORMER RAILROAD CROSSING, AND THE FORMER NORTON AFB IN THE BACKGROUND.

PHOTO 22 VIEW FACING WEST AT MOUNTAIN VIEW AVENUE AND THE PROJECT ALIGNMENT. TO THE RIGHT IS THE MOUNTAIN VIEW POWER PLANT.

PHOTO 23 VIEW FACING WEST SHOWING THE SEGMENT FROM MOUNTAIN VIEW TO CALIFORNIA AVENUES. NOTE THE ALIGNMENT STAKE IS OFFSET TO THE LEFT AS THE GROUND AT THE ALIGNMENT WAS TOO HARD TO DRIVE THE STAKE.

PHOTO 24 VIEW OF A LOCKHEED MARTIN GROUNDWATER MONITORING WELL, LOCATED SOUTH OF THE PROJECT ALIGNMENT, EAST OF MOUNTAIN VIEW AVENUE.

PHOTO 25 VIEW FACING WEST SHOWING THE PROJECT ALIGNMENT WITH THE MOUNTAIN VIEW POWER PLANT IN THE BACKGROUND. TO THE RIGHT ARE STOCKPILES OF SOIL AND INERT DEBRIS PLACED ON THE EDGE OF THE LEVEE.

PHOTO 26 VIEW FACING EAST ALONG THE MOUNTAIN VIEW TO CALIFORNIA AVENUES SEGMENTS. TO THE RIGHT ACROSS VACANT LAND IS A RECENTLY CONSTRUCTED INDUSTRIAL PARK.

PHOTO 27 VIEW OF THE PAINT BALL COURSE SET UP ON THE VACANT LAND SOUTH OF THE LEVEE AND PROJECT ALIGNMENT AT CALIFORNIA AVENUE. IN THE BACKGROUND, THROUGH THE TREES, IS A FORMER LANDFILL, NOW CLOSED AND COVERED.

APPENDIX B

The EDR Historical Topographic Map Report

SART- Phase III

SART- Phase III

San Bernardino, CA 92408

Inquiry Number: 2976305.2

January 27, 2011

EDR Historical Topographic Map Report

EDR® Environmental Data Resources Inc

440 Wheelers Farms Road
Milford, CT 06461
800.352.0050
www.edrnet.com

EDR Historical Topographic Map Report

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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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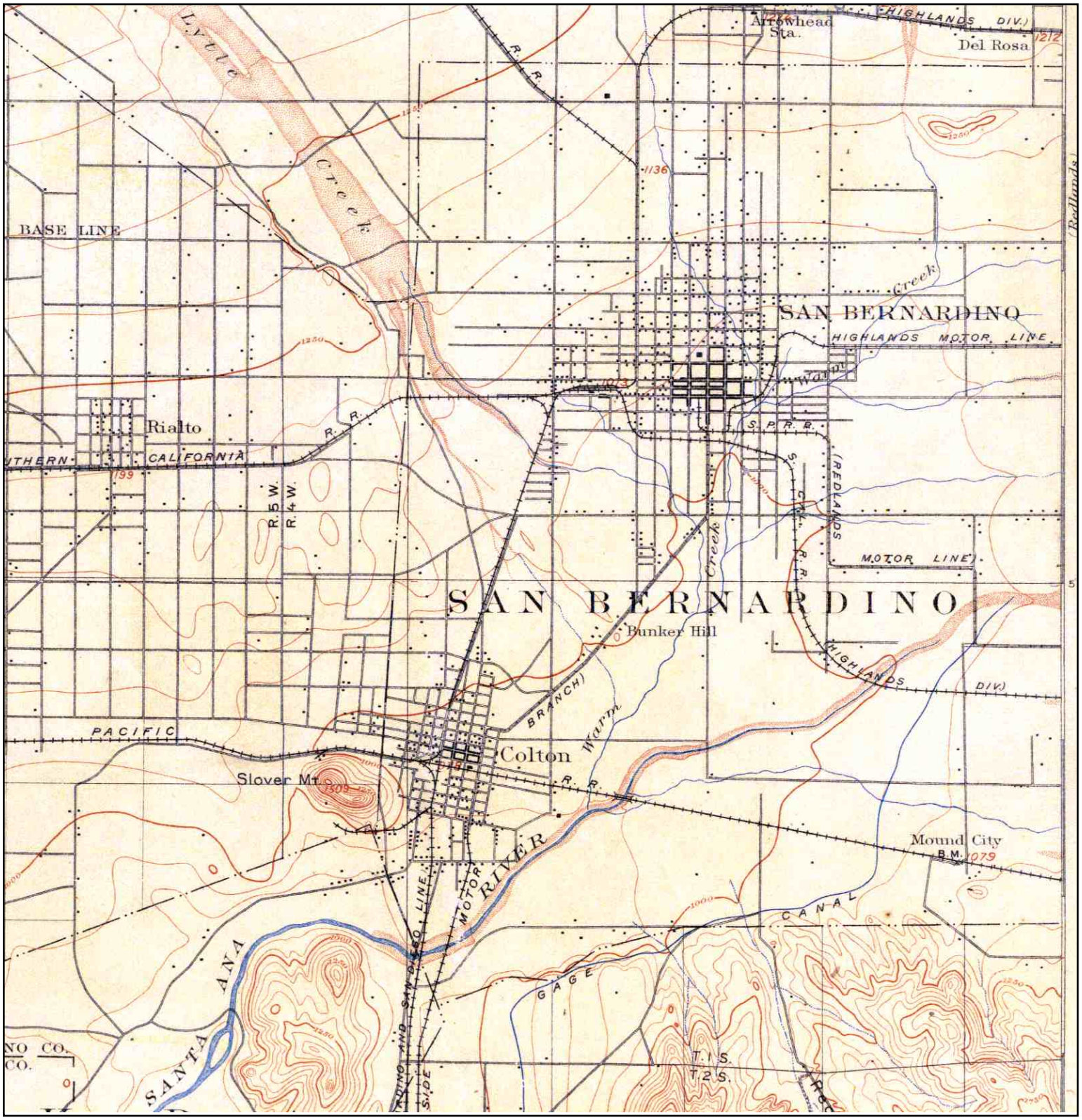
Exhibit 4: Initial Study and Mitigated Negative Declaration for the
"Santa Ana River Trail, Phase III Project"

Historical Topographic Map



N	**TARGET QUAD** NAME: SAN BERNARDINO MAP YEAR: 1901 SERIES: 15 SCALE: 1:62500	SITE NAME: SART- Phase III ADDRESS: SART- Phase III San Bernardino, CA 92408 LAT/LONG: 34.0849 / -117.2507	CLIENT: LOR Geotechnical Group, Inc. CONTACT: Kevin Osmun INQUIRY#: 2976305.2 RESEARCH DATE: 01/27/2011

Exhibit 4: Initial Study and Mitigated Negative Declaration for the
"Santa Ana River Trail, Phase III Project"

Historical Topographic Map

N	**TARGET QUAD** NAME: SOUTHERN CA SHEET 1 MAP YEAR: 1901 SERIES: 60 SCALE: 1:250000	SITE NAME: SART- Phase III ADDRESS: SART- Phase III San Bernardino, CA 92408 LAT/LONG: 34.0849 / -117.2507	CLIENT: LOR Geotechnical Group, Inc. CONTACT: Kevin Osmun INQUIRY#: 2976305.2 RESEARCH DATE: 01/27/2011

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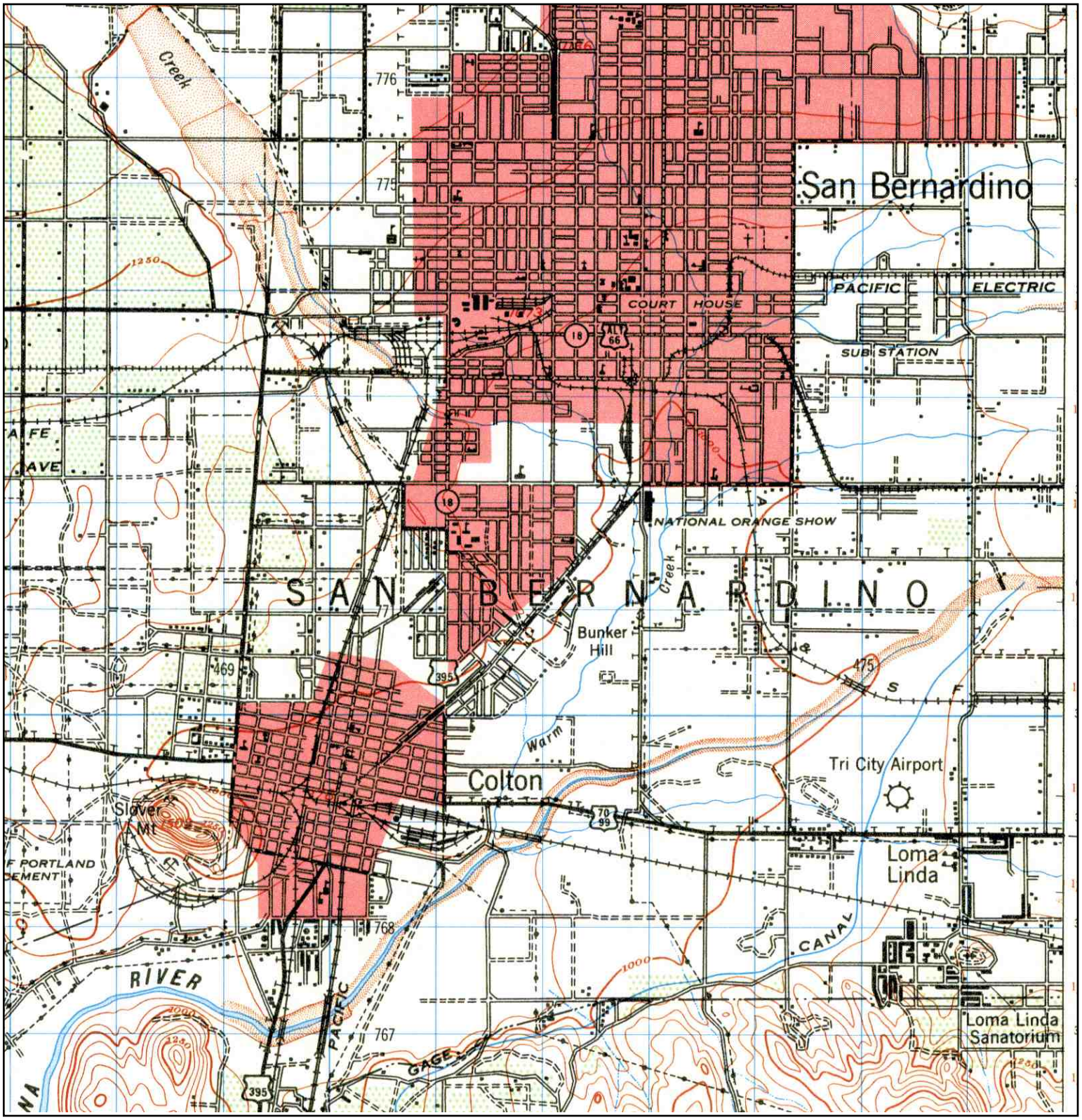
Historical Topographic Map



N	TARGET QUAD NAME: SAN BERNARDINO MAP YEAR: 1942 SERIES: 15 SCALE: 1:50000	SITE NAME: SART- Phase III ADDRESS: SART- Phase III San Bernardino, CA 92408 LAT/LONG: 34.0849 / -117.2507	CLIENT: LOR Geotechnical Group, Inc. CONTACT: Kevin Osmun INQUIRY#: 2976305.2 RESEARCH DATE: 01/27/2011

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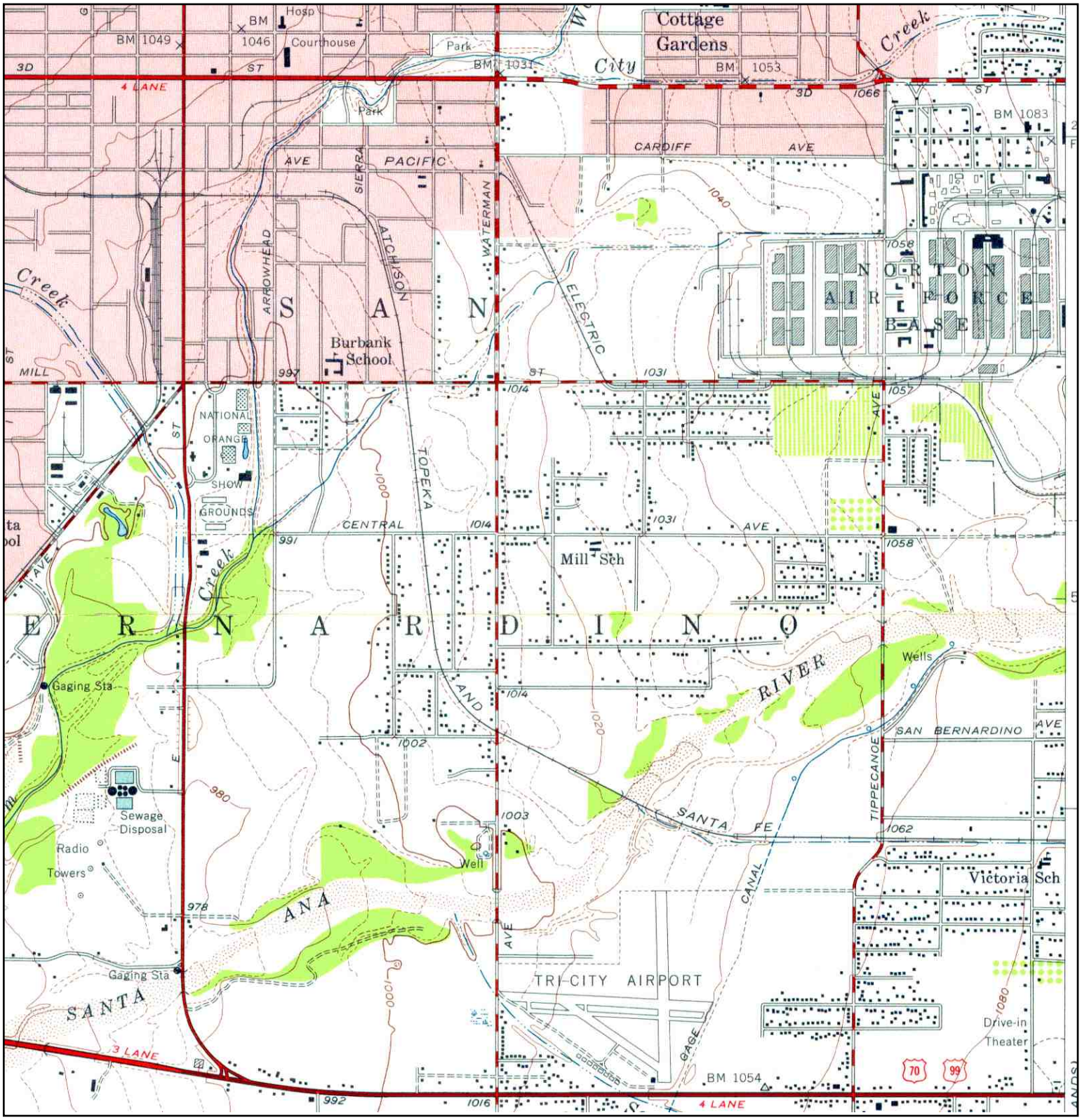

N	**TARGET QUAD** NAME: SAN BERNARDINO SOUTH MAP YEAR: 1954 SERIES: 7.5 SCALE: 1:24000	SITE NAME: SART- Phase III ADDRESS: SART- Phase III San Bernardino, CA 92408 LAT/LONG: 34.0849 / -117.2507	CLIENT: LOR Geotechnical Group, Inc. CONTACT: Kevin Osmun INQUIRY#: 2976305.2 RESEARCH DATE: 01/27/2011

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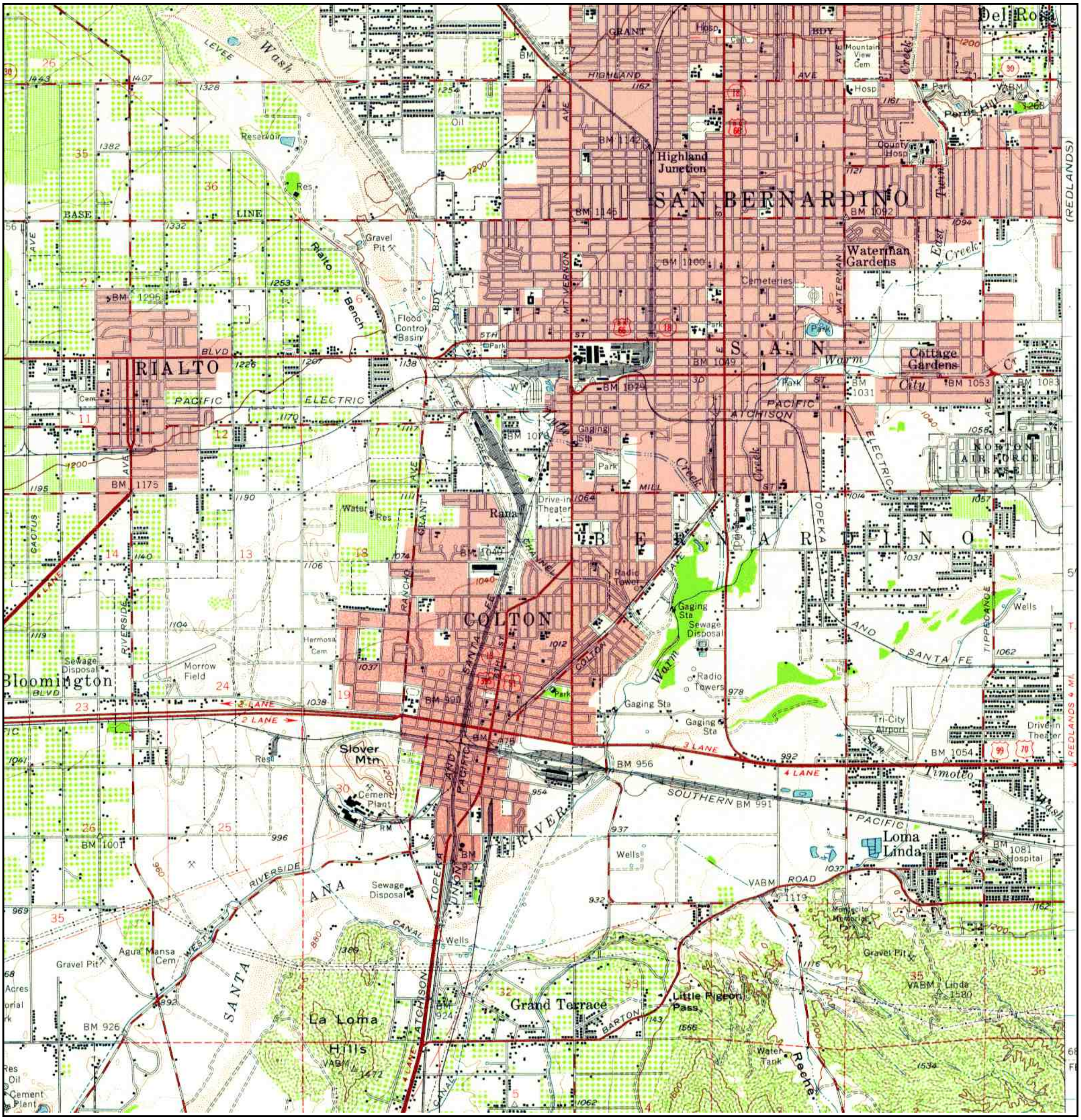
Historical Topographic Map



N ↑	TARGET QUAD NAME: SAN BERNARDINO MAP YEAR: 1954 SERIES: 15 SCALE: 1:62500	SITE NAME: SART- Phase III ADDRESS: SART- Phase III San Bernardino, CA 92408 LAT/LONG: 34.0849 / -117.2507	CLIENT: LOR Geotechnical Group, Inc. CONTACT: Kevin Osmun INQUIRY#: 2976305.2 RESEARCH DATE: 01/27/2011

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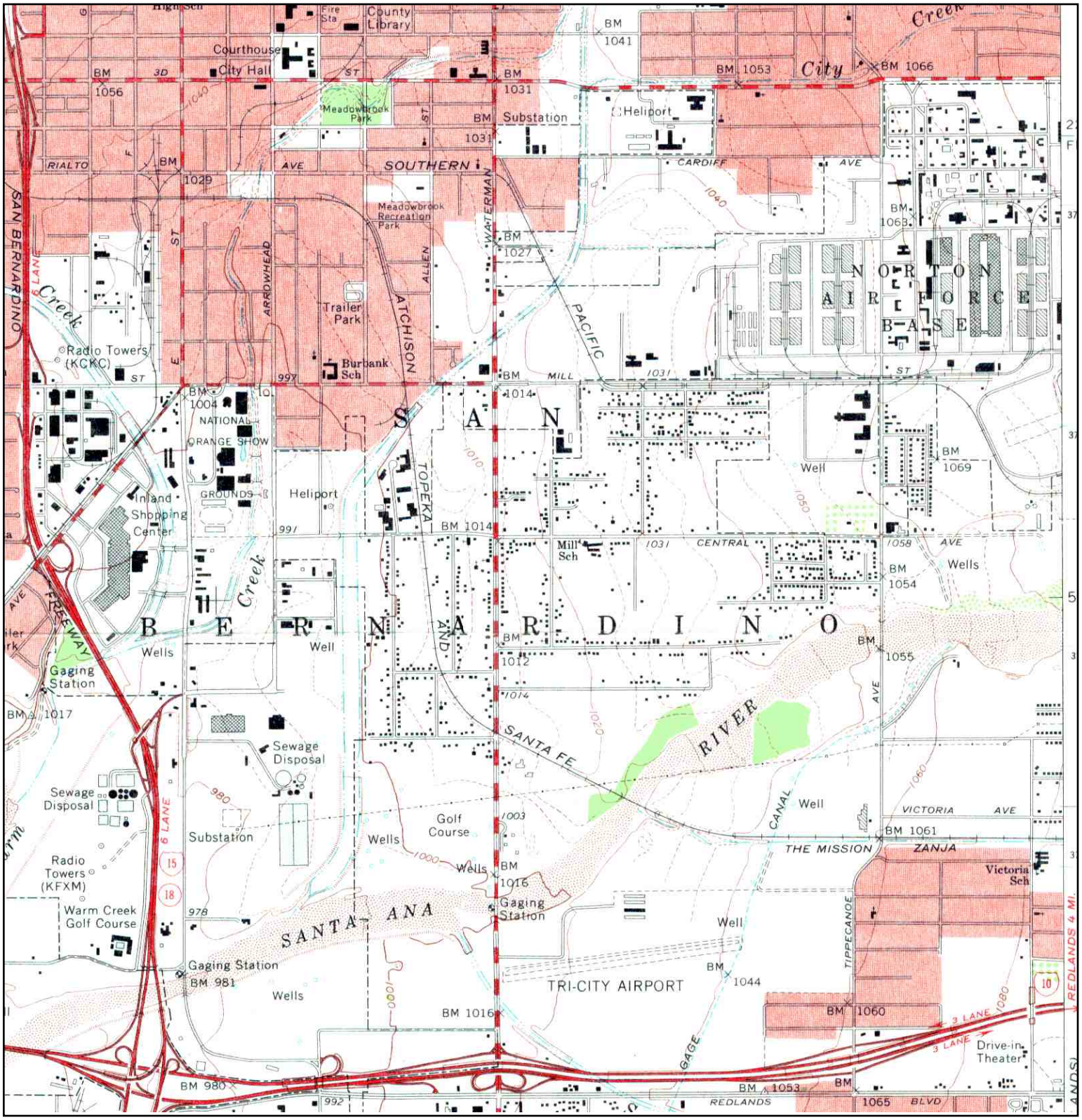
Historical Topographic Map



N	**TARGET QUAD** NAME: SAN BERNARDINO SOUTH MAP YEAR: 1967 SERIES: 7.5 SCALE: 1:24000	SITE NAME: SART- Phase III ADDRESS: SART- Phase III San Bernardino, CA 92408 LAT/LONG: 34.0849 / -117.2507	CLIENT: LOR Geotechnical Group, Inc. CONTACT: Kevin Osmun INQUIRY#: 2976305.2 RESEARCH DATE: 01/27/2011

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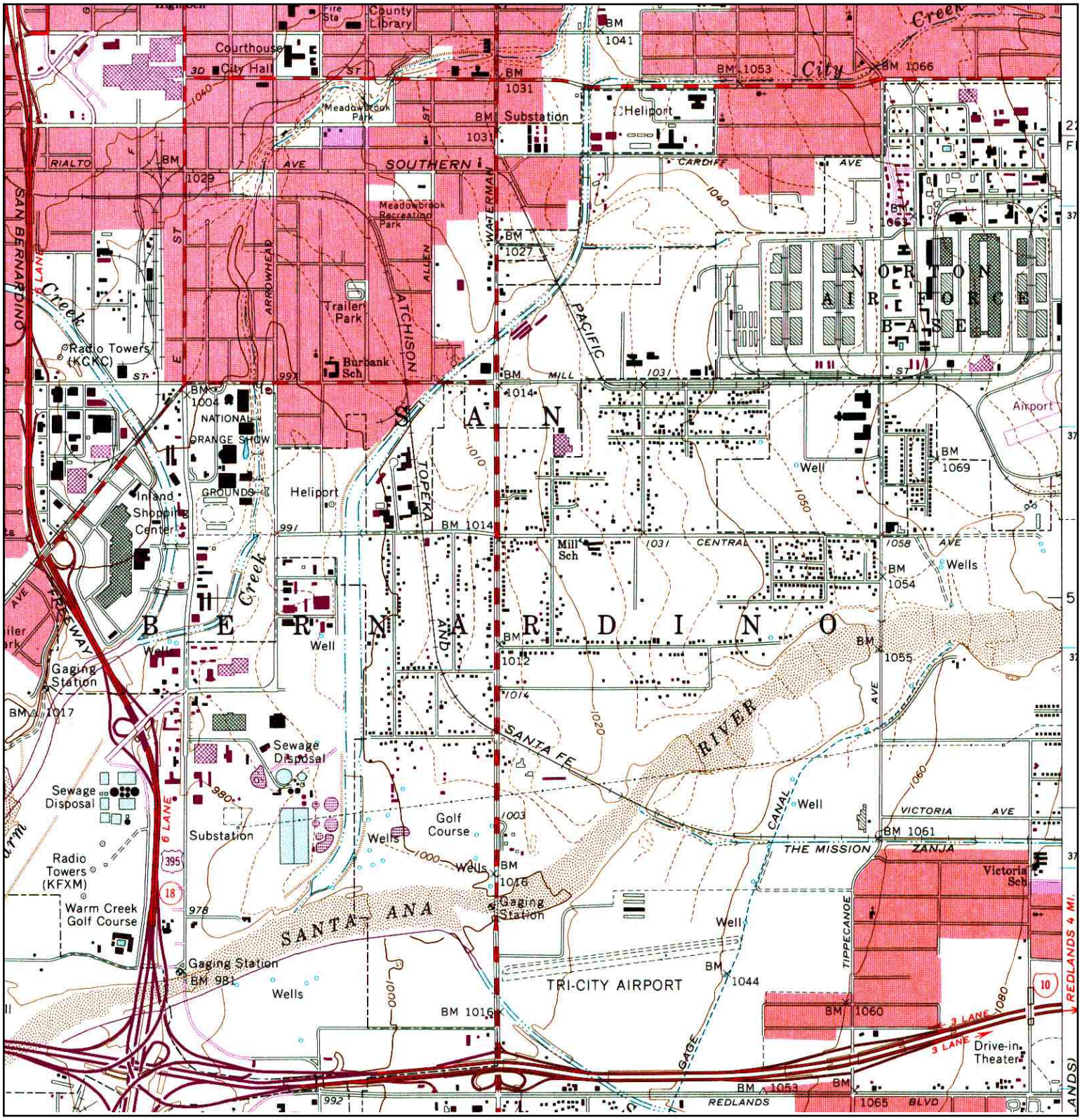

N	**TARGET QUAD** NAME: SAN BERNARDINO SOUTH MAP YEAR: 1973 PHOTOREVISED:1967 SERIES: 7.5 SCALE: 1:24000	SITE NAME: SART- Phase III ADDRESS: SART- Phase III San Bernardino, CA 92408 LAT/LONG: 34.0849 / -117.2507	CLIENT: LOR Geotechnical Group, Inc. CONTACT: Kevin Osmun INQUIRY#: 2976305.2 RESEARCH DATE: 01/27/2011

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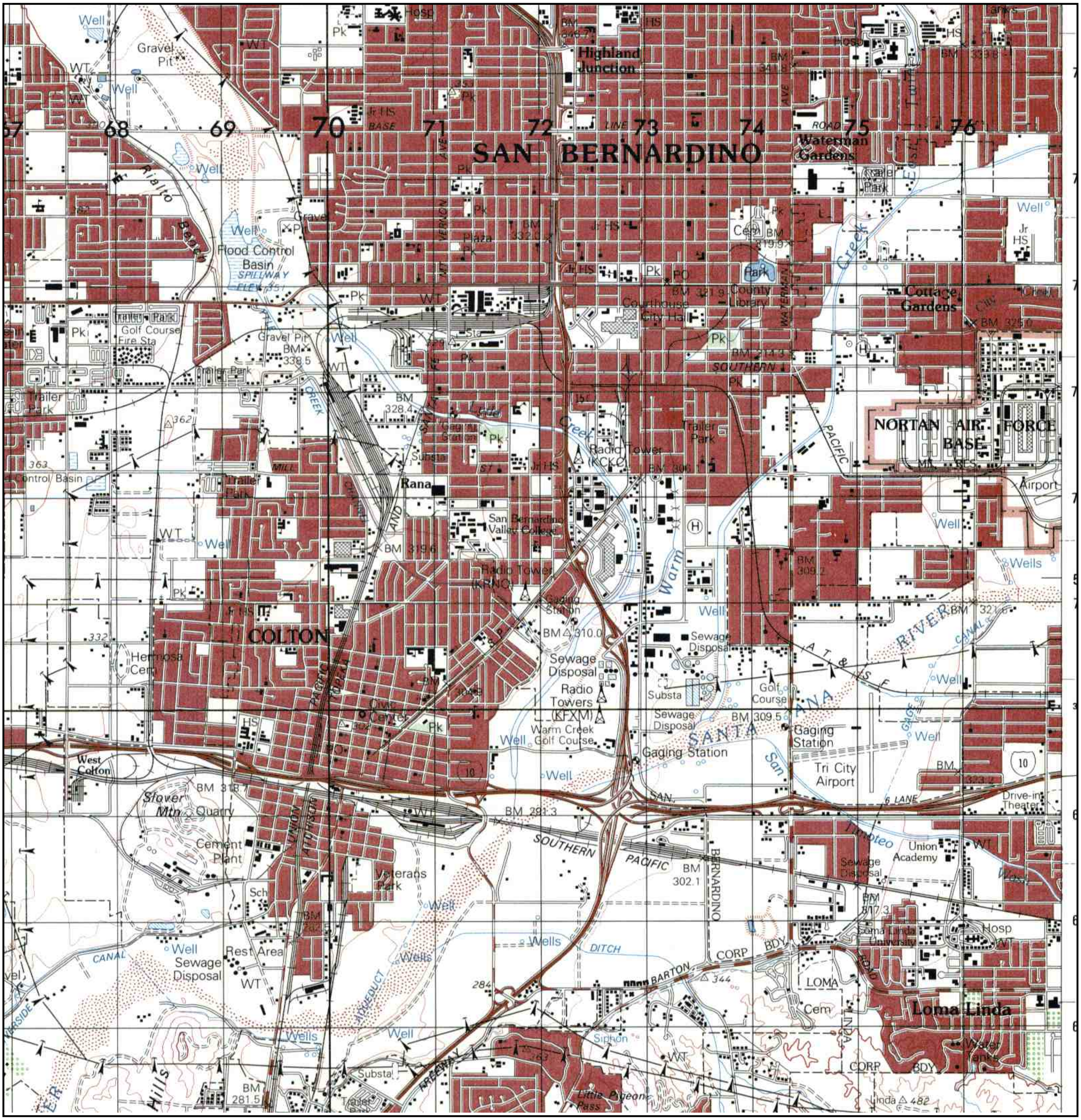

N ↑	TARGET QUAD NAME: SAN BERNARDINO MAP YEAR: 1975 SERIES: 15 SCALE: 1:50000	SITE NAME: SART- Phase III ADDRESS: SART- Phase III San Bernardino, CA 92408 LAT/LONG: 34.0849 / -117.2507	CLIENT: LOR Geotechnical Group, Inc. CONTACT: Kevin Osmun INQUIRY#: 2976305.2 RESEARCH DATE: 01/27/2011

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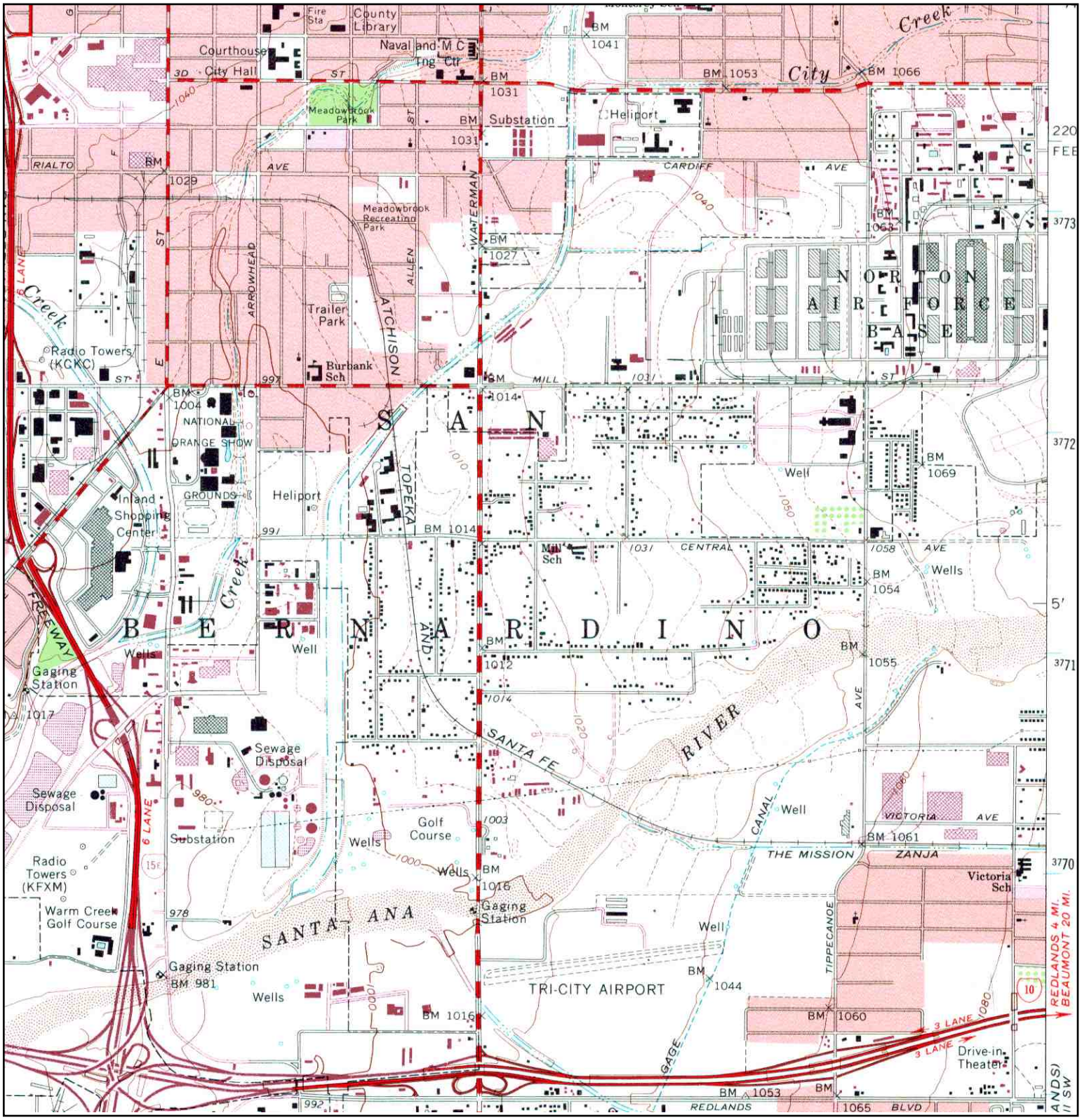
Historical Topographic Map



N	**TARGET QUAD** NAME: SAN BERNARDINO SOUTH MAP YEAR: 1980 PHOTOREVISED:1967 SERIES: 7.5 SCALE: 1:24000	SITE NAME: SART- Phase III ADDRESS: SART- Phase III San Bernardino, CA 92408 LAT/LONG: 34.0849 / -117.2507	CLIENT: LOR Geotechnical Group, Inc. CONTACT: Kevin Osmun INQUIRY#: 2976305.2 RESEARCH DATE: 01/27/2011

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Historical Topographic Map

N	ADJOINING QUAD NAME: REDLANDS MAP YEAR: 1901 SERIES: 15 SCALE: 1:62500	SITE NAME: SART- Phase III ADDRESS: SART- Phase III San Bernardino, CA 92408 LAT/LONG: 34.0849 / -117.2507	CLIENT: LOR Geotechnical Group, Inc. CONTACT: Kevin Osmun INQUIRY#: 2976305.2 RESEARCH DATE: 01/27/2011

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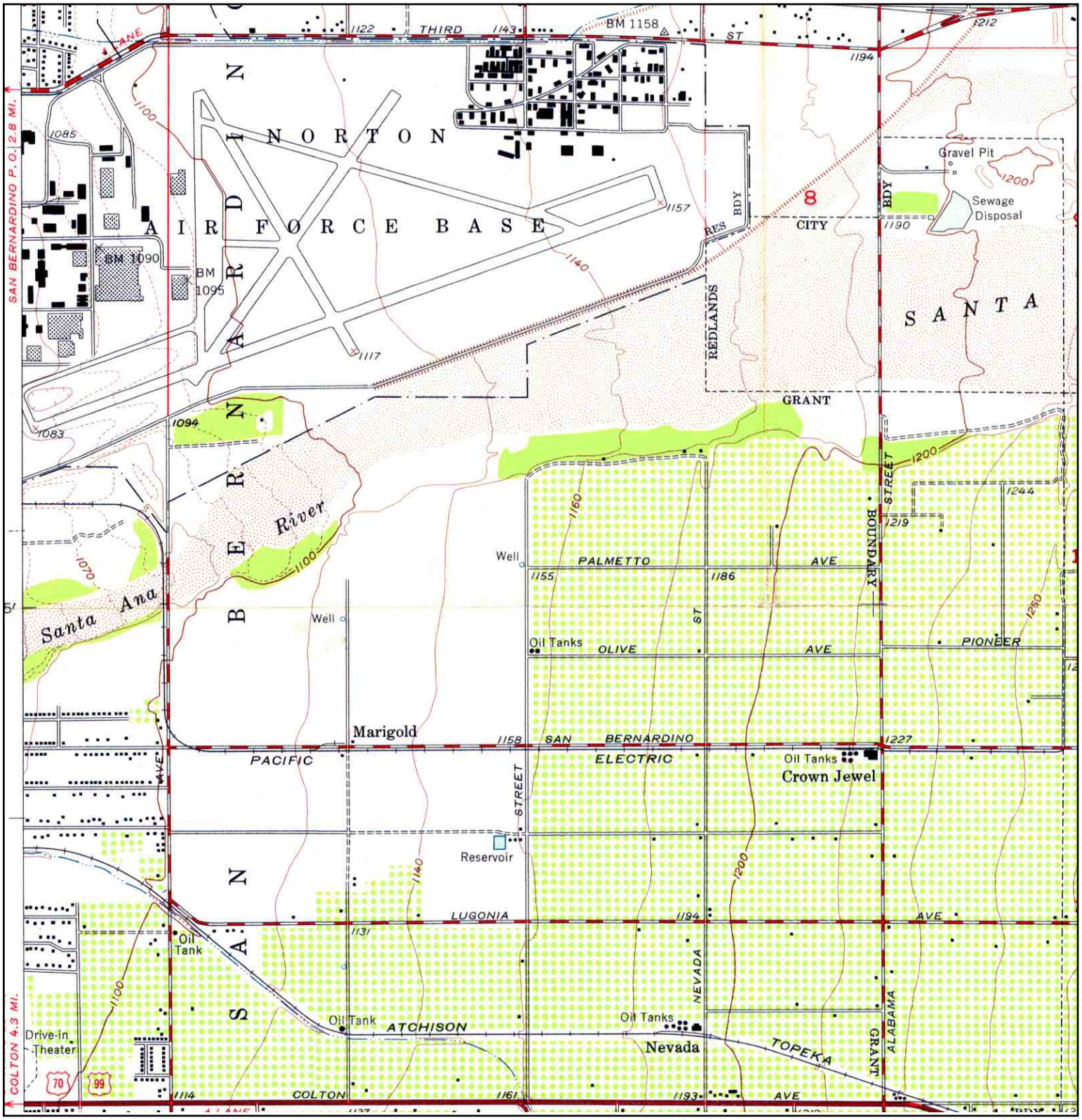

N	ADJOINING QUAD NAME: REDLANDS MAP YEAR: 1954 SERIES: 7.5 SCALE: 1:24000	SITE NAME: SART- Phase III ADDRESS: SART- Phase III San Bernardino, CA 92408 LAT/LONG: 34.0849 / -117.2507	CLIENT: LOR Geotechnical Group, Inc. CONTACT: Kevin Osmun INQUIRY#: 2976305.2 RESEARCH DATE: 01/27/2011

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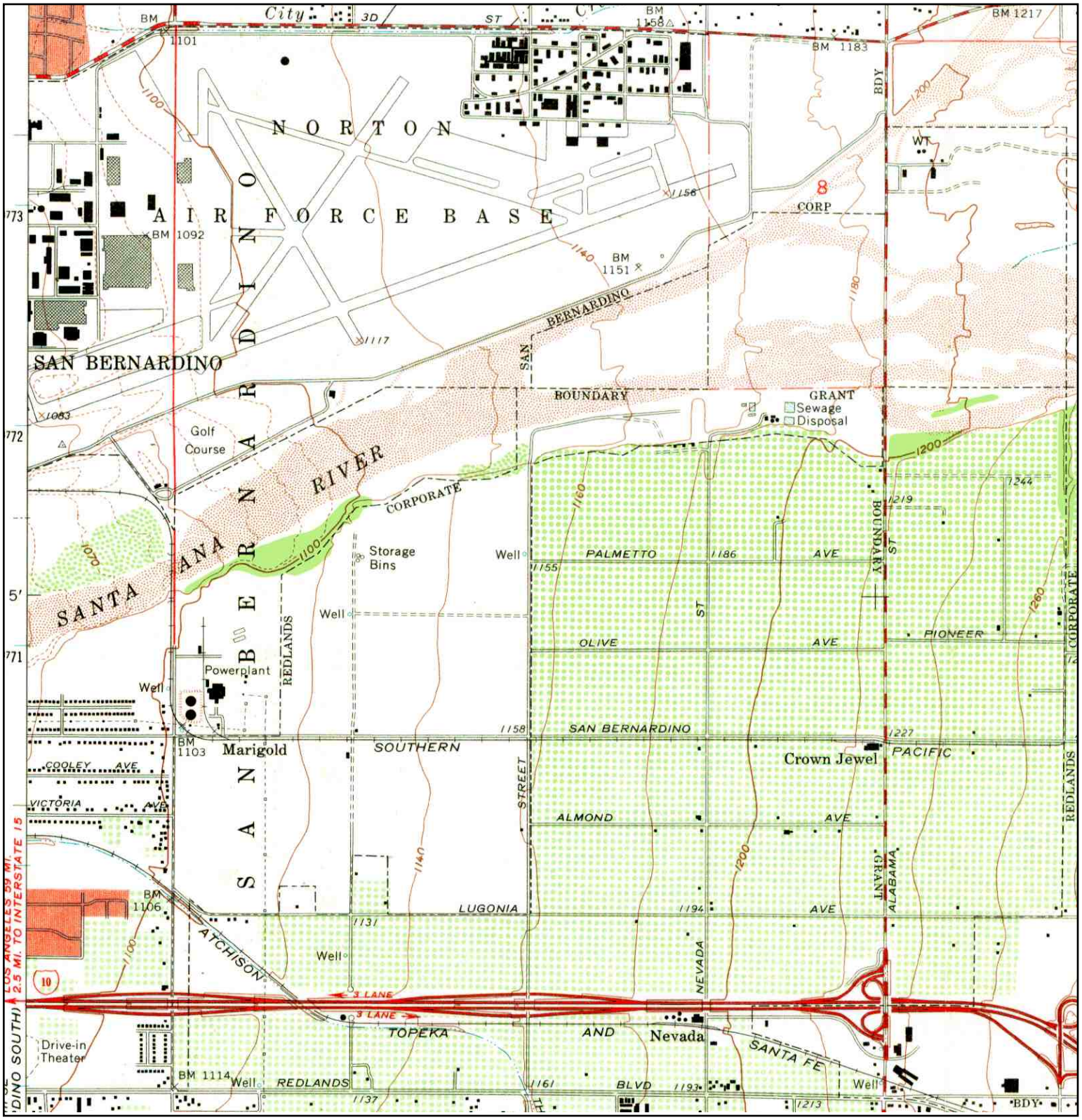

N	ADJOINING QUAD NAME: REDLANDS MAP YEAR: 1967 SERIES: 7.5 SCALE: 1:24000	SITE NAME: SART- Phase III ADDRESS: SART- Phase III San Bernardino, CA 92408 LAT/LONG: 34.0849 / -117.2507	CLIENT: LOR Geotechnical Group, Inc. CONTACT: Kevin Osmun INQUIRY#: 2976305.2 RESEARCH DATE: 01/27/2011

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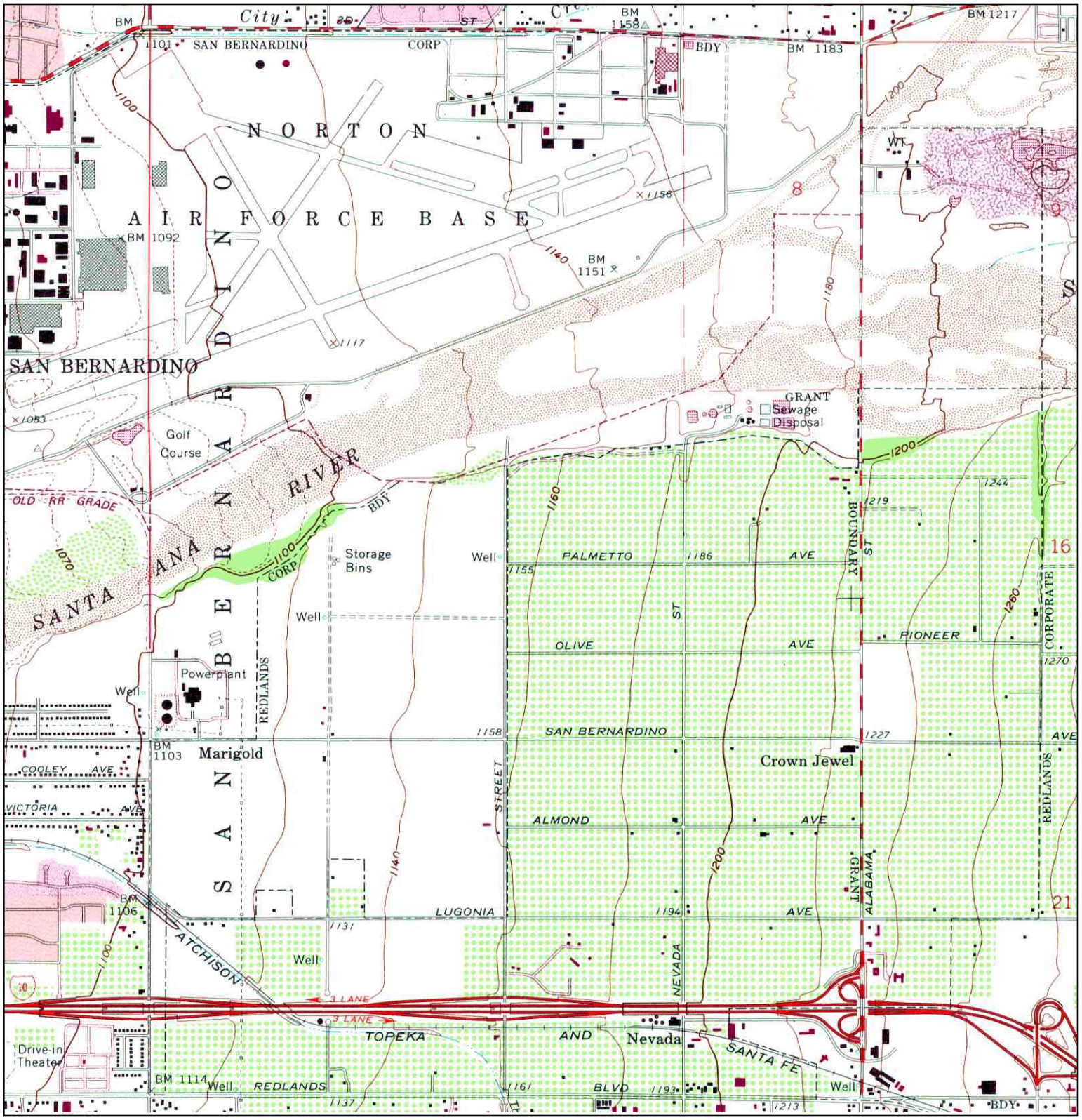

N	ADJOINING QUAD NAME: REDLANDS MAP YEAR: 1980 PHOTOREVISED:1967 SERIES: 7.5 SCALE: 1:24000	SITE NAME: SART- Phase III ADDRESS: SART- Phase III San Bernardino, CA 92408 LAT/LONG: 34.0849 / -117.2507	CLIENT: LOR Geotechnical Group, Inc. CONTACT: Kevin Osmun INQUIRY#: 2976305.2 RESEARCH DATE: 01/27/2011

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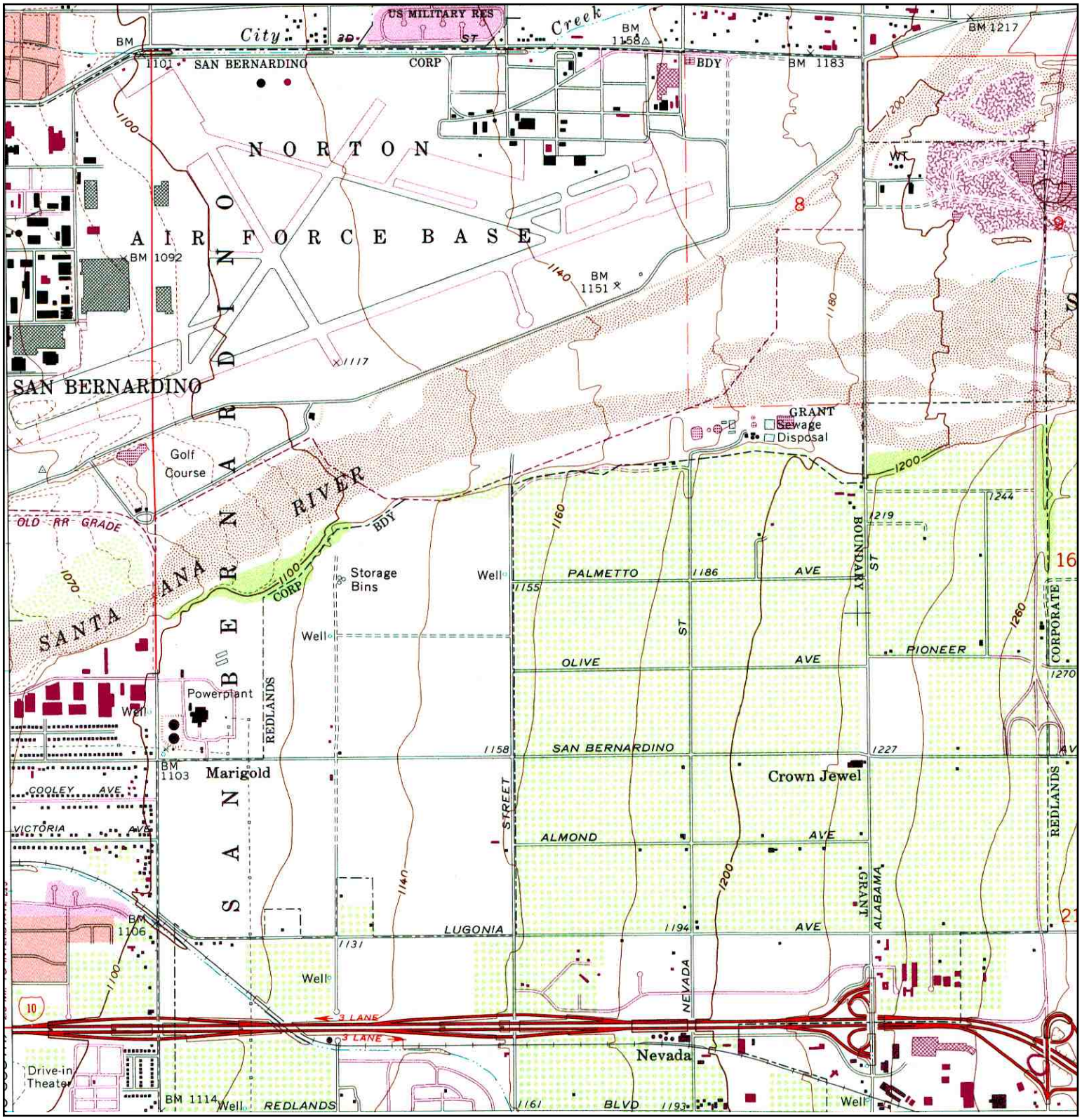

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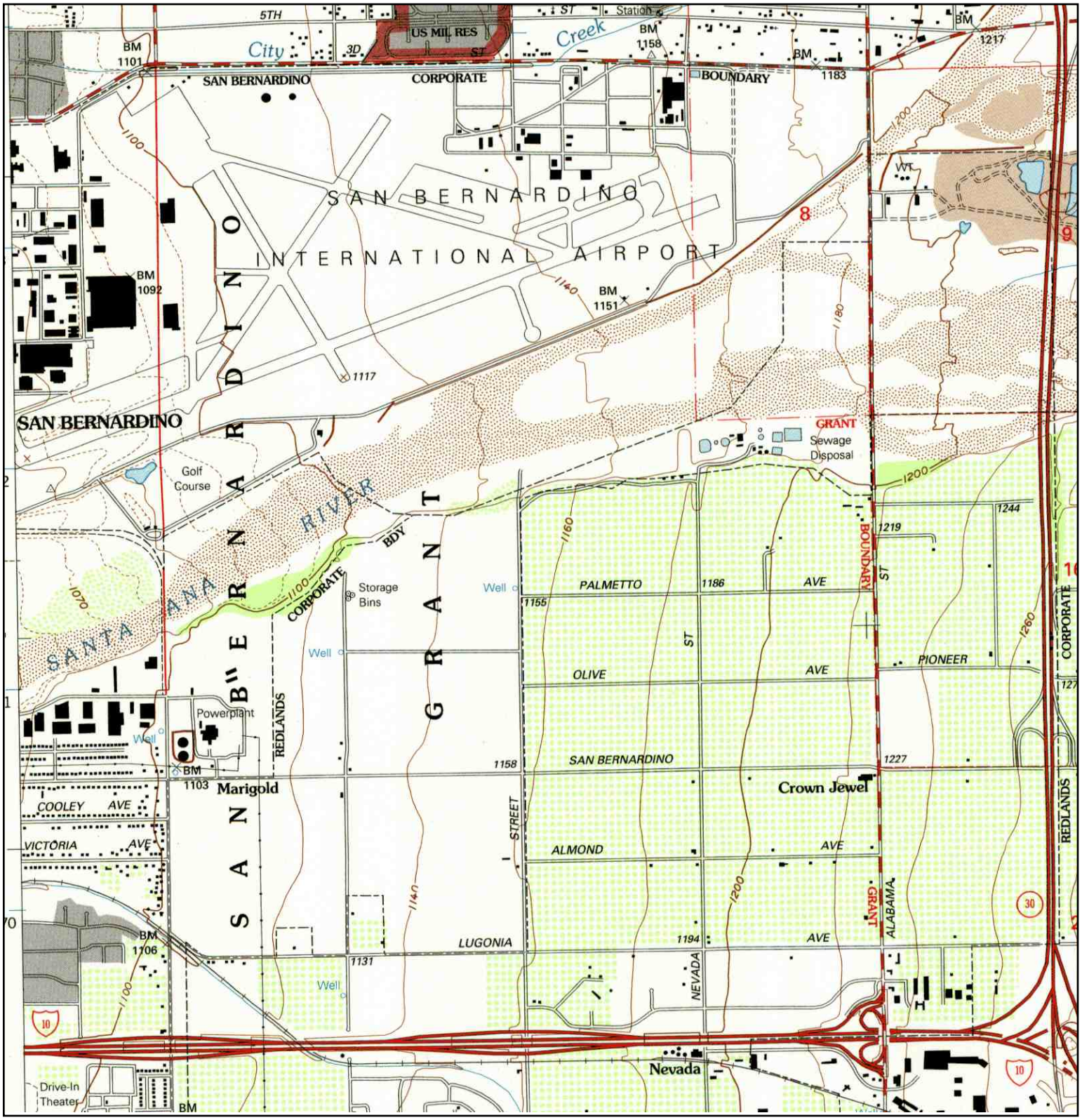

N	ADJOINING QUAD NAME: REDLANDS MAP YEAR: 1996 SERIES: 7.5 SCALE: 1:24000	SITE NAME: SART- Phase III ADDRESS: SART- Phase III San Bernardino, CA 92408 LAT/LONG: 34.0849 / -117.2507	CLIENT: LOR Geotechnical Group, Inc. CONTACT: Kevin Osmun INQUIRY#: 2976305.2 RESEARCH DATE: 01/27/2011

APPENDIX C

Certified Sanborn® Map Report

SART- Phase III

SART- Phase III

San Bernardino, CA 92408

Inquiry Number: 2976305.3

January 27, 2011

Certified Sanborn® Map Report

EDR® Environmental Data Resources Inc

440 Wheelers Farms Road
Milford, CT 06461
800.352.0050
www.edrnet.com

Certified Sanborn® Map Report

1/27/11

Site Name:
SART- Phase III
SART- Phase III
San Bernardino, CA 92408

EDR Inquiry # 2976305.3

Client Name:
LOR Geotechnical Group, Inc.
6121 Quail Valley Court
Riverside, CA 92507

Contact: Kevin Osmun

EDR® Environmental Data Resources Inc

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Certified Sanborn Results:

Site Name: SART- Phase III
Address: SART- Phase III
City, State, Zip: San Bernardino, CA 92408
Cross Street:
P.O. # NA
Project: NA
Certification # 408D-475D-AF56

Sanborn® Library search results
Certification # 408D-475D-AF56

UNMAPPED PROPERTY

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- ✔ Library of Congress
- ✔ University Publications of America
- ✔ EDR Private Collection

The Sanborn Library LLC Since 1866™

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APPENDIX D

EDR DataMap™Corridor Study and EDR Site Reports™

SART-Phase III
San Bernardino, CA 92408

Inquiry Number: 2976305.1s
January 31, 2011

EDR DataMap™ Corridor Study

EDR® Environmental Data Resources Inc

440 Wheelers Farms Road
Milford, CT 06461
Toll Free: 800.352.0050
www.edrnet.com

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

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EXECUTIVE SUMMARY

TARGET PROPERTY INFORMATION

ADDRESS

SAN BERNARDINO, CA 92408
SAN BERNARDINO, CA 92408

DATABASES WITH NO MAPPED SITES

No mapped sites were found in EDR's search of available ("reasonably ascertainable ") government records within the requested search area for the following databases:

FEDERAL RECORDS

Proposed NPL	Proposed National Priority List Sites
Delisted NPL	National Priority List Deletions
NPL LIENS	Federal Superfund Liens
CERC-NFRAP	CERCLIS No Further Remedial Action Planned
LIENS 2	CERCLA Lien Information
RCRA-LQG	RCRA - Large Quantity Generators
RCRA-CESQG	RCRA - Conditionally Exempt Small Quantity Generator
ERNS	Emergency Response Notification System
HMIRS	Hazardous Materials Information Reporting System
DOT OPS	Incident and Accident Data
US CDL	Clandestine Drug Labs
US BROWNFIELDS	A Listing of Brownfields Sites
FUDS	Formerly Used Defense Sites
LUCIS	Land Use Control Information System
CONSENT	Superfund (CERCLA) Consent Decrees
UMTRA	Uranium Mill Tailings Sites
ODI	Open Dump Inventory
DEBRIS REGION 9	Torres Martinez Reservation Illegal Dump Site Locations
MINES	Mines Master Index File
TRIS	Toxic Chemical Release Inventory System
TSCA	Toxic Substances Control Act
FTTS	FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
HIST FTTS	FIFRA/TSCA Tracking System Administrative Case Listing
SSTS	Section 7 Tracking Systems
ICIS	Integrated Compliance Information System
MLTS	Material Licensing Tracking System
RADINFO	Radiation Information Database
RAATS	RCRA Administrative Action Tracking System
SCRD DRYCLEANERS	State Coalition for Remediation of Drycleaners Listing
COAL ASH EPA	Coal Combustion Residues Surface Impoundments List
PCB TRANSFORMER	PCB Transformer Registration Database
COAL ASH DOE	Sleam-Electric Plan Operation Data
FEDERAL FACILITY	Federal Facility Site Information listing
FEMA UST	Underground Storage Tank Listing

EXECUTIVE SUMMARY

US HIST CDL ..... National Clandestine Laboratory Register

STATE AND LOCAL RECORDS

SCH ..... School Property Evaluation Program
WMUDS/SWAT ..... Waste Management Unit Database
SWRCY ..... Recycler Database
SLIC ..... Statewide SLIC Cases
LIENS ..... Environmental Liens Listing
CHMIRS ..... California Hazardous Material Incident Report System
LDS ..... Land Disposal Sites Listing
MCS ..... Military Cleanup Sites Listing
Notify 65 ..... Proposition 65 Records
VCP ..... Voluntary Cleanup Program Properties
DRYCLEANERS ..... Cleaner Facilities
WIP ..... Well Investigation Program Case List
CDL ..... Clandestine Drug Labs
RESPONSE ..... State Response Sites
HAULERS ..... Registered Waste Tire Haulers Listing
MWMP ..... Medical Waste Management Program Listing
PROC ..... Certified Processors Database

TRIBAL RECORDS

INDIAN RESERV ..... Indian Reservations
INDIAN ODI ..... Report on the Status of Open Dumps on Indian Lands
INDIAN LUST ..... Leaking Underground Storage Tanks on Indian Land
INDIAN UST ..... Underground Storage Tanks on Indian Land
INDIAN VCP ..... Voluntary Cleanup Priority Listing

EDR PROPRIETARY RECORDS

Manufactured Gas Plants ..... EDR Proprietary Manufactured Gas Plants

SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified.

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.

FEDERAL RECORDS

NPL: Also known as Superfund, the National Priority List database is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund program. The source of this database is the U.S. EPA.

A review of the NPL list, as provided by EDR, and dated 12/31/2010 has revealed that there is 1 NPL site within the searched area.

EXECUTIVE SUMMARY

Site	Address	Map ID	Page
USAF NORTON AFB	*I-10 US HWY 395*	*0*	*3*

CERCLIS: The Comprehensive Environmental Response, Compensation and Liability Information System 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). CERCLIS contains sites which are either proposed to or on the National Priorities List (NPL) and sites which are in the screening and assessment phase for possible inclusion on the NPL.

A review of the CERCLIS list, as provided by EDR, and dated 09/30/2010 has revealed that there is 1 CERCLIS site within the searched area.

Site	Address	Map ID	Page
USAF NORTON AFB	*I-10 US HWY 395*	*0*	*3*

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 05/25/2010 has revealed that there is 1 CORRACTS site within the searched area.

Site	Address	Map ID	Page
USAF NORTON AFB	*I-10 US HWY 395*	*0*	*3*

RCRA-TSDF: 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.

A review of the RCRA-TSDF list, as provided by EDR, and dated 02/17/2010 has revealed that there is 1 RCRA-TSDF site within the searched area.

Site	Address	Map ID	Page
USAF NORTON AFB	*I-10 US HWY 395*	*0*	*3*

EXECUTIVE SUMMARY

RCRA-SQG: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

A review of the RCRA-SQG list, as provided by EDR, and dated 02/17/2010 has revealed that there are 8 RCRA-SQG sites within the searched area.

Site	Address	Map ID	Page
USAF NORTON AFB	***I-10 US HWY 395***	***0***	***3***
MONIER LIFETILE LLC	***1990 EAST RIVERVIEW DRI***	***4***	***142***
NATIONAL TELECOMMUNICATIONS SY	***1817-A RIVERVIEW DR***	***5***	***154***
AMPAD CORP	***1455 E RIVERVIEW DR***	***7***	***167***
EPTC SAN BERNARDINO	***25720 SAN BERNARDINO AV***	***12***	***181***
J P TECHNOLOGIES INC	***1430 COOLEY CT***	***16***	***202***
SHELL SERVICE STATION	***1930 S WATERMAN AVE***	***25***	***224***
COMPUTERIZED DIAGNOSTIC IMAGIN	***1884 BUSINESS CENTER DR***	***26***	***234***

RCRA-NonGen: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

A review of the RCRA-NonGen list, as provided by EDR, and dated 02/17/2010 has revealed that there are 2 RCRA-NonGen sites within the searched area.

Site	Address	Map ID	Page
CANAM METAL PRODUCTS INC	***1795 RIVERVIEW DR***	***5***	***148***
ENVIRONMENTAL MNGMT TECHNOLOGI	1456 S GAGE ST	14	194

US ENG CONTROLS: A listing of sites with engineering controls in place.

A review of the US ENG CONTROLS list, as provided by EDR, and dated 01/05/2011 has revealed that there is 1 US ENG CONTROLS site within the searched area.

Site	Address	Map ID	Page
USAF NORTON AFB	***I-10 US HWY 395***	***0***	***3***

US INST CONTROL: 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.

A review of the US INST CONTROL list, as provided by EDR, and dated 01/05/2011 has revealed that there is 1 US INST CONTROL site within the searched area.

EXECUTIVE SUMMARY

Site	Address	Map ID	Page
USAF NORTON AFB	***I-10 US HWY 395***	***0***	***3***

DOD: 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.

A review of the DOD list, as provided by EDR, and dated 12/31/2005 has revealed that there is 1 DOD site within the searched area.

Site	Address	Map ID	Page
NORTON AIR FORCE BASE (CLOSED)		0	38

ROD: Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid the cleanup.

A review of the ROD list, as provided by EDR, and dated 06/01/2010 has revealed that there is 1 ROD site within the searched area.

Site	Address	Map ID	Page
USAF NORTON AFB	***I-10 US HWY 395***	***0***	***3***

PADS: The PCB Activity Database identifies generators, transporters, commercial storers and/or brokers and disposers of PCBs who are required to notify the United States Environmental Protection Agency of such activities. The source of this database is the U.S. EPA.

A review of the PADS list, as provided by EDR, and dated 02/01/2010 has revealed that there is 1 PADS site within the searched area.

Site	Address	Map ID	Page
USAF NORTON AFB	***I-10 US HWY 395***	***0***	***3***

FINDS: The Facility Index System contains both facility information and "pointers" to other sources of information that contain more detail. These include: RCRIS; Permit Compliance System (PCS); Aerometric Information Retrieval System (AIRS); FATES (FIFRA [Federal Insecticide Fungicide Rodenticide Act] and TSCA Enforcement System, FTTS [FIFRA/TSCA Tracking System]; CERCLIS; DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes); Federal Underground Injection Control (FURS); Federal Reporting Data System (FRDS); Surface Impoundments (SIA); TSCA Chemicals in Commerce Information System (CICS); PADS; RCRA-J (medical waste transporters/disposers); TRIS; and TSCA. The source of this database is the U.S. EPA/NTIS.

A review of the FINDS list, as provided by EDR, and dated 04/14/2010 has revealed that there are 8 FINDS sites within the searched area.

EXECUTIVE SUMMARY

Site	Address	Map ID	Page
USAF NORTON AFB	***I-10 US HWY 395***	***0***	***3***
MONIER LIFETILE LLC	***1990 EAST RIVERVIEW DRI***	***4***	***142***
CANAM METAL PRODUCTS INC	***1795 RIVERVIEW DR***	***5***	***148***
NATIONAL TELECOMMUNICATIONS SY	***1817-A RIVERVIEW DR***	***5***	***154***
AMPAD CORP	***1455 E RIVERVIEW DR***	***7***	***167***
J P TECHNOLOGIES INC	***1430 COOLEY CT***	***16***	***202***
SHELL SERVICE STATION	***1930 S WATERMAN AVE***	***25***	***224***
COMPUTERIZED DIAGNOSTIC IMAGIN	***1884 BUSINESS CENTER DR***	***26***	***234***

STATE AND LOCAL RECORDS

HIST Cal-Sites: Formerly known as ASPIS, this database contains both known and potential hazardous substance sites. The source is the California Department of Toxic Substance Control. No longer updated by the state agency. It has been replaced by ENVIROSTOR.

A review of the HIST Cal-Sites list, as provided by EDR, and dated 08/08/2005 has revealed that there are 2 HIST Cal-Sites sites within the searched area.

Site	Address	Map ID	Page
NORTON AIR FORCE BASE	***2,208 ACRES;58 MI EA OF***	***1***	***39***
NORTH SAN BERNARDINO AREA	***BUNKER HILL GROUND WATE***	***2***	***125***

CA BOND EXP. 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.

A review of the CA BOND EXP. PLAN list, as provided by EDR, and dated 01/01/1989 has revealed that there are 2 CA BOND EXP. PLAN sites within the searched area.

Site	Address	Map ID	Page
NORTON AIR FORCE BASE	NORTON AIR FORCE BASE	1	38
NORTH SAN BERNARDINO AREA	***BUNKER HILL GROUND WATE***	***2***	***125***

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 the searched area.

Site	Address	Map ID	Page
NORTON AFB		***1***	***123***
Closure Date: / /			

EXECUTIVE SUMMARY

SWF/LF: The Solid Waste Facilities/Landfill Sites records typically contain an inventory of solid waste disposal facilities or landfills in a particular state. The data come from the Integrated Waste Management Board's Solid Waste Information System (SWIS) database.

A review of the SWF/LF list, as provided by EDR, and dated 11/22/2010 has revealed that there is 1 SWF/LF site within the searched area.

Site	Address	Map ID	Page
WATERMAN LANDFILL	NE OF INTERSECTION OF W	18	208

WDS: California Water Resources Control Board - Waste Discharge System.

A review of the WDS list, as provided by EDR, and dated 06/19/2007 has revealed that there are 3 WDS sites within the searched area.

Site	Address	Map ID	Page
MONIER LIFETILE LLC	***1990 EAST RIVERVIEW DRI***	***4***	***142***
BRYDENSCOT METAL PRODUCTS	***1299 RIVERVIEW DR***	***8***	***168***
STOCK BUILDING SUPPLY	***595 E ORANGE SHOW RD***	***11***	***179***

NPDES: A listing of NPDES permits, including stormwater.

A review of the NPDES list, as provided by EDR, and dated 11/22/2010 has revealed that there are 3 NPDES sites within the searched area.

Site	Address	Map ID	Page
BRYDENSCOT METAL PRODUCTS	***1299 RIVERVIEW DR***	***8***	***168***
SOUTHERN CALIFORNIA EDISON CO.	***25770 SAN BERNARDINO AV***	***12***	***186***
SOUTHERN CALIFORNIA EDISO	***25770 SAN BERNARDINO***	***12***	***188***

Cortese: 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). This listing is no longer updated by the state agency.

A review of the Cortese list, as provided by EDR, and dated 01/04/2011 has revealed that there are 2 Cortese sites within the searched area.

Site	Address	Map ID	Page
NORTON AIR FORCE BASE	***2,208 ACRES;58 MI EA OF***	***1***	***39***
NORTH SAN BERNARDINO AREA	***BUNKER HILL GROUND WATE***	***2***	***125***

EXECUTIVE SUMMARY

HIST CORTESE: 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].

A review of the HIST CORTESE list, as provided by EDR, and dated 04/01/2001 has revealed that there are 7 HIST CORTESE sites within the searched area.

Site	Address	Map ID	Page
NORTON AFB		***1***	***123***
NORTH SAN BERNARDINO AREA	***BUNKER HILL GROUND WATE***	***2***	***125***
SHIH-LIAV HAM	***520 ORANGE SHOW RD***	***9***	***175***
SOUTHERN CALIFORNIA EDISO	***25770 SAN BERNARDINO***	***12***	***188***
S AND G ROOFING SUPPLY IN	***1444 TIPPECANOE***	***15***	***197***
SHELL SERVICE STATION	***1930 WATERMAN***	***25***	***223***
MOBIL #11-E13	***1950***	***27***	***237***

LUST: The Leaking Underground Storage Tank Incident Reports contain an inventory of reported leaking underground storage tank incidents. The data come from the State Water Resources Control Board Leaking Underground Storage Tank Information System.

A review of the LUST list, as provided by EDR, and dated 12/16/2010 has revealed that there are 11 LUST sites within the searched area.

Site	Address	Map ID	Page
NORTON AFB		***1***	***123***
SHELL SERVICE STATION Status: Completed - Case Closed	505 ORANGE SHOW RD	9	172
SHELL SERVICE STATION Status: Open - Site Assessment	505 ORANGE SHOW ROAD	9	174
SHIH-LIAV HAM Status: Open - Remediation	***520 ORANGE SHOW RD***	***9***	***175***
SOUTHERN CALIFORNIA EDISON CO. Status: Completed - Case Closed	***25770 SAN BERNARDINO AV***	***12***	***186***
S AND G ROOFING SUPPLY IN Status: Completed - Case Closed	***1444 TIPPECANOE***	***15***	***197***
SHELL #1930 Status: Completed - Case Closed	1930 S WATERMAN AVE	25	222
SHELL SERVICE STATION	***1930 WATERMAN***	***25***	***223***
WATERMAN SHELL Status: Open - Verification Monitoring	***1930 S WATERMAN AVE***	***25***	***227***
TOSCO/ 76 STATION #4975 (#3077 Status: Open - Remediation	1950 S WATERMAN AVE	27	237
MOBIL #11-E13	***1950***	***27***	***237***

CA FID UST: The Facility Inventory Database contains active and inactive underground storage tank locations. The source is the State Water Resource Control Board.

A review of the CA FID UST list, as provided by EDR, and dated 10/31/1994 has revealed that there are 11 CA FID UST sites within the searched area.

Site	Address	Map ID	Page
UNOCAL 76	***2378 N STERLING RD***	***3***	***140***

EXECUTIVE SUMMARY

Site	Address	Map ID	Page
ROGERS BINDING & MAILING	***1905 E RIVERVIEW***	***5***	***147***
KRUGER MCGREW CONSTRUCTION	***1880 E RIVERVIEW DR***	***5***	***157***
WAXIE'S ENTERPRISES INC	***1707 E RIVERVIEW***	***6***	***164***
PARKWAY DISTRIBUTORS	***1445 E RIVERVIEW DR***	***7***	***165***
SHIH-LIAV HAM	***520 ORANGE SHOW RD***	***9***	***175***
LLUMC SUPPORT SERVICES	***1269 SAN BERNARDINO***	***13***	***191***
ROOFERS WHOLESALE SUPPLY CO IN	***9973 S WATERMAN AV***	***21***	***215***
TEXACO	***9539 S WATERMAN AVE***	***22***	***217***
LEONARD OJENA	***9501 S WATERMAN***	***22***	***218***
WATERMAN/I-10 SHELL	***1930 S WATERMAN***	***25***	***232***

UST: The Underground Storage Tank database contains registered USTs. USTs are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA). The data come from the State Water Resources Control Board's Hazardous Substance Storage Container Database.

A review of the UST list, as provided by EDR, and dated 12/16/2010 has revealed that there are 4 UST sites within the searched area.

Site	Address	Map ID	Page
HARBER COMPANIES INC	1880 RIVERVIEW DR	5	160
WAXIE'S ENTERPRISES INC	1707 RIVERVIEW DR	6	165
CI-SAN BDNO FIRE STN 11	450 E VANDERBILT WAY	24	222
WATERMAN SHELL	***1930 S WATERMAN AVE***	***25***	***227***

HIST UST: Historical UST Registered Database.

A review of the HIST UST list, as provided by EDR, and dated 10/15/1990 has revealed that there are 7 HIST UST sites within the searched area.

Site	Address	Map ID	Page
KRUGER MCGREW CONSTRUCTION	1880 RIVERVIEW DR	5	159
KLEEN-LINE CORP.	1707 RIVERVIEW DR	6	164
HOBART CORPORATION	1350 RIVERVIEW DR	8	172
ROOFERS ASPHALT EQUIPMENT CO.	9975 S. WATERMAN AVENUE	21	214
FERGS	9539 S. WATERMAN AVE.	22	216
WATERMAN SHELL	***1930 S WATERMAN AVE***	***25***	***227***
DBA INLAND PETROLEIM PROD	***1930 S WATERMAN AVE***	***25***	***230***

SWEEPS UST: Statewide Environmental Evaluation and Planning System. This underground storage tank listing was updated and maintained by a company contacted by the SWRCB in the early 1990's. The listing is no longer updated or maintained. The local agency is the contact for more information on a site on the SWEEPS list.

A review of the SWEEPS UST list, as provided by EDR, and dated 06/01/1994 has revealed that there are 11 SWEEPS UST sites within the searched area.

EXECUTIVE SUMMARY

Site	Address	Map ID	Page
UNOCAL 76	*2378 N STERLING RD*	*3*	*140*
ROGERS BINDING & MAILING	*1905 E RIVERVIEW*	*5*	*147*
KRUGER MCGREW CONSTRUCTION	*1880 E RIVERVIEW DR*	*5*	*157*
WAXIE'S ENTERPRISES INC	*1707 E RIVERVIEW*	*6*	*164*
PARKWAY DISTRIBUTORS	*1445 E RIVERVIEW DR*	*7*	*165*
SHIH-LIAV HAM	*520 ORANGE SHOW RD*	*9*	*175*
LLUMC SUPPORT SERVICES	*1269 SAN BERNARDINO*	*13*	*191*
ROOFERS WHOLESALE SUPPLY CO IN	*9973 S WATERMAN AV*	*21*	*215*
TEXACO	*9539 S WATERMAN AVE*	*22*	*217*
LEONARD OJENA	*9501 S WATERMAN*	*22*	*218*
WATERMAN/I-10 SHELL	*1930 S WATERMAN*	*25*	*232*

AST: The Aboveground Storage Tank database contains registered ASTs. The data come from the State Water Resources Control Board's Hazardous Substance Storage Container Database.

A review of the AST list, as provided by EDR, and dated 08/01/2009 has revealed that there is 1 AST site within the searched area.

Site	Address	Map ID	Page
STOCK BUILDING SUPPLY	*595 E ORANGE SHOW RD*	*11*	*179*

DEED: The use of recorded land use restrictions is one of the methods the DTSC uses to protect the public from unsafe exposures to hazardous substances and wastes .

A review of the DEED list, as provided by EDR, and dated 12/14/2010 has revealed that there is 1 DEED site within the searched area.

Site	Address	Map ID	Page
NORTON AIR FORCE BASE	*2,208 ACRES;58 MI EA OF*	*1*	*39*

HAZNET: 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 from non-California manifests & continuation sheets are not included at the present time. 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, & disposal method. The source is the Department of Toxic Substance Control is the agency

A review of the HAZNET list, as provided by EDR, and dated 12/31/2009 has revealed that there are 25 HAZNET sites within the searched area.

Site	Address	Map ID	Page
MONIER LIFETILE LLC	*1990 EAST RIVERVIEW DRI*	*4*	*142*
CANAM METAL PRODUCTS INC	*1795 RIVERVIEW DR*	*5*	*148*
HALEY BROS INC	*1905 RIVERVIEW DR*	*5*	*157*
HARBER COMPANIES INC	*1880 E RIVERVIEW DR*	*5*	*160*
SYSTEMS TECHNOLOGY INC	*1351 E RIVERVIEW DR*	*8*	*170*
SHIH-LIAV HAM	*520 ORANGE SHOW RD*	*9*	*175*

EXECUTIVE SUMMARY

Site	Address	Map ID	Page
STOCK BUILDING SUPPLY	*595 E ORANGE SHOW RD*	*11*	*179*
EPTC SAN BERNARDINO	*25720 SAN BERNARDINO AV*	*12*	*181*
SOUTHERN CALIFORNIA EDISO	*25770 SAN BERNARDINO*	*12*	*188*
BARRYE'S THREAD ROLL	*1469 S GAGE ST*	*14*	*192*
WESTCRAFT SHUTTERS MANUF CO.	*1417 S GAGE ST*	*14*	*195*
LIQUID VACUUM	*1405 S GAGE ST*	*14*	*196*
MERIDIAN RAIL SERVICES	*1475 COOLEY CT*	*16*	*198*
CET SAN BERNARDINO	*1430 COOLEY CT*	*16*	*200*
J P TECHNOLOGIES INC	*1430 COOLEY CT*	*16*	*202*
GARNER HOLT PRODUCTIONS	*825 E COOLEY AVE*	*16*	*206*
ROOFER'S WHOLESALE SUPPLY	*1515 S WATERMAN AVE*	*19*	*209*
SAN BERNARDINO GOLF CLUB	*1494 S WATERMAN AVE*	*19*	*211*
DEXTER CHASSIS GROUP	*1400 E VICTORIA AVE*	*20*	*212*
SB CITY FIRE STATION #231	*450 E VANDERBILT WAY*	*24*	*220*
SHELL SERVICE STATION	*1930 S WATERMAN AVE*	*25*	*224*
WATERMAN SHELL	*1930 S WATERMAN AVE*	*25*	*227*
DBA INLAND PETROLEIM PROD	*1930 S WATERMAN AVE*	*25*	*230*
WATERMAN/I-10 SHELL	*1930 S WATERMAN*	*25*	*232*
COMPUTERIZED DIAGNOSTIC IMAGIN	*1884 BUSINESS CENTER DR*	*26*	*234*

EMI: Toxics and criteria pollutant emissions data collected by the ARB and local air pollution agencies

A review of the EMI list, as provided by EDR, and dated 12/31/2008 has revealed that there are 5 EMI sites within the searched area.

Site	Address	Map ID	Page
MONIER LIFETILE LLC	*1990 EAST RIVERVIEW DRI*	*4*	*142*
CANAM METAL PRODUCTS INC	*1795 RIVERVIEW DR*	*5*	*148*
KRUGER MCGREW CONSTRUCTION	*1880 E RIVERVIEW DR*	*5*	*157*
SOUTHERN CALIFORNIA EDISO	*25770 SAN BERNARDINO*	*12*	*188*
ROOFERS WHOLESALE SUPPLY CO IN	*9973 S WATERMAN AV*	*21*	*215*

ENVIROSTOR: The Department of Toxic Substances Control's (DTSC's) Site Mitigation and Brownfields Reuse Program's (SMBRP's) EnviroStor database identifes sites that have known contamination or sites for which there may be reasons to investigate further. The database includes the following site types: Federal Superfund sites (National Priorities List (NPL)); State Response, including Military Facilities and State Superfund; Voluntary Cleanup; and School sites. EnviroStor provides similar information to the information that was available in CalSites, and provides additional site information, including, but not limited to, identification of formerly-contaminated properties that have been released for reuse, properties where environmental deed restrictions have been recorded to prevent inappropriate land uses, and risk characterization information that is used to assess potential impacts to public health and the environment at contaminated sites.

A review of the ENVIROSTOR list, as provided by EDR, and dated 11/08/2010 has revealed that there are 2 ENVIROSTOR sites within the searched area.

Site	Address	Map ID	Page
NORTON AIR FORCE BASE Status: Active	*2,208 ACRES;58 MI EA OF*	*1*	*39*

EXECUTIVE SUMMARY

Site	Address	Map ID	Page
NORTH SAN BERNARDINO AREA Status: Active	***BUNKER HILL GROUND WATE***	***2***	***125***

HWT: 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.

A review of the HWT list, as provided by EDR, and dated 01/17/2011 has revealed that there is 1 HWT site within the searched area.

Site	Address	Map ID	Page
ENVIRONMENTAL MANAGEMENT TECHN	1456 GAGE STREET	14	194

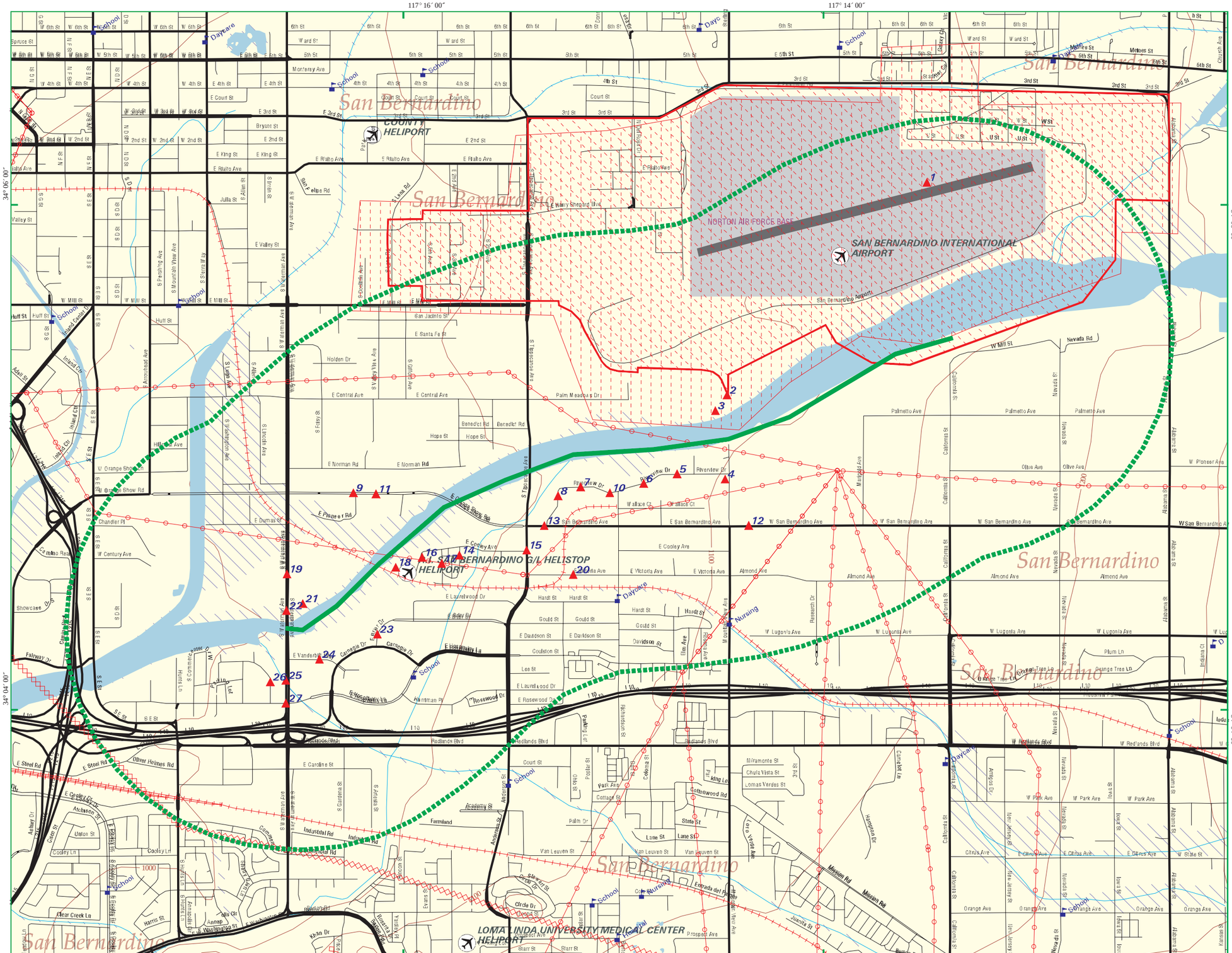
HWP: Detailed information on permitted hazardous waste facilities and corrective action ("cleanups") tracked in EnviroStor.

A review of the HWP list, as provided by EDR, and dated 08/09/2010 has revealed that there are 2 HWP sites within the searched area.

Site	Address	Map ID	Page
EPTC SAN BERNARDINO	***25720 SAN BERNARDINO AV***	***12***	***181***
DEXTER CHASSIS GROUP	***1400 E VICTORIA AVE***	***20***	***212***

EXECUTIVE SUMMARY

Please refer to the end of the findings report for unmapped orphan sites due to poor or inadequate address information.



EDR DataMap® Corridor Study

SART-Phase III

- Listed Sites
- Earthquake Epicenters (Richter 5 or greater)
- Search Boundary
- Roads
- Major Roads
- Waterways
- Railroads
- Contour Lines
- Pipelines
- Powerlines
- Fault Lines
- Water
- Superfund Sites
- Federal DOD Sites
- Indian Reservations BIA
- 100-Yr Flood Zones

N

San Bernardino, CA

0 1/4 1/2

Scale in Miles

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MAP FINDINGS SUMMARY

Database	Total Plotted
FEDERAL RECORDS	
NPL	1
Proposed NPL	0
Delisted NPL	0
NPL LIENS	0
CERCLIS	1
CERC-NFRAP	0
LIENS 2	0
CORRACTS	1
RCRA-TSDF	1
RCRA-LQG	0
RCRA-SQG	8
RCRA-CESQG	0
RCRA-NonGen	2
US ENG CONTROLS	1
US INST CONTROL	1
ERNS	0
HMIRS	0
DOT OPS	0
US CDL	0
US BROWNFIELDS	0
DOD	1
FUDS	0
LUCIS	0
CONSENT	0
ROD	1
UMTRA	0
ODI	0
DEBRIS REGION 9	0
MINES	0
TRIS	0
TSCA	0
FTTS	0
HIST FTTS	0
SSTS	0
ICIS	0
PADS	1
MLTS	0
RADINFO	0
FINDS	8
RAATS	0
SCRD DRYCLEANERS	0
COAL ASH EPA	0
PCB TRANSFORMER	0
COAL ASH DOE	0
FEDERAL FACILITY	0
FEMA UST	0
US HIST CDL	0
STATE AND LOCAL RECORDS	
HIST Cal-Sites	2

MAP FINDINGS SUMMARY

Database	Total Plotted
CA BOND EXP. PLAN	2
SCH	0
Toxic Pits	1
SWF/LF	1
WDS	3
NPDES	3
WMUDS/SWAT	0
Cortese	2
HIST CORTESE	7
SWRCY	0
LUST	11
CA FID UST	11
SLIC	0
UST	4
HIST UST	7
LIENS	0
SWEEPS UST	11
CHMIRS	0
LDS	0
MCS	0
AST	1
Notify 65	0
DEED	1
VCP	0
DRYCLEANERS	0
WIP	0
CDL	0
RESPONSE	0
HAZNET	25
EMI	5
ENVIROSTOR	2
HAULERS	0
HWT	1
HWP	2
MWMP	0
PROC	0

TRIBAL RECORDS

INDIAN RESERV	0
INDIAN ODI	0
INDIAN LUST	0
INDIAN UST	0
INDIAN VCP	0

EDR PROPRIETARY RECORDS

Manufactured Gas Plants	0

NOTES:

Sites may be listed in more than one database

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number
NPL **Region**	**USAF NORTON AFB** **I-10 US HWY 395** **NORTON AFB, CA 92409**	**NPL** **CERCLIS** **CORRACTS** **RCRA-TSDF** **RCRA-SQG** **US ENG CONTROLS** **US INST CONTROL** **ROD** **PADS** **FINDS** **MANIFEST**	**1000417274** **CA4570024345**

NPL:

EPA ID:	CA4570024345
EPA Region:	09
Federal:	Y
Final Date:	7/22/1987

Category Details:

NPL Status:	Currently on the Final NPL
Category Description:	Depth To Aquifer-> 50 And <= 100 Feet
Category Value:	80
NPL Status:	Currently on the Final NPL
Category Description:	Distance To Nearest Population-> 0 And <= 1/4 Mile
Category Value:	10

Site Details:

Site Name:	NORTON AIR FORCE BASE (LNDFLL #2)
Site Status:	Final
Site Zip:	92408
Site City:	SAN BERNARDINO
Site State:	CA
Federal Site:	Yes
Site County:	SAN BERNARDINO
EPA Region:	09
Date Proposed:	10/15/84
Date Deleted:	Not reported
Date Finalized:	07/22/87

Substance Details:

NPL Status:	Currently on the Final NPL
Substance ID:	Not reported
Substance:	Not reported
CAS #:	Not reported
Pathway:	Not reported
Scoring:	Not reported
NPL Status:	Currently on the Final NPL
Substance ID:	U211
Substance:	CARBON TETRACHLORIDE
CAS #:	56-23-5
Pathway:	GROUND WATER PATHWAY
Scoring:	3
NPL Status:	Currently on the Final NPL
Substance ID:	U228
Substance:	TRICHLOROETHYLENE (TCE)

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number

USAF NORTON AFB (Continued) **1000417274**

CAS #: 79-01-6
Pathway: GROUND WATER PATHWAY
Scoring: 2

Summary Details:

Conditions at proposal October 15, 1984): Norton Air Force Base covers approximately 2,036 acres 58 miles east of Los Angeles near the City of San Bernardino, San Bernardino County, California. It is in a low-lying alluvial plain surroundedon the north and east by the San Bernardino Mountain Range. The base began operations in 1942 and has served as a major overhaul center for jet engines and the general repair of aircraft. Since 1962, the facility has served as a Military Airlift Command Base. In addition, Norton formerly had the responsibility for providing maintenance and logistics for liquid-fuel intercontinental ballistic missiles. Past ha ardous waste management practices may have contributed to existingcontamination problems throughout the base. The practices include burial of drums and other unspecified materials; disposal of waste oils, solvents, and paint residues into landfills, unlined pits, ponds, and drying beds; storage in leaking underground tanks; and spills of AVGAS, oils, solvents, PCBs, and acidic plating solutions. Industrial solvents have been used extensively on the base. Unknown quantities of spent solvents were disposed of in several base landfills.A well on the base has been contaminated with trichloroethylene TCE). The well water is currently being used in a blended system and is sampled quarterly to ensure that TCE is below the California State action level. The water is used by approximately ll,000 people who live and/or work on the base. Norton Air Force Base is participating in the Installation Restoration Program IRP), established in l978. Under this program, the Department of Defense seeks to identify, investigate, and clean up contamination from ha ardous materials. The Air Force has completed Phase I records search). Phase II remedial investigation) is underway. Status July 22, 1987): In November 1986, the California Regional Water Quality Control Board issued a Cleanup and Abatement Order requiring Norton to clean up one on-base area, the Industrial Waste Water Treatment Plant Sludge Drying Beds. Phase II-Stage 2 of the IRP was completed in December 1986. It focusedon characteri ation of the contamination at 18 on-base areas. More than 22 areas have been identified to date. Additional areas will be studied in Stage 3, scheduled to begin in the fall of 1987. Within the boundaries of this Federal facility, there are areas subject to the Subtitle C corrective action authorities of the Resource Conservation and Recovery Act RCRA). However, no such areas were included in scoring this specific site. Therefore, this Federal facility site isbeing placed on the Federal section of the NPL under the NPL/RCRA policy announced on September 8, 1983 48 FR 40662).

Site Status Details:
NPL Status: Final
Proposed Date: 10/15/1984
Final Date: 07/22/1987
Deleted Date: Not reported

Narratives Details:
NPL Name: NORTON AIR FORCE BASE (LNDFLL #2)
City: SAN BERNARDINO
State: CA

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number

USAF NORTON AFB (Continued) **1000417274**

CERCLIS:

Site ID:	0902760
Federal Facility:	Federal Facility
NPL Status:	Currently on the Final NPL
Non NPL Status:	Not reported

CERCLIS Site Contact Name(s):

Contact Name:	James Chang
Contact Tel:	(415) 972-3193
Contact Title:	Remedial Project Manager (RPM)
Contact Name:	Karen Jurist
Contact Tel:	(415) 972-3219
Contact Title:	Site Assessment Manager (SAM)
Contact Name:	Jeff Inglis
Contact Tel:	(415) 972-3095
Contact Title:	Site Assessment Manager (SAM)
Contact Name:	Carl Brickner
Contact Tel:	(415) 972-3814
Contact Title:	Site Assessment Manager (SAM)
Contact Name:	Dawn Richmond
Contact Tel:	(415) 972-3097
Contact Title:	Site Assessment Manager (SAM)

CERCLIS Site Alias Name(s):

Alias Name:	AREA II LANDFILL
Alias Address:	GOLF COURSE NORTON AFB, CA 92409
Alias Name:	NORTON AIR FORCE BASE (LANDFILL #2)
Alias Address:	Not reported CA
Alias Name:	NORTON AIR FORCE BASE
Alias Address:	I-10-US 395 SAN BERNARDINO, CA 92408
Alias Name:	NORTON AIR FORCE BASE (LNDFLL #2)
Alias Address:	I-10-US 395 SAN BERNARDINO, CA 92409
Alias Name:	NORTON USAF BASE
Alias Address:	63ABG/CC NORTON AFB, CA 86023

Site Description: The Base Closure team has worked closely with the City of Riverside to ensure that controls are in place to protect the public from exposure to contamination. The Air Force constructed a groundwater extraction and treatment remedy in 1994 and is currently operating two pump and treat systems which have treated over 90 million gallons of contaminated groundwater to date. Approximately 325 lbs. of TCE have been removed from the groundwater. Additionally, a soil vapor extraction system is currently operating and 6,247 lbs. of TCE have been removed from the contamination source area. Since 1994, the Air Force has excavated approximately 40,000 cubic yards of contaminated soils from various locations on the base which were then treated and disposed of on-site, or transported to an off site disposal facility. The Air Force also closed numerous underground storage tanks and excavate and treated contaminated soil using bioremediation technology in 1996. An

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number
	USAF NORTON AFB (Continued)		**1000417274**

investigation of alleged radiological contamination was conducted and results showed that elevated levels of radionuclides in groundwater were caused by naturally occurring uranium. In 1996, the Air Force removed a waste line contaminated with radium paint residue and another industrial waste line. A JP-4 aircraft fuel system which was not contaminated will be salvaged for future use by the airport.In 1980, DOD issued a policy requiring identification of hazardous waste sites. In 1982, Norton issued the Phase I Records Search. In 1985, the site issued the Phase II Problem Confirmation Study. In June 1989, after various investigations, the Air Force signed the Norton AFB Federal Facility Agreement. In November 1990, Norton AFB began the Central Base Area (CBA) OU Groundwater Investigation to define the extent of the plume. In 1991, through a removal action, TCE-contaminated soil was treated onsite. In early 1993, the Air Force issued a draft RI, FS and proposed plan. In June 1992, the Air Force began a treatability test of the ground water pump and treat system. In 1993, Norton AFB issued the Final FS and Plan.The 2,003-acre Norton AFB is located in San Bernardino County, California (40th Congressional District), approximately 65 miles east of Los Angeles. The site is bounded by the Santa Ana River to the south, and other adjacent areas are used for residential, industrial, and agricultural purposes. Operations at the site began in 1942, and the facility served as a major overhaul center for jet engines and the general repair of aircraft. The site formerly had the responsibility of providing maintenance and logistics for liquid-fuel intercontinental ballistic missiles. There are more than 20 areas of contamination on the base including two landfills, six discharge areas, four chemical pits, a fire training area, a fuel spill area, a polychlorinated biphenyl (PCB) spill area, a chemical spill area, two waste storage areas, an underground storage area, and a low-level radioactive waste burial site. Soil contaminants included PCBs, trichloroethylene (TCE), petroleum hydrocarbons, metals such as lead and polycyclic aromatic hydrocarbons. An off-site groundwater plume (TCE) has impacted several municipal drinking water wells. Norton AFB was closed by the Department of Defense in March 1994, based on the legislative requirements in the Base Realignment and Closure Act of 1990. Consistent with the reuse alternatives identified in the Final Environmental Impact Statement, the Base is being redeveloped as an airport with mixed non-aviation, light industrial land use. Norton Air Force Base is located in the city of San Bernardino, San Bernardino County, California, 55 miles east of Los Angeles and 60 miles west of Palm Springs. The main surface water features near the site are City Creek, Warm Creek, the Twin Creek flood control channel, and the Santa Ana River, which flows southwest along the southern base boundary. The aquifer system beneath the site is part of the Bunker Hill hydrologic basin. Drinking water is derived from the middle and lower water-bearing zones. The site is classified as residential and light industrial. Adjacent properties includes area of residences, light and heavy industry, and agriculture. The population of the county is 1,418,380. The site was activated in March 1942 as an engine repair center for Air Force, U. S. Navy, and private industry aircraft. The site became a Military Airlift Command base in 1966. In 1968, the Aerospace Audiovisual Services established its headquarters at the base. The site also provided airlift and sustenance capabilities for air and combat units world-wide. Solvents, specifically TCE, were used in servicing aircraft from 1940s to the early 1980s. Former waste disposal, handling, and discharge practices have resulted in the contamination of soil and the upper water-bearing zone of a drinking water aquifer. The base was officially added to the U.S. EPA National Priorities List (NPL) on July 22, 1987. The U.S. EPA, California Department of Toxic Substances Control (DTSC), and the U.S. Air Force signed an interagency agreement, known as the Norton AFB Federal Facility Agreement (FFA) on June 29, 1989, which governs the conduct of environmental investigation and cleanup activities. The Air Force, U.S. EPA, DTSC, and the

MAP FINDINGS

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Regional Water Quality Control Board (RWQCB) Santa Ana Region comprise the Base Realignment and Closure (BRAC) Cleanup Team (BCT), with the Air Force serving as lead agency. The base has been subdivided into six separate areas for purposes of investigation and description of base activities. Since closure and redevelopment of portions of the base, many streets have been renamed. -The Central Base Area (CBA), which reflects the western one-third of the former base, was the most developed portion of the base and included the majority of offices, warehouses, on-base housing, engineering yards, and aircraft repair facilities. -The former Ballistic Missile Organization (BMO) complex is located south of the CBA and across Mill Street. The former BMO complex has been deeded to the Inland Valley Development Agency and a portion is occupied by the Defense Finance and Accounting Service. -The airfield includes the runways, ramps, aircraft parking, and hangars used for aircraft repair. The airfield covers the eastern two-thirds of the former base. -The Northeast Base Area (NBA) is located north of the airfield and represents the portion of the base with the oldest buildings. The original aircraft hangars and repair facilities are located within the NBA, as well as the former base Landfill No. 2. -The Golf Course Area (GCA) is located south of the airfield and is the current site of the Palm Meadows Golf Course. Prior to construction of the golf course, the GCA was used as a landfill (IRP Site 10), liquid waste disposal (IRP Site 1), a quartermaster's salvage yard, and chemical warfare training area, among other activities. -The former industrial waste treatment plant (IWTP) facility is located south of the GCA and was used for the treatment of liquid wastes generated as part of aircraft maintenance and repainting. Several investigations were conducted from 1982 to date. The 1982 to 1988 investigations resulted in identification of 22 Installation Restoration Program (IRP) sites. During closure of the base, additional records investigations resulted in identification of 73 AOCs. Contamination at the Small Arms Range (SAR) and the pipeline excavation at Building 752 was identified during cleanup actions performed at these sites. OU2: Site Specific Information IRP Site 1 - IRP Site 1 is in the GCA and was the location of former unlined lagoons used from 1950 to 1960 for the disposal of liquid waste generated during aircraft repair. During the 1960s, a portion of the golf course was constructed over the site without removing all industrial waste. The Remedial Investigation (RI) identified soils contaminated with paints, solvents, oil, fuels, and solids that had been washed into the industrial waste system. Chlorobenzene, 1,2-dichlorobenzene (DCB), and 1,4-DCB exceeded industrial PRGs. An Engineering Evaluation/Cost Analysis (EE/CA) identified removal of contaminated soil to a depth of approximately 30 feet below ground surface (bgs), backfilling with clean soil, and restoring the site as a portion of a fairway and green. A total of 20,325 tons of contaminated soil was excavated from an area of approximately 25,000 square feet, to the top of the perched-zone groundwater at a depth of approximately 29 feet bgs. The excavation was located next to a berm that supports the airfield perimeter road. Based on confirmation sampling results the contamination extended beneath the perimeter road. For technical and implementability reasons, the deep and lateral contamination was not removed. The area of affected soil left in place covers approximately 3,800 square feet. IRP Site 1 is part of the active golf course, and the property is currently zoned industrial/commercial by the city of San Bernardino. The projected long-term use of the site is expected to be commercial/industrial-related options for the property. IRP Site 2 - IRP Site 2 is located in the northeast corner of former Norton AFB and is the location of a former base landfill used between 1958 and 1980. Originally, it covered approximately 31 acres and was used for the disposal of general refuse, office waste, industrial waste, and industrial waste treatment plant (IWTP) sludge. Under CERCLA, the presumptive remedy for landfills is to leave waste in place and to provide an appropriate containment system. Under the presumptive

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	USAF NORTON AFB (Continued)		**1000417274**

remedy guidelines, various cover systems and associated gas control systems were evaluated in an EE/CA for IRP Site 2, and a natural soil cover was selected with an appropriate surface water control system. Because landfill gas (e.g., methane, PCE, trichloroethene [TCE], and vinyl chloride) was present, a landfill gas control system was also required. The cover, surface water control, and gas control systems were described in an Action Memorandum (AM). The design for the landfill has been implemented with consolidation into a smaller footprint and construction of the landfill cover and gas collection/control systems completed in December 1998 and accepted by the BRAC Cleanup Team (BCT) in February 1999. Site 2 is a closed landfill, and the property is currently zoned industrial/commercial by the city of San Bernardino. The projected long-term use of the site is expected to be passive open space. IRP Site 5 - IRP Site 5 served as the training area for fire control and abatement exercises from the late 1950s through the 1970s. Site 5 is in the southern portion of the former base, east of the golf course. Fire training exercises involved floating a layer of oil, fuel, or other combustible material on a layer of water and repeatedly igniting and extinguishing the material. RI results showed the site to contain metals (cadmium, copper, lead, and zinc) and dioxins in near-surface soils (to 10 feet bgs) and fuels (benzene, toluene, ethylbenzene, xylenes [BTEX]), solvents, and PAHs in deeper soils up to 40 feet bgs. The EE/CA and subsequent AM for IRP Site 5 selected soil vapor extraction (SVE) for remediation of fuel contamination, excavation followed by stabilization of the metals/dioxin-contaminated soil, and excavation and disposal of the PAH-contaminated soil. This removal action was completed during 1998 and involved an area of approximately 100,000 square feet. Excavation was performed to a maximum depth of 13 feet bgs, and confirmation samples were taken on the sidewalls and bottom of the excavation. The SAR impact berm adjacent to IRP Site 5 was also removed during the Site 5 removal action. The SVE component of the remedy removed 22,600 pounds of hydrocarbons. The SVE system was operated from January 10, 1996, until July 10, 1997. The effectiveness of the SVE system was assessed through confirmation soil boring samples and vadose zone leaching modeling. The model simulations indicated that the SVE removal adequately addressed the hydrocarbon contamination and was protective of groundwater. The soil excavation was performed in two phases. The first phase consisted of the removal of 21,104 tons of contaminated soil and 4,589 tons of rock and debris. This material was transported to the IRP Site 2 landfill. The lead in the contaminated soil was stabilized using 15 percent (by weight) Portland cement to meet State of California nonhazardous waste criteria. The soil that met nonhazardous criteria was used as foundation material for the landfill cap. The material not meeting the California nonhazardous waste criteria (1,443 tons) met federal nonhazardous waste criteria and was shipped to Browning Ferris Industries (BFI) landfill in La Paz, Arizona, for disposal. The second phase involved excavation of 3,496 tons of contaminated soil, stabilized with 15 percent (by weight) Portland cement, which was shipped to the BFI landfill in Arizona for disposal as an RCRA nonhazardous waste. The excavation area was backfilled with clean soil to the level of the former topographic grade. No groundwater contamination is associated with IRP Site 5. The site is being used for storage of golf course landscape waste prior to off-site disposal, and the property is currently zoned industrial/commercial by the city of San Bernardino. The projected long-term use of the site is expected to be industrial/commercial-related. Small Arms Range - The SAR was located immediately adjacent to IRP Site 5 and historically included an impact berm. The berm was contaminated by lead projectiles as a result of small arms practice, and a removal action was addressed in a work plan. Because the berm was contiguous with Site 5, portions of the berm were removed during the Site 5 removal action. A total of 11,478 tons of material was removed from the SAR,

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Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number
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including 210 tons of bullet fragments and rock, classified as RCRA hazardous waste, and disposed at the Laidlaw Environmental Services landfill in Westmoreland, California. Nonhazardous waste, including 128 tons of rock and debris and 9,124 tons of soil, was placed at the IRP Site 2 landfill. The remaining 2,106 tons of soil were stabilized with 15 percent (by weight) Portland cement. This material did not meet California nonhazardous waste criteria and was shipped to the BFI landfill in Arizona for disposal. Confirmation samples were collected, and lead was detected above the residential PRG at one location. Following completion of the soil removal action, much of the remaining portion of the SAR impact berm was pushed into the Site 5 excavation as fill. The soil from the berm was then covered with soil imported from the adjacent riverbed to bring the Site 5 area back to its original grade. The firing line area of the SAR remains as a ground depression and is not being used. Projected long-term plans for the area are industrial/commercial-related use. The firing line area remains as a ground depression and is not being used. Projected long-term use of the site is expected to be commercial/industrial-related options for the property. IRP Site 7 - IRP Site 7 is located in the southeast corner of the former IWTP compound. Although Site 7 is part of this CERCLA ROD, as part of the former IWTP, Site 7 also must be closed as part of the RCRA corrective action termination of the interim status facility (two separate closure processes). The site included 12 concrete-walled, unlined sludge-drying beds, covering approximately 17,280 square feet. The beds were used to dry sludge generated at the IWTP until 1987. During removal of the sludge, it was temporarily stored at the northeast corner of the site. The former waste pile appears to have been located on what is now highly weathered asphalt pavement. Physical removal and disposal of the concrete-walled sludge-drying beds and surface soils were completed in March 2004, and the CERCLA closure report is in review. The site is currently not being used. The property is zoned industrial/commercial by the city of San Bernardino. Projected long-term use of the site is expected to be commercial/industrial-related options for the property. IRP Site 10 - Site 10 is located along the southern base boundary in the eastern portion of the golf course. Landfill No. 1 was used by the Air Force from 1943 to 1958, primarily for disposal of general refuse, which was apparently burned at the site. The 1984 to 1995 investigations, which included sampling for metals, pesticides, PAHs, and PCBs, indicated the presence of metals in ash (primarily chromium and lead) above the residential soil PRGs in shallow soil (0 to 2 feet bgs). Based on the RI data for metals, an RA for Site 10 was evaluated in an EE/CA. Because contamination was not significantly above industrial soil cleanup goals, the Air Force elected to establish a deed restriction for the site. However, the ecological risk assessment (ERA) determined that the contamination was localized, and concentrations of chromium and lead at the hot spots posed a significant risk to plants and animals. The Air Force responded by developing a hot-spot removal plan for Site 10. A removal action was performed at four hot spot locations that resulted in excavation of 340 cubic yards of contaminated soil. Approximately 224 cubic yards of contaminated soil were disposed at the Site 2 landfill, and 116 cubic yards were disposed off site. Physical removal and disposal of dioxin-contaminated soil were completed in 2004, and the closure report is in preparation. The northern portion of the site is used as a golf course fairway, and the property is currently zoned industrial/commercial by the city of San Bernardino. Projected long-term use of the site north of the base boundary is expected to be industrial-related. The southern portion of the site includes habitat for two endangered species, and is bounded by a man-made flood protection levee. The southern portion is off base and is zoned open space with unrestricted public access. IRP Site 17 - IRP Site 17 is located in the southwestern corner of the former IWTP compound. Although Site 17 is part of the CERCLA ROD, as part of the former IWTP, Site 17

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number
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is undergoing RCRA closure as part of the corrective action termination of the RCRA interim status facility (two separate processes). The former IWTP treated industrial wastewater from the repair of military aircraft from 1960 to 1993. Most of the IWTP facility was removed in 1995. IRP Site 17 is comprised of two connected brick-lined sumps that the Air Force constructed during the early 1960s for the purpose of burning waste fuels and solvents. The Air Force initiated burning, but in 1961 permission for continued burning was denied by local air quality authorities. Therefore, the sumps were used for waste destruction for a limited time but were used primarily as holding tanks for the IWTP and as an oil/water separator until 1985. The area immediately south of the sumps was also used for storage of solvent and plating wastes contained in 55-gallon drums. Site 17 was subject to a series of site investigations initiated in 1984. Site investigations have identified a zone of fine-grained soils, 25 to 55 feet bgs, that underlie and overlie two zones of coarser-grained soils. An EE/CA prepared for Site 17 presented a detailed analysis of the subsurface conditions at the site. In summary, there are two water-bearing zones below the Site 17 area. The first zone is a perched groundwater layer that is supported by a layer of finer-grained silts and clays extending from approximately 25 to 55 feet bgs. Collectively, the zone of finer-grained soils starting at 25 feet bgs and the perched groundwater supported by the finergrained soils is termed the "perched zone." Below the zone of finer-grained soil material is the second zone, termed the "upper aquifer." The upper aquifer comprises sands and gravels that extend to at least 500 feet below the site. During the early 1980s, the top of the upper aquifer was in contact with the zone of finer-grained soil material at 50 feet bgs. Between 1984 and 1988, the elevation of the upper aquifer dropped 7 to 10 feet, below the soil layer of the perched zone. Between 1988 and 1993, the water elevation decreased another 15 to 25 feet, resulting in several dry monitoring wells. The depth to groundwater in the upper aquifer now ranges from approximately 75 to 90 feet bgs (depending on seasonal fluctuations) in the area of IRP Site 17. The perched-zone groundwater contamination is assumed to have resulted from the former chemical waste storage at Site 17. The source may have been from the drums of waste solvents once stored at Site 17 or leakage from the Site 17 sumps. Due to the sandy nature of the surface soils, the solvent migrated downward to the perched zone, where further downward migration was retarded by the finer-grained soils. The two sumps, which were part of the IWTP, were removed in 2003, and the CERCLA closure report is in preparation. The site is currently not being used. The property is zoned industrial/commercial by the city of San Bernardino. Projected long-term use of the site is expected to be as industrial/commercial-related options for the property. IRP Site 19 - Site 19, located in the CBA to the south of Building 763, was formerly used as a drum storage area and aircraft washing facility. Drums of fuels, oils, electroplating solutions, TCE and trichloroethane (TCA) sludge, and cyanide waste solutions were stored on an unpaved fenced lot. The area south of Building 763 was the general location of the original aircraft washing facility. This facility was removed in 1966, and the area was resurfaced with 20 inches of concrete to become part of the flight line. Site 19 was investigated during the 1984 to 1986 IRP and the 1991 to 1993 RIs. PCBs were detected in excess of residential PRGs, primarily in the upper 6 inches of soil beneath the concrete runway apron. An interim ROD was developed for IRP Site 19 to identify a use restriction documenting the presence of the contamination. This ROD and its decision for IRP Site 19 will supersede the interim ROD. No groundwater contamination is associated with this site. The long-term future land use for Site 19 is to retain the runway apron for use by the San Bernardino International Airport Authority (SBIAA) airfield. AOC 4 - Building 301, located in the NBA near U and 102nd streets, was an equipment and vehicle washing facility. During the 1950s, the building was part of a spray

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number
	USAF NORTON AFB (Continued)		**1000417274**

painting facility. At the time of base closure (1994), it was used by civilian auto hobby personnel. AOC 4 consists of the foundation of former Building 301, an adjacent washing slab, and adjacent soil areas. A separator/dosing chamber was removed and its location evaluated as part of the basewide underground storage tank (UST) program. A solids collection pit and two trench drains were identified during the site investigation. The concrete washing slab was heavily stained, particularly near the trench drains. Drums of oil and other materials were stored in sheds along the southern drain line. A 4-foot-by 4-foot-wide area surrounded by a 6-foot-tall chain-link fence is located to the north of the washing slab and may represent the location of a former waste receptacle. The area is capped with a wooden cover, and the material under the cover may be fill. The area of affected soil is approximately 40 feet by 120 feet. No groundwater contamination is associated with this AOC. AOC 4 is on a parcel that was transferred by SBIAA to the San Bernardino County Fire Department under a Federal Aviation Administration (FAA) covenant that allows only industrial, commercial, or aircraft support usage. The Fire Department has refurbished Building 302 for office use and vehicle repair and is using the area west of the building (north of AOC 4) as a household hazardous waste collection point. Remedial alternatives were evaluated in an EE/CA. The Air Force identified ICs as the preferred alternative in the AM. Paved areas south of Building 302 are being used for vehicle and equipment storage. The western half of AOC 4 is covered by grassy weeds, while the eastern half is paved and includes a covered storage area. The Fire Department plans to use the paved area for equipment storage, while there are no plans for use of the grassy area of AOC 4 outside of the fenced storage yard. The property is currently zoned industrial/commercial by the city of San Bernardino. Projected long-term use of the site is expected to be industrial/commercial-related options for the property. AOC 18 - Former Buildings 451 and 452 were located in the CBA, east of Tippecanoe Avenue and north of Harry Sheppard Boulevard. Building 451 was a former garage and gas station in operation from 1942 to the late 1960s or early 1970s; Building 452 was the site of USTs. A 1942 site drawing indicates five 12,000-gallon gasoline USTs, a fueling station, and an oil storage house (Buildings 452, 451, and 450, respectively), although a 1967 site drawing indicates only two 12,000-gallon USTs were present. All structures and USTs have been removed. AOC 18 was investigated during the confirmation study (CS) and expanded source investigation (ESI). The soil contamination covers an area of approximately 600 feet. Prior to the initial redevelopment activities, AOC 18 was covered by an asphalt-paved parking lot that served the adjacent base post office. From January 2000 to 2004, the surface of the AOC was bare earth facilitating aeration (volatilization) of the fuel-related chemicals. The site is now paved with asphalt as part of the Mattel warehouse and distribution center. Remedial alternatives were previously evaluated in an EE/CA. The Air Force identified ICs in the AM as the preferred RA. AOC 18 is on property that was transferred to Inland Valley Development Agency (IVDA). IVDA has demolished all structures in the vicinity of AOC 18 and removed all pavement in preparation for redevelopment. The property is currently zoned industrial/commercial by the city of San Bernardino. Projected long-term use of the site is expected to be industrial/commercial-related options for the property. AOC 33 - Building 747, located in the southeastern corner of the CBA, was one of the primary industrial facilities at Norton AFB. Although AOC 33 is part of this CERCLA ROD, as part of the former Industrial Waste Line (IWL), it is also part of the RCRA corrective action termination of the interim status facility (two separate closure processes). The building was constructed in 1942 and renovated in 1944, 1953, and 1955. From 1942 to 1966, the building supported operations for the repair and overhaul of engines and other aircraft parts. Building 747 was converted into a freight terminal facility in 1966, and

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the building served as offices and storage facilities. Subsurface soil contamination at AOC 33 is associated with sumps (some recently removed) buried beneath an asphalt access road immediately south of Building 747. The sump portion of AOC 33 is part of the IWL that is undergoing RCRA corrective action termination as an interim status facility. AOC 33 was investigated during the CBA OU RI, CS, and the ESI. No groundwater contamination is associated with AOC 33. Remedial alternatives were evaluated in an EE/CA. The Air Force identified a deed restriction in the AM as the preferred RA. The sump and surrounding soil were removed in 2003. The CERCLA closure report is in preparation. AOC 33 is on property that has been leased by the Air Force to SBIAA. Building 747 has been subleased by SBIAA to several entities for commercial use. The property is currently zoned industrial/commercial by the city of San Bernardino. Projected long-term use of the site is expected to be industrial/commercial-related options for the property, including aviation support. AOC 39 - AOC 39 is located west of Club House Drive and south of the southern perimeter road, where an underground storm drainpipe empties into a grass-covered fairway drainage ditch. The discharge serves storm drain lines that originate along the southern flight line area. An oil/water separator removes oil prior to discharge into the ditch. The discharge point possibly received waste from the flight line and Buildings 695, 763, and 795. Aerial photographs from the 1950s and later indicate that fluids from aircraft repair and fueling emptied into the storm drain system. A 1982 interview record indicated that flight line oils were occasionally observed in the golf course drain. No groundwater contamination is associated with AOC 39. Remedial alternatives of AOC 39 were previously evaluated in an EE/CA. The Air Force selected deed restrictions in the AM as the preferred RA. AOC 39 was evaluated further in the BWFS. AOC 70 - AOC 70 was a percolation pond used for treated IWTP effluent during the mid-1980s to 1993. Although AOC 70 is part of this CERCLA ROD, as part of the former IWTP, AOC 70 also must be closed as part of the RCRA corrective action termination of the interim status facility (two separate closure processes). On December 31, 2004, DTSC-RCRA acknowledged that AOC 70 was clean closed. The 0.25-acre pond site was constructed upon sandy soils that readily facilitated infiltration of the treated effluent into the subsurface. There was no outflow from the pond. The pond dried out when the IWTP ceased functioning in mid-1993. AOC 70 was investigated under the CS Addendum No. 2. RAs were evaluated in an EE/CA. The Air Force selected a soil removal action in the AM as the preferred remedy. The Air Force completed the removal action in 1997 and backfilled the site with certified clean fill. No groundwater contamination is associated with the AOC. AOC 70 is within a parcel of the base that has been leased to IVDA. The property is currently zoned industrial/commercial by the city of San Bernardino. Projected long-term use of the site is expected to be as industrial/commercial-related options for the property consistent with city of San Bernardino zoning. Building 752 - Building 752 is located in the eastern portion of the CBA adjacent to the airfield. The building was used during the 1940s and 1950s for the repair of aircraft instruments, including painting instrument dials with radio-luminescent paint containing radium-226. The room used for painting dials was sealed in 1955 when painting operations ceased. During the period that painting occurred, paint waste was flushed into a sink connected to the sanitary sewer. Investigations of the sink and piping system showed that they were contaminated by radium-226. This included the piping system outside of the building to where it connected with the sanitary sewer. Cleanup of the interior piping system and interior surfaces of Building 752 were handled under separate programs. Cleanup of soils affected by radium-226 waste outside of Building 752 are being addressed in this ROD. To determine whether soils outside of the building had been affected by the discharge of paint waste into the sanitary sewer pipe, the pipe was excavated for visual characterization and soil sampling. The pipe was constructed of

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number

USAF NORTON AFB (Continued) **1000417274**

6-inch vitreous clay in 3-foot sections. Two soil samples collected as part of the initial site characterization were found to contain radium-226 at 169 ?10 picoCuries per gram (pCi/g) and 1,940 ?20 pCi/g (background is 1.41 pCi/g). The entire waste line piping was surveyed with a field instrument and found to exhibit gamma radiation above background levels. Excavation of the piping system was conducted July 23 through August 1, 1996. The excavation was approximately 3 feet deep where the waste line exited the southwest corner of the building, and extended to a depth of 9 feet where the waste line entered the sanitary sewer. All excavated soil and piping was disposed off site. Before backfilling the trench, a new waste line was installed between the building and the sanitary sewer. After backfilling the trench, asphalt pavement was placed over the excavation. As part of the overall radium-226 investigation of the Building 752 area, additional radium-226 contamination was discovered in an area immediately west of the building. Building drawings from the 1950s indicate a wooden loading dock attached to the building over the affected area. In February 2001, the loading dock area was sampled for radium-226. The investigators determined that the area of concern is 11 by 55 feet, with depth of contamination between 1 and 4 feet bgs. The estimated volume of affected soil is 1,400 cubic feet. Radium-226 contaminated soil was removed in 2004. The closure report is in preparation. All contaminated soil will be properly disposed. Currently the site is not in use. The property is currently zoned industrial/commercial by the city of San Bernardino. Projected long-term use of the building and surrounding area is expected to be industrial/commercial-related options for the property (airfield support). Northeast Base Area PCE Plume - The NBA has two PCE plumes, one in the eastern portion (east PCE plume) where the former Site 2 landfill is situated, and a smaller plume in the central portion (west PCE plume). Only the west PCE plume has been above the maximum contaminant level (MCL) for PCE since April 2003. The average gradient in the NBA has been observed to fluctuate between a low of 0.004 foot per foot (October 2003) and a high of 0.039 foot per foot (April 1996). Seasonal variation remains relatively constant. The source of the contamination contributing to the NBA west PCE plume is not believed to be associated with IRP Site 2. PCE concentrations are higher in the west plume than those in the east plume, whereas they would be expected to be less due to contaminant dispersal. The groundwater flow direction in the NBA is to the west to west-northwest. Groundwater quality data for the NBA plume wells do not indicate significant movement of the plumes, either horizontally or vertically. The property overlying the NBA plume is zoned industrial/commercial by the city of San Bernardino. The projected long-term use for Site 2, which overlies the east plume, is expected to be passive open space or potentially a long-term, open storage area. The projected long-term use for the property over the west plume is industrial/commercial, possibly warehousing. A Record of Decision (ROD) addressing Operable Unit 2 (OU2) was completed in September of 2005.

CERCLIS Assessment History:

Action:	DISCOVERY
Date Started:	Not reported
Date Completed:	08/01/80
Priority Level:	Not reported
Action:	PRELIMINARY ASSESSMENT
Date Started:	Not reported
Date Completed:	04/01/84
Priority Level:	Low priority for further assessment
Action:	SITE INSPECTION
Date Started:	Not reported

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number

USAF NORTON AFB (Continued) **1000417274**

Date Completed: 04/01/84
Priority Level: Higher priority for further assessment

Action: PROPOSAL TO NATIONAL PRIORITIES LIST
Date Started: Not reported
Date Completed: 10/15/84
Priority Level: Not reported

Action: FINAL LISTING ON NATIONAL PRIORITIES LIST
Date Started: Not reported
Date Completed: 07/22/87
Priority Level: Not reported

Action: HAZARD RANKING SYSTEM PACKAGE
Date Started: Not reported
Date Completed: 06/01/88
Priority Level: Not reported

Action: INTERAGENCY AGREEMENT NEGOTIATIONS
Date Started: 05/05/87
Date Completed: 06/29/89
Priority Level: Not reported

Action: FEDERAL INTERAGENCY AGREEMENT
Date Started: 05/05/87
Date Completed: 06/29/89
Priority Level: Not reported

Action: FEDERAL FACILITY REMOVAL
Date Started: 01/04/91
Date Completed: 04/08/92
Priority Level: Cleaned up

Action: FEDERAL FACILITY REMEDIAL INVESTIGATION/FEASIBILITY STUDY
Date Started: 06/29/89
Date Completed: 11/24/93
Priority Level: Not reported

Action: RECORD OF DECISION
Date Started: Not reported
Date Completed: 11/24/93
Priority Level: Not reported

Action: FEDERAL FACILITY REMEDIAL DESIGN
Date Started: 11/24/93
Date Completed: 09/16/94
Priority Level: Not reported

Action: ENGINEERING EVALUATION/COST ANALYSIS
Date Started: Not reported
Date Completed: 03/29/96
Priority Level: Not reported

Action: FEDERAL FACILITY REMEDIAL ACTION
Date Started: 09/16/94
Date Completed: 07/26/96
Priority Level: Not reported

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number

USAF NORTON AFB (Continued) **1000417274**

Action: FEDERAL FACILITY REMOVAL
Date Started: 09/20/96
Date Completed: 11/15/96
Priority Level: Not reported

Action: FEDERAL FACILITY REMOVAL
Date Started: 03/25/96
Date Completed: 04/22/97
Priority Level: Partially Cleaned up

Action: RECORD OF DECISION
Date Started: Not reported
Date Completed: 06/25/97
Priority Level: Not reported

Action: FEDERAL FACILITY REMOVAL
Date Started: 04/15/96
Date Completed: 07/22/97
Priority Level: Not reported

Action: FEDERAL FACILITY REMOVAL
Date Started: 04/18/96
Date Completed: 12/19/97
Priority Level: Partially Cleaned up

Action: FEDERAL FACILITY REMOVAL
Date Started: 06/25/97
Date Completed: 12/08/98
Priority Level: Not reported

Action: FEDERAL FACILITY REMOVAL
Date Started: 06/30/97
Date Completed: 12/08/98
Priority Level: Not reported

Action: FEDERAL FACILITY REMOVAL
Date Started: 12/21/95
Date Completed: 07/28/99
Priority Level: Not reported

Action: FEDERAL FACILITY REMOVAL
Date Started: 04/25/96
Date Completed: 09/30/99
Priority Level: Stabilized

Action: FEDERAL FACILITY FIVE YEAR REVIEW
Date Started: 03/05/99
Date Completed: 10/27/99
Priority Level: Not reported

Action: FEDERAL FACILITY REMEDIAL INVESTIGATION/FEASIBILITY STUDY
Date Started: 10/01/98
Date Completed: 06/10/03
Priority Level: Not reported

Action: FEDERAL FACILITY REMOVAL
Date Started: 12/11/03

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number

USAF NORTON AFB (Continued) **1000417274**

Date Completed: 12/03/04
Priority Level: Not reported

Action: FEDERAL FACILITY FIVE YEAR REVIEW
Date Started: 02/28/05
Date Completed: 09/20/05
Priority Level: Not reported

Action: FEDERAL FACILITY REMOVAL
Date Started: 11/24/03
Date Completed: 09/29/05
Priority Level: Not reported

Action: FEDERAL FACILITY REMOVAL
Date Started: 12/17/03
Date Completed: 09/29/05
Priority Level: Not reported

Action: FEDERAL FACILITY REMOVAL
Date Started: 02/02/04
Date Completed: 09/29/05
Priority Level: Not reported

Action: RECORD OF DECISION
Date Started: Not reported
Date Completed: 09/29/05
Priority Level: Final Remedy Selected at Site

Action: OPERATIONS AND MAINTENANCE
Date Started: 07/26/96
Date Completed: 12/21/05
Priority Level: Not reported

Action: PRELIMINARY CLOSE-OUT REPORT PREPARED
Date Started: Not reported
Date Completed: 05/16/06
Priority Level: Not reported

Action: Restoration Advisory Board
Date Started: 12/01/94
Date Completed: Not reported
Priority Level: Not reported

Action: OPERATIONS AND MAINTENANCE
Date Started: 11/28/99
Date Completed: Not reported
Priority Level: Not reported

CORRACTS:

EPA ID: CA4570024345
EPA Region: 9
Area Name: ENTIRE FACILITY
Actual Date: 1/1/1996
Action: CA210SF - CA Responsibility Referred To A Non-RCRA Federal Authority,

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number

USAF NORTON AFB (Continued) **1000417274**

Corrective Action at the facility or area referred to CERCLA
NAICS Code(s): 332813 92811 92811
Electroplating, Plating, Polishing, Anodizing, and Coloring
National Security
National Security
Original schedule date: Not reported
Schedule end date: Not reported

EPA ID: CA4570024345
EPA Region: 9
Area Name: CENTRAL BASE AREA OU
Actual Date: 2/5/1993
Action: CA150 - RFI Workplan Approved
NAICS Code(s): 332813 92811 92811
Electroplating, Plating, Polishing, Anodizing, and Coloring
National Security
National Security
Original schedule date: Not reported
Schedule end date: Not reported

EPA ID: CA4570024345
EPA Region: 9
Area Name: CENTRAL BASE AREA OU
Actual Date: 2/5/1993
Action: CA200 - RFI Approved
NAICS Code(s): 332813 92811 92811
Electroplating, Plating, Polishing, Anodizing, and Coloring
National Security
National Security
Original schedule date: Not reported
Schedule end date: Not reported

EPA ID: CA4570024345
EPA Region: 9
Area Name: CENTRAL BASE AREA OU
Actual Date: 2/5/1993
Action: CA300 - CMS Workplan Approved
NAICS Code(s): 332813 92811 92811
Electroplating, Plating, Polishing, Anodizing, and Coloring
National Security
National Security
Original schedule date: Not reported
Schedule end date: Not reported

EPA ID: CA4570024345
EPA Region: 9
Area Name: CENTRAL BASE AREA OU
Actual Date: 2/5/1993
Action: CA350 - CMS Approved
NAICS Code(s): 332813 92811 92811
Electroplating, Plating, Polishing, Anodizing, and Coloring
National Security
National Security
Original schedule date: Not reported
Schedule end date: Not reported

EPA ID: CA4570024345

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number

USAF NORTON AFB (Continued) **1000417274**

EPA Region: 9
Area Name: ENTIRE FACILITY
Actual Date: 4/1/1984
Action: CA049SI
NAICS Code(s): 332813 92811 92811
Electroplating, Plating, Polishing, Anodizing, and Coloring
National Security
National Security
Original schedule date: Not reported
Schedule end date: Not reported

EPA ID: CA4570024345
EPA Region: 9
Area Name: CENTRAL BASE AREA OU
Actual Date: 5/1/1992
Action: CA650 - Stabilization Construction Completed
NAICS Code(s): 332813 92811 92811
Electroplating, Plating, Polishing, Anodizing, and Coloring
National Security
National Security
Original schedule date: Not reported
Schedule end date: Not reported

EPA ID: CA4570024345
EPA Region: 9
Area Name: ENTIRE FACILITY
Actual Date: 5/22/2000
Action: CA750NO - Migration of Contaminated Groundwater under Control, Unacceptable migration of contaminated groundwater is observed or expected
NAICS Code(s): 332813 92811 92811
Electroplating, Plating, Polishing, Anodizing, and Coloring
National Security
National Security
Original schedule date: Not reported
Schedule end date: Not reported

EPA ID: CA4570024345
EPA Region: 9
Area Name: ENTIRE FACILITY
Actual Date: 5/22/2000
Action: CA725YE - Current Human Exposures Under Control, Yes, Current Human Exposures Under Control has been verified
NAICS Code(s): 332813 92811 92811
Electroplating, Plating, Polishing, Anodizing, and Coloring
National Security
National Security
Original schedule date: Not reported
Schedule end date: Not reported

EPA ID: CA4570024345
EPA Region: 9
Area Name: ENTIRE FACILITY
Actual Date: 6/1/1984
Action: CA029SF
NAICS Code(s): 332813 92811 92811
Electroplating, Plating, Polishing, Anodizing, and Coloring

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number
	USAF NORTON AFB (Continued)		**1000417274**

National Security
National Security
Original schedule date: Not reported
Schedule end date: Not reported

EPA ID: CA4570024345
EPA Region: 9
Area Name: ENTIRE FACILITY
Actual Date: 6/1/1984
Action: CA049PA
NAICS Code(s): 332813 92811 92811
Electroplating, Plating, Polishing, Anodizing, and Coloring
National Security
National Security
Original schedule date: Not reported
Schedule end date: Not reported

EPA ID: CA4570024345
EPA Region: 9
Area Name: ENTIRE FACILITY
Actual Date: 6/1/1984
Action: CA050 - RFA Completed
NAICS Code(s): 332813 92811 92811
Electroplating, Plating, Polishing, Anodizing, and Coloring
National Security
National Security
Original schedule date: Not reported
Schedule end date: Not reported

EPA ID: CA4570024345
EPA Region: 9
Area Name: CENTRAL BASE AREA OU
Actual Date: 6/1/1995
Action: CA550 - Certification Of Remedy Completion Or Construction Completion
NAICS Code(s): 332813 92811 92811
Electroplating, Plating, Polishing, Anodizing, and Coloring
National Security
National Security
Original schedule date: Not reported
Schedule end date: Not reported

EPA ID: CA4570024345
EPA Region: 9
Area Name: ENTIRE FACILITY
Actual Date: 6/18/1998
Action: CA210 - CA Responsibility Referred To A Non-RCRA Federal Authority
NAICS Code(s): 332813 92811 92811
Electroplating, Plating, Polishing, Anodizing, and Coloring
National Security
National Security
Original schedule date: Not reported
Schedule end date: Not reported

EPA ID: CA4570024345
EPA Region: 9
Area Name: ENTIRE FACILITY
Actual Date: 6/18/1998

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number

USAF NORTON AFB (Continued) **1000417274**

Action: CA725YE - Current Human Exposures Under Control, Yes, Current Human Exposures Under Control has been verified
NAICS Code(s): 332813 92811 92811
Electroplating, Plating, Polishing, Anodizing, and Coloring
National Security
National Security
Original schedule date: Not reported
Schedule end date: Not reported

EPA ID: CA4570024345
EPA Region: 9
Area Name: ENTIRE FACILITY
Actual Date: 6/18/1998
Action: CA750YE - Migration of Contaminated Groundwater under Control, Yes, Migration of Contaminated Groundwater Under Control has been verified
NAICS Code(s): 332813 92811 92811
Electroplating, Plating, Polishing, Anodizing, and Coloring
National Security
National Security
Original schedule date: Not reported
Schedule end date: Not reported

EPA ID: CA4570024345
EPA Region: 9
Area Name: ENTIRE FACILITY
Actual Date: 6/18/1998
Action: CA225NR - Stabilization Measures Evaluation, This facility is, not amenable to stabilization activity at the, present time for reasons other than (1) it appears to be technically, infeasible or inappropriate (NF) or (2) there is a lack of technical, information (IN). Reasons for this conclusion may be the status of, closure at the facility, the degree of risk, timing considerations, the status of corrective action work at the facility, or other, administrative considerations
NAICS Code(s): 332813 92811 92811
Electroplating, Plating, Polishing, Anodizing, and Coloring
National Security
National Security
Original schedule date: Not reported
Schedule end date: Not reported

EPA ID: CA4570024345
EPA Region: 9
Area Name: ENTIRE FACILITY
Actual Date: 6/18/1998
Action: CA075ME - CA Prioritization, Facility or area was assigned a medium corrective action priority
NAICS Code(s): 332813 92811 92811
Electroplating, Plating, Polishing, Anodizing, and Coloring
National Security
National Security
Original schedule date: Not reported
Schedule end date: Not reported

EPA ID: CA4570024345
EPA Region: 9
Area Name: CENTRAL BASE AREA OU

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number

USAF NORTON AFB (Continued) **1000417274**

Actual Date: 7/13/1989
Action: CA600GW - Stabilization Measures Implemented, Groundwater extraction and treatment
NAICS Code(s): 332813 92811 92811
Electroplating, Plating, Polishing, Anodizing, and Coloring
National Security
National Security
Original schedule date: Not reported
Schedule end date: Not reported

EPA ID: CA4570024345
EPA Region: 9
Area Name: ENTIRE FACILITY
Actual Date: 7/13/1989
Action: CA100 - RFI Imposition
NAICS Code(s): 332813 92811 92811
Electroplating, Plating, Polishing, Anodizing, and Coloring
National Security
National Security
Original schedule date: Not reported
Schedule end date: Not reported

EPA ID: CA4570024345
EPA Region: 9
Area Name: ENTIRE FACILITY
Actual Date: 7/13/1989
Action: CA250 - CMS Imposition
NAICS Code(s): 332813 92811 92811
Electroplating, Plating, Polishing, Anodizing, and Coloring
National Security
National Security
Original schedule date: Not reported
Schedule end date: Not reported

EPA ID: CA4570024345
EPA Region: 9
Area Name: CENTRAL BASE AREA OU
Actual Date: 10/7/1994
Action: CA500 - CMI Workplan Approved
NAICS Code(s): 332813 92811 92811
Electroplating, Plating, Polishing, Anodizing, and Coloring
National Security
National Security
Original schedule date: Not reported
Schedule end date: Not reported

EPA ID: CA4570024345
EPA Region: 9
Area Name: CENTRAL BASE AREA OU
Actual Date: 10/7/1994
Action: CA450 - Corrective Measures Design Approved
NAICS Code(s): 332813 92811 92811
Electroplating, Plating, Polishing, Anodizing, and Coloring
National Security
National Security
Original schedule date: Not reported
Schedule end date: Not reported

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number

USAF NORTON AFB (Continued) **1000417274**

EPA ID:	CA4570024345
EPA Region:	9
Area Name:	CENTRAL BASE AREA OU
Actual Date:	11/24/1993
Action:	CA400 - Date For Remedy Selection (CM Imposed)
NAICS Code(s):	332813 92811 92811 Electroplating, Plating, Polishing, Anodizing, and Coloring National Security National Security
Original schedule date:	Not reported
Schedule end date:	Not reported

RCRA-TSDF:

Date form received by agency:	09/01/1996
Facility name:	USAF NORTON AFB
Facility address:	305 S TIPPECANOE AVE SAN BERNARDINO, CA 92408
EPA ID:	CA4570024345
Mailing address:	63RD CIV ENG SQU/DEEV NORTON AFB, CA 92409
Contact:	Not reported
Contact address:	Not reported Not reported
Contact country:	Not reported
Contact telephone:	Not reported
Contact email:	Not reported
EPA Region:	09
Land type:	Federal
Classification:	TSDF
Description:	Handler is engaged in the treatment, storage or disposal of hazardous waste
TSD commencement date:	Not reported

Owner/Operator Summary:

Owner/operator name:	MULTIPLE OPS - USAF & DPDO
Owner/operator address:	US DEPT OF AIR FORCE NORTON CITY NOT REPORTED, CA 99999
Owner/operator country:	Not reported
Owner/operator telephone:	(714) 382-3909
Legal status:	Federal
Owner/Operator Type:	Operator
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported
Owner/operator name:	US AIR FORCE
Owner/operator address:	NORTON AFB SAN BERNARDINO, CA 92409
Owner/operator country:	Not reported
Owner/operator telephone:	(714) 382-3909
Legal status:	Federal
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste: Unknown

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number
	USAF NORTON AFB (Continued)		**1000417274**

Mixed waste (haz. and radioactive): Unknown
Recycler of hazardous waste: No
Transporter of hazardous waste: Yes
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: Unknown
Furnace exemption: Unknown
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No
Off-site waste receiver: Verified to be non-commercial

Historical Generators:
Date form received by agency: 09/01/1996
Facility name: USAF NORTON AFB
Classification: Small Quantity Generator

Date form received by agency: 03/11/1996
Facility name: USAF NORTON AFB
Site name: NORTON AIR FORCE BASE
Classification: Large Quantity Generator

Date form received by agency: 03/28/1994
Facility name: USAF NORTON AFB
Classification: Large Quantity Generator

Date form received by agency: 02/28/1992
Facility name: USAF NORTON AFB
Site name: NORTON AIR FORCE BASE
Classification: Large Quantity Generator

Date form received by agency: 04/17/1990
Facility name: USAF NORTON AFB
Site name: NORTON AIR FORCE BASE
Classification: Large Quantity Generator

Date form received by agency: 08/18/1980
Facility name: USAF NORTON AFB
Classification: Large Quantity Generator

Corrective Action Summary:
Event date: 04/01/1984
Event: CA049SI

Event date: 06/01/1984
Event: CA029SF

Event date: 06/01/1984
Event: CA049PA

Event date: 06/01/1984
Event: RFA Completed

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number
	USAF NORTON AFB (Continued)		**1000417274**

Event date:	07/13/1989
Event:	CMS Imposition
Event date:	07/13/1989
Event:	RFI Imposition
Event date:	07/13/1989
Event:	Stabilization Measures Implemented, Groundwater extraction and treatment (e.g., to achieve groundwater containment, to achieve MCL).
Event date:	05/01/1992
Event:	Stabilization Construction Completed
Event date:	02/05/1993
Event:	RFI Approved
Event date:	02/05/1993
Event:	CMS Workplan Approved
Event date:	02/05/1993
Event:	CMS Approved
Event date:	02/05/1993
Event:	RFI Workplan Approved
Event date:	11/24/1993
Event:	Date For Remedy Selection (CM Imposed)
Event date:	10/07/1994
Event:	CMI Workplan Approved
Event date:	10/07/1994
Event:	Corrective Measures Design Approved
Event date:	06/01/1995
Event:	Certification Of Remedy Completion Or Construction Completion
Event date:	01/01/1996
Event:	CA Responsibility Referred To A Non-RCRA Federal Authority, Corrective Action at the facility or area referred to CERCLA.
Event date:	06/18/1998
Event:	CA Responsibility Referred To A Non-RCRA Federal Authority
Event date:	06/18/1998
Event:	CA Prioritization, Facility or area was assigned a medium corrective action priority.
Event date:	06/18/1998
Event:	Igration of Contaminated Groundwater under Control, Yes, Migration of Contaminated Groundwater Under Control has been verified. Based on a review of information contained in the EI determination, it has been determined that migration of contaminated groundwater is under control at the facility. Specifically, this determination indicates that the migration of contaminated groundwater is under control, and that monitoring will be conducted to confirm that contaminated groundwater remains within the existing area of contaminated groundwater. This

MAP FINDINGS

Map ID / Direction / Distance / Distance (ft.)	Site	Database(s)	EDR ID Number / EPA ID Number

USAF NORTON AFB (Continued) **1000417274**

determination will be re-evaluated when the Agency becomes aware of significant changes at the facility.

Event date: 06/18/1998
Event: Stabilization Measures Evaluation,This facility is not amenable to stabilization activity at the present time for reasons other than 1- it appears to be technically infeasible or inappropriate (NF) or 2- there is a lack of technical information (IN). Reasons for this conclusion may be the status of closure at the facility, the degree of risk, timing considerations, the status of corrective action work at the facility, or other administrative considerations.

Event date: 06/18/1998
Event: Current Human Exposures under Control, Yes, Current Human Exposures Under Control has been verified. Based on a review of information contained in the EI determination, current human exposures are expected to be under control at the facility under current and reasonably expected conditions. This determination will be re-evaluated when the Agency/State becomes aware of significant changes at the facility.

Event date: 05/22/2000
Event: Current Human Exposures under Control, Yes, Current Human Exposures Under Control has been verified. Based on a review of information contained in the EI determination, current human exposures are expected to be under control at the facility under current and reasonably expected conditions. This determination will be re-evaluated when the Agency/State becomes aware of significant changes at the facility.

Event date: 05/22/2000
Event: Igration of Contaminated Groundwater under Control, Unacceptable migration of contaminated groundwater is observed or expected.

Facility Has Received Notices of Violations:
Regulation violated: Not reported
Area of violation: TSD IS-Ground-Water Monitoring
Date violation determined: 04/22/2003
Date achieved compliance: 07/27/2005
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 03/16/2005
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: F - 262.30-34.C
Area of violation: Generators - General
Date violation determined: 04/22/1993
Date achieved compliance: 01/28/1994
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 04/22/1993
Enf. disposition status: Not reported

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number
	USAF NORTON AFB (Continued)		**1000417274**

Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: F - 264.190-201.J
Area of violation: TSD - General
Date violation determined: 04/22/1993
Date achieved compliance: 01/28/1994
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 04/22/1993
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: F - 262.40-43.D
Area of violation: Generators - General
Date violation determined: 04/22/1993
Date achieved compliance: 01/28/1994
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 04/22/1993
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: F - 264.170-177.I
Area of violation: TSD - General
Date violation determined: 04/22/1993
Date achieved compliance: 01/28/1994
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 04/22/1993
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: F - 264.30-37.C
Area of violation: TSD - General
Date violation determined: 05/15/1992
Date achieved compliance: 06/19/1992
Violation lead agency: State
Enforcement action: Not reported
Enforcement action date: Not reported
Enf. disposition status: Not reported
Enf. disp. status date: Not reported

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number
	USAF NORTON AFB (Continued)		**1000417274**

Enforcement lead agency: Not reported
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: F - 262.10-12.A
Area of violation: Generators - General
Date violation determined: 05/15/1992
Date achieved compliance: 06/19/1992
Violation lead agency: State
Enforcement action: Not reported
Enforcement action date: Not reported
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: Not reported
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: F - 264.70-77.E
Area of violation: TSD - General
Date violation determined: 05/15/1992
Date achieved compliance: 06/19/1992
Violation lead agency: State
Enforcement action: Not reported
Enforcement action date: Not reported
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: Not reported
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: F - 270
Area of violation: TSD - General
Date violation determined: 05/15/1992
Date achieved compliance: 06/19/1992
Violation lead agency: State
Enforcement action: Not reported
Enforcement action date: Not reported
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: Not reported
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: F - 270
Area of violation: TSD - General
Date violation determined: 02/27/1991
Date achieved compliance: 05/16/1991
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 04/12/1991
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number
	USAF NORTON AFB (Continued)		**1000417274**

Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FR - 270
Area of violation: TSD - General
Date violation determined: 10/30/1989
Date achieved compliance: 03/14/1990
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 12/11/1989
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FR - 270
Area of violation: TSD - General
Date violation determined: 07/26/1988
Date achieved compliance: 10/30/1989
Violation lead agency: EPA
Enforcement action: EPA TO STATE ADMINISTRATIVE REFERRAL
Enforcement action date: 11/07/1988
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: EPA
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FR - 264.110-120.G
Area of violation: TSD - Closure/Post-Closure
Date violation determined: 08/20/1987
Date achieved compliance: 07/26/1988
Violation lead agency: EPA
Enforcement action: EPA TO STATE ADMINISTRATIVE REFERRAL
Enforcement action date: 02/06/1988
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: EPA
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FR - 264.90-94.F
Area of violation: TSD IS-Ground-Water Monitoring
Date violation determined: 08/20/1987
Date achieved compliance: 07/26/1988
Violation lead agency: EPA
Enforcement action: EPA TO STATE ADMINISTRATIVE REFERRAL
Enforcement action date: 02/06/1988
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: EPA
Proposed penalty amount: Not reported

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number
	USAF NORTON AFB (Continued)		**1000417274**

Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FR - 270
Area of violation: TSD - General
Date violation determined: 08/20/1987
Date achieved compliance: 07/26/1988
Violation lead agency: EPA
Enforcement action: STATE TO EPA ADMINISTRATIVE REFERRAL
Enforcement action date: 05/12/1988
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FR - 270
Area of violation: TSD - General
Date violation determined: 08/20/1987
Date achieved compliance: 07/26/1988
Violation lead agency: EPA
Enforcement action: EPA TO STATE ADMINISTRATIVE REFERRAL
Enforcement action date: 02/06/1988
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: EPA
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: F - 270
Area of violation: TSD - General
Date violation determined: 06/23/1987
Date achieved compliance: 08/06/1987
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 08/06/1987
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: F - 270
Area of violation: TSD - General
Date violation determined: 06/23/1987
Date achieved compliance: 08/06/1987
Violation lead agency: State
Enforcement action: STATE TO EPA ADMINISTRATIVE REFERRAL
Enforcement action date: 08/06/1987
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported

MAP FINDINGS

Map ID / Direction / Distance / Distance (ft.)	Site	Database(s)	EDR ID Number / EPA ID Number
	USAF NORTON AFB (Continued)		**1000417274**

Paid penalty amount: Not reported

Evaluation Action Summary:

Evaluation date: 06/19/2008
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 04/11/2007
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 04/25/2006
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 06/22/2005
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 04/22/2003
Evaluation: GROUNDWATER MONITORING EVALUATION
Area of violation: TSD IS-Ground-Water Monitoring
Date achieved compliance: 07/27/2005
Evaluation lead agency: State

Evaluation date: 01/26/1994
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 03/08/1993
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: TSD - General
Date achieved compliance: 01/28/1994
Evaluation lead agency: State

Evaluation date: 03/08/1993
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Generators - General
Date achieved compliance: 01/28/1994
Evaluation lead agency: State

Evaluation date: 03/30/1992
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Generators - General
Date achieved compliance: 06/19/1992
Evaluation lead agency: State

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number
	USAF NORTON AFB (Continued)		**1000417274**

Evaluation date: 03/30/1992
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: TSD - General
Date achieved compliance: 06/19/1992
Evaluation lead agency: State

Evaluation date: 02/27/1991
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: TSD - General
Date achieved compliance: 05/16/1991
Evaluation lead agency: State

Evaluation date: 10/30/1989
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: TSD - General
Date achieved compliance: 03/14/1990
Evaluation lead agency: State

Evaluation date: 07/26/1988
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: TSD - General
Date achieved compliance: 10/30/1989
Evaluation lead agency: EPA

Evaluation date: 08/20/1987
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: TSD - Closure/Post-Closure
Date achieved compliance: 07/26/1988
Evaluation lead agency: EPA

Evaluation date: 08/20/1987
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: TSD - General
Date achieved compliance: 07/26/1988
Evaluation lead agency: EPA

Evaluation date: 08/20/1987
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: TSD IS-Ground-Water Monitoring
Date achieved compliance: 07/26/1988
Evaluation lead agency: EPA

Evaluation date: 07/30/1987
Evaluation: FINANCIAL RECORD REVIEW
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 07/30/1987
Evaluation: FINANCIAL RECORD REVIEW
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: EPA

Evaluation date: 06/23/1987
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number
	USAF NORTON AFB (Continued)		**1000417274**

Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 06/23/1987
Evaluation: NON-FINANCIAL RECORD REVIEW
Area of violation: TSD - General
Date achieved compliance: 08/06/1987
Evaluation lead agency: State

US ENG CONTROLS:
EPA ID: CA4570024345
Site ID: 0902760
Name: NORTON AIR FORCE BASE (LNDFLL #2)
Address: I-10/US 395 FORMER NORTON AFB
SAN BERNARDINO, CA 92408
EPA Region: 09
County: SAN BERNARDINO
Event Code: Not reported
Actual Date: Not reported

Action ID: 001
Action Name: RECORD OF DECISION
Action Completion date: 11/24/93
Planned Complet. date: 12/31/93
Operable Unit: 01
Contaminated Media : Groundwater
Engineering Control: Air Stripping

Action ID: 001
Action Name: RECORD OF DECISION
Action Completion date: 11/24/93
Planned Complet. date: 12/31/93
Operable Unit: 01
Contaminated Media : Groundwater
Engineering Control: Alternate Drinking Water, (N.O.S.)

Action ID: 001
Action Name: RECORD OF DECISION
Action Completion date: 11/24/93
Planned Complet. date: 12/31/93
Operable Unit: 01
Contaminated Media : Groundwater
Engineering Control: Carbon Adsorption

Action ID: 001
Action Name: RECORD OF DECISION
Action Completion date: 11/24/93
Planned Complet. date: 12/31/93
Operable Unit: 01
Contaminated Media : Groundwater
Engineering Control: Discharge

Action ID: 001
Action Name: RECORD OF DECISION
Action Completion date: 11/24/93
Planned Complet. date: 12/31/93
Operable Unit: 01
Contaminated Media : Groundwater

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number
	USAF NORTON AFB (Continued)		**1000417274**

Engineering Control: Extraction

Action ID: 001
Action Name: RECORD OF DECISION
Action Completion date: 11/24/93
Planned Complet. date: 12/31/93
Operable Unit: 01
Contaminated Media : Groundwater
Engineering Control: Monitoring

Action ID: 001
Action Name: RECORD OF DECISION
Action Completion date: 11/24/93
Planned Complet. date: 12/31/93
Operable Unit: 01
Contaminated Media : Groundwater
Engineering Control: Pump And Treat

Action ID: 001
Action Name: RECORD OF DECISION
Action Completion date: 11/24/93
Planned Complet. date: 12/31/93
Operable Unit: 01
Contaminated Media : Groundwater
Engineering Control: Reinjection

Action ID: 001
Action Name: RECORD OF DECISION
Action Completion date: 11/24/93
Planned Complet. date: 12/31/93
Operable Unit: 01
Contaminated Media : Soil
Engineering Control: Carbon Adsorption

Action ID: 001
Action Name: RECORD OF DECISION
Action Completion date: 11/24/93
Planned Complet. date: 12/31/93
Operable Unit: 01
Contaminated Media : Soil
Engineering Control: Disposal

Action ID: 001
Action Name: RECORD OF DECISION
Action Completion date: 11/24/93
Planned Complet. date: 12/31/93
Operable Unit: 01
Contaminated Media : Soil
Engineering Control: Excavation

Action ID: 001
Action Name: RECORD OF DECISION
Action Completion date: 11/24/93
Planned Complet. date: 12/31/93
Operable Unit: 01
Contaminated Media : Soil
Engineering Control: Monitoring

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number
	USAF NORTON AFB (Continued)		**1000417274**

Action ID: 001
Action Name: RECORD OF DECISION
Action Completion date: 11/24/93
Planned Complet. date: 12/31/93
Operable Unit: 01
Contaminated Media : Soil
Engineering Control: Soil Vapor Extraction (ex-situ)

Action ID: 001
Action Name: RECORD OF DECISION
Action Completion date: 11/24/93
Planned Complet. date: 12/31/93
Operable Unit: 01
Contaminated Media : Soil
Engineering Control: Soil Vapor Extraction (in-situ)

Action ID: 002
Action Name: RECORD OF DECISION
Action Completion date: 09/29/05
Planned Complet. date: 09/30/05
Operable Unit: 02
Contaminated Media : Soil
Engineering Control: Disposal

Action ID: 002
Action Name: RECORD OF DECISION
Action Completion date: 09/29/05
Planned Complet. date: 09/30/05
Operable Unit: 02
Contaminated Media : Soil
Engineering Control: Excavation

Action ID: 002
Action Name: RECORD OF DECISION
Action Completion date: 09/29/05
Planned Complet. date: 09/30/05
Operable Unit: 02
Contaminated Media : Soil
Engineering Control: No Further Action

Action ID: 003
Action Name: RECORD OF DECISION
Action Completion date: 06/25/97
Planned Complet. date: 06/30/97
Operable Unit: 02
Contaminated Media : Groundwater
Engineering Control: No Further Action

Action ID: 003
Action Name: RECORD OF DECISION
Action Completion date: 06/25/97
Planned Complet. date: 06/30/97
Operable Unit: 02
Contaminated Media : Soil
Engineering Control: No Further Action

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number

USAF NORTON AFB (Continued) **1000417274**

US INST CONTROL:

EPA ID:	CA4570024345
Site ID:	0902760
Name:	NORTON AIR FORCE BASE (LNDFLL #2)
Action Name:	RECORD OF DECISION
Address:	I-10/US 395 FORMER NORTON AFB SAN BERNARDINO, CA 92408
EPA Region:	09
County:	SAN BERNARDINO
Event Code:	Not reported
Inst. Control:	Deed Restriction
Actual Date:	Not reported
Complet. Date:	11/24/93
Operable Unit:	01
Contaminated Media :	Groundwater

EPA ID:	CA4570024345
Site ID:	0902760
Name:	NORTON AIR FORCE BASE (LNDFLL #2)
Action Name:	RECORD OF DECISION
Address:	I-10/US 395 FORMER NORTON AFB SAN BERNARDINO, CA 92408
EPA Region:	09
County:	SAN BERNARDINO
Event Code:	Not reported
Inst. Control:	Deed Restriction
Actual Date:	Not reported
Complet. Date:	11/24/93
Operable Unit:	01
Contaminated Media :	Soil

EPA ID:	CA4570024345
Site ID:	0902760
Name:	NORTON AIR FORCE BASE (LNDFLL #2)
Action Name:	RECORD OF DECISION
Address:	I-10/US 395 FORMER NORTON AFB SAN BERNARDINO, CA 92408
EPA Region:	09
County:	SAN BERNARDINO
Event Code:	Not reported
Inst. Control:	Covenant
Actual Date:	Not reported
Complet. Date:	09/29/05
Operable Unit:	02
Contaminated Media :	Soil

EPA ID:	CA4570024345
Site ID:	0902760
Name:	NORTON AIR FORCE BASE (LNDFLL #2)
Action Name:	RECORD OF DECISION
Address:	I-10/US 395 FORMER NORTON AFB SAN BERNARDINO, CA 92408
EPA Region:	09
County:	SAN BERNARDINO
Event Code:	Not reported
Inst. Control:	Deed Restriction
Actual Date:	Not reported

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number

USAF NORTON AFB (Continued) **1000417274**

Complet. Date: 06/25/97
Operable Unit: 02
Contaminated Media : Soil

ROD:

Full-text of USEPA Record of Decision(s) is available from EDR.

PADS:

EPAID:	CA4570024345
Facility name:	USAF NORTON AFB
Facility Address:	63 CES DEV NORTON AFB, CA 92409
Facility country:	US
Generator:	Yes
Storer:	No
Transporter:	No
Disposer:	No
Research facility:	No
Smelter:	No
Facility owner name:	US DOD
Contact title:	Not reported
Contact name:	DIENZO EDMUND M
Contact tel:	(714)382-2444
Contact extension:	Not reported
Mailing address:	63 CES DEV NORTON AFB, CA 92409
Mailing country:	US
Cert. title:	Not reported
Cert. name:	Not reported
Cert. date:	6/22/1990
Date received:	7/11/1990

FINDS:

Registry ID: 110000830815

Environmental Interest/Information System

NCDB (National Compliance Data Base) supports implementation of the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) and the Toxic Substances Control Act (TSCA). The system tracks inspections in regions and states with cooperative agreements, enforcement actions, and settlements.

The NEI (National Emissions Inventory) database contains information on stationary and mobile sources that emit criteria air pollutants and their precursors, as well as hazardous air pollutants (HAPs).

California Hazardous Waste Tracking System - Datamart (HWTS-DATAMART) provides California with information on hazardous waste shipments for generators, transporters, and treatment, storage, and disposal facilities.

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number
	USAF NORTON AFB (Continued)		**1000417274**

program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

CERCLIS (Comprehensive Environmental Response, Compensation, and Liability Information System) is the Superfund database that is used to support management in all phases of the Superfund program. The system contains information on all aspects of hazardous waste sites, including an inventory of sites, planned and actual site activities, and financial information.

NY MANIFEST:

EPA ID:	CA4570024345
Country:	USA
Mailing Name:	UNITED STATES MILITARY - D.P.D.O.
Mailing Contact:	UNITED STATES MILITARY - D.P.D.O.
Mailing Address:	BUILDING 948
Mailing Address 2:	Not reported
Mailing City:	NORTON AIR FORCE BASE
Mailing State:	CA
Mailing Zip:	92405
Mailing Zip4:	Not reported
Mailing Country:	USA
Mailing Phone:	714-382-6501

Document ID:	NYA2651931
Manifest Status:	Completed after the designated time period for a TSDF to get a copy to the DEC
Trans1 State ID:	54068
Trans2 State ID:	AMOX23602
Generator Ship Date:	850425
Trans1 Recv Date:	850425
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	850606
Part A Recv Date:	850515
Part B Recv Date:	850703
Generator EPA ID:	CA4570024345
Trans1 EPA ID:	CAD006913206
Trans2 EPA ID:	CAD006913206
TSDF ID:	NY7890008975
Waste Code:	D001 - NON-LISTED IGNITABLE WASTES
Quantity:	06880
Units:	G - Gallons (liquids only)* (8.3 pounds)
Number of Containers:	001
Container Type:	TT - Cargo tank, tank trucks
Handling Method:	B Incineration, heat recovery, burning.
Specific Gravity:	085
Year:	85

Document ID:	NYA2704788
Manifest Status:	Completed after the designated time period for a TSDF to get a copy to the DEC
Trans1 State ID:	54068
Trans2 State ID:	ACFX88990
Generator Ship Date:	850306
Trans1 Recv Date:	850306
Trans2 Recv Date:	Not reported

MAP FINDINGS

Map ID / Direction / Distance / Distance (ft.)	Site	Database(s)	EDR ID Number / EPA ID Number

USAF NORTON AFB (Continued) **1000417274**

TSD Site Recv Date:	850425
Part A Recv Date:	850515
Part B Recv Date:	850524
Generator EPA ID:	CA4570024345
Trans1 EPA ID:	CAD006913206
Trans2 EPA ID:	CAD006913206
TSDF ID:	NY7890008975
Waste Code:	D001 - NON-LISTED IGNITABLE WASTES
Quantity:	46300
Units:	P - Pounds
Number of Containers:	001
Container Type:	TT - Cargo tank, tank trucks
Handling Method:	B Incineration, heat recovery, burning.
Specific Gravity:	089
Year:	85

DOD Region **NORTON AIR FORCE BASE (CLOSED)** **DOD** **CUSA143166** **N/A**

NORTON AIR FORCE BASE (CL (County), CA

DOD:

Feature 1:	Air Force DOD
Feature 2:	Not reported
Feature 3:	Not reported
URL:	Not reported
Name 1:	Norton Air Force Base (Closed)
Name 2:	Not reported
Name 3:	Not reported
State:	CA
DOD Site:	Yes
Tile name:	CASAN_BERNARDINO

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1 **NORTON AIR FORCE BASE** **CA BOND EXP. PLAN** **S100833333**
NORTON AIR FORCE BASE **N/A**
SAN BERNARDINO, CA 92409

CA BOND EXP. PLAN:

Reponsible Party:	FEDERAL FACILITY SITE CLEANUP WORKPLAN
Project Revenue Source Company:	Not reported
Project Revenue Source Addr:	Not reported
Project Revenue Source City,St,Zip:	Not reported
Project Revenue Source Desc:	DHS will either enter into an interagency agreement with EPA and DOD or will issue an order to DOD. DHS has budgeted $100,000 for oversight and monitoring of DOD's activities. DHS will seek cost recovery for its direct costs plus staff costs and overhead related to the project.
Site Description:	This site is a U.S. Air Force Military Command Base which began operations in 1942. Past waste management practices associated with base activities included drum burial, hazardous waste disposal in unlined pits, storage of leaking drums, leakage of underground storage tanks, and materials spills. The practices have resulted in significant soil and ground water contamination.
Hazardous Waste Desc:	Past disposal practices onsite have caused the release of large volumes of fuels, solvents and heavy metals to the soil and ground water. Monitoring wells on the base are contaminated with methylene chloride, toluene, benzene and trichloroethene (TCE). Chemicals found in the soil onsite include oil and grease, hexavalent chromium, xylene and polychlorinated biphenyls (PCBs).
Threat To Public Health & Env:	Contaminants have migrated into soil and ground water beneath the Base. Major

MAP FINDINGS

Map ID / Direction / Distance / Distance (ft.)	Site	Database(s)	EDR ID Number / EPA ID Number

NORTON AIR FORCE BASE (Continued) **S100833333**

public drinking supply wells are within 500 feet of waste disposal areas onsite. Drinking water supplies are threatened. In addition, there is a potential for direct worker contact with contaminated soils onsite.

Site Activity Status: The site is currently in Phase II of a four phase installation restoration program (IRP). The IRP was initiated by the Department of Defense (DOD). The site has been proposed for inclusion on the NPL. EPA and DOD are negotiating and agreement to remediate contamination under EPA oversight. DHS will monitor the DOD's remedial activities.

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1 **NORTON AIR FORCE BASE**
2,208 ACRES;58 MI EA OF LOS ANGELES, CA
SAN BERNARDINO, CA 92409

HIST Cal-Sites **S101272838**
Cortese **N/A**
DEED
ENVIROSTOR

HISTORICAL CAL-SITES:

Facility ID:	36970004
Region:	3
Region Name:	GLENDALE
Branch:	SO
Branch Name:	OMF-SOUTHERN CALIF
File Name:	Not reported
State Senate District:	05011986
Status:	AWP - ANNUAL WORKPLAN (AWP) - ACTIVE SITE
Status Name:	ANNUAL WORKPLAN - ACTIVE SITE
Lead Agency:	EPA
Lead Agency:	ENVIRONMENTAL PROTECTION AGENCY
Facility Type:	CLOSE
Type Name:	CLOSED MILITARY BASE
NPL:	Listed
SIC Code:	97
SIC Name:	NATIONAL SECURITY/INTERNATIONAL AFFAIRS
Access:	Controlled
Cortese:	Not reported
Hazardous Ranking Score:	Not reported
Date Site Hazard Ranked:	Not reported
Groundwater Contamination:	Confirmed
Staff Member Responsible for Site:	SNIOU
Supervisor Responsible for Site:	Not reported
Region Water Control Board:	SA
Region Water Control Board Name:	SANTA ANA
Lat/Long Direction:	Not reported
Lat/Long (dms):	0 0 0 / 0 0 0
Lat/long Method:	Not reported
Lat/Long Description:	Not reported
State Assembly District Code:	64
State Senate District Code:	37
Facility ID:	36970004
Activity:	FOST
Activity Name:	FINDING OF SUITABILITY TO TRANSFER
AWP Code:	E-2A
Proposed Budget:	0
AWP Completion Date:	10161998
Revised Due Date:	Not reported
Comments Date:	10161998
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	AWP

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number

NORTON AIR FORCE BASE (Continued) **S101272838**

Definition of Status:	ANNUAL WORKPLAN - ACTIVE SITE
Liquids Removed (Gals):	0
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	Not reported
Activity Comments:	Not reported
For Commercial Reuse:	0
For Industrial Reuse:	0
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	36970004
Activity:	FOST
Activity Name:	FINDING OF SUITABILITY TO TRANSFER
AWP Code:	P-L
Proposed Budget:	0
AWP Completion Date:	08301995
Revised Due Date:	Not reported
Comments Date:	08301995
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	AWP
Definition of Status:	ANNUAL WORKPLAN - ACTIVE SITE
Liquids Removed (Gals):	0
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	Not reported
Activity Comments:	Not reported
For Commercial Reuse:	0
For Industrial Reuse:	0
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	36970004
Activity:	FOST
Activity Name:	FINDING OF SUITABILITY TO TRANSFER
AWP Code:	P-N
Proposed Budget:	0
AWP Completion Date:	02101997
Revised Due Date:	Not reported
Comments Date:	02101997
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	AWP
Definition of Status:	ANNUAL WORKPLAN - ACTIVE SITE
Liquids Removed (Gals):	0
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	Not reported
Activity Comments:	Not reported
For Commercial Reuse:	0

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number
	NORTON AIR FORCE BASE (Continued)		**S101272838**

For Industrial Reuse:	0
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	36970004
Activity:	FOSL
Activity Name:	FINDING OF SUITABILITY TO LEASE
AWP Code:	P-K3
Proposed Budget:	0
AWP Completion Date:	05051995
Revised Due Date:	Not reported
Comments Date:	05051995
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	AWP
Definition of Status:	ANNUAL WORKPLAN - ACTIVE SITE
Liquids Removed (Gals):	0
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	Not reported
Activity Comments:	Not reported
For Commercial Reuse:	0
For Industrial Reuse:	0
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	36970004
Activity:	FOSL
Activity Name:	FINDING OF SUITABILITY TO LEASE
AWP Code:	UTILS
Proposed Budget:	0
AWP Completion Date:	02161995
Revised Due Date:	Not reported
Comments Date:	02161995
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	AWP
Definition of Status:	ANNUAL WORKPLAN - ACTIVE SITE
Liquids Removed (Gals):	0
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	Not reported
Activity Comments:	Not reported
For Commercial Reuse:	0
For Industrial Reuse:	0
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	36970004
Activity:	FOSL
Activity Name:	FINDING OF SUITABILITY TO LEASE
AWP Code:	P-K1
Proposed Budget:	0
AWP Completion Date:	02161995

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number

NORTON AIR FORCE BASE (Continued) **S101272838**

Revised Due Date:	Not reported
Comments Date:	02161995
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	AWP
Definition of Status:	ANNUAL WORKPLAN - ACTIVE SITE
Liquids Removed (Gals):	0
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	Not reported
Activity Comments:	Not reported
For Commercial Reuse:	7.60000
For Industrial Reuse:	0
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	36970004
Activity:	DES
Activity Name:	DESIGN
AWP Code:	CBA-S
Proposed Budget:	0
AWP Completion Date:	12071994
Revised Due Date:	Not reported
Comments Date:	12071994
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	AWP
Definition of Status:	ANNUAL WORKPLAN - ACTIVE SITE
Liquids Removed (Gals):	0
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	Not reported
Activity Comments:	Not reported
For Commercial Reuse:	0
For Industrial Reuse:	0
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	36970004
Activity:	PEA
Activity Name:	PRELIMINARY ENDANGERMENT ASSESSMENT
AWP Code:	OU3
Proposed Budget:	0
AWP Completion Date:	12011994
Revised Due Date:	Not reported
Comments Date:	12011994
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	AWP
Definition of Status:	ANNUAL WORKPLAN - ACTIVE SITE
Liquids Removed (Gals):	0
Liquids Treated (Gals):	0

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number
	NORTON AIR FORCE BASE (Continued)		**S101272838**

Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	Not reported
Activity Comments:	Not reported
For Commercial Reuse:	0
For Industrial Reuse:	0
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	36970004
Activity:	DES
Activity Name:	DESIGN
AWP Code:	CBAGW
Proposed Budget:	0
AWP Completion Date:	10071994
Revised Due Date:	Not reported
Comments Date:	10071994
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	AWP
Definition of Status:	ANNUAL WORKPLAN - ACTIVE SITE
Liquids Removed (Gals):	0
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	Not reported
Activity Comments:	Not reported
For Commercial Reuse:	0
For Industrial Reuse:	0
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	36970004
Activity:	DES
Activity Name:	DESIGN
AWP Code:	CBAGW
Proposed Budget:	0
AWP Completion Date:	09211994
Revised Due Date:	Not reported
Comments Date:	09211994
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	AWP
Definition of Status:	ANNUAL WORKPLAN - ACTIVE SITE
Liquids Removed (Gals):	0
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	Not reported
Activity Comments:	Not reported
For Commercial Reuse:	0
For Industrial Reuse:	0
For Residential Reuse:	0
Unknown Type:	0

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number

NORTON AIR FORCE BASE (Continued) **S101272838**

Facility ID:	36970004
Activity:	RIFS
Activity Name:	REMEDIAL INVESTIGATION / FEASIBILITY STUDY
AWP Code:	IRP15
Proposed Budget:	0
AWP Completion Date:	06051994
Revised Due Date:	Not reported
Comments Date:	06051994
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	AWP
Definition of Status:	ANNUAL WORKPLAN - ACTIVE SITE
Liquids Removed (Gals):	0
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	Not reported
Activity Comments:	Not reported
For Commercial Reuse:	0
For Industrial Reuse:	0
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	36970004
Activity:	CERFA
Activity Name:	COMMUNITY ENVIRONMENTAL RESPONSE FACILITATION ACT
AWP Code:	NAFB
Proposed Budget:	0
AWP Completion Date:	04191994
Revised Due Date:	Not reported
Comments Date:	04191994
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	AWP
Definition of Status:	ANNUAL WORKPLAN - ACTIVE SITE
Liquids Removed (Gals):	0
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	Not reported
Activity Comments:	Not reported
For Commercial Reuse:	0
For Industrial Reuse:	0
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	36970004
Activity:	BWEBS
Activity Name:	BASEWIDE ENVIRONMENTAL BASELINE SURVEY
AWP Code:	NAFB
Proposed Budget:	0
AWP Completion Date:	12231993
Revised Due Date:	Not reported
Comments Date:	12231993
Est Person-Yrs to complete:	0

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number
	NORTON AIR FORCE BASE (Continued)		**S101272838**

Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	AWP
Definition of Status:	ANNUAL WORKPLAN - ACTIVE SITE
Liquids Removed (Gals):	0
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	Not reported
Activity Comments:	Not reported
For Commercial Reuse:	0
For Industrial Reuse:	0
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	36970004
Activity:	RIFS
Activity Name:	REMEDIAL INVESTIGATION / FEASIBILITY STUDY
AWP Code:	CBAOU
Proposed Budget:	0
AWP Completion Date:	02051993
Revised Due Date:	Not reported
Comments Date:	02051993
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	AWP
Definition of Status:	ANNUAL WORKPLAN - ACTIVE SITE
Liquids Removed (Gals):	0
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	Not reported
Activity Comments:	Not reported
For Commercial Reuse:	0
For Industrial Reuse:	0
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	36970004
Activity:	RA
Activity Name:	REMOVAL ACTION
AWP Code:	GW
Proposed Budget:	0
AWP Completion Date:	12021992
Revised Due Date:	Not reported
Comments Date:	12021992
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	AWP
Definition of Status:	ANNUAL WORKPLAN - ACTIVE SITE
Liquids Removed (Gals):	0
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number

NORTON AIR FORCE BASE (Continued) **S101272838**

Removal Action Certification:	N
Activity Comments:	DESIGN AND CONSTRUCTION OF A SYSTEM TO EXTRACT AND TREAT CONTAMINATEDGROUNDWATER, AND REINJECT CLEAN WATER TO THE AQUIFER.
For Commercial Reuse:	0
For Industrial Reuse:	0
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	36970004
Activity:	FRIFS
Activity Name:	FOCUSED REMEDIAL INVESTIGATION/FEASIBILITY STUDY
AWP Code:	Not reported
Proposed Budget:	0
AWP Completion Date:	08121991
Revised Due Date:	Not reported
Comments Date:	08121991
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	AWP
Definition of Status:	ANNUAL WORKPLAN - ACTIVE SITE
Liquids Removed (Gals):	0
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	Not reported
Activity Comments:	Not reported
For Commercial Reuse:	0
For Industrial Reuse:	0
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	36970004
Activity:	RA
Activity Name:	REMOVAL ACTION
AWP Code:	B#763
Proposed Budget:	0
AWP Completion Date:	06271991
Revised Due Date:	Not reported
Comments Date:	06271991
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	AWP
Definition of Status:	ANNUAL WORKPLAN - ACTIVE SITE
Liquids Removed (Gals):	6600
Liquids Treated (Gals):	6600
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	N
Activity Comments:	APPROXIMATELY 6,600 CY OF SOIL WERE REMOVED & TREATED BEFORE DISPOSALTO A CLASS III LANDFILL.
For Commercial Reuse:	0
For Industrial Reuse:	0
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	36970004

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number

NORTON AIR FORCE BASE (Continued) **S101272838**

Activity:	PPP
Activity Name:	PUBLIC PARTICIPATION PLAN
AWP Code:	Not reported
Proposed Budget:	0
AWP Completion Date:	01301990
Revised Due Date:	Not reported
Comments Date:	01301990
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	AWP
Definition of Status:	ANNUAL WORKPLAN - ACTIVE SITE
Liquids Removed (Gals):	0
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	Not reported
Activity Comments:	Not reported
For Commercial Reuse:	0
For Industrial Reuse:	0
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	36970004
Activity:	RAP
Activity Name:	REMEDIAL ACTION PLAN / RECORD OF DECISION
AWP Code:	STE10
Proposed Budget:	0
AWP Completion Date:	11202003
Revised Due Date:	Not reported
Comments Date:	11202003
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	AWP
Definition of Status:	ANNUAL WORKPLAN - ACTIVE SITE
Liquids Removed (Gals):	0
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	Not reported
Activity Comments:	Not reported
For Commercial Reuse:	0
For Industrial Reuse:	0
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	36970004
Activity:	DEED
Activity Name:	DEED RESTRICTIONS
AWP Code:	SITE2
Proposed Budget:	0
AWP Completion Date:	06302007
Revised Due Date:	Not reported
Comments Date:	Not reported
Est Person-Yrs to complete:	0
Estimated Size:	Not reported

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number
	NORTON AIR FORCE BASE (Continued)		**S101272838**

Request to Delete Activity:	Not reported
Activity Status:	AWP
Definition of Status:	ANNUAL WORKPLAN - ACTIVE SITE
Liquids Removed (Gals):	0
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	Not reported
Activity Comments:	Not reported
For Commercial Reuse:	0
For Industrial Reuse:	0
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	36970004
Activity:	RAW
Activity Name:	REMOVAL ACTION WORKPLAN
AWP Code:	STE10
Proposed Budget:	0
AWP Completion Date:	01272004
Revised Due Date:	Not reported
Comments Date:	01272004
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	AWP
Definition of Status:	ANNUAL WORKPLAN - ACTIVE SITE
Liquids Removed (Gals):	0
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	Not reported
Activity Comments:	Not reported
For Commercial Reuse:	0
For Industrial Reuse:	0
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	36970004
Activity:	FOST
Activity Name:	FINDING OF SUITABILITY TO TRANSFER
AWP Code:	SSWR
Proposed Budget:	0
AWP Completion Date:	08311999
Revised Due Date:	Not reported
Comments Date:	08311999
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	AWP
Definition of Status:	ANNUAL WORKPLAN - ACTIVE SITE
Liquids Removed (Gals):	0
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	Not reported

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number
	NORTON AIR FORCE BASE (Continued)		**S101272838**

Activity Comments:	Not reported
For Commercial Reuse:	0
For Industrial Reuse:	0
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	36970004
Activity:	FOST
Activity Name:	FINDING OF SUITABILITY TO TRANSFER
AWP Code:	C1
Proposed Budget:	0
AWP Completion Date:	08301999
Revised Due Date:	Not reported
Comments Date:	08301999
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	AWP
Definition of Status:	ANNUAL WORKPLAN - ACTIVE SITE
Liquids Removed (Gals):	0
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	Not reported
Activity Comments:	Not reported
For Commercial Reuse:	0
For Industrial Reuse:	0
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	36970004
Activity:	FOST
Activity Name:	FINDING OF SUITABILITY TO TRANSFER
AWP Code:	PCL-C
Proposed Budget:	0
AWP Completion Date:	12312006
Revised Due Date:	Not reported
Comments Date:	Not reported
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	AWP
Definition of Status:	ANNUAL WORKPLAN - ACTIVE SITE
Liquids Removed (Gals):	0
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	Not reported
Activity Comments:	Not reported
For Commercial Reuse:	0
For Industrial Reuse:	0
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	36970004
Activity:	RA
Activity Name:	REMOVAL ACTION
AWP Code:	IRP-2

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number

NORTON AIR FORCE BASE (Continued) **S101272838**

Proposed Budget:	0
AWP Completion Date:	07211999
Revised Due Date:	Not reported
Comments Date:	07211999
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	AWP
Definition of Status:	ANNUAL WORKPLAN - ACTIVE SITE
Liquids Removed (Gals):	180
Liquids Treated (Gals):	0
Action Included Capping:	X
Well Decommissioned:	X
Action Included Fencing:	X
Removal Action Certification:	N
Activity Comments:	141,800 CUBIC YARDS WERE CONSOLIDATED INTO THE LANDFILL.
For Commercial Reuse:	0
For Industrial Reuse:	15
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	36970004
Activity:	FOST
Activity Name:	FINDING OF SUITABILITY TO TRANSFER
AWP Code:	PL-C1
Proposed Budget:	0
AWP Completion Date:	06151999
Revised Due Date:	Not reported
Comments Date:	06151999
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	AWP
Definition of Status:	ANNUAL WORKPLAN - ACTIVE SITE
Liquids Removed (Gals):	0
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	Not reported
Activity Comments:	Not reported
For Commercial Reuse:	0
For Industrial Reuse:	0
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	36970004
Activity:	RA
Activity Name:	REMOVAL ACTION
AWP Code:	SAR
Proposed Budget:	0
AWP Completion Date:	06091999
Revised Due Date:	Not reported
Comments Date:	06091999
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	AWP
Definition of Status:	ANNUAL WORKPLAN - ACTIVE SITE

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number

NORTON AIR FORCE BASE (Continued) **S101272838**

Liquids Removed (Gals):	11478
Liquids Treated (Gals):	11478
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	N
Activity Comments:	A TOTAL OF 11,478 TONS OF SOIL WAS EXCAVATED AND PROCESSED AT IRP SITE 2.
For Commercial Reuse:	0.50000
For Industrial Reuse:	0
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	36970004
Activity:	FOST
Activity Name:	FINDING OF SUITABILITY TO TRANSFER
AWP Code:	P-I1
Proposed Budget:	0
AWP Completion Date:	02101999
Revised Due Date:	Not reported
Comments Date:	02101999
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	AWP
Definition of Status:	ANNUAL WORKPLAN - ACTIVE SITE
Liquids Removed (Gals):	0
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	Not reported
Activity Comments:	Not reported
For Commercial Reuse:	0
For Industrial Reuse:	0
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	36970004
Activity:	RA
Activity Name:	REMOVAL ACTION
AWP Code:	IRP10
Proposed Budget:	0
AWP Completion Date:	10291998
Revised Due Date:	Not reported
Comments Date:	10291998
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	AWP
Definition of Status:	ANNUAL WORKPLAN - ACTIVE SITE
Liquids Removed (Gals):	116
Liquids Treated (Gals):	116
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	N
Activity Comments:	APPROXIMATELY 116 CUBIC YARDS OF POTENTIALLY HAZARDOUS WASTE WAS EXCAVATED AND DISPOSED OFF-SITE.

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number

NORTON AIR FORCE BASE (Continued) **S101272838**

For Commercial Reuse:	0
For Industrial Reuse:	3
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	36970004
Activity:	RA
Activity Name:	REMOVAL ACTION
AWP Code:	AOC70
Proposed Budget:	0
AWP Completion Date:	10291998
Revised Due Date:	Not reported
Comments Date:	10291998
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	AWP
Definition of Status:	ANNUAL WORKPLAN - ACTIVE SITE
Liquids Removed (Gals):	1632
Liquids Treated (Gals):	1632
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	N
Activity Comments:	APPROXIMATELY 1632 CUBIC YARDS OF MATERIAL WAS EXCAVATED, TREATED ANDDISPOSED OFF-SITE.
For Commercial Reuse:	0
For Industrial Reuse:	0.25000
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	36970004
Activity:	RIFS
Activity Name:	REMEDIAL INVESTIGATION / FEASIBILITY STUDY
AWP Code:	BSWD
Proposed Budget:	0
AWP Completion Date:	06232003
Revised Due Date:	Not reported
Comments Date:	06232003
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	AWP
Definition of Status:	ANNUAL WORKPLAN - ACTIVE SITE
Liquids Removed (Gals):	0
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	Not reported
Activity Comments:	Not reported
For Commercial Reuse:	0
For Industrial Reuse:	0
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	36970004
Activity:	FOST
Activity Name:	FINDING OF SUITABILITY TO TRANSFER
AWP Code:	E-1

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number
	NORTON AIR FORCE BASE (Continued)		**S101272838**

Proposed Budget:	0
AWP Completion Date:	10161998
Revised Due Date:	Not reported
Comments Date:	10161998
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	AWP
Definition of Status:	ANNUAL WORKPLAN - ACTIVE SITE
Liquids Removed (Gals):	0
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	Not reported
Activity Comments:	Not reported
For Commercial Reuse:	0
For Industrial Reuse:	0
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	36970004
Activity:	RAW
Activity Name:	REMOVAL ACTION WORKPLAN
AWP Code:	STE17
Proposed Budget:	0
AWP Completion Date:	05071998
Revised Due Date:	Not reported
Comments Date:	05071998
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	AWP
Definition of Status:	ANNUAL WORKPLAN - ACTIVE SITE
Liquids Removed (Gals):	0
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	Not reported
Activity Comments:	Not reported
For Commercial Reuse:	0
For Industrial Reuse:	0
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	36970004
Activity:	DES
Activity Name:	DESIGN
AWP Code:	SITE2
Proposed Budget:	0
AWP Completion Date:	12291997
Revised Due Date:	Not reported
Comments Date:	12291997
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	AWP
Definition of Status:	ANNUAL WORKPLAN - ACTIVE SITE

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number
	NORTON AIR FORCE BASE (Continued)		**S101272838**

Liquids Removed (Gals):	0
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	Not reported
Activity Comments:	Not reported
For Commercial Reuse:	0
For Industrial Reuse:	0
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	36970004
Activity:	RAP
Activity Name:	REMEDIAL ACTION PLAN / RECORD OF DECISION
AWP Code:	SITE2
Proposed Budget:	0
AWP Completion Date:	12291997
Revised Due Date:	Not reported
Comments Date:	12291997
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	AWP
Definition of Status:	ANNUAL WORKPLAN - ACTIVE SITE
Liquids Removed (Gals):	0
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	Not reported
Activity Comments:	Not reported
For Commercial Reuse:	0
For Industrial Reuse:	0
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	36970004
Activity:	FOST
Activity Name:	FINDING OF SUITABILITY TO TRANSFER
AWP Code:	P1-3A
Proposed Budget:	0
AWP Completion Date:	04231998
Revised Due Date:	Not reported
Comments Date:	04231998
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	AWP
Definition of Status:	ANNUAL WORKPLAN - ACTIVE SITE
Liquids Removed (Gals):	0
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	Not reported
Activity Comments:	Not reported
For Commercial Reuse:	0
For Industrial Reuse:	0

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number

NORTON AIR FORCE BASE (Continued) **S101272838**

For Residential Reuse:	0
Unknown Type:	0
Facility ID:	36970004
Activity:	RA
Activity Name:	REMOVAL ACTION
AWP Code:	SITE1
Proposed Budget:	0
AWP Completion Date:	12291997
Revised Due Date:	Not reported
Comments Date:	12291997
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	AWP
Definition of Status:	ANNUAL WORKPLAN - ACTIVE SITE
Liquids Removed (Gals):	5500
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	N
Activity Comments:	A TOTAL OF APPROXIMATELY 20,900 TONS OF SOILS EXCEEDING CLEANUP LEVELS WERE EXCAVATED AND DISPOSED OF OFF-BASE.
For Commercial Reuse:	0
For Industrial Reuse:	0.60000
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	36970004
Activity:	RA
Activity Name:	REMOVAL ACTION
AWP Code:	ST5SV
Proposed Budget:	0
AWP Completion Date:	06091999
Revised Due Date:	Not reported
Comments Date:	06091999
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	AWP
Definition of Status:	ANNUAL WORKPLAN - ACTIVE SITE
Liquids Removed (Gals):	6000
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	N
Activity Comments:	189,000 SQUARE FEET OF VAPORS TREATED WHICH RESULTED IN 22,556 LBS OFVOLATILE AND SEMI-VOLATILE ORGANICS BEING EXTRACTED FROM THE SUBSUR-FACE.
For Commercial Reuse:	1.50000
For Industrial Reuse:	0
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	36970004
Activity:	RA
Activity Name:	REMOVAL ACTION
AWP Code:	ST5SO

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number

NORTON AIR FORCE BASE (Continued) **S101272838**

Proposed Budget:	0
AWP Completion Date:	06091999
Revised Due Date:	Not reported
Comments Date:	06091999
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	AWP
Definition of Status:	ANNUAL WORKPLAN - ACTIVE SITE
Liquids Removed (Gals):	25694
Liquids Treated (Gals):	25694
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	N
Activity Comments:	TOTAL 25,694 TONS TREATED AND DISPOSED.
For Commercial Reuse:	0
For Industrial Reuse:	1.50000
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	36970004
Activity:	FOST
Activity Name:	FINDING OF SUITABILITY TO TRANSFER
AWP Code:	P-E2
Proposed Budget:	0
AWP Completion Date:	06021997
Revised Due Date:	Not reported
Comments Date:	06021997
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	AWP
Definition of Status:	ANNUAL WORKPLAN - ACTIVE SITE
Liquids Removed (Gals):	0
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	Not reported
Activity Comments:	Not reported
For Commercial Reuse:	0
For Industrial Reuse:	0
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	36970004
Activity:	FOST
Activity Name:	FINDING OF SUITABILITY TO TRANSFER
AWP Code:	P-E1
Proposed Budget:	0
AWP Completion Date:	06021997
Revised Due Date:	Not reported
Comments Date:	06021997
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	AWP
Definition of Status:	ANNUAL WORKPLAN - ACTIVE SITE

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number
	NORTON AIR FORCE BASE (Continued)		**S101272838**

Liquids Removed (Gals):	0
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	Not reported
Activity Comments:	Not reported
For Commercial Reuse:	0
For Industrial Reuse:	0
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	36970004
Activity:	RAW
Activity Name:	REMOVAL ACTION WORKPLAN
AWP Code:	6AOCS
Proposed Budget:	0
AWP Completion Date:	06251997
Revised Due Date:	Not reported
Comments Date:	06251997
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	AWP
Definition of Status:	ANNUAL WORKPLAN - ACTIVE SITE
Liquids Removed (Gals):	0
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	Not reported
Activity Comments:	Not reported
For Commercial Reuse:	0
For Industrial Reuse:	2.40000
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	36970004
Activity:	RIFS
Activity Name:	REMEDIAL INVESTIGATION / FEASIBILITY STUDY
AWP Code:	6AOCS
Proposed Budget:	0
AWP Completion Date:	06251997
Revised Due Date:	Not reported
Comments Date:	06251997
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	AWP
Definition of Status:	ANNUAL WORKPLAN - ACTIVE SITE
Liquids Removed (Gals):	0
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	Not reported
Activity Comments:	Not reported
For Commercial Reuse:	0
For Industrial Reuse:	0

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number

NORTON AIR FORCE BASE (Continued) **S101272838**

For Residential Reuse:	0
Unknown Type:	0
Facility ID:	36970004
Activity:	RA
Activity Name:	REMOVAL ACTION
AWP Code:	AOC73
Proposed Budget:	0
AWP Completion Date:	06231997
Revised Due Date:	Not reported
Comments Date:	06231997
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	AWP
Definition of Status:	ANNUAL WORKPLAN - ACTIVE SITE
Liquids Removed (Gals):	0
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	N
Activity Comments:	REMOVED 2,000 POUNDS. WHICH IS APPROXIMATELY .89 CU YARDS
For Commercial Reuse:	0
For Industrial Reuse:	6.70000
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	36970004
Activity:	RA
Activity Name:	REMOVAL ACTION
AWP Code:	AOC38
Proposed Budget:	0
AWP Completion Date:	06191997
Revised Due Date:	Not reported
Comments Date:	06191997
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	AWP
Definition of Status:	ANNUAL WORKPLAN - ACTIVE SITE
Liquids Removed (Gals):	1603
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	N
Activity Comments:	2 ACRES OF LAND RETURNED / RELEASED FOR REUSE.
For Commercial Reuse:	0
For Industrial Reuse:	2
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	36970004
Activity:	RA
Activity Name:	REMOVAL ACTION
AWP Code:	AOC37
Proposed Budget:	0
AWP Completion Date:	06191997
Revised Due Date:	Not reported

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number

NORTON AIR FORCE BASE (Continued) **S101272838**

Comments Date:	06191997
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	AWP
Definition of Status:	ANNUAL WORKPLAN - ACTIVE SITE
Liquids Removed (Gals):	8925
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	N
Activity Comments:	2 ACRES OF LAND RETURNED / RELEASED FOR REUSE.
For Commercial Reuse:	0
For Industrial Reuse:	2
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	36970004
Activity:	RA
Activity Name:	REMOVAL ACTION
AWP Code:	SITE8
Proposed Budget:	0
AWP Completion Date:	06191997
Revised Due Date:	Not reported
Comments Date:	06191997
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	AWP
Definition of Status:	ANNUAL WORKPLAN - ACTIVE SITE
Liquids Removed (Gals):	1533
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	N
Activity Comments:	1.5 ACRES OF LAND RETURNED / RELEASED FOR REUSE.
For Commercial Reuse:	0
For Industrial Reuse:	1.50000
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	36970004
Activity:	RAW
Activity Name:	REMOVAL ACTION WORKPLAN
AWP Code:	STE14
Proposed Budget:	0
AWP Completion Date:	06271996
Revised Due Date:	Not reported
Comments Date:	06271996
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	AWP
Definition of Status:	ANNUAL WORKPLAN - ACTIVE SITE
Liquids Removed (Gals):	0
Liquids Treated (Gals):	0
Action Included Capping:	Not reported

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number

NORTON AIR FORCE BASE (Continued) **S101272838**

Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	Not reported
Activity Comments:	Not reported
For Commercial Reuse:	0
For Industrial Reuse:	0
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	36970004
Activity:	RA
Activity Name:	REMOVAL ACTION
AWP Code:	SIT13
Proposed Budget:	0
AWP Completion Date:	06191997
Revised Due Date:	Not reported
Comments Date:	06191997
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	AWP
Definition of Status:	ANNUAL WORKPLAN - ACTIVE SITE
Liquids Removed (Gals):	3290
Liquids Treated (Gals):	3040
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	N
Activity Comments:	0.35 ACRES OF LAND RETURNED/RELEASED FOR REUSE.
For Commercial Reuse:	0
For Industrial Reuse:	0.35000
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	36970004
Activity:	FOST
Activity Name:	FINDING OF SUITABILITY TO TRANSFER
AWP Code:	P-E4
Proposed Budget:	0
AWP Completion Date:	04181997
Revised Due Date:	Not reported
Comments Date:	04181997
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	AWP
Definition of Status:	ANNUAL WORKPLAN - ACTIVE SITE
Liquids Removed (Gals):	0
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	Not reported
Activity Comments:	Not reported
For Commercial Reuse:	0
For Industrial Reuse:	0
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	36970004

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number

NORTON AIR FORCE BASE (Continued) **S101272838**

Activity:	FOST
Activity Name:	FINDING OF SUITABILITY TO TRANSFER
AWP Code:	P-I1A
Proposed Budget:	0
AWP Completion Date:	04181997
Revised Due Date:	Not reported
Comments Date:	04181997
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	AWP
Definition of Status:	ANNUAL WORKPLAN - ACTIVE SITE
Liquids Removed (Gals):	0
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	Not reported
Activity Comments:	Not reported
For Commercial Reuse:	0
For Industrial Reuse:	0
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	36970004
Activity:	FOST
Activity Name:	FINDING OF SUITABILITY TO TRANSFER
AWP Code:	B1234
Proposed Budget:	0
AWP Completion Date:	10151997
Revised Due Date:	Not reported
Comments Date:	10151997
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	AWP
Definition of Status:	ANNUAL WORKPLAN - ACTIVE SITE
Liquids Removed (Gals):	0
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	Not reported
Activity Comments:	Not reported
For Commercial Reuse:	0
For Industrial Reuse:	0
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	36970004
Activity:	FOST
Activity Name:	FINDING OF SUITABILITY TO TRANSFER
AWP Code:	P-A
Proposed Budget:	0
AWP Completion Date:	10151997
Revised Due Date:	Not reported
Comments Date:	10151997
Est Person-Yrs to complete:	0
Estimated Size:	Not reported

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number
	NORTON AIR FORCE BASE (Continued)		**S101272838**

Request to Delete Activity:	Not reported
Activity Status:	AWP
Definition of Status:	ANNUAL WORKPLAN - ACTIVE SITE
Liquids Removed (Gals):	0
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	Not reported
Activity Comments:	Not reported
For Commercial Reuse:	0
For Industrial Reuse:	0
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	36970004
Activity:	RIFS
Activity Name:	REMEDIAL INVESTIGATION / FEASIBILITY STUDY
AWP Code:	SIT20
Proposed Budget:	0
AWP Completion Date:	07231996
Revised Due Date:	Not reported
Comments Date:	07231996
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	AWP
Definition of Status:	ANNUAL WORKPLAN - ACTIVE SITE
Liquids Removed (Gals):	0
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	Not reported
Activity Comments:	Not reported
For Commercial Reuse:	0
For Industrial Reuse:	0
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	36970004
Activity:	FOST
Activity Name:	FINDING OF SUITABILITY TO TRANSFER
AWP Code:	P-K1
Proposed Budget:	0
AWP Completion Date:	02101997
Revised Due Date:	Not reported
Comments Date:	02101997
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	AWP
Definition of Status:	ANNUAL WORKPLAN - ACTIVE SITE
Liquids Removed (Gals):	0
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	Not reported

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number
	NORTON AIR FORCE BASE (Continued)		**S101272838**

Activity Comments:	Not reported
For Commercial Reuse:	0
For Industrial Reuse:	0
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	36970004
Activity:	FOST
Activity Name:	FINDING OF SUITABILITY TO TRANSFER
AWP Code:	NCO-H
Proposed Budget:	0
AWP Completion Date:	02081997
Revised Due Date:	Not reported
Comments Date:	02081997
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	AWP
Definition of Status:	ANNUAL WORKPLAN - ACTIVE SITE
Liquids Removed (Gals):	0
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	Not reported
Activity Comments:	Not reported
For Commercial Reuse:	0
For Industrial Reuse:	0
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	36970004
Activity:	FOST
Activity Name:	FINDING OF SUITABILITY TO TRANSFER
AWP Code:	OFFCR
Proposed Budget:	0
AWP Completion Date:	02081997
Revised Due Date:	Not reported
Comments Date:	02081997
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	AWP
Definition of Status:	ANNUAL WORKPLAN - ACTIVE SITE
Liquids Removed (Gals):	0
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	Not reported
Activity Comments:	Not reported
For Commercial Reuse:	0
For Industrial Reuse:	0
For Residential Reuse:	27
Unknown Type:	0
Facility ID:	36970004
Activity:	FOST
Activity Name:	FINDING OF SUITABILITY TO TRANSFER
AWP Code:	P-K4

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number
	NORTON AIR FORCE BASE (Continued)		**S101272838**

Proposed Budget:	0
AWP Completion Date:	02101997
Revised Due Date:	Not reported
Comments Date:	02101997
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	AWP
Definition of Status:	ANNUAL WORKPLAN - ACTIVE SITE
Liquids Removed (Gals):	0
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	Not reported
Activity Comments:	Not reported
For Commercial Reuse:	16.40000
For Industrial Reuse:	0
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	36970004
Activity:	FOST
Activity Name:	FINDING OF SUITABILITY TO TRANSFER
AWP Code:	P-K2
Proposed Budget:	0
AWP Completion Date:	02101997
Revised Due Date:	Not reported
Comments Date:	02101997
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	AWP
Definition of Status:	ANNUAL WORKPLAN - ACTIVE SITE
Liquids Removed (Gals):	0
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	Not reported
Activity Comments:	Not reported
For Commercial Reuse:	0
For Industrial Reuse:	0
For Residential Reuse:	4.70000
Unknown Type:	0
Facility ID:	36970004
Activity:	FOST
Activity Name:	FINDING OF SUITABILITY TO TRANSFER
AWP Code:	P-J1
Proposed Budget:	0
AWP Completion Date:	12181996
Revised Due Date:	Not reported
Comments Date:	12181996
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	AWP
Definition of Status:	ANNUAL WORKPLAN - ACTIVE SITE

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number
	NORTON AIR FORCE BASE (Continued)		**S101272838**

Liquids Removed (Gals):	0
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	Not reported
Activity Comments:	Not reported
For Commercial Reuse:	1.80000
For Industrial Reuse:	0
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	36970004
Activity:	FOST
Activity Name:	FINDING OF SUITABILITY TO TRANSFER
AWP Code:	P-I3
Proposed Budget:	0
AWP Completion Date:	02101997
Revised Due Date:	Not reported
Comments Date:	02101997
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	AWP
Definition of Status:	ANNUAL WORKPLAN - ACTIVE SITE
Liquids Removed (Gals):	0
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	Not reported
Activity Comments:	Not reported
For Commercial Reuse:	0
For Industrial Reuse:	111
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	36970004
Activity:	FOST
Activity Name:	FINDING OF SUITABILITY TO TRANSFER
AWP Code:	P-I2
Proposed Budget:	0
AWP Completion Date:	02101997
Revised Due Date:	Not reported
Comments Date:	02101997
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	AWP
Definition of Status:	ANNUAL WORKPLAN - ACTIVE SITE
Liquids Removed (Gals):	0
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	Not reported
Activity Comments:	Not reported
For Commercial Reuse:	0
For Industrial Reuse:	57

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number
	NORTON AIR FORCE BASE (Continued)		**S101272838**

For Residential Reuse:	0
Unknown Type:	0
Facility ID:	36970004
Activity:	FOST
Activity Name:	FINDING OF SUITABILITY TO TRANSFER
AWP Code:	P-K3
Proposed Budget:	0
AWP Completion Date:	02101997
Revised Due Date:	Not reported
Comments Date:	02101997
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	AWP
Definition of Status:	ANNUAL WORKPLAN - ACTIVE SITE
Liquids Removed (Gals):	0
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	Not reported
Activity Comments:	Not reported
For Commercial Reuse:	2.20000
For Industrial Reuse:	0
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	36970004
Activity:	FOST
Activity Name:	FINDING OF SUITABILITY TO TRANSFER
AWP Code:	P-H
Proposed Budget:	0
AWP Completion Date:	02101997
Revised Due Date:	Not reported
Comments Date:	02101997
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	AWP
Definition of Status:	ANNUAL WORKPLAN - ACTIVE SITE
Liquids Removed (Gals):	0
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	Not reported
Activity Comments:	Not reported
For Commercial Reuse:	0
For Industrial Reuse:	0
For Residential Reuse:	0
Unknown Type:	19
Facility ID:	36970004
Activity:	FOST
Activity Name:	FINDING OF SUITABILITY TO TRANSFER
AWP Code:	P-F
Proposed Budget:	0
AWP Completion Date:	01201997
Revised Due Date:	Not reported

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number
	NORTON AIR FORCE BASE (Continued)		**S101272838**

Comments Date:	01201997
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	AWP
Definition of Status:	ANNUAL WORKPLAN - ACTIVE SITE
Liquids Removed (Gals):	0
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	Not reported
Activity Comments:	Not reported
For Commercial Reuse:	0
For Industrial Reuse:	0
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	36970004
Activity:	OM
Activity Name:	OPERATION & MAINTENANCE
AWP Code:	BBP&T
Proposed Budget:	0
AWP Completion Date:	10281996
Revised Due Date:	Not reported
Comments Date:	10281996
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	AWP
Definition of Status:	ANNUAL WORKPLAN - ACTIVE SITE
Liquids Removed (Gals):	0
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	Not reported
Activity Comments:	Not reported
For Commercial Reuse:	0
For Industrial Reuse:	0
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	36970004
Activity:	RAW
Activity Name:	REMOVAL ACTION WORKPLAN
AWP Code:	EXPOR
Proposed Budget:	0
AWP Completion Date:	09101996
Revised Due Date:	Not reported
Comments Date:	09101996
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	AWP
Definition of Status:	ANNUAL WORKPLAN - ACTIVE SITE
Liquids Removed (Gals):	0
Liquids Treated (Gals):	0
Action Included Capping:	Not reported

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number

NORTON AIR FORCE BASE (Continued) **S101272838**

Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	Not reported
Activity Comments:	Not reported
For Commercial Reuse:	0
For Industrial Reuse:	0
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	36970004
Activity:	OM
Activity Name:	OPERATION & MAINTENANCE
AWP Code:	SVECB
Proposed Budget:	0
AWP Completion Date:	08221996
Revised Due Date:	Not reported
Comments Date:	08221996
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	AWP
Definition of Status:	ANNUAL WORKPLAN - ACTIVE SITE
Liquids Removed (Gals):	0
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	Not reported
Activity Comments:	Not reported
For Commercial Reuse:	0
For Industrial Reuse:	0
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	36970004
Activity:	FOSL
Activity Name:	FINDING OF SUITABILITY TO LEASE
AWP Code:	P E-3
Proposed Budget:	0
AWP Completion Date:	04081996
Revised Due Date:	Not reported
Comments Date:	04081996
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	AWP
Definition of Status:	ANNUAL WORKPLAN - ACTIVE SITE
Liquids Removed (Gals):	0
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	Not reported
Activity Comments:	Not reported
For Commercial Reuse:	0
For Industrial Reuse:	0
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	36970004

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number

NORTON AIR FORCE BASE (Continued) **S101272838**

Activity:	FOSL
Activity Name:	FINDING OF SUITABILITY TO LEASE
AWP Code:	P E-2
Proposed Budget:	0
AWP Completion Date:	04081996
Revised Due Date:	Not reported
Comments Date:	04081996
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	AWP
Definition of Status:	ANNUAL WORKPLAN - ACTIVE SITE
Liquids Removed (Gals):	0
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	Not reported
Activity Comments:	Not reported
For Commercial Reuse:	0
For Industrial Reuse:	0
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	36970004
Activity:	FOSL
Activity Name:	FINDING OF SUITABILITY TO LEASE
AWP Code:	P E-1
Proposed Budget:	0
AWP Completion Date:	04081996
Revised Due Date:	Not reported
Comments Date:	04081996
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	AWP
Definition of Status:	ANNUAL WORKPLAN - ACTIVE SITE
Liquids Removed (Gals):	0
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	Not reported
Activity Comments:	Not reported
For Commercial Reuse:	0
For Industrial Reuse:	0
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	36970004
Activity:	FOST
Activity Name:	FINDING OF SUITABILITY TO TRANSFER
AWP Code:	WATER
Proposed Budget:	0
AWP Completion Date:	09241996
Revised Due Date:	Not reported
Comments Date:	09241996
Est Person-Yrs to complete:	0
Estimated Size:	Not reported

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number
	NORTON AIR FORCE BASE (Continued)		**S101272838**

Request to Delete Activity:	Not reported
Activity Status:	AWP
Definition of Status:	ANNUAL WORKPLAN - ACTIVE SITE
Liquids Removed (Gals):	0
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	Not reported
Activity Comments:	Not reported
For Commercial Reuse:	0
For Industrial Reuse:	0
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	36970004
Activity:	FOSL
Activity Name:	FINDING OF SUITABILITY TO LEASE
AWP Code:	P-N
Proposed Budget:	0
AWP Completion Date:	06301996
Revised Due Date:	Not reported
Comments Date:	06301996
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	AWP
Definition of Status:	ANNUAL WORKPLAN - ACTIVE SITE
Liquids Removed (Gals):	0
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	Not reported
Activity Comments:	Not reported
For Commercial Reuse:	0
For Industrial Reuse:	0
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	36970004
Activity:	FOST
Activity Name:	FINDING OF SUITABILITY TO TRANSFER
AWP Code:	P M
Proposed Budget:	0
AWP Completion Date:	04081996
Revised Due Date:	Not reported
Comments Date:	04081996
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	AWP
Definition of Status:	ANNUAL WORKPLAN - ACTIVE SITE
Liquids Removed (Gals):	0
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	Not reported

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number
	NORTON AIR FORCE BASE (Continued)		**S101272838**

Activity Comments:	Not reported
For Commercial Reuse:	0
For Industrial Reuse:	0
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	36970004
Activity:	FOST
Activity Name:	FINDING OF SUITABILITY TO TRANSFER
AWP Code:	P G-2
Proposed Budget:	0
AWP Completion Date:	04081996
Revised Due Date:	Not reported
Comments Date:	04081996
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	AWP
Definition of Status:	ANNUAL WORKPLAN - ACTIVE SITE
Liquids Removed (Gals):	0
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	Not reported
Activity Comments:	Not reported
For Commercial Reuse:	0
For Industrial Reuse:	0
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	36970004
Activity:	RA
Activity Name:	REMOVAL ACTION
AWP Code:	OWSCP
Proposed Budget:	0
AWP Completion Date:	07031996
Revised Due Date:	Not reported
Comments Date:	07031996
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	AWP
Definition of Status:	ANNUAL WORKPLAN - ACTIVE SITE
Liquids Removed (Gals):	0
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	Not reported
Activity Comments:	Not reported
For Commercial Reuse:	0
For Industrial Reuse:	0
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	36970004
Activity:	RAW
Activity Name:	REMOVAL ACTION WORKPLAN
AWP Code:	STE13

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number

NORTON AIR FORCE BASE (Continued) **S101272838**

Proposed Budget:	0
AWP Completion Date:	06271996
Revised Due Date:	Not reported
Comments Date:	06271996
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	AWP
Definition of Status:	ANNUAL WORKPLAN - ACTIVE SITE
Liquids Removed (Gals):	0
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	Not reported
Activity Comments:	Not reported
For Commercial Reuse:	0
For Industrial Reuse:	0
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	36970004
Activity:	RA
Activity Name:	REMOVAL ACTION
AWP Code:	BIO-T
Proposed Budget:	0
AWP Completion Date:	01291997
Revised Due Date:	Not reported
Comments Date:	01291997
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	AWP
Definition of Status:	ANNUAL WORKPLAN - ACTIVE SITE
Liquids Removed (Gals):	0
Liquids Treated (Gals):	19300
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	N
Activity Comments:	CONTAMINATED SOIL EXCAVATED FROM FORMER UNDERGROUND STORAGE TANK (UST) LOCATIONS WERE TREATED ON BASE FROM SEPTEMBER 1995 TO DECEMBER 1996 USING BIOREMEDIATION.
For Commercial Reuse:	0
For Industrial Reuse:	0
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	36970004
Activity:	RA
Activity Name:	REMOVAL ACTION
AWP Code:	IWTP
Proposed Budget:	0
AWP Completion Date:	10241996
Revised Due Date:	Not reported
Comments Date:	10241996
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number

NORTON AIR FORCE BASE (Continued) **S101272838**

Activity Status:	AWP
Definition of Status:	ANNUAL WORKPLAN - ACTIVE SITE
Liquids Removed (Gals):	0
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	N
Activity Comments:	9.8 TONS OF NON-HAZARDOUS SOIL WAS DISPOSED OF, 400 GALLONS OF NON-RCRA HAZARDOUS WASTE SLUDGE, AND 21,800 GALLONS OF NON- HAZARDOUS RINSEATE WATER WERE TREATED.
For Commercial Reuse:	0
For Industrial Reuse:	0
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	36970004
Activity:	RAP
Activity Name:	REMEDIAL ACTION PLAN / RECORD OF DECISION
AWP Code:	STE19
Proposed Budget:	0
AWP Completion Date:	07211997
Revised Due Date:	Not reported
Comments Date:	07211997
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	AWP
Definition of Status:	ANNUAL WORKPLAN - ACTIVE SITE
Liquids Removed (Gals):	0
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	Not reported
Activity Comments:	Not reported
For Commercial Reuse:	0
For Industrial Reuse:	0
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	36970004
Activity:	RAW
Activity Name:	REMOVAL ACTION WORKPLAN
AWP Code:	PA1-3
Proposed Budget:	0
AWP Completion Date:	08221996
Revised Due Date:	Not reported
Comments Date:	08221996
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	AWP
Definition of Status:	ANNUAL WORKPLAN - ACTIVE SITE
Liquids Removed (Gals):	0
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number
	NORTON AIR FORCE BASE (Continued)		**S101272838**

Removal Action Certification:	Not reported
Activity Comments:	Not reported
For Commercial Reuse:	0
For Industrial Reuse:	0
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	36970004
Activity:	RAW
Activity Name:	REMOVAL ACTION WORKPLAN
AWP Code:	SITE1
Proposed Budget:	0
AWP Completion Date:	10021996
Revised Due Date:	Not reported
Comments Date:	10021996
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	AWP
Definition of Status:	ANNUAL WORKPLAN - ACTIVE SITE
Liquids Removed (Gals):	0
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	Not reported
Activity Comments:	Not reported
For Commercial Reuse:	0
For Industrial Reuse:	0
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	36970004
Activity:	PEA
Activity Name:	PRELIMINARY ENDANGERMENT ASSESSMENT
AWP Code:	EXSI
Proposed Budget:	0
AWP Completion Date:	10021996
Revised Due Date:	Not reported
Comments Date:	10021996
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	AWP
Definition of Status:	ANNUAL WORKPLAN - ACTIVE SITE
Liquids Removed (Gals):	0
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	Not reported
Activity Comments:	Not reported
For Commercial Reuse:	0
For Industrial Reuse:	0
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	36970004
Activity:	RIFS
Activity Name:	REMEDIAL INVESTIGATION / FEASIBILITY STUDY

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number

NORTON AIR FORCE BASE (Continued) **S101272838**

AWP Code:	10&12
Proposed Budget:	0
AWP Completion Date:	10031996
Revised Due Date:	Not reported
Comments Date:	10031996
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	AWP
Definition of Status:	ANNUAL WORKPLAN - ACTIVE SITE
Liquids Removed (Gals):	0
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	Not reported
Activity Comments:	Not reported
For Commercial Reuse:	0
For Industrial Reuse:	0
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	36970004
Activity:	DES
Activity Name:	DESIGN
AWP Code:	SITE5
Proposed Budget:	0
AWP Completion Date:	06251997
Revised Due Date:	Not reported
Comments Date:	06251997
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	AWP
Definition of Status:	ANNUAL WORKPLAN - ACTIVE SITE
Liquids Removed (Gals):	0
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	Not reported
Activity Comments:	Not reported
For Commercial Reuse:	0
For Industrial Reuse:	0
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	36970004
Activity:	PEA
Activity Name:	PRELIMINARY ENDANGERMENT ASSESSMENT
AWP Code:	SOILR
Proposed Budget:	0
AWP Completion Date:	07231996
Revised Due Date:	Not reported
Comments Date:	07231996
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	AWP

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number

NORTON AIR FORCE BASE (Continued) **S101272838**

Definition of Status:	ANNUAL WORKPLAN - ACTIVE SITE
Liquids Removed (Gals):	0
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	Not reported
Activity Comments:	Not reported
For Commercial Reuse:	0
For Industrial Reuse:	0
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	36970004
Activity:	PEA
Activity Name:	PRELIMINARY ENDANGERMENT ASSESSMENT
AWP Code:	OU2&3
Proposed Budget:	0
AWP Completion Date:	08221996
Revised Due Date:	Not reported
Comments Date:	08221996
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	AWP
Definition of Status:	ANNUAL WORKPLAN - ACTIVE SITE
Liquids Removed (Gals):	0
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	Not reported
Activity Comments:	Not reported
For Commercial Reuse:	0
For Industrial Reuse:	0
For Residential Reuse:	47
Unknown Type:	0
Facility ID:	36970004
Activity:	RA
Activity Name:	REMOVAL ACTION
AWP Code:	SVECB
Proposed Budget:	0
AWP Completion Date:	06211996
Revised Due Date:	Not reported
Comments Date:	06211996
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	AWP
Definition of Status:	ANNUAL WORKPLAN - ACTIVE SITE
Liquids Removed (Gals):	0
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	N
Activity Comments:	CONSTRUCTION AND STARTUP OF AN IN-SITU SOIL VAPOR EXTRACTION SYSTEM AT BUILDINGS 673 AND 763, IN THE CENTRAL BASE AREA.

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number
	NORTON AIR FORCE BASE (Continued)		**S101272838**

For Commercial Reuse:	0
For Industrial Reuse:	0
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	36970004
Activity:	RA
Activity Name:	REMOVAL ACTION
AWP Code:	SIT14
Proposed Budget:	0
AWP Completion Date:	06191997
Revised Due Date:	Not reported
Comments Date:	06191997
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	AWP
Definition of Status:	ANNUAL WORKPLAN - ACTIVE SITE
Liquids Removed (Gals):	420
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	N
Activity Comments:	0.05 ACRES OF LAND RETURNED/RELEASED FOR REUSE.
For Commercial Reuse:	0
For Industrial Reuse:	0
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	36970004
Activity:	RIFS
Activity Name:	REMEDIAL INVESTIGATION / FEASIBILITY STUDY
AWP Code:	SITE2
Proposed Budget:	0
AWP Completion Date:	04301996
Revised Due Date:	Not reported
Comments Date:	04301996
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	AWP
Definition of Status:	ANNUAL WORKPLAN - ACTIVE SITE
Liquids Removed (Gals):	0
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	Not reported
Activity Comments:	Not reported
For Commercial Reuse:	0
For Industrial Reuse:	0
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	36970004
Activity:	RIFS
Activity Name:	REMEDIAL INVESTIGATION / FEASIBILITY STUDY
AWP Code:	PAR13
Proposed Budget:	0

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number
	NORTON AIR FORCE BASE (Continued)		**S101272838**

AWP Completion Date:	03271996
Revised Due Date:	Not reported
Comments Date:	03271996
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	AWP
Definition of Status:	ANNUAL WORKPLAN - ACTIVE SITE
Liquids Removed (Gals):	0
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	Not reported
Activity Comments:	Not reported
For Commercial Reuse:	0
For Industrial Reuse:	0
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	36970004
Activity:	RAP
Activity Name:	REMEDIAL ACTION PLAN / RECORD OF DECISION
AWP Code:	CBAOU
Proposed Budget:	0
AWP Completion Date:	11241993
Revised Due Date:	Not reported
Comments Date:	11241993
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	AWP
Definition of Status:	ANNUAL WORKPLAN - ACTIVE SITE
Liquids Removed (Gals):	0
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	Not reported
Activity Comments:	Not reported
For Commercial Reuse:	0
For Industrial Reuse:	0
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	36970004
Activity:	RA
Activity Name:	REMOVAL ACTION
AWP Code:	BBPTS
Proposed Budget:	0
AWP Completion Date:	04021996
Revised Due Date:	Not reported
Comments Date:	04021996
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	AWP
Definition of Status:	ANNUAL WORKPLAN - ACTIVE SITE
Liquids Removed (Gals):	0

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number

NORTON AIR FORCE BASE (Continued) **S101272838**

Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	N
Activity Comments:	CONSTRUCTION AND STARTUP OF A GOUNDWATER TREATMENT FACILITY LOCATED AT THE SOUTHERN BOUNDARY OF THE BASE. 3 GROUNDWATER EXTRACTION WELLS
For Commercial Reuse:	0
For Industrial Reuse:	0
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	36970004
Activity:	RA
Activity Name:	REMOVAL ACTION
AWP Code:	SITE9
Proposed Budget:	0
AWP Completion Date:	04021996
Revised Due Date:	Not reported
Comments Date:	04021996
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	AWP
Definition of Status:	ANNUAL WORKPLAN - ACTIVE SITE
Liquids Removed (Gals):	490
Liquids Treated (Gals):	490
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	N
Activity Comments:	APPROXIMATELY 490 CY OF TCE CONTAMINATED SOIL WERE TREATED. AN ESTIMA TED 1,633 CY OF CHROMIUM CONTAMINATED SOIL, AND 914 TONS OF CHROMIUMCONTAMINATED CONCRETE WERE DISPOSED.
For Commercial Reuse:	0
For Industrial Reuse:	0
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	36970004
Activity:	RIFS
Activity Name:	REMEDIAL INVESTIGATION / FEASIBILITY STUDY
AWP Code:	SITE1
Proposed Budget:	0
AWP Completion Date:	02221996
Revised Due Date:	Not reported
Comments Date:	02221996
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	AWP
Definition of Status:	ANNUAL WORKPLAN - ACTIVE SITE
Liquids Removed (Gals):	0
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	Not reported
Activity Comments:	Not reported

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number

NORTON AIR FORCE BASE (Continued) **S101272838**

For Commercial Reuse:	0
For Industrial Reuse:	0
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	36970004
Activity:	RA
Activity Name:	REMOVAL ACTION
AWP Code:	DRMO
Proposed Budget:	0
AWP Completion Date:	04021996
Revised Due Date:	Not reported
Comments Date:	04021996
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	AWP
Definition of Status:	ANNUAL WORKPLAN - ACTIVE SITE
Liquids Removed (Gals):	3
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	N
Activity Comments:	REMOVAL OF BUILDINGS 964 AND 970, CONCRETE PADS, AND CONTAMINATED SOIL. SOIL CONTAMINATED WITH PETROLEUM HYDROCARBONS AND ARSENIC WERE MANIFESTED TO A LICENSED DISPOSAL FACILITY.
For Commercial Reuse:	0
For Industrial Reuse:	0
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	36970004
Activity:	RIFS
Activity Name:	REMEDIAL INVESTIGATION / FEASIBILITY STUDY
AWP Code:	IRP#S
Proposed Budget:	0
AWP Completion Date:	02021996
Revised Due Date:	Not reported
Comments Date:	02021996
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	AWP
Definition of Status:	ANNUAL WORKPLAN - ACTIVE SITE
Liquids Removed (Gals):	0
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	Not reported
Activity Comments:	Not reported
For Commercial Reuse:	0
For Industrial Reuse:	0
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	36970004
Activity:	RIFS
Activity Name:	REMEDIAL INVESTIGATION / FEASIBILITY STUDY

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number
	NORTON AIR FORCE BASE (Continued)		**S101272838**

AWP Code:	ST 13
Proposed Budget:	0
AWP Completion Date:	02021996
Revised Due Date:	Not reported
Comments Date:	02021996
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	AWP
Definition of Status:	ANNUAL WORKPLAN - ACTIVE SITE
Liquids Removed (Gals):	0
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	Not reported
Activity Comments:	Not reported
For Commercial Reuse:	0
For Industrial Reuse:	0
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	36970004
Activity:	RAP
Activity Name:	REMEDIAL ACTION PLAN / RECORD OF DECISION
AWP Code:	NFA#S
Proposed Budget:	0
AWP Completion Date:	04091996
Revised Due Date:	Not reported
Comments Date:	04091996
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	AWP
Definition of Status:	ANNUAL WORKPLAN - ACTIVE SITE
Liquids Removed (Gals):	0
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	Not reported
Activity Comments:	Not reported
For Commercial Reuse:	0
For Industrial Reuse:	0
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	36970004
Activity:	FOSL
Activity Name:	FINDING OF SUITABILITY TO LEASE
AWP Code:	ROAD
Proposed Budget:	0
AWP Completion Date:	10101995
Revised Due Date:	Not reported
Comments Date:	10101995
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	AWP

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number

NORTON AIR FORCE BASE (Continued) **S101272838**

Definition of Status:	ANNUAL WORKPLAN - ACTIVE SITE
Liquids Removed (Gals):	0
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	Not reported
Activity Comments:	Not reported
For Commercial Reuse:	0
For Industrial Reuse:	0
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	36970004
Activity:	FOSL
Activity Name:	FINDING OF SUITABILITY TO LEASE
AWP Code:	WATER
Proposed Budget:	0
AWP Completion Date:	09261995
Revised Due Date:	Not reported
Comments Date:	09261995
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	AWP
Definition of Status:	ANNUAL WORKPLAN - ACTIVE SITE
Liquids Removed (Gals):	0
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	Not reported
Activity Comments:	Not reported
For Commercial Reuse:	0
For Industrial Reuse:	0
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	36970004
Activity:	ORDER
Activity Name:	I/SE, IORSE, FFA, FFSRA, VCA, EA
AWP Code:	SITE5
Proposed Budget:	0
AWP Completion Date:	Not reported
Revised Due Date:	Not reported
Comments Date:	04141995
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	AWP
Definition of Status:	ANNUAL WORKPLAN - ACTIVE SITE
Liquids Removed (Gals):	0
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	Not reported
Activity Comments:	Not reported
For Commercial Reuse:	0

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number
	NORTON AIR FORCE BASE (Continued)		**S101272838**

For Industrial Reuse:	0
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	36970004
Activity:	CEQA
Activity Name:	CEQA INCLUDING NEGATIVE DECS
AWP Code:	GW
Proposed Budget:	0
AWP Completion Date:	Not reported
Revised Due Date:	Not reported
Comments Date:	11251991
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	AWP
Definition of Status:	ANNUAL WORKPLAN - ACTIVE SITE
Liquids Removed (Gals):	0
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	Not reported
Activity Comments:	Not reported
For Commercial Reuse:	0
For Industrial Reuse:	0
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	36970004
Activity:	ORDER
Activity Name:	I/SE, IORSE, FFA, FFSRA, VCA, EA
AWP Code:	FFA
Proposed Budget:	0
AWP Completion Date:	Not reported
Revised Due Date:	Not reported
Comments Date:	06291989
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	AWP
Definition of Status:	ANNUAL WORKPLAN - ACTIVE SITE
Liquids Removed (Gals):	0
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	Not reported
Activity Comments:	Not reported
For Commercial Reuse:	0
For Industrial Reuse:	0
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	36970004
Activity:	CERT
Activity Name:	CERTIFICATION
AWP Code:	STE10
Proposed Budget:	0
AWP Completion Date:	06302008

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number
	NORTON AIR FORCE BASE (Continued)		**S101272838**

Revised Due Date:	Not reported
Comments Date:	Not reported
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	AWP
Definition of Status:	ANNUAL WORKPLAN - ACTIVE SITE
Liquids Removed (Gals):	0
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	Not reported
Activity Comments:	Not reported
For Commercial Reuse:	0
For Industrial Reuse:	0
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	36970004
Activity:	CERT
Activity Name:	CERTIFICATION
AWP Code:	SITE2
Proposed Budget:	0
AWP Completion Date:	06302008
Revised Due Date:	Not reported
Comments Date:	Not reported
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	AWP
Definition of Status:	ANNUAL WORKPLAN - ACTIVE SITE
Liquids Removed (Gals):	0
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	Not reported
Activity Comments:	Not reported
For Commercial Reuse:	0
For Industrial Reuse:	0
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	36970004
Activity:	CERT
Activity Name:	CERTIFICATION
AWP Code:	B752
Proposed Budget:	0
AWP Completion Date:	12312006
Revised Due Date:	Not reported
Comments Date:	Not reported
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	AWP
Definition of Status:	ANNUAL WORKPLAN - ACTIVE SITE
Liquids Removed (Gals):	0
Liquids Treated (Gals):	0

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number

NORTON AIR FORCE BASE (Continued) **S101272838**

Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	Not reported
Activity Comments:	Not reported
For Commercial Reuse:	0
For Industrial Reuse:	0
For Residential Reuse:	0
Unknown Type:	0
Alternate Address:	2,208 ACRES;58 MI EA OF LOS ANGELES, CA
Alternate City,St,Zip:	SAN BERNARDINO, CA 92409
Alternate Address:	I-10 - US 395
Alternate City,St,Zip:	NORTON AFB, CA 92409
Alternate Address:	I-10 - US 395
Alternate City,St,Zip:	SAN BERNARDINO, CA 92409
Alternate Address:	MAIN GATE AT 3RD STREET & 6TH STREET
Alternate City,St,Zip:	SAN BERNARDINO, CA 92409
Alternate Address:	NORTON AIR FORCE BASE
Alternate City,St,Zip:	SAN BERNARDINO, CA 92409
Background Info:	This site is a U.S. Air Force Military Command Base which began o perations in 1942. Norton's original function was to maintain an d repair aircraft. After World War II, the oper- ations were exp anded by providing maintenance, storage, and logistic support for various missile programs. Norton became a Military Airlift Wing in 1966. In 1968, the Aero- space Audiovisual Services establis hed its headquarters at Norton. Past waste management practices associated with base activities include drum burial, hazardous wa ste dispo- sal in unlined pits, storage of leaking drums, leakage of underground storage tanks, and materials spills. The practic es have resulted in significant soil and groundwater contaminatio n. Past disposal practices onsite have caused the release of larg e volumes of fuels, solvents, and luminescent dials and heavy met als to the soil and groundwater. Monitoring wells on the base ar e contaminated with methylene chloride, toluene, benzene and tric hloroethene (TCE). Chemicals found in the soil onsite include oi l and grease, hexavalent chromium, xylene and polychlorinated bip henyls (PCBs). There is a potential for direct worker contact wit h contami- nated onsite soils. Contaminants have migrated into th e soil and groundwater beneath the Base. The City of Riverside's drinking water supply wells are within 500 feet of waste disposa l onsite. Domestic wells owned by the City showed TCE contaminati on and levels of radionuclides above the maximum contaminant leve ls. The site was placed on the NPL on July 22, 1987. On June 29, 1989, EPA, DTSC, and DoD entered into a Federal Facility Agre ement (FFA) to remediate contamination under EPA over- sight. DT SC will support EPA's oversight of the DoD's reme- dial activitie s. The FFA provides funding and will reim- burse the State for a ll reasonable costs incurred during oversight of the IRP activiti es. The FFA has established a procedural framework and schedule for developing, implement- ing, and monitoring appropriate respon se actions at the site. The State has also entered into a Defens e/State Memo- randum of Agreement (DSMOA) with DoD which addresse s State reimbursement.
Comments Date:	12291997
Comments:	and the graded to its original levels. In addition, three new mo
Comments Date:	12291997
Comments:	nitoring wells were installed for monitoring purposes. A Long Ter

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number
	NORTON AIR FORCE BASE (Continued)		**S101272838**

Comments Date: 12291997
Comments: m Ground- water Monitoring plan will be implemented as a result o
Comments Date: 12291997
Comments: f leaving matreials in place.
Comments Date: 12301997
Comments: RAP - SITE2: As a result of trenching activities and in accordanc
Comments Date: 12301997
Comments: e with Title 27, California Code of Regulations, the intent of th
Comments Date: 12301997
Comments: is plan is to upgrade waste management units to closure standards
Comments Date: 12301997
Comments: established in regulations. This activity is equivalent to a RAP
Comments Date: 12301997
Comments: since it will cost approxim- ately $ 13,700,000.00. The public a
Comments Date: 12301997
Comments: nd regulatory agencies have had an opportunity to comment and all
Comments Date: 12301997
Comments: comments have been adequately addressed by the PRP. Activities w
Comments Date: 12301997
Comments: hich will take place from February 1998 to December 1998 include:
Comments Date: 12301997
Comments: landfill gas extraction and treatment, waste consolidation of ap
Comments Date: 12301997
Comments: proximately 120,000 cubic yards from the northeast, confirmation
Comments Date: 12301997
Comments: sampling of consolidated material, a monolithic, cover, drainage
Comments Date: 12301997
Comments: control, groundwater monitoring and long term operation and maint
Comments Date: 12301997
Comments: enance activities.
Comments Date: 04141995
Comments: aining area. Soils at IRP Site 5 are contaminated with hydrocarb
Comments Date: 04141995
Comments: ons, dioxins, metals, and polynuclear aromatic hydrocarbons (PAHs
Comments Date: 06201997
Comments: sal facility, if hazardous, or to IRP Site 2. Verification sampli
Comments Date: 01091998
Comments: DES - SITE2: As a result of trenching activities and in accordanc
Comments Date: 01091998
Comments: e with Title 27, California Code of Regulations, the intent of th
Comments Date: 01091998
Comments: is plan is to upgrade waste management units to closure standards
Comments Date: 01091998
Comments: established in regulations. This activity is equivalent to a RAP
Comments Date: 01091998
Comments: since it will cost approxi- mately $13,700,000.00. The public an
Comments Date: 01091998
Comments: d regulatory agencies have had an opportunity to comment and all
Comments Date: 01091998
Comments: comments have been adeguately addressed by the PRP. Activities wh
Comments Date: 01091998
Comments: ich will take place from February 1998 to December 1998 include:
Comments Date: 01091998
Comments: landfill gas extraction and treatment, waste consolidation of app
Comments Date: 01091998
Comments: roximately 120,000 cubic yards from the northeast, confirmation s
Comments Date: 01091998

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number
	NORTON AIR FORCE BASE (Continued)		**S101272838**

Comments:	ampling of consolidated material, a monolithic cover, drainage co
Comments Date:	01091998
Comments:	ntrol, groundwater monitoring and long term operation and mainten
Comments Date:	01091998
Comments:	ance activities.
Comments Date:	01142005
Comments:	The site may be suitable for unrestricted use.
Comments Date:	01262005
Comments:	Site may be suitable for unrestricted use.
Comments Date:	01272004
Comments:	RAW - STE10: Because of the San Bernadino Kangaroo Rat, the Air F
Comments Date:	01272004
Comments:	orce will trap and relocate the animals and set up fences to prev
Comments Date:	01272004
Comments:	ent burrowing animals from crawling back into the excavation area
Comments Date:	01272004
Comments:	during removal. The Air Force will remove the top two feet of s
Comments Date:	01272004
Comments:	oil and then depending on the presence of ash layers and fieldscr
Comments Date:	01272004
Comments:	eening sampling results to determine whether additional two feet
Comments Date:	01272004
Comments:	of soil will be removed or not. After excavation, the AF will ta
Comments Date:	01272004
Comments:	ke confirmation soil samples and analyze them for dioxins/furans
Comments Date:	01272004
Comments:	and metals. If excessive contamination remains, excavation will
Comments Date:	01272004
Comments:	resume. Once the removal action is complete, the AF will restore
Comments Date:	01272004
Comments:	the site to pre-excavation conditions.
Comments Date:	01301997
Comments:	RA for BIO-T: 19300 cubic yards of soil were treated and
Comments Date:	01301997
Comments:	they will be used as fill for the landfill 2 cap.
Comments Date:	02051993
Comments:	Final FS for the Central Base Area (CBA) OU was approved. The CBA
Comments Date:	02051993
Comments:	OU is OU#1 which addresses groundwater contamination and all sou
Comments Date:	02051993
Comments:	rces.
Comments Date:	02061996
Comments:	RA - DRMO This removal action consisted of the closure of two bui
Comments Date:	02061996
Comments:	ldings used for storage of hazardous waste in accordance with RCR
Comments Date:	02061996
Comments:	A. Three and one quarter cubic yards of soil contaminated with pe
Comments Date:	02061996
Comments:	troleum hydrocarbons and arsenic were also removed and sent to a
Comments Date:	02061996
Comments:	licensed disposal facility. Approximate cost: $450,000.00; fundin
Comments Date:	02061996
Comments:	g: BRAC I
Comments Date:	03111993
Comments:	A public meeting was held at the San Bernardino City Hall to
Comments Date:	03111993
Comments:	receive public comments on the draft Proposed Plan for the

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number

NORTON AIR FORCE BASE (Continued) **S101272838**

Comments Date: 03111993
Comments: CBA OU. Public comment period would end 3/18/93. Fact Sht.
Comments Date: 03111993
Comments: and Public Notice went out 2/11/93.
Comments Date: 03121996
Comments: RA - BBPTS
Comments Date: 03121996
Comments: This is the one of components of the final remedial action
Comments Date: 03121996
Comments: for the Central Base Area Operable Unit. The system
Comments Date: 03121996
Comments: consists of three groundwater extraction wells, a treatment
Comments Date: 03121996
Comments: plant including pumps, and air stripper, air blower,
Comments Date: 03121996
Comments: off-gas treatment system, computerized control unit,
Comments Date: 03121996
Comments: storage tanks, piping, and seven injection wells.
Comments Date: 03121996
Comments: The system extracts TCE contaminated groundwater at a
Comments Date: 03121996
Comments: maximum capacity of 2,500 gallons per minute, strips the
Comments Date: 03121996
Comments: TCE and other volatile organic compounds from the water,
Comments Date: 03121996
Comments: and reinjects it to the same aquifer to maintain hydraulic
Comments Date: 03121996
Comments: control of the plume. TCE and other compounds are adsorbed
Comments Date: 03121996
Comments: in the off-gas treatment system on granular activated
Comments Date: 03121996
Comments: carbon to comply with air quality standards. Carbon is
Comments Date: 03121996
Comments: sent to a reclycling facility after is spent.
Comments Date: 03121996
Comments: The system will extract aproximately 1.1 billion gallons
Comments Date: 03121996
Comments: of contaminated water per year, and treat about 200 pounds
Comments Date: 03121996
Comments: of TCE per year. Approximate Cost: $7,500,000.00; BRAC I
Comments Date: 04141995
Comments: BUILDING 658 CLEANUP OF SHALLOW SUBSTANCE TRICHLOROETHYLENE (TCE)
Comments Date: 04141995
Comments: CONTAMINATED SOILS BY EX-SITU SOIL VAPOR EXTRATION. THIS ACTIVIT
Comments Date: 04141995
Comments: Y IS THE ONE OF THE SELECTED REMEDIES DESCRIBED IN THE NOVEMBER 2
Comments Date: 04141995
Comments: 4, 1993, CENTRAL BASE AREA OPERABLE UNIT RECORD OF DECISION (ROD)
Comments Date: 04141995
Comments: , SECTION 9.2.2. THE NOVEMBER 18, 19 ENGINEERING DESIGN REPORT D
Comments Date: 04141995
Comments: ESCRIBED THE REMEDIAL ACTIONS TO BE IMPLEMENTED AT BUILDING 658.
Comments Date: 04141995
Comments: THESE ACTIONS CONSIST OF: EXCAVATION OF TCE-CONTAMINATED SOIL AT
Comments Date: 04141995
Comments: BUILDING 658, AND REMOVAL OF A SUMP AND ASSOCIATION APPURTENANCES
Comments Date: 04141995

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number

NORTON AIR FORCE BASE (Continued) **S101272838**

Comments:	; TRANSPORT OF THE SOIL FROM BUILDING 658 TO A ON-BASE LOCATION;
Comments Date:	04141995
Comments:	CONSTRUCTION OF AN EX-SITU TREATMENT CELL AND VAPOR ABATEMENT SYS
Comments Date:	04141995
Comments:	TEM TO REMEDIATE THE EXCAVATED SOIL USING VAPOR EXTRATION; OPERAT
Comments Date:	04141995
Comments:	ION OF THE EX-SITU TREATMENT SYSTEM UNTIL TCE CONCENTRATIONS ARE
Comments Date:	04141995
Comments:	BELOW LEVELS PRESCRIBED IN THE ROD; AND SITE RESTORATION, INCLUDI
Comments Date:	04141995
Comments:	NG BACKFILL OF THE EXCAVATION AND RESURFACING OF THE DISTURBED AR
Comments Date:	04141995
Comments:	EA. RESULT OF THE CONFIRMATION SAMPLING DID NOT DETECT ANY CONCEN
Comments Date:	04141995
Comments:	TRATIONS ABOVE THE CLEANUP STANDARD (5UG/L IN LEACHATE ANALYZED B
Comments Date:	04141995
Comments:	Y THE TOXIC CHARACTERISTICS LEACHING PROCEDURE (TCP)). ORDER In
Comments Date:	04141995
Comments:	stallation Restoration Program (IRP) Site 5 is the former fire tr
Comments Date:	04141995
Comments:	). The proposed remedial actions will meet industrial reuse and
Comments Date:	04141995
Comments:	groundwater protection based Target Cleanup Goals (TCGs) and will
Comments Date:	04141995
Comments:	consist of: - Soil Vapor Extraction (SVE), including activated
Comments Date:	04141995
Comments:	carbon treatment of extracted vapors, to reduce hydrocarbon cont
Comments Date:	04141995
Comments:	am- ination in site soils to below groundwater protection based T
Comments Date:	04141995
Comments:	CGs; - Excavation and offsite landfill disposal of soils contai
Comments Date:	04141995
Comments:	n- ing dioxin concentrations in excess of industrial reuse TCGs a
Comments Date:	04141995
Comments:	t a licensed Subtitle C disposal facility permitted to accept dio
Comments Date:	04141995
Comments:	xin-contaminated soils; - Excavation, stabilization, and transp
Comments Date:	04141995
Comments:	ort to IRP Site 2 Landfill (to be used as fill material for landf
Comments Date:	04141995
Comments:	ill closure cap) of metal- and PAH-contaminated soil above the in
Comments Date:	04141995
Comments:	dus- trial reuse TCGs; - Excavation and transport to IRP Site 2
Comments Date:	04141995
Comments:	(without stabil- ization), of metal- and PAH-contaminated soils
Comments Date:	04141995
Comments:	above the industrial reuse TCGs and classified as California nonh
Comments Date:	04141995
Comments:	azardous. VOLUME TREATED, STABILIZED, OR DISPOSED: Approximatel
Comments Date:	04141995
Comments:	y 6000 cubic yards APPROXIMATE COST: $500,000
Comments Date:	05141998
Comments:	RAW - STE17: The remedy which was agreed upon by the Dispute
Comments Date:	05141998
Comments:	Resolution Committee (DRC) was monitoring by installing two
Comments Date:	05141998
Comments:	additional wells. This Work Plan approves the implementation

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number
	NORTON AIR FORCE BASE (Continued)		**S101272838**

Comments Date: 05141998
Comments: of these two wells.
Comments Date: 05161995
Comments: engineering design building 673 and 763 trichloroethylene
Comments Date: 05161995
Comments: (TCE) source area remediation by in situ vapor extraction.
Comments Date: 05161995
Comments: this activity is one of the selected remedies described
Comments Date: 05161995
Comments: in the november 24, 1993 report, central base area operable
Comments Date: 05161995
Comments: unit record of decision (ROD), sections 9.2.1 and 9.2.2.
Comments Date: 05161995
Comments: the report describes the design, implementation, and oper-
Comments Date: 05161995
Comments: ation of the soil vapor extraction system to accomplish the
Comments Date: 05161995
Comments: remediation of the TCE soil contamination in the areas of
Comments Date: 05161995
Comments: building 673 and 763. soil vapor extraction wells will be
Comments Date: 05161995
Comments: installed as mecessary to delineate the TCE plume. A vapor
Comments Date: 05161995
Comments: extraction and treatment system, including all necessary
Comments Date: 05161995
Comments: equipment such as blowers, moisture separator, process
Comments Date: 05161995
Comments: cooler, carbon adsorbers, instrumentation and controls,
Comments Date: 05161995
Comments: will be constructed.
Comments Date: 05301986
Comments: This is the date the site was first listed pursuant to
Comments Date: 05301986
Comments: section 25356.
Comments Date: 06051994
Comments: RI/FS - IRP15 -- DTSC approved the Remediation Investigation/Feas
Comments Date: 06051994
Comments: ibility Study for IRP15 on June 5, 1994. Approximate cost = $4,0
Comments Date: 06051994
Comments: 00,000; funding = BRAC.
Comments Date: 06081992
Comments: Air force began pumping the Central Base Area (CBA) plume as
Comments Date: 06081992
Comments: a treatability study. The EE/CA showed that the rate of
Comments Date: 06081992
Comments: pumping of the initial system (200gpm) will have little or
Comments Date: 06081992
Comments: no effect on the CBA plume, so cannot reasonably be called a
Comments Date: 06081992
Comments: removal action. The system cost $3 M and consists of two
Comments Date: 06081992
Comments: extraction and one injection well.
Comments Date: 06101999
Comments: RA - SAR: Between July and October 1997 Earth Tech, a remedial co
Comments Date: 06101999
Comments: ntractor hired by the Air Force excavated, treated and disposed o
Comments Date: 06101999

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number
	NORTON AIR FORCE BASE (Continued)		**S101272838**

Comments:	f lead contaminated soils down to 2 feet bgs at the base of the S
Comments Date:	06101999
Comments:	AR and 4 feet into the impact berm. A total of 11,478 tons of soi
Comments Date:	06101999
Comments:	l was excavated and processed at IRP Site 2. Of this amount 210 t
Comments Date:	06101999
Comments:	ons were bullet fragments and small rocks which were classified a
Comments Date:	06101999
Comments:	s RCRA Hazardous waste and were disposed of offsite at Laidlaw En
Comments Date:	06101999
Comments:	vironmental Services landfill in Westmoreland, California. Appro
Comments Date:	06101999
Comments:	ximately 2,100 tons were stabilized by adding 15% Portland Cement
Comments Date:	06101999
Comments:	and processing through a pug mill. None of the stabilized soil
Comments Date:	06101999
Comments:	met the treatment standard so all of it was sent offsite to Brown
Comments Date:	06101999
Comments:	ing Ferris Industries (BFI) landfill in La Paz, Arizona as a Cali
Comments Date:	06101999
Comments:	fornia hazardous, non-RCRA waste.
Comments Date:	06141999
Comments:	5 YEAR - OU1: The Five Year Review documents that all of the CBA
Comments Date:	06141999
Comments:	OU actions are either complete or underway. This review is a Type
Comments Date:	06141999
Comments:	Ia as the remedy has not achieved ARAR's. The ROD standards for
Comments Date:	06141999
Comments:	groundwater have not been achieved for TCE. From an initial
Comments Date:	06141999
Comments:	concentration of 4,000 ug/l at MW90, the average concentrations
Comments Date:	06141999
Comments:	for the pump and treat system is 2.1 ug/l. This has been deemed
Comments Date:	06141999
Comments:	Operating Properly and Successfully by the regulators. The system
Comments Date:	06141999
Comments:	is expected to reach ROD standards in 16 years. From October 4,
Comments Date:	06141999
Comments:	1995 to April 1997 over 7,500 lbs TCE were extracted from
Comments Date:	06141999
Comments:	component 2, deep soils. Confirmation results indicate that
Comments Date:	06141999
Comments:	approximately 770 lbs are left in place in tight soil formations.
Comments Date:	06141999
Comments:	Component 3, shallow soils, excavated approximately 350 cubic
Comments Date:	06141999
Comments:	yards of TCE contaminated soil and were successfully treated
Comments Date:	06141999
Comments:	using SVE and a carbon air treatment. Component 4, shallow soils
Comments Date:	06141999
Comments:	associated with IRP 9, resulted in 2,123 tons of TCE contaminated
Comments Date:	06141999
Comments:	material and 914 tons of concrete being excavated and disposed
Comments Date:	06141999
Comments:	in a RCRA Subtitle C disposal facility.
Comments Date:	06201997
Comments:	RA - SITE 8: The removal actions involved the excavation and disp

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number
	NORTON AIR FORCE BASE (Continued)		**S101272838**

Comments Date: 06201997
Comments: osal of 1,553 cubic yards of contaminated soil either to an offsi
Comments Date: 06201997
Comments: te disposal facility, if hazardous, or to IRP Site 2. Verificatio
Comments Date: 06201997
Comments: n sampling was conducted to document that target cleanup goals (T
Comments Date: 06201997
Comments: CGS) identified in the Final Action Memoran- dum were achieved. S
Comments Date: 06201997
Comments: ite restoration was also performed. Confirmation surface soil sam
Comments Date: 06201997
Comments: ples were collected from the excavations to assess if cleanup goa
Comments Date: 06201997
Comments: ls had been attained, in accordance with the Work Plan. RA - AO
Comments Date: 06201997
Comments: C37: The removal actions involved the excavation and disposal of
Comments Date: 06201997
Comments: 8,925 cubic yards of contaminated soil either to an offsite dispo
Comments Date: 06201997
Comments: ng was conducted to document that target cleanup goals (TCGS) ide
Comments Date: 06201997
Comments: ntified in the Final Action Memoran- dum were achieved. Site rest
Comments Date: 06201997
Comments: oration was also performed. Confirmation surface soil samples wer
Comments Date: 06201997
Comments: e collected from the excavations to assess if cleanup goals had b
Comments Date: 06201997
Comments: een attained, in accordance with the Work Plan. RA - AOC38: The r
Comments Date: 06201997
Comments: emoval actions involved the excavation and disposal of 1,603 cub
Comments Date: 06201997
Comments: ic yards of contaminated soil either to an offsite disposal faci
Comments Date: 06201997
Comments: lity, if hazardous, or to IRP Site 2. Verification sampling was c
Comments Date: 06201997
Comments: onducted to document that target cleanup goals (TCGS) identified
Comments Date: 06201997
Comments: in the Final Action Memoran- dum were achieved. Site restoration
Comments Date: 06201997
Comments: was also performed. Confirmation surface soil samples were collec
Comments Date: 06201997
Comments: ted from the excavations to assess if cleanup goals had been att
Comments Date: 06201997
Comments: ained, in accordance with the Work Plan.
Comments Date: 06232003
Comments: RIFS - BSWD: The BCT has disputed on the implementation of instit
Comments Date: 06232003
Comments: utional control in 1999. While the resolution state that the AF
Comments Date: 06232003
Comments: will issue post-ROD primary documents to specify IC requirements,
Comments Date: 06232003
Comments: the revised BSWD FS denied such a commitment and states that ICs
Comments Date: 06232003
Comments: are AF's voluntary acts. The implementation of ICs shouldn't be
Comments Date: 06232003
Comments: overseeing by regulatory agencies. After much discussion EPA, D
Comments Date: 06232003

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number
	NORTON AIR FORCE BASE (Continued)		**S101272838**

Comments:	TSC, RWQCB, and the AF agreed to postpone the dispute of IC imple
Comments Date:	06232003
Comments:	mentation until the draft ROD is issued. The regulatiory agencie
Comments Date:	06232003
Comments:	s thus approved the proposed remedies for the sites included in t
Comments Date:	06232003
Comments:	his BSWD FS.
Comments Date:	06261997
Comments:	DES - SITE5: The Engineering Design report establishes the
Comments Date:	06261997
Comments:	implementation procedures for the removal action. It also
Comments Date:	06261997
Comments:	establishes procedures for verification of the obtainment of
Comments Date:	06261997
Comments:	the cleanup goals. The procedures for removal involve
Comments Date:	06261997
Comments:	excavation, stabilization and disposal of contaminated soil.
Comments Date:	06261997
Comments:	Not reported
Comments Date:	06261997
Comments:	RIFS - 6AOCS: An Engineering Evaluation/Cost Analysis(EE/CA)
Comments Date:	06261997
Comments:	was prepared to address the remedial action alternatives for
Comments Date:	06261997
Comments:	the six areas of concern. The EE/CA presented an evaluation
Comments Date:	06261997
Comments:	of the technological alternatives for the non-time critical
Comments Date:	06261997
Comments:	remedial action at the AOCs. The EE/CA was submited to a 30
Comments Date:	06261997
Comments:	day public coment period.
Comments Date:	06261997
Comments:	Not reported
Comments Date:	06261997
Comments:	RAW - 6AOCS: Given the low risk to human health, the remedy
Comments Date:	06261997
Comments:	chosen at AOCs 4, 18, 33, 39, and 40 is the placement of
Comments Date:	06261997
Comments:	institutional controls (i.e., deed restrictions). The
Comments Date:	06261997
Comments:	remedy at AOC 70 will be excavation of soil that contains
Comments Date:	06261997
Comments:	contaminants above the soil target cleanup goals and
Comments Date:	06261997
Comments:	disposal at the landfill No 2 on base.
Comments Date:	06291989
Comments:	Federal Facility Agreement (FFA) between Air Force, USEPA, and DH
Comments Date:	06291989
Comments:	S Toxic Substances Control Division was signed.
Comments Date:	06301991
Comments:	Removal Action: Soil removal/treatment Building #763.
Comments Date:	07231999
Comments:	RA-IRP-2: The Removal Action consisted of consolidating 15 acres
Comments Date:	07231999
Comments:	of the original 35 acres unto a 20 acres footprint. Then a four
Comments Date:	07231999
Comments:	foot monolithic cover was placed over the consolidated area which

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number
	NORTON AIR FORCE BASE (Continued)		**S101272838**

Comments Date: 07231999
Comments: included: a landfill gas collection (LFG) system, extensive soil
Comments Date: 07231999
Comments: gas monitoring probes, groundwater monitoring wells, a flare to
Comments Date: 07231999
Comments: treat gas and condensate and finally was graded and hydro-seeded.
Comments Date: 07231999
Comments: Monitoring wells which were near the landfill were closed. Wastes
Comments Date: 07231999
Comments: deemed incompatible with the landfill closure were excavated and
Comments Date: 07231999
Comments: disposed of off site. These wastes included 16 cubic yards of
Comments Date: 07231999
Comments: hydrocarbon contaminated soils, 5 roll-off bins of 20 cubic yards
Comments Date: 07231999
Comments: full of tires, 16 cubic yards of fuel bladders, and 48 cubic
Comments Date: 07231999
Comments: yards of drilling spoils. The final footprint of the landfill is
Comments Date: 07231999
Comments: 25 acres and is enclosed with a chain link fence.
Comments Date: 07251991
Comments: US Air Force Military Command Base. Contaminants include
Comments Date: 07251991
Comments: fuels, TCE, PCBs, xylenes, Cr, methylene chloride, DCB,
Comments Date: 07251991
Comments: and toluene.
Comments Date: 07291997
Comments: RAP - SIT19: The response action addressed in the Record of
Comments Date: 07291997
Comments: Decision consists of a deed restriction that precludes
Comments Date: 07291997
Comments: access to the soils and prevents uncontrolled releases. This
Comments Date: 07291997
Comments: remedy was considered to be the most cost effective and
Comments Date: 07291997
Comments: protective of human health and the environment. The remedy
Comments Date: 07291997
Comments: is deemed an interim measure and an additional remedy may be
Comments Date: 07291997
Comments: considered when it is found necessary to remove the concrete
Comments Date: 07291997
Comments: apron covering the contaminated soil.
Comments Date: 08121991
Comments: Filed Neg. Dec. with State clearing house in comp. w/ CEQA
Comments Date: 09211994
Comments: DES - CBAGW -- Central Base Area Groundwater (CBAGW) pump and tre
Comments Date: 09211994
Comments: at system. The pump and treat system includes a new extraction w
Comments Date: 09211994
Comments: ell (to supplement the two existing wells), eight injection wells
Comments Date: 09211994
Comments: , a groundwater treatment plant, and pipelines to transport the w
Comments Date: 09211994
Comments: ater among the wells and the treatment plant. The groundwater wi
Comments Date: 09211994
Comments: ll be treated by packed tower air strippers. As mandated in the
Comments Date: 09211994

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number
	NORTON AIR FORCE BASE (Continued)		**S101272838**

Comments:	Record of Decision dated November 24, 1993, this system will "mai
Comments Date:	09211994
Comments:	ntain hydraulic control to the extent possible of the plume while
Comments Date:	09211994
Comments:	extracting contaminated groundwater, and reinjecting treated gro
Comments Date:	09211994
Comments:	undwater into the contaminant plume or the clean portion of the a
Comments Date:	09211994
Comments:	quifer." Approximate cost = $700,000; funding = BRAC.
Comments Date:	10071994
Comments:	DES - CBAGW -- MODIFICATION - The design consists of modification
Comments Date:	10071994
Comments:	s to the existent Central Base Area (CBA) pump and treat system t
Comments Date:	10071994
Comments:	o increase its capacity from 200 gallons per minute (gpm) to 400
Comments Date:	10071994
Comments:	gpm. The modifications are: addition of four new extraction well
Comments Date:	10071994
Comments:	s and three new injection wells; replace 4-inch piping with 6-inc
Comments Date:	10071994
Comments:	h piping as required inside the treatment system area; replace ex
Comments Date:	10071994
Comments:	isting centrifugal transfer pumps with larger pumps; operate the
Comments Date:	10071994
Comments:	liquid phase carbon units in a parallel mode; addition of new in-
Comments Date:	10071994
Comments:	line filters; addition of a new in-line sand separator; and insta
Comments Date:	10071994
Comments:	llation of pipeline from the new extraction wells and injection w
Comments Date:	10071994
Comments:	ells to the treatment plant area; install new pipeline from new i
Comments Date:	10071994
Comments:	njection wells and tie-in to the existing injection well pipeline
Comments Date:	10071994
Comments:	. Approximate cost = 336,000; funding = BRAC.
Comments Date:	10171991
Comments:	Modified and refiled Neg. Dec. with State Clearing House as
Comments Date:	10171991
Comments:	a result of comments from the City of Riverside regarding
Comments Date:	10171991
Comments:	the presence of radionuclides in the ground water and the
Comments Date:	10171991
Comments:	possible risk of radon contaminating activated carbon filter
Comments Date:	10301998
Comments:	were met. The area was then backfilled with clean fill and grade
Comments Date:	10301998
Comments:	d.
Comments Date:	10301998
Comments:	RA - AOC70: The Removal Action goal for AOC 70 was to excavate an
Comments Date:	10301998
Comments:	d remove soil containing contaminants of concern: PCBs, benzo(a p
Comments Date:	10301998
Comments:	yrene, benzo(b)flouranthene, benzo(k)-flouranthene, TPH-diesel an
Comments Date:	10301998
Comments:	d TPH-gasoline at depths up to 10 feet. Approximately 1632 cubic
Comments Date:	10301998
Comments:	yards of material was excavated, treated and disposed off- site.

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number
	NORTON AIR FORCE BASE (Continued)		**S101272838**

Comments Date: 10301998
Comments: Confirmation samples were then taken, analyzed and the determinat
Comments Date: 10301998
Comments: ion was made that the objectives were met. The area was then back
Comments Date: 10301998
Comments: filled with clean fill and graded. RA - IRP10: The Removal Acti
Comments Date: 10301998
Comments: on goal for IRP Site 10 was to excavate and remove soil containin
Comments Date: 10301998
Comments: g contaminants of concern: lead arsenic and chromium at depths up
Comments Date: 10301998
Comments: to three feet or one foot below the ash layer, as this was the z
Comments Date: 10301998
Comments: one of ecological risk. Approx. 224 cubic yards of non-hazardous
Comments Date: 10301998
Comments: material was disposed of at the base landfill, IRP Site 2 and app
Comments Date: 10301998
Comments: roximately 116 cubic yards of potentially hazardous waste were ex
Comments Date: 10301998
Comments: cavated and disposed off site. Confirmation samples were then tak
Comments Date: 10301998
Comments: en, analyzed and the determina- tion was made that the objectives
Comments Date: 11202003
Comments: RAP - SITE 10 (Removal action at Site 10 and 12): Following the f
Comments Date: 11202003
Comments: inalization of Basewide Feasibility Study Report, the AF issued t
Comments Date: 11202003
Comments: his document for conducting soil removal at these sites to accele
Comments Date: 11202003
Comments: rate cleanup actions at the former Norton AFB. Because of the end
Comments Date: 11202003
Comments: angered species, the AF will conduct formal consultation with US
Comments Date: 11202003
Comments: Fish and Wildlife and obtain permits from California Dept. of Fis
Comments Date: 11202003
Comments: h and Game. The detected contamination is within four feet of gr
Comments Date: 11202003
Comments: ound surface, the AF will restrict depth of excavation accordingl
Comments Date: 11202003
Comments: y. Also, because part of Site 10 is now potions of a golf course
Comments Date: 11202003
Comments: , part of the golf course will be closed during the removal actio
Comments Date: 11202003
Comments: n. Excavated soil will be profiled and sent to a regulated landf
Comments Date: 11202003
Comments: ill. Once the removal action is complete, no further remedial ac
Comments Date: 11202003
Comments: tions are anticipated at these sites.
Comments Date: 11241993
Comments: RAP CBAOU 11/24/93 Completion of Proposed Plan and Record of Deci
Comments Date: 11241993
Comments: sion for the Central Base Area Operable Unit (CBAOU). The propose
Comments Date: 11241993
Comments: d Plan details the remedies considered and selected to clean grou
Comments Date: 11241993
Comments: ndwater and soil contamination in the CBA OU, and give the public
Comments Date: 11241993

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number
	NORTON AIR FORCE BASE (Continued)		**S101272838**

Comments:	the opportunity to comment on the proposed remedies. The Record
Comments Date:	11241993
Comments:	of Decision explains the basis and purpose of the decision made b
Comments Date:	11241993
Comments:	y the Air Force to implement the remedies proposed in the propose
Comments Date:	11241993
Comments:	d plan. Volume Treated, Stabilized, or Disposed: N/A Approximat
Comments Date:	11241993
Comments:	e cost $60,000.00
Comments Date:	11251991
Comments:	A Negative Declaration was filed with the State clearing House on
Comments Date:	11251991
Comments:	10/5/91. A notice if determination was filed with the San Berna
Comments Date:	11251991
Comments:	rdino County Clerk for the pump & treat system for the central ba
Comments Date:	11251991
Comments:	se area.
Comments Date:	12011992
Comments:	Design and construction of a system to extract and treat
Comments Date:	12011992
Comments:	contaminated groundwater and reinject groundwater to the
Comments Date:	12011992
Comments:	aquifer. GW is pumped from two extraction wells located in
Comments Date:	12011992
Comments:	the central base area, treated through an air stripper, and
Comments Date:	12011992
Comments:	reinjected to the aquifer. The two extraction wells are ca-
Comments Date:	12011992
Comments:	pable of producing 200 gal per minute. Each well is equipped
Comments Date:	12011992
Comments:	with a submergible pump and current sensor. The current
Comments Date:	12011992
Comments:	sensor is capable of auto shutoff of the pumps when the
Comments Date:	12011992
Comments:	water levels in the wells are too low. The TCE contaminated
Comments Date:	12011992
Comments:	water is delivered by a double-walled underground pipeline
Comments Date:	12011992
Comments:	to an equalization tank which is present to provide
Comments Date:	12011992
Comments:	constant feed to top of the air stripper tower.
Comments Date:	12011994
Comments:	PEA - OU3 -- DTSC approved the PEA on December 1, 1994. This PEA
Comments Date:	12011994
Comments:	resulted in the identification of 19 locations with sufficient ev
Comments Date:	12011994
Comments:	idence of contamination that warranted more thorough investigatio
Comments Date:	12011994
Comments:	n of the extent of contamination. Approximate cost = 1,100,000;
Comments Date:	12011994
Comments:	funding = BRAC.
Comments Date:	12071994
Comments:	DES - CBA-S -- Design for contaminated soils within the Centra Ba
Comments Date:	12071994
Comments:	se Area (CBA). This design describes the engineering design comp
Comments Date:	12071994
Comments:	onents of remedial actions at Building 658 and IRP Site 9 located

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number

NORTON AIR FORCE BASE (Continued) **S101272838**

Comments Date: 12071994
Comments: in the TCE source areas of the CBA-OU. The selected remedies co
Comments Date: 12071994
Comments: nsist of excavation and exsitu vapor extraction for TCE impacted
Comments Date: 12071994
Comments: soils at Building 658 and excavation and off-site stabilization a
Comments Date: 12071994
Comments: nd disposal for TCE and chromium impacted soils from IRP Site 9.
Comments Date: 12071994
Comments: Approximate cost = 300,000; funding = BRAC.
Comments Date: 12291997
Comments: RA - SITE1: A removal action was implemented as a result of an Ac
Comments Date: 12291997
Comments: trion Memorandum completed in March 1996. the removal action was
Comments Date: 12291997
Comments: implemented in two phases between November 1996 and July 1997. A
Comments Date: 12291997
Comments: total of approximately 20,900 tons of soils exceeding cleanup lev
Comments Date: 12291997
Comments: els were excavated and disposed of off- base at an appropriate fa
Comments Date: 12291997
Comments: cility. Approximately 3,800 square feet of material above the cle
Comments Date: 12291997
Comments: anup levels were left in place as they were not extractable durin
Comments Date: 12291997
Comments: g the removal effort. The excavation was subsequently back filled
ID Name: EPA IDENTIFICATION NUMBER
ID Value: CA4570024345
ID Name: BEP DATABASE PCODE
ID Value: P42053
Alternate Name: Norton Air Force Base
Special Programs Code: BRAC1
Special Programs Name: BASE REALIGNMENT & CLOSURE, 1ST ROUND
Special Programs Code: DSMOA
Special Programs Name: DEFENSE MEMORANDUM OF AGREEMENT

Cortese:
Region: CORTESE
Envirostor Id: 36970004
Site/Facility Type: FEDERAL SUPERFUND - LISTED
Cleanup Status: ACTIVE - LAND USE RESTRICTIONS
Status Date: 5/1/1986
Site Code: 400108
Latitude: 34.096600000000002
Longitude: -117.2478

DEED:
Area: * BASEWIDE
Sub Area: SITE5
Site Type: FEDERAL SUPERFUND
Status: ACTIVE
Deed Date(s): 9/17/2007

Area: * BASEWIDE
Sub Area: SAR
Site Type: FEDERAL SUPERFUND

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number

NORTON AIR FORCE BASE (Continued) **S101272838**

Status: ACTIVE
Deed Date(s): 9/17/2007

Area: * BASEWIDE
Sub Area: STE19
Site Type: FEDERAL SUPERFUND
Status: ACTIVE
Deed Date(s): 8/31/2007

Area: Not reported
Sub Area: PCL-C
Site Type: FEDERAL SUPERFUND
Status: ACTIVE
Deed Date(s): 9/26/2007

Area: * BASEWIDE
Sub Area: SITE 2
Site Type: FEDERAL SUPERFUND
Status: ACTIVE
Deed Date(s): 9/20/2007

ENVIROSTOR:

Site Type:	Federal Superfund
Site Type Detailed:	Closed Base
Acres:	2179
NPL:	YES
Regulatory Agencies:	SMBRP, RWQCB 8 - Santa Ana, US EPA
Lead Agency:	US EPA
Program Manager:	STEPHEN NIOU
Supervisor:	Robert Senga
Division Branch:	Cleanup Cypress
Facility ID:	36970004
Site Code:	400108
Assembly:	64
Senate:	37
Special Program:	Not reported
Status:	Active
Status Date:	5/1/1986
Restricted Use:	YES
Site Mgmt. Req.:	NONE SPECIFIED
Funding:	BRAC 88
Latitude:	34.096600000000002
Longitude:	-117.2478
APN:	NONE SPECIFIED
Past Use:	AIRCRAFT MAINTENANCE, AIRFIELD OPERATIONS, DAY CARE FACILITY, DEGREASING FACILITY, DRY CLEANING, ENGINE TESTING/REPAIR, FIRE TRAINING AREAS, FIRING RANGE - SMALL ARMS ETC..., FUEL - AIRCRAFT STORAGE/ REFUELING, JET FUEL STORAGE/REFUELING, LANDFILL - DOMESTIC, MACHINE SHOP, OIL/WATER SEPARATORS, PAINT/DEPAINT FACILITY, PHOTOGRAPHIC PROCESSING, RESIDENTIAL AREA, TRANSPORTATION - WAREHOUSING, WASTE - INDUSTRIAL TREATMENT FACILITY, WASTE - INDUSTRIAL WASTE LINE, WASTE WATER PONDS
Potential COC:	10037, 10179, 30009, 30013, 30015, 30019, 3002501, 30027
Confirmed COC:	Not reported
Potential Description:	AQUI, OTH, SOIL, WELL
Alias Name:	CA4570024345
Alias Type:	EPA Identification Number

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number

NORTON AIR FORCE BASE (Continued) **S101272838**

Alias Name: 110033605908
Alias Type: EPA (FRS #)
Alias Name: P42053
Alias Type: PCode
Alias Name: 11671
Alias Type: RB-PCA
Alias Name: 400108
Alias Type: Project Code (Site Code)
Alias Name: 36970004
Alias Type: Envirostor ID Number

Completed Info:

Completed Area Name: * BASEWIDE
Completed Sub Area Name: SAR
Completed Document Type: Land Use Restriction
Completed Date: 2007-09-17 00:00:00
Comments: Not reported

Completed Area Name: * BASEWIDE
Completed Sub Area Name: STE19
Completed Document Type: Land Use Restriction
Completed Date: 2007-08-31 00:00:00
Comments: Not reported

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: IWTP
Completed Document Type: Site Inspections/Visit (Non LUR)
Completed Date: 2006-07-12 00:00:00
Comments: Not reported

Completed Area Name: * BASEWIDE
Completed Sub Area Name: SITE5
Completed Document Type: Land Use Restriction
Completed Date: 2007-09-17 00:00:00
Comments: Not reported

Completed Area Name: * BASEWIDE
Completed Sub Area Name: Site 2
Completed Document Type: Land Use Restriction
Completed Date: 2007-09-20 00:00:00
Comments: Not reported

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: PCL-C
Completed Document Type: Land Use Restriction
Completed Date: 2007-09-26 00:00:00
Comments: LUCs on Site 5 & Small Arms Range were signed and recorded.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Site Inspections/Visit (Non LUR)
Completed Date: 2007-02-20 00:00:00
Comments: Not reported

Completed Area Name: * BASEWIDE
Completed Sub Area Name: SITE5
Completed Document Type: * Order
Completed Date: 1995-04-14 00:00:00

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number

NORTON AIR FORCE BASE (Continued) **S101272838**

Comments: BUILDING 658 CLEANUP OF SHALLOW SUBSTANCE TRICHLOROETHYLENE (TCE) CONTAMINATED SOILS BY EX-SITU SOIL VAPOR EXTRATION. THIS ACTIVITY IS THE ONE OF THE SELECTED REMEDIES DESCRIBED IN THE NOVEMBER 24, 1993, CENTRAL BASE AREA OPERABLE UNIT RECORD OF DECISION (ROD), SECTION 9.2.2. THE NOVEMBER 18, 19 ENGINEERING DESIGN REPORT DESCRIBED THE REMEDIAL ACTIONS TO BE IMPLEMENTED AT BUILDING 658. THESE ACTIONS CONSIST OF: EXCAVATION OF TCE-CONTAMINATED SOIL AT BUILDING 658, AND REMOVAL OF A SUMP AND ASSOCIATION APPURTENANCES; TRANSPORT OF THE SOIL FROM BUILDING 658 TO A ON-BASE LOCATION; CONSTRUCTION OF AN EX-SITU TREATMENT CELL AND VAPOR ABATEMENT SYSTEM TO REMEDIATE THE EXCAVATED SOIL USING VAPOR EXTRATION; OPERATION OF THE EX-SITU TREATMENT SYSTEM UNTIL TCE CONCENTRATIONS ARE BELOW LEVELS PRESCRIBED IN THE ROD; AND SITE RESTORATION, INCLUDING BACKFILL OF THE EXCAVATION AND RESURFACING OF THE DISTURBED AREA. RESULT OF THE CONFIRMATION SAMPLING DID NOT DETECT ANY CONCENTRATIONS ABOVE THE CLEANUP STANDARD (5UG/L IN LEACHATE ANALYZED BY THE TOXIC CHARACTERISTICS LEACHING PROCEDURE (TCP)). ORDER Installation Restoration Program (IRP) Site 5 is the former fire training area. Soils at IRP Site 5 are contaminated with hydrocarbons, dioxins, metals, and polynuclear aromatic hydrocarbons (PAHs). The proposed remedial actions will meet industrial reuse and groundwater protection based Target Cleanup Goals (TCGs) and will consist of: - Soil Vapor Extraction (SVE), including activated carbon treatment of extracted vapors, to reduce hydrocarbon contam- ination in site soils to below groundwater protection based TCGs; - Excavation and offsite landfill disposal of soils contain- ing dioxin concentrations in excess of industrial reuse TCGs at a licensed Subtitle C disposal facility permitted to accept dioxin-contaminated soils; - Excavation, stabilization, and transport to IRP Site 2 Landfill (to be used as fill material for landfill closure cap) of metal- and PAH-contaminated soil above the indus- trial reuse TCGs; - Excavation and transport to IRP Site 2 (without stabil- ization), of metal- and PAH-contaminated soils above the industrial reuse TCGs and classified as California nonhazardous. VOLUME TREATED, STABILIZED, OR DISPOSED: Approximately 6000 cubic yards APPROXIMATE COST: $500,000

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Federal Facility Agreement
Completed Date: 1989-06-29 00:00:00
Comments: Federal Facility Agreement (FFA) between Air Force, USEPA, and DHS Toxic Substances Control Division was signed.

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: GW
Completed Document Type: * CEQA
Completed Date: 1991-11-25 00:00:00
Comments: A Negative Declaration was filed with the State clearing House on 10/5/91. A notice if determination was filed with the San Bernardino County Clerk for the pump & treat system for the central base area.

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: P-K4
Completed Document Type: Environmental Baseline Survey
Completed Date: 1996-12-03 00:00:00
Comments: Not reported

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number

NORTON AIR FORCE BASE (Continued) **S101272838**

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: P-K2
Completed Document Type: Finding of Suitability to Transfer
Completed Date: 1997-02-10 00:00:00
Comments: Not reported

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: P-K2
Completed Document Type: Environmental Baseline Survey
Completed Date: 1996-12-03 00:00:00
Comments: Not reported

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: P-J1
Completed Document Type: Finding of Suitability to Transfer
Completed Date: 1996-12-18 00:00:00
Comments: Not reported

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: P-I3
Completed Document Type: Finding of Suitability to Transfer
Completed Date: 1997-02-10 00:00:00
Comments: Not reported

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: P-I3
Completed Document Type: Environmental Baseline Survey
Completed Date: 1996-12-13 00:00:00
Comments: Not reported

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: P-I2
Completed Document Type: Finding of Suitability to Transfer
Completed Date: 1997-02-10 00:00:00
Comments: Not reported

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: P-I2
Completed Document Type: Environmental Baseline Survey
Completed Date: 1996-12-13 00:00:00
Comments: Not reported

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: P-K3
Completed Document Type: Finding of Suitability to Transfer
Completed Date: 1997-02-10 00:00:00
Comments: Not reported

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: P-H
Completed Document Type: Finding of Suitability to Transfer
Completed Date: 1997-02-10 00:00:00
Comments: Not reported

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: P-H
Completed Document Type: Environmental Baseline Survey

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number
	NORTON AIR FORCE BASE (Continued)		**S101272838**

Completed Date: 1996-12-03 00:00:00
Comments: Not reported

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: P-F
Completed Document Type: Finding of Suitability to Transfer
Completed Date: 1997-01-20 00:00:00
Comments: Not reported

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: P-F
Completed Document Type: Environmental Baseline Survey
Completed Date: 1996-12-03 00:00:00
Comments: Not reported

Completed Area Name: OU2&3
Completed Sub Area Name: BBP&T
Completed Document Type: Operations and Maintenance Plan
Completed Date: 1996-10-28 00:00:00
Comments: Not reported

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: EXPOR
Completed Document Type: *Action Memorandum (if <$1M)
Completed Date: 1996-09-10 00:00:00
Comments: Not reported

Completed Area Name: CBA
Completed Sub Area Name: SVECB
Completed Document Type: Operations and Maintenance Plan
Completed Date: 1996-08-22 00:00:00
Comments: Not reported

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: P E-3
Completed Document Type: Finding of Suitability to Lease
Completed Date: 1996-04-08 00:00:00
Comments: Not reported

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: P E-3
Completed Document Type: Environmental Baseline Survey
Completed Date: 1996-04-08 00:00:00
Comments: Not reported

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: P E-2
Completed Document Type: Finding of Suitability to Lease
Completed Date: 1996-04-08 00:00:00
Comments: Not reported

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: P E-2
Completed Document Type: Environmental Baseline Survey
Completed Date: 1996-04-08 00:00:00
Comments: Not reported

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number

NORTON AIR FORCE BASE (Continued) **S101272838**

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: P E-1
Completed Document Type: Finding of Suitability to Lease
Completed Date: 1996-04-08 00:00:00
Comments: Not reported

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: P E-1
Completed Document Type: Environmental Baseline Survey
Completed Date: 1996-04-08 00:00:00
Comments: Not reported

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: WATER
Completed Document Type: Finding of Suitability to Transfer
Completed Date: 1996-09-24 00:00:00
Comments: Not reported

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: P-N
Completed Document Type: Finding of Suitability to Lease
Completed Date: 1996-06-30 00:00:00
Comments: Not reported

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: P M
Completed Document Type: Finding of Suitability to Transfer
Completed Date: 1996-04-08 00:00:00
Comments: Not reported

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: P M
Completed Document Type: Environmental Baseline Survey
Completed Date: 1996-04-08 00:00:00
Comments: Not reported

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: P G-2
Completed Document Type: Finding of Suitability to Transfer
Completed Date: 1996-04-08 00:00:00
Comments: Not reported

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: P G-2
Completed Document Type: Environmental Baseline Survey
Completed Date: 1996-04-08 00:00:00
Comments: Not reported

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: STE13
Completed Document Type: *Action Memorandum (if <$1M)
Completed Date: 1996-06-27 00:00:00
Comments: Not reported

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: BIO-T
Completed Document Type: Removal Action Completion Report

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number
	NORTON AIR FORCE BASE (Continued)		**S101272838**

Completed Date: 1997-01-29 00:00:00
Comments: Not reported

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: IWTP
Completed Document Type: Removal Action Completion Report
Completed Date: 1996-10-24 00:00:00
Comments: Not reported

Completed Area Name: * BASEWIDE
Completed Sub Area Name: STE19
Completed Document Type: Remedial Action Plan
Completed Date: 1997-07-21 00:00:00
Comments: Not reported

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: PA1-3
Completed Document Type: *Action Memorandum (if <$1M)
Completed Date: 1996-08-22 00:00:00
Comments: Not reported

Completed Area Name: * BASEWIDE
Completed Sub Area Name: SITE1
Completed Document Type: *Action Memorandum (if <$1M)
Completed Date: 1996-10-02 00:00:00
Comments: Not reported

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: EXSI
Completed Document Type: Preliminary Endangerment Assessment Report
Completed Date: 1996-10-02 00:00:00
Comments: Not reported

Completed Area Name: * BASEWIDE
Completed Sub Area Name: Ste 12
Completed Document Type: Feasibility Study Report
Completed Date: 1996-10-03 00:00:00
Comments: Not reported

Completed Area Name: * BASEWIDE
Completed Sub Area Name: SITE5
Completed Document Type: * Remedial or Removal Design
Completed Date: 1997-06-25 00:00:00
Comments: Not reported

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: SOILR
Completed Document Type: Preliminary Endangerment Assessment Report
Completed Date: 1996-07-23 00:00:00
Comments: Not reported

Completed Area Name: OU2&3
Completed Sub Area Name: Not reported
Completed Document Type: Preliminary Endangerment Assessment Report
Completed Date: 1996-08-22 00:00:00
Comments: Not reported

MAP FINDINGS

Map ID / Direction / Distance / Distance (ft.)	Site	Database(s)	EDR ID Number / EPA ID Number

NORTON AIR FORCE BASE (Continued) **S101272838**

Completed Area Name: CBA
Completed Sub Area Name: SVECB
Completed Document Type: Removal Action Completion Report
Completed Date: 1996-06-21 00:00:00
Comments: Not reported

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: SIT14
Completed Document Type: Removal Action Completion Report
Completed Date: 1997-06-19 00:00:00
Comments: Not reported

Completed Area Name: * BASEWIDE
Completed Sub Area Name: SITE2
Completed Document Type: Feasibility Study Report
Completed Date: 1996-04-30 00:00:00
Comments: Not reported

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: PAR13
Completed Document Type: Feasibility Study Report
Completed Date: 1996-03-27 00:00:00
Comments: Not reported

Completed Area Name: CBA
Completed Sub Area Name: CBAOU
Completed Document Type: Remedial Action Plan
Completed Date: 1993-11-24 00:00:00
Comments: RAP CBAOU 11/24/93 Completion of Proposed Plan and Record of Decision for the Central Base Area Operable Unit (CBAOU). The proposed Plan details the remedies considered and selected to clean groundwater and soil contamination in the CBA OU, and give the public the opportunity to comment on the proposed remedies. The Record of Decision explains the basis and purpose of the decision made by the Air Force to implement the remedies proposed in the proposed plan. Volume Treated, Stabilized, or Disposed: N/A Approximate cost $60,000.00

Completed Area Name: CBA
Completed Sub Area Name: BBPTS
Completed Document Type: Removal Action Completion Report
Completed Date: 1996-04-02 00:00:00
Comments: Not reported

Completed Area Name: CBA
Completed Sub Area Name: SITE9
Completed Document Type: Removal Action Completion Report
Completed Date: 1996-04-02 00:00:00
Comments: Not reported

Completed Area Name: * BASEWIDE
Completed Sub Area Name: SITE1
Completed Document Type: Feasibility Study Report
Completed Date: 1996-02-22 00:00:00
Comments: Not reported

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: DRMO

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number
	NORTON AIR FORCE BASE (Continued)		**S101272838**

Completed Document Type: Removal Action Completion Report
Completed Date: 1996-04-02 00:00:00
Comments: Not reported

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: IRP#S
Completed Document Type: Feasibility Study Report
Completed Date: 1996-02-02 00:00:00
Comments: Not reported

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: ST 13
Completed Document Type: Feasibility Study Report
Completed Date: 1996-02-02 00:00:00
Comments: Not reported

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: NFA#S
Completed Document Type: Remedial Action Plan
Completed Date: 1996-04-09 00:00:00
Comments: Not reported

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: ROAD
Completed Document Type: Finding of Suitability to Lease
Completed Date: 1995-10-10 00:00:00
Comments: Not reported

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: WATER
Completed Document Type: Environmental Baseline Survey
Completed Date: 1996-04-08 00:00:00
Comments: Not reported

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: ROAD
Completed Document Type: Environmental Baseline Survey
Completed Date: 1995-09-30 00:00:00
Comments: Not reported

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: WATER
Completed Document Type: Finding of Suitability to Lease
Completed Date: 1995-09-26 00:00:00
Comments: Not reported

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: P-L
Completed Document Type: Environmental Baseline Survey
Completed Date: 1995-07-21 00:00:00
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Public Participation Plan / Community Relations Plan
Completed Date: 2005-06-30 00:00:00
Comments: completed

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number

NORTON AIR FORCE BASE (Continued) **S101272838**

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Other Report
Completed Date: 2005-06-30 00:00:00
Comments: completed

Completed Area Name: * BASEWIDE
Completed Sub Area Name: Not reported
Completed Document Type: Proposed Plan
Completed Date: 2005-04-18 00:00:00
Comments: The proposed plan public meeting was held on 8/11/2004

Completed Area Name: * BASEWIDE
Completed Sub Area Name: Not reported
Completed Document Type: Record of Decision
Completed Date: 2005-09-29 00:00:00
Comments: DTSC concurred with the Basewide ROD, which addresses 22 Installation Restoration Program (IRP) sites, 73 areas of concern (AOC), the Small Arms Range, Building 752, and groundwater contamination in the Northeast Base Area. The ROD will enable properties at Norton Air Force Base to be transferred to the redevelopment authorities. The closed portions of the base are planned for air cargo, warehouses, commercial, and other industrial uses. The selected remedy for Site 2, a former landfill, is operation and maintenance of the landfill cover and gas extraction system. Excavation and off-site disposal was selected for Sites 7, 10, 17, Building 752, and AOC 33. In addition, institutional controls were selected for Sites 2, 5, 19, Small Arms Range, and AOC 4. All other facilities require no further action. The purchaser of sites with institutional controls as the selected remedy will be required to enter into a land use covenant with DTSC as an Air Force condition of sale.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Monitoring Report
Completed Date: 2005-06-30 00:00:00
Comments: completed

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Monitoring Report
Completed Date: 2005-06-30 00:00:00
Comments: completed

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Well Decommissioning Workplan
Completed Date: 2005-06-30 00:00:00
Comments: completed

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Other Report
Completed Date: 2005-06-30 00:00:00
Comments: completed

Completed Area Name: * BASEWIDE

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number

NORTON AIR FORCE BASE (Continued) **S101272838**

Completed Sub Area Name: Not reported
Completed Document Type: Long Term Monitoring Report
Completed Date: 2005-06-30 00:00:00
Comments: completed

Completed Area Name: * BASEWIDE
Completed Sub Area Name: Not reported
Completed Document Type: Long Term Monitoring Report
Completed Date: 2005-06-30 00:00:00
Comments: completed

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Monitoring Report
Completed Date: 2006-06-30 00:00:00
Comments: Completed the review of 10/05 quarterly groundwater monitoring report

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Other Report
Completed Date: 2006-06-30 00:00:00
Comments: Completed the review of 12th annual groundwater monitoring report

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Other Report
Completed Date: 2006-06-30 00:00:00
Comments: Completed the review of 2005 offbase water supply annual report

Completed Area Name: * BASEWIDE
Completed Sub Area Name: Not reported
Completed Document Type: Operations and Maintenance Report
Completed Date: 2006-06-30 00:00:00
Comments: Completed Site 2 annual O&M report

Completed Area Name: * BASEWIDE
Completed Sub Area Name: Not reported
Completed Document Type: Operations and Maintenance Report
Completed Date: 2006-06-30 00:00:00
Comments: Completed the review of 1st quarter 2006 Site 2 landfill gas O&M report

Completed Area Name: CBA
Completed Sub Area Name: Not reported
Completed Document Type: Technical Report
Completed Date: 2005-09-08 00:00:00
Comments: Secondary document. Revised document is not required

Completed Area Name: CBA
Completed Sub Area Name: Not reported
Completed Document Type: 5 Year Review Reports
Completed Date: 2006-01-30 00:00:00
Comments: DTSC concurred with the findings in the 2nd 5-year review report.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Other Report

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number

NORTON AIR FORCE BASE (Continued) **S101272838**

Completed Date: 2006-12-07 00:00:00
Comments: Secondary document (groundwater monitoring report, 2nd quarter 2006) accepted

Completed Area Name: * BASEWIDE
Completed Sub Area Name: Not reported
Completed Document Type: Removal Action Completion Report
Completed Date: 2006-03-27 00:00:00
Comments: The Air Force removed 19,000 cubic yards of dioxin contaminated soil. Of this soil, 2,700 cubic yards were classified as California hazardous wastes and disposed at a permitted hazardous waste facility. The remaining soil was transported to a nearby city disposal facility to be used as landfill cover. The Air Force took 18 confirmation soil samples and calculated the post-removal risk to human health and sensitive burrowing animals. The results indicated that the combined child/adult excess cancer risk is 1.7x10-6. The non cancer hazard index for children is 1.2x10-2 at the golf course area and 3.3x10-2 at the habitat area. For adults, the non-cancer hazard index for the golf course portion is 3.8x10-4 and 1.1x10-2 for the habitat area

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Removal Action Completion Report
Completed Date: 2005-01-14 00:00:00
Comments: The action cosisted of demolishing 11 metal sheds and their floors, removing the top foot of soil (440 cubic yards), and taking confirmation samples. The calculated human health risk is 1.1x10-5 excess cancer risk and 0.02 in hazard index. The site may be suitable for unrestricted use.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Removal Action Completion Report
Completed Date: 2005-01-26 00:00:00
Comments: The Air Force excavated and disposed 560 cubic yards of soil soil contaminated with metal and petroleum hydrocarbons. The confirmation samples indicate no contaminants of concern exceeding the clean up goals. The site may be suitable for unrestricted use.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Removal Action Completion Report
Completed Date: 2006-04-25 00:00:00
Comments: DTSC approved Site 7 closure report under CERCLA. The Air Force removed 12 concrete sludge drying beds and associated PAH-contaminated soil. A total of 113 cubic yards of concrete and 405 cubic yards of soil were excavated and disposed of. Confirmation sampling indicate that current excess cancer risk is 2x10-6.

Completed Area Name: * BASEWIDE
Completed Sub Area Name: SITE2
Completed Document Type: Operations and Maintenance Report
Completed Date: 2006-12-07 00:00:00
Comments: Secondary document accepted.

Completed Area Name: * BASEWIDE

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number
	NORTON AIR FORCE BASE (Continued)		**S101272838**

Completed Sub Area Name: SITE2
Completed Document Type: Operations and Maintenance Report
Completed Date: 2006-12-07 00:00:00
Comments: Secondary document accepted

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Operations and Maintenance Report
Completed Date: 2007-03-07 00:00:00
Comments: The Offbase Water Supply Contingency Annual Report has been incorporated into the Basewide annual groundwater monitoring report and was reviewed together.

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: PCL-C
Completed Document Type: * Reuse Document
Completed Date: 2007-09-26 00:00:00
Comments: LUCs on Site 5 & Small Arms Range were signed and recorded.

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: PCL-C
Completed Document Type: Finding of Suitability to Transfer
Completed Date: 2007-10-24 00:00:00
Comments: DTSC approved the property transfer with 2 SLUCs

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: Parcels B1C & E3E
Completed Document Type: Finding of Suitability to Transfer
Completed Date: 2007-09-26 00:00:00
Comments: Both the FOST & LUC are finalized.

Completed Area Name: CBA
Completed Sub Area Name: Not reported
Completed Document Type: Removal Action Completion Report
Completed Date: 2007-01-11 00:00:00
Comments: DTSC approved the report on 1/11/2007

Completed Area Name: * BASEWIDE
Completed Sub Area Name: SITE2
Completed Document Type: Other Report
Completed Date: 2006-08-24 00:00:00
Comments: On 10/3/05, Geologic entered Site 2 Landfill with a backhoe and dug 6 potholes. This report documents Geologic's repair work on 5/9-10/06. The RA work is complete and accepted by all BCT members.

Completed Area Name: CBA
Completed Sub Area Name: CBAOU
Completed Document Type: Other Report
Completed Date: 2007-01-11 00:00:00
Comments: The decommissioning of Central Base Area and Base Boundary groundwater pump and treat systems performed in five phases began in December 2001 and completed in February 2006. The final report was accepted on Jan 11, 2007.

Completed Area Name: * BASEWIDE
Completed Sub Area Name: SITE5
Completed Document Type: Other Report

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number

NORTON AIR FORCE BASE (Continued) **S101272838**

Completed Date: 2008-01-29 00:00:00
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Public Participation Plan / Community Relations Plan
Completed Date: 2009-06-16 00:00:00
Comments: accepted

Completed Area Name: * BASEWIDE
Completed Sub Area Name: AOC 33
Completed Document Type: Remedial Action Implementation Workplan
Completed Date: 2010-10-07 00:00:00
Comments: Finalized

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: 5 Year Review Reports
Completed Date: 2010-10-07 00:00:00
Comments: finalized

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: P-L
Completed Document Type: Finding of Suitability to Transfer
Completed Date: 1995-08-30 00:00:00
Comments: Not reported

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: P-N
Completed Document Type: Finding of Suitability to Transfer
Completed Date: 1997-02-10 00:00:00
Comments: Not reported

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: P-K3
Completed Document Type: Finding of Suitability to Lease
Completed Date: 1995-05-05 00:00:00
Comments: Not reported

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: P-N
Completed Document Type: Environmental Baseline Survey
Completed Date: 1996-12-13 00:00:00
Comments: Not reported

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: P-K3
Completed Document Type: Environmental Baseline Survey
Completed Date: 1996-12-13 00:00:00
Comments: Not reported

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: UTILS
Completed Document Type: Finding of Suitability to Lease
Completed Date: 1995-02-16 00:00:00
Comments: Not reported

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number

NORTON AIR FORCE BASE (Continued) **S101272838**

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: P-K1
Completed Document Type: Finding of Suitability to Lease
Completed Date: 1995-02-16 00:00:00
Comments: Not reported

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: UTILS
Completed Document Type: Environmental Baseline Survey
Completed Date: 1995-02-09 00:00:00
Comments: Not reported

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: P-J1
Completed Document Type: Environmental Baseline Survey
Completed Date: 1996-12-13 00:00:00
Comments: Not reported

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: P-K1
Completed Document Type: Environmental Baseline Survey
Completed Date: 1996-12-03 00:00:00
Comments: Not reported

Completed Area Name: CBA
Completed Sub Area Name: CBA-S
Completed Document Type: * Remedial or Removal Design
Completed Date: 1994-12-07 00:00:00
Comments: DES - CBA-S -- Design for contaminated soils within the Centra Base Area (CBA). This design describes the engineering design components of remedial actions at Building 658 and IRP Site 9 located in the TCE source areas of the CBA-OU. The selected remedies consist of excavation and exsitu vapor extraction for TCE impacted soils at Building 658 and excavation and off-site stabilization and disposal for TCE and chromium impacted soils from IRP Site 9. Approximate cost = 300,000; funding = BRAC.

Completed Area Name: OU3
Completed Sub Area Name: Not reported
Completed Document Type: Preliminary Endangerment Assessment Report
Completed Date: 1994-12-01 00:00:00
Comments: PEA - OU3 -- DTSC approved the PEA on December 1, 1994. This PEA resulted in the identification of 19 locations with sufficient evidence of contamination that warranted more thorough investigation of the extent of contamination. Approximate cost = 1,100,000; funding = BRAC.

Completed Area Name: CBA
Completed Sub Area Name: CBAGW
Completed Document Type: * Remedial or Removal Design
Completed Date: 1994-10-07 00:00:00
Comments: DES - CBAGW -- MODIFICATION - The design consists of modifications to the existent Central Base Area (CBA) pump and treat system to increase its capacity from 200 gallons per minute (gpm) to 400 gpm. The modifications are: addition of four new extraction wells and three new injection wells; replace 4-inch piping with 6-inch piping as required inside the treatment system area; replace existing

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number

NORTON AIR FORCE BASE (Continued) **S101272838**

centrifugal transfer pumps with larger pumps; operate the liquid phase carbon units in a parallel mode; addition of new in-line filters; addition of a new in-line sand separator; and installation of pipeline from the new extraction wells and injection wells to the treatment plant area; install new pipeline from new injection wells and tie-in to the existing injection well pipeline. Approximate cost = 336,000; funding = BRAC.

Completed Area Name: CBA
Completed Sub Area Name: CBAGW
Completed Document Type: * Remedial or Removal Design
Completed Date: 1994-09-21 00:00:00
Comments: DES - CBAGW -- Central Base Area Groundwater (CBAGW) pump and treat system. The pump and treat system includes a new extraction well (to supplement the two existing wells), eight injection wells, a groundwater treatment plant, and pipelines to transport the water among the wells and the treatment plant. The groundwater will be treated by packed tower air strippers. As mandated in the Record of Decision dated November 24, 1993, this system will "maintain hydraulic control to the extent possible of the plume while extracting contaminated groundwater, and reinjecting treated groundwater into the contaminant plume or the clean portion of the aquifer." Approximate cost = $700,000; funding = BRAC.

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: IRP15
Completed Document Type: Feasibility Study Report
Completed Date: 1994-06-05 00:00:00
Comments: RI/FS - IRP15 -- DTSC approved the Remediation Investigation/Feasibility Study for IRP15 on June 5, 1994. Approximate cost = $4,000,000; funding = BRAC.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: * Community Environmental Response Facilitation Act
Completed Date: 1994-04-19 00:00:00
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Environmental Baseline Survey
Completed Date: 1993-12-23 00:00:00
Comments: Not reported

Completed Area Name: CBA
Completed Sub Area Name: CBAOU
Completed Document Type: Feasibility Study Report
Completed Date: 1993-02-05 00:00:00
Comments: Final FS for the Central Base Area (CBA) OU was approved. The CBA OU is OU#1 which addresses groundwater contamination and all sources.

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: GW
Completed Document Type: Removal Action Completion Report
Completed Date: 1992-12-02 00:00:00
Comments: Not reported

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number

NORTON AIR FORCE BASE (Continued) **S101272838**

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: * Engineering Evaluation / Cost Analysis
Completed Date: 1991-08-12 00:00:00
Comments: Filed Neg. Dec. with State clearing house in comp. w/ CEQA

Completed Area Name: CBA
Completed Sub Area Name: B#763
Completed Document Type: Removal Action Completion Report
Completed Date: 1991-06-27 00:00:00
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Public Participation Plan / Community Relations Plan
Completed Date: 1990-01-30 00:00:00
Comments: Not reported

Completed Area Name: * BASEWIDE
Completed Sub Area Name: STE10
Completed Document Type: Remedial Action Plan
Completed Date: 2003-11-20 00:00:00
Comments: RAP - SITE 10 (Removal action at Site 10 and 12): Following the finalization of Basewide Feasibility Study Report, the AF issued this document for conducting soil removal at these sites to accelerate cleanup actions at the former Norton AFB. Because of the endangered species, the AF will conduct formal consultation with US Fish and Wildlife and obtain permits from California Dept. of Fish and Game. The detected contamination is within four feet of ground surface, the AF will restrict depth of excavation accordingly. Also, because part of Site 10 is now potions of a golf course, part of the golf course will be closed during the removal action. Excavated soil will be profiled and sent to a regulated landfill. Once the removal action is complete, no further remedial actions are anticipated at these sites.

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: SSWR
Completed Document Type: Environmental Baseline Survey
Completed Date: 1999-08-31 00:00:00
Comments: Not reported

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: C1
Completed Document Type: Environmental Baseline Survey
Completed Date: 1999-08-30 00:00:00
Comments: Not reported

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: SSWR
Completed Document Type: Finding of Suitability to Transfer
Completed Date: 1999-08-31 00:00:00
Comments: Not reported

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: C1
Completed Document Type: Finding of Suitability to Transfer
Completed Date: 1999-08-30 00:00:00

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number

NORTON AIR FORCE BASE (Continued) **S101272838**

Comments: Not reported

Completed Area Name: * BASEWIDE
Completed Sub Area Name: Site 2
Completed Document Type: Removal Action Completion Report
Completed Date: 1999-07-21 00:00:00
Comments: Not reported

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: PL-C1
Completed Document Type: Finding of Suitability to Transfer
Completed Date: 1999-06-15 00:00:00
Comments: Not reported

Completed Area Name: * BASEWIDE
Completed Sub Area Name: STE10
Completed Document Type: *Action Memorandum (if <$1M)
Completed Date: 2004-01-27 00:00:00
Comments: RAW - STE10: Because of the San Bernadino Kangaroo Rat, the Air Force will trap and relocate the animals and set up fences to prevent burrowing animals from crawling back into the excavation area during removal. The Air Force will remove the top two feet of soil and then depending on the presence of ash layers and fieldscreening sampling results to determine whether additional two feet of soil will be removed or not. After excavation, the AF will take confirmation soil samples and analyze them for dioxins/furans and metals. If excessive contamination remains, excavation will resume. Once the removal action is complete, the AF will restore the site to pre-excavation conditions.

Completed Area Name: * BASEWIDE
Completed Sub Area Name: SAR
Completed Document Type: Removal Action Completion Report
Completed Date: 1999-06-09 00:00:00
Comments: RA - SAR: Between July and October 1997 Earth Tech, a remedial contractor hired by the Air Force excavated, treated and disposed of lead contaminated soils down to 2 feet bgs at the base of the SAR and 4 feet into the impact berm. A total of 11,478 tons of soil was excavated and processed at IRP Site 2. Of this amount 210 tons were bullet fragments and small rocks which were classified as RCRA Hazardous waste and were disposed of offsite at Laidlaw Environmental Services landfill in Westmoreland, California. Approximately 2,100 tons were stabilized by adding 15% Portland Cement and processing through a pug mill. None of the stabilized soil met the treatment standard so all of it was sent offsite to Browning Ferris Industries (BFI) landfill in La Paz, Arizona as a California hazardous, non-RCRA waste.

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: P-I1
Completed Document Type: Environmental Baseline Survey
Completed Date: 1999-02-10 00:00:00
Comments: Not reported

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: P-I1
Completed Document Type: Finding of Suitability to Transfer

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number

NORTON AIR FORCE BASE (Continued) **S101272838**

Completed Date: 1999-02-10 00:00:00
Comments: Not reported

Completed Area Name: * BASEWIDE
Completed Sub Area Name: ste10
Completed Document Type: Removal Action Completion Report
Completed Date: 1998-10-29 00:00:00
Comments: Not reported

Completed Area Name: * BASEWIDE
Completed Sub Area Name: AOC70
Completed Document Type: Removal Action Completion Report
Completed Date: 1998-10-29 00:00:00
Comments: RA - AOC70: The Removal Action goal for AOC 70 was to excavate and remove soil containing contaminants of concern: PCBs, benzo(a pyrene, benzo(b)flouranthene, benzo(k)-flouranthene, TPH-diesel and TPH-gasoline at depths up to 10 feet. Approximately 1632 cubic yards of material was excavated, treated and disposed off- site. Confirmation samples were then taken, analyzed and the determination was made that the objectives were met. The area was then backfilled with clean fill and graded. ‘ RA - IRP10: The Removal Action goal for IRP Site 10 was to excavate and remove soil containing contaminants of concern: lead arsenic and chromium at depths up to three feet or one foot below the ash layer, as this was the zone of ecological risk. Approx. 224 cubic yards of non-hazardous material was disposed of at the base landfill, IRP Site 2 and approximately 116 cubic yards of potentially hazardous waste were excavated and disposed off site. Confirmation samples were then taken, analyzed and the determination was made that the objectives were met. The area was then backfilled with clean fill and graded.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Feasibility Study Report
Completed Date: 2003-06-23 00:00:00
Comments: RIFS - BSWD: The BCT has disputed on the implementation of institutional control in 1999. While the resolution state that the AF will issue post-ROD primary documents to specify IC requirements, the revised BSWD FS denied such a commitment and states that ICs are AF’s voluntary acts. The implementation of ICs shouldn’t be overseeing by regulatory agencies. After much discussion EPA, DTSC, RWQCB, and the AF agreed to postpone the dispute of IC implementation until the draft ROD is issued. The regulatiory agencies thus approved the proposed remedies for the sites included in this BSWD FS.

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: E-2A
Completed Document Type: Environmental Baseline Survey
Completed Date: 1998-10-16 00:00:00
Comments: Not reported

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: E-1
Completed Document Type: Environmental Baseline Survey
Completed Date: 1998-10-16 00:00:00
Comments: Not reported

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number

NORTON AIR FORCE BASE (Continued) **S101272838**

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: E-2A
Completed Document Type: Finding of Suitability to Transfer
Completed Date: 1998-10-16 00:00:00
Comments: Not reported

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: E-1
Completed Document Type: Finding of Suitability to Transfer
Completed Date: 1998-10-16 00:00:00
Comments: Not reported

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: STE17
Completed Document Type: *Action Memorandum (if <$1M)
Completed Date: 1998-05-07 00:00:00
Comments: Not reported

Completed Area Name: * BASEWIDE
Completed Sub Area Name: SITE2
Completed Document Type: * Remedial or Removal Design
Completed Date: 1997-12-29 00:00:00
Comments: DES - SITE2: As a result of trenching activities and in accordance with Title 27, California Code of Regulations, the intent of this plan is to upgrade waste management units to closure standards established in regulations. This activity is equivalent to a RAP since it will cost approxi- mately $13,700,000.00. The public and regulatory agencies have had an opportunity to comment and all comments have been adeguately addressed by the PRP. Activities which will take place from February 1998 to December 1998 include: landfill gas extraction and treatment, waste consolidation of approximately 120,000 cubic yards from the northeast, confirmation sampling of consolidated material, a monolithic cover, drainage control, groundwater monitoring and long term operation and maintenance activities.

Completed Area Name: * BASEWIDE
Completed Sub Area Name: SITE2
Completed Document Type: Remedial Action Plan
Completed Date: 1997-12-29 00:00:00
Comments: RAP - SITE2: As a result of trenching activities and in accordance with Title 27, California Code of Regulations, the intent of this plan is to upgrade waste management units to closure standards established in regulations. This activity is equivalent to a RAP since it will cost approxim- ately $ 13,700,000.00. The public and regulatory agencies have had an opportunity to comment and all comments have been adequately addressed by the PRP. Activities which will take place from February 1998 to December 1998 include: landfill gas extraction and treatment, waste consolidation of approximately 120,000 cubic yards from the northeast, confirmation sampling of consolidated material, a monolithic, cover, drainage control, groundwater monitoring and long term operation and maintenance activities.

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: P1-3A
Completed Document Type: Environmental Baseline Survey

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number

NORTON AIR FORCE BASE (Continued) **S101272838**

Completed Date: 1998-04-23 00:00:00
Comments: Not reported

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: P1-3A
Completed Document Type: Finding of Suitability to Transfer
Completed Date: 1998-04-23 00:00:00
Comments: Not reported

Completed Area Name: * BASEWIDE
Completed Sub Area Name: SITE1
Completed Document Type: Removal Action Completion Report
Completed Date: 1997-12-29 00:00:00
Comments: RA - SITE1: A removal action was implemented as a result of an Actrion Memorandum completed in March 1996. the removal action was implemented in two phases between November 1996 and July 1997. A total of approximately 20,900 tons of soils exceeding cleanup levels were excavated and disposed of off- base at an appropriate facility. Approximately 3,800 square feet of material above the cleanup levels were left in place as they were not extractable during the removal effort. The excavation was subsequently back filled and the graded to its original levels. In addition, three new monitoring wells were installed for monitoring purposes. A Long Term Ground- water Monitoring plan will be implemented as a result of leaving matreials in place.

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: ST5SV
Completed Document Type: Removal Action Completion Report
Completed Date: 1999-06-09 00:00:00
Comments: Not reported

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: ST5SO
Completed Document Type: Removal Action Completion Report
Completed Date: 1999-06-09 00:00:00
Comments: Not reported

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: P-E2
Completed Document Type: Finding of Suitability to Transfer
Completed Date: 1997-06-02 00:00:00
Comments: Not reported

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: P-E1
Completed Document Type: Finding of Suitability to Transfer
Completed Date: 1997-06-02 00:00:00
Comments: Not reported

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: P-E2
Completed Document Type: Environmental Baseline Survey
Completed Date: 1997-06-02 00:00:00
Comments: Not reported

Completed Area Name: Sites With No Operable Unit

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number

NORTON AIR FORCE BASE (Continued) **S101272838**

Completed Sub Area Name: P-E1
Completed Document Type: Environmental Baseline Survey
Completed Date: 1997-06-02 00:00:00
Comments: Not reported

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: 6AOCS
Completed Document Type: *Action Memorandum (if <$1M)
Completed Date: 1997-06-25 00:00:00
Comments: Not reported

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: 6AOCS
Completed Document Type: Feasibility Study Report
Completed Date: 1997-06-25 00:00:00
Comments: Not reported

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: AOC73
Completed Document Type: Removal Action Completion Report
Completed Date: 1997-06-23 00:00:00
Comments: Not reported

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: AOC38
Completed Document Type: Removal Action Completion Report
Completed Date: 1997-06-19 00:00:00
Comments: Not reported

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: AOC37
Completed Document Type: Removal Action Completion Report
Completed Date: 1997-06-19 00:00:00
Comments: Not reported

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: SITE8
Completed Document Type: Removal Action Completion Report
Completed Date: 1997-06-19 00:00:00
Comments: RA - SITE 8: The removal actions involved the excavation and disposal of 1,553 cubic yards of contaminated soil either to an offsite disposal facility, if hazardous, or to IRP Site 2. Verification sampling was conducted to document that target cleanup goals (TCGS) identified in the Final Action Memoran- dum were achieved. Site restoration was also performed. Confirmation surface soil samples were collected from the excavations to assess if cleanup goals had been attained, in accordance with the Work Plan. RA - AOC37: The removal actions involved the excavation and disposal of 8,925 cubic yards of contaminated soil either to an offsite disposal facility, if hazardous, or to IRP Site 2. Verification sampling was conducted to document that target cleanup goals (TCGS) identified in the Final Action Memoran- dum were achieved. Site restoration was also performed. Confirmation surface soil samples were collected from the excavations to assess if cleanup goals had been attained, in accordance with the Work Plan. RA - AOC38: The removal actions involved the excavation and disposal of 1,603 cubic yards of contaminated soil either to an offsite disposal facility, if

MAP FINDINGS

Map ID / Direction / Distance / Distance (ft.)	Site	Database(s)	EDR ID Number / EPA ID Number
	NORTON AIR FORCE BASE (Continued)		**S101272838**

hazardous, or to IRP Site 2. Verification sampling was conducted to document that target cleanup goals (TCGS) identified in the Final Action Memoran- dum were achieved. Site restoration was also performed. Confirmation surface soil samples were collected from the excavations to assess if cleanup goals had been attained, in accordance with the Work Plan.

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: STE14
Completed Document Type: *Action Memorandum (if <$1M)
Completed Date: 1996-06-27 00:00:00
Comments: Not reported

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: SIT13
Completed Document Type: Removal Action Completion Report
Completed Date: 1997-06-19 00:00:00
Comments: Not reported

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: P-E4
Completed Document Type: Environmental Baseline Survey
Completed Date: 1997-04-18 00:00:00
Comments: Not reported

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: P-E4
Completed Document Type: Finding of Suitability to Transfer
Completed Date: 1997-04-18 00:00:00
Comments: Not reported

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: P-I1A
Completed Document Type: Finding of Suitability to Transfer
Completed Date: 1997-04-18 00:00:00
Comments: Not reported

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: P-I1A
Completed Document Type: Environmental Baseline Survey
Completed Date: 1997-04-18 00:00:00
Comments: Not reported

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: B1234
Completed Document Type: Finding of Suitability to Transfer
Completed Date: 1997-10-15 00:00:00
Comments: Not reported

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: P-A
Completed Document Type: Finding of Suitability to Transfer
Completed Date: 1997-10-15 00:00:00
Comments: Not reported

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: B1234

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number
	NORTON AIR FORCE BASE (Continued)		**S101272838**

Completed Document Type: Environmental Baseline Survey
Completed Date: 1997-05-12 00:00:00
Comments: Not reported

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: P-A
Completed Document Type: Environmental Baseline Survey
Completed Date: 1997-05-12 00:00:00
Comments: Not reported

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: SIT20
Completed Document Type: Feasibility Study Report
Completed Date: 1996-07-23 00:00:00
Comments: Not reported

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: P-K1
Completed Document Type: Finding of Suitability to Transfer
Completed Date: 1997-02-10 00:00:00
Comments: Not reported

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: NCO-H
Completed Document Type: Finding of Suitability to Transfer
Completed Date: 1997-02-08 00:00:00
Comments: Not reported

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: NCO-H
Completed Document Type: Environmental Baseline Survey
Completed Date: 1996-12-11 00:00:00
Comments: Not reported

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: OFFCR
Completed Document Type: Finding of Suitability to Transfer
Completed Date: 1997-02-08 00:00:00
Comments: Not reported

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: OFFCR
Completed Document Type: Environmental Baseline Survey
Completed Date: 1996-12-11 00:00:00
Comments: Not reported

Completed Area Name: Sites With No Operable Unit
Completed Sub Area Name: P-K4
Completed Document Type: Finding of Suitability to Transfer
Completed Date: 1997-02-10 00:00:00
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: PROJECT WIDE

MAP FINDINGS

Map ID / Direction / Distance / Distance (ft.)	Site	Database(s)	EDR ID Number / EPA ID Number

NORTON AIR FORCE BASE (Continued) **S101272838**

Schedule Sub Area Name: Not reported
Schedule Document Type: Removal Action Completion Report
Schedule Due Date: 2006-07-29 00:00:00
Schedule Revised Date: Not reported
Schedule Area Name: * BASEWIDE
Schedule Sub Area Name: B752
Schedule Document Type: Certification
Schedule Due Date: 2006-12-31 00:00:00
Schedule Revised Date: Not reported
Schedule Area Name: PROJECT WIDE
Schedule Sub Area Name: Not reported
Schedule Document Type: Certification
Schedule Due Date: 2009-03-25 00:00:00
Schedule Revised Date: Not reported
Schedule Area Name: * BASEWIDE
Schedule Sub Area Name: AOC 4
Schedule Document Type: Land Use Restriction
Schedule Due Date: 2009-01-22 00:00:00
Schedule Revised Date: Not reported

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1 **NORTON AFB** **Toxic Pits** **S100676362**
HIST CORTESE **N/A**
SAN BERNARDINO, CA **LUST**

Toxic Pits:
Region: 08
Task #: 68009
Owner: U.S.A.F. NORTON AFB
1/2 Mi Limit: Y
Num. of Pits: 1
Cease Discharge Due: 06/30/88
Cease Discharge Complete: 08/10/88
Closure Due: / /
Closure Completed: / /
Status: CLOSED
Hydro Geological Assessment Report Due: / /
Final Hydro Geological Assessment Review Completed: / /

CORTESE:
Region: CORTESE
Facility County Code: 36
Reg By: LTNKA
Reg Id: 083602593T

LUST REG 8:
Region: 8
County: San Bernardino
Regional Board: Santa Ana Region
Facility Status: Case Closed
Case Number: 083602455T
Local Case Num: Not reported
Case Type: Soil only
Substance: Gasoline
Qty Leaked: Not reported
Abate Method: Not reported
Cross Street: DEL ROSA DRIVE (6TH ST.)
Enf Type: Not reported

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number

NORTON AFB (Continued) **S100676362**

Funding:	Not reported
How Discovered:	Tank Closure
How Stopped:	Not reported
Leak Cause:	UNK
Leak Source:	Tank
Global ID:	T0607100327
How Stopped Date:	4/8/1994
Enter Date:	6/16/1994
Review Date:	Not reported
Prelim Assess:	Not reported
Discover Date:	4/8/1994
Enforcement Date:	Not reported
Close Date:	12/26/1996
Workplan:	Not reported
Pollution Char:	Not reported
Remed Plan:	2/27/1995
Remed Action:	Not reported
Monitoring:	Not reported
Enter Date:	6/16/1994
GW Qualifies:	Not reported
Soil Qualifies:	Not reported
Operator:	Not reported
Facility Contact:	Not reported
Interim:	Not reported
Oversite Program:	DOD
Latitude:	34.1320986
Longitude:	-117.2952347
MTBE Date:	Not reported
Max MTBE GW:	Not reported
MTBE Concentration:	0
Max MTBE Soil:	Not reported
MTBE Fuel:	1
MTBE Tested:	Site NOT Tested for MTBE.Includes Unknown and Not Analyzed.
MTBE Class:	*
Staff:	JCB
Staff Initials:	CR2
Lead Agency:	Regional Board
Local Agency:	36000L
Hydr Basin #:	UPPER SANTA ANA VALL
Beneficial:	Not reported
Priority:	Not reported
Cleanup Fund Id:	Not reported
Work Suspended:	Not reported
Summary:	FIVE 10,000 GAL UNLEADED GASOLINE ONE 600 GAL OIL/WATER SEPARATOR, AND ONE 550 GAL WASTE OIL (ALL INSTALLED 1974, REMOVED 4/1994); FORMERLY A CIVILIAN SERVICE STATION (CONSTRUCTED 1970s). 7 FUELING ISLANDS, VEHICLE SERV. AREA, WASH'G SLAB

MAP FINDINGS

Map ID / Direction / Distance / Distance (ft.)	Site	Database(s)	EDR ID Number / EPA ID Number
2	**NORTH SAN BERNARDINO AREA** **BUNKER HILL GROUND WATER BASIN** **SAN BERNARDINO, CA 92401**	**HIST Cal-Sites** **CA BOND EXP. PLAN** **Cortese** **HIST CORTESE** **ENVIROSTOR**	**S100833383** **N/A**

HISTORICAL CAL-SITES:

Facility ID:	36990002
Region:	4
Region Name:	CYPRESS
Branch:	SB
Branch Name:	SO CAL - CYPRESS
File Name:	Not reported
State Senate District:	04221996
Status:	AWP - ANNUAL WORKPLAN (AWP) - ACTIVE SITE
Status Name:	ANNUAL WORKPLAN - ACTIVE SITE
Lead Agency:	EPA
Lead Agency:	ENVIRONMENTAL PROTECTION AGENCY
Facility Type:	NPJF
Type Name:	NPL SITE, JOINT STATE/FEDERAL-FUNDED
NPL:	Listed
SIC Code:	99
SIC Name:	NONCLASSIFIABLE ESTABLISHMENTS
Access:	Not reported
Cortese:	Not reported
Hazardous Ranking Score:	Not reported
Date Site Hazard Ranked:	Not reported
Groundwater Contamination:	Confirmed
Staff Member Responsible for Site:	YAREF
Supervisor Responsible for Site:	Not reported
Region Water Control Board:	Not reported
Region Water Control Board Name:	Not reported
Lat/Long Direction:	Not reported
Lat/Long (dms):	0 0 0 / 0 0 0
Lat/long Method:	Not reported
Lat/Long Description:	Not reported
State Assembly District Code:	63
State Senate District Code:	31
Facility ID:	36990002
Activity:	ORDER
Activity Name:	I/SE, IORSE, FFA, FFSRA, VCA, EA
AWP Code:	ISE
Proposed Budget:	0
AWP Completion Date:	Not reported
Revised Due Date:	Not reported
Comments Date:	11301986
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	AWP
Definition of Status:	ANNUAL WORKPLAN - ACTIVE SITE
Liquids Removed (Gals):	0
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	Not reported
Activity Comments:	Not reported
For Commercial Reuse:	0

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number
	NORTH SAN BERNARDINO AREA (Continued)		**S100833383**

For Industrial Reuse:	0
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	36990002
Activity:	PPP
Activity Name:	PUBLIC PARTICIPATION PLAN
AWP Code:	Not reported
Proposed Budget:	0
AWP Completion Date:	Not reported
Revised Due Date:	Not reported
Comments Date:	11301987
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	AWP
Definition of Status:	ANNUAL WORKPLAN - ACTIVE SITE
Liquids Removed (Gals):	0
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	Not reported
Activity Comments:	Not reported
For Commercial Reuse:	0
For Industrial Reuse:	0
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	36990002
Activity:	RA
Activity Name:	REMOVAL ACTION
AWP Code:	NWMRK
Proposed Budget:	0
AWP Completion Date:	Not reported
Revised Due Date:	Not reported
Comments Date:	06301988
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	AWP
Definition of Status:	ANNUAL WORKPLAN - ACTIVE SITE
Liquids Removed (Gals):	0
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	Not reported
Activity Comments:	Not reported
For Commercial Reuse:	0
For Industrial Reuse:	0
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	36990002
Activity:	RIFS
Activity Name:	REMEDIAL INVESTIGATION / FEASIBILITY STUDY
AWP Code:	MO-U
Proposed Budget:	0
AWP Completion Date:	Not reported

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number
	NORTH SAN BERNARDINO AREA (Continued)		**S100833383**

Revised Due Date:	Not reported
Comments Date:	03121993
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	AWP
Definition of Status:	ANNUAL WORKPLAN - ACTIVE SITE
Liquids Removed (Gals):	0
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	Not reported
Activity Comments:	Not reported
For Commercial Reuse:	0
For Industrial Reuse:	0
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	36990002
Activity:	RIFS
Activity Name:	REMEDIAL INVESTIGATION / FEASIBILITY STUDY
AWP Code:	OU
Proposed Budget:	0
AWP Completion Date:	Not reported
Revised Due Date:	Not reported
Comments Date:	03121993
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	AWP
Definition of Status:	ANNUAL WORKPLAN - ACTIVE SITE
Liquids Removed (Gals):	0
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	Not reported
Activity Comments:	Not reported
For Commercial Reuse:	0
For Industrial Reuse:	0
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	36990002
Activity:	RAP
Activity Name:	REMEDIAL ACTION PLAN / RECORD OF DECISION
AWP Code:	N-OU
Proposed Budget:	0
AWP Completion Date:	Not reported
Revised Due Date:	Not reported
Comments Date:	08041993
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	AWP
Definition of Status:	ANNUAL WORKPLAN - ACTIVE SITE
Liquids Removed (Gals):	0
Liquids Treated (Gals):	0

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number
	NORTH SAN BERNARDINO AREA (Continued)		**S100833383**

Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	Not reported
Activity Comments:	Not reported
For Commercial Reuse:	0
For Industrial Reuse:	0
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	36990002
Activity:	RIFS
Activity Name:	REMEDIAL INVESTIGATION / FEASIBILITY STUDY
AWP Code:	M-OU
Proposed Budget:	0
AWP Completion Date:	Not reported
Revised Due Date:	Not reported
Comments Date:	12021994
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	AWP
Definition of Status:	ANNUAL WORKPLAN - ACTIVE SITE
Liquids Removed (Gals):	0
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	Not reported
Activity Comments:	Not reported
For Commercial Reuse:	0
For Industrial Reuse:	0
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	36990002
Activity:	RAP
Activity Name:	REMEDIAL ACTION PLAN / RECORD OF DECISION
AWP Code:	M-OU
Proposed Budget:	0
AWP Completion Date:	Not reported
Revised Due Date:	Not reported
Comments Date:	03211995
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	AWP
Definition of Status:	ANNUAL WORKPLAN - ACTIVE SITE
Liquids Removed (Gals):	0
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	Not reported
Activity Comments:	Not reported
For Commercial Reuse:	0
For Industrial Reuse:	0
For Residential Reuse:	0
Unknown Type:	0

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number
	NORTH SAN BERNARDINO AREA (Continued)		**S100833383**

Facility ID:	36990002
Activity:	DES
Activity Name:	DESIGN
AWP Code:	M-OU
Proposed Budget:	0
AWP Completion Date:	Not reported
Revised Due Date:	Not reported
Comments Date:	09302003
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	AWP
Definition of Status:	ANNUAL WORKPLAN - ACTIVE SITE
Liquids Removed (Gals):	0
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	Not reported
Activity Comments:	Not reported
For Commercial Reuse:	0
For Industrial Reuse:	0
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	36990002
Activity:	RIFS
Activity Name:	REMEDIAL INVESTIGATION / FEASIBILITY STUDY
AWP Code:	S-OU
Proposed Budget:	0
AWP Completion Date:	06302005
Revised Due Date:	Not reported
Comments Date:	Not reported
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	AWP
Definition of Status:	ANNUAL WORKPLAN - ACTIVE SITE
Liquids Removed (Gals):	0
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	Not reported
Activity Comments:	Not reported
For Commercial Reuse:	0
For Industrial Reuse:	0
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	36990002
Activity:	DES
Activity Name:	DESIGN
AWP Code:	N-OU
Proposed Budget:	0
AWP Completion Date:	Not reported
Revised Due Date:	Not reported
Comments Date:	06301998
Est Person-Yrs to complete:	0

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number
	NORTH SAN BERNARDINO AREA (Continued)		**S100833383**

Estimated Size:	X
Request to Delete Activity:	Not reported
Activity Status:	AWP
Definition of Status:	ANNUAL WORKPLAN - ACTIVE SITE
Liquids Removed (Gals):	0
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	Not reported
Activity Comments:	Not reported
For Commercial Reuse:	0
For Industrial Reuse:	0
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	36990002
Activity:	RMDL
Activity Name:	REMEDIAL ACTION (RAP REQUIRED)
AWP Code:	M-OU
Proposed Budget:	0
AWP Completion Date:	12312005
Revised Due Date:	Not reported
Comments Date:	Not reported
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	AWP
Definition of Status:	ANNUAL WORKPLAN - ACTIVE SITE
Liquids Removed (Gals):	0
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	Not reported
Activity Comments:	Not reported
For Commercial Reuse:	0
For Industrial Reuse:	0
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	36990002
Activity:	RMDL
Activity Name:	REMEDIAL ACTION (RAP REQUIRED)
AWP Code:	N-OU
Proposed Budget:	0
AWP Completion Date:	Not reported
Revised Due Date:	Not reported
Comments Date:	10281998
Est Person-Yrs to complete:	0
Estimated Size:	X
Request to Delete Activity:	Not reported
Activity Status:	AWP
Definition of Status:	ANNUAL WORKPLAN - ACTIVE SITE
Liquids Removed (Gals):	0
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number
	NORTH SAN BERNARDINO AREA (Continued)		**S100833383**

Removal Action Certification:	N
Activity Comments:	Not reported
For Commercial Reuse:	0
For Industrial Reuse:	0
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	36990002
Activity:	OM
Activity Name:	OPERATION & MAINTENANCE
AWP Code:	Not reported
Proposed Budget:	0
AWP Completion Date:	12312049
Revised Due Date:	Not reported
Comments Date:	Not reported
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	AWP
Definition of Status:	ANNUAL WORKPLAN - ACTIVE SITE
Liquids Removed (Gals):	0
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	Not reported
Activity Comments:	Not reported
For Commercial Reuse:	0
For Industrial Reuse:	0
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	36990002
Activity:	CERT
Activity Name:	CERTIFICATION
AWP Code:	Not reported
Proposed Budget:	0
AWP Completion Date:	06302008
Revised Due Date:	Not reported
Comments Date:	Not reported
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	AWP
Definition of Status:	ANNUAL WORKPLAN - ACTIVE SITE
Liquids Removed (Gals):	0
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	Not reported
Activity Comments:	Not reported
For Commercial Reuse:	0
For Industrial Reuse:	0
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	36990002
Activity:	ROD
Activity Name:	RECORD OF DECISION

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number
	NORTH SAN BERNARDINO AREA (Continued)		**S100833383**

AWP Code:	S-OU
Proposed Budget:	0
AWP Completion Date:	12312005
Revised Due Date:	Not reported
Comments Date:	Not reported
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	AWP
Definition of Status:	ANNUAL WORKPLAN - ACTIVE SITE
Liquids Removed (Gals):	0
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	Not reported
Activity Comments:	Not reported
For Commercial Reuse:	0
For Industrial Reuse:	0
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	36990002
Activity:	RMDL
Activity Name:	REMEDIAL ACTION (RAP REQUIRED)
AWP Code:	S-OU
Proposed Budget:	0
AWP Completion Date:	09302006
Revised Due Date:	Not reported
Comments Date:	Not reported
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	AWP
Definition of Status:	ANNUAL WORKPLAN - ACTIVE SITE
Liquids Removed (Gals):	0
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	Not reported
Activity Comments:	Not reported
For Commercial Reuse:	0
For Industrial Reuse:	0
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	36990002
Activity:	ORDER
Activity Name:	I/SE, IORSE, FFA, FFSRA, VCA, EA
AWP Code:	CD
Proposed Budget:	0
AWP Completion Date:	06302005
Revised Due Date:	Not reported
Comments Date:	03232005
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	AWP

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number

NORTH SAN BERNARDINO AREA (Continued) **S100833383**

Definition of Status:	ANNUAL WORKPLAN - ACTIVE SITE
Liquids Removed (Gals):	0
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	Not reported
Activity Comments:	Not reported
For Commercial Reuse:	0
For Industrial Reuse:	0
For Residential Reuse:	0
Unknown Type:	0
Alternate Address:	MUSCOY AREA N. OF SAN BERNARDINO
Alternate City,St,Zip:	SAN BERNARDINO, CA 92401
Alternate Address:	BUNKER HILL GROUND WATER BASIN
Alternate City,St,Zip:	SAN BERNARDINO, CA 92408

Background Info:

This site is part of the North San Bernardino Area groundwater site. It encompasses four municipal wells known as the Newmark Well Field. The site was listed on the NPL in March, 1989.
The site consists of approximately 700 square feet in the Bunker Hill Groundwater Basin. The San Bernardino Municipal Water Department was forced to close the four wells in the early 1980s, when they were found to be contaminated with high levels of halogenated organic chemicals including tetrachloroethylene (PCE) and trichloroethylene (TCE).
There are levels of TCE and PCE in the four domestic water wells above the State health based action levels for drinking water at this site. TCE was a degreaser used in large quantities for commercial, industrial, and aerospace applications in the area. PCE is a similar degreaser and is commonly used as a cleaning compound in the dry cleaning industry.
Groundwater in the well field is of high natural quality. Four domestic supply wells have been closed. There is evidence that suggests that the contamination is moving in the direction of other well fields serving the majority of the population of the cities of San Bernardino and Riverside. The population served by wells potentially affected by the contamination is at least 200,000. In November, 1986, DHS found the Bunker Hill Basin, including the Newmark Well Field, to constitute an imminent and substantial endangerment to public health and the enviroment. However, there is no known current exposure above the drinking water standards.
In October, 1986, DHS entered into a contract with the City of San Bernardino to conduct initial remedial actions. These actions included design, construction and installation of airstripping towers (using carbon vapor units to control exhaust emissions) for the Newmark well field. These actions were part of work conducted for the State's North San Bernardino Superfund Site. The treatment system has been in operation since June, 1988, and it replaced the total capacity of the four municipal wells. The system can treat up to 8.6 million gallons per day.
DTSC and U.S. EPA entered into a Superfund agreement to clean up the Newmark Operable Unit.
The Newmark OU groundwater treatment system is operational. This treatment system integrates into and replaces the State funded treatment system installed in 1988. Groundwater extraction wells have been installed at the leading edge of the

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number
	NORTH SAN BERNARDINO AREA (Continued)		**S100833383**

Newmark contamination plume. Air stripping towers at the Waterman and at the 48th Street treatment plants have been replaced with Granular Activated Carbon (GAC) treatment units. Total groundwater treatment capacity for the Newmark OU is 41.6 million gallons per day.
Not reported
Additional carbon units will be added to the Newmark OU Treatment system to handle additional contaminated water from the Muscoy OU plume. Extraction wells and a pipeline are currently in the design phase.

Comments Date: 01311989
Comments: This is the date the site was first listed pursuant to
Comments Date: 01311989
Comments: section 25356.
Comments Date: 03211995
Comments: DTSC reviewed the draft ROD for the Newmark Groundwater Muscoy
Comments Date: 03211995
Comments: Plume OU and concurs with US EPA's selected remedy of extraction
Comments Date: 03211995
Comments: and treatment of contaminated using granular activated carbon
Comments Date: 03211995
Comments: carbon treatment technology and distribution of the treated
Comments Date: 03211995
Comments: water to a public water supply agency (and/or reinjection into
Comments Date: 03211995
Comments: the acquifer).
Comments Date: 03232005
Comments: A Consent Decree for the Newmark and Muscoy operable units was
Comments Date: 03232005
Comments: signed by a judge. The City of San Bernardino will perform the
Comments Date: 03232005
Comments: work described in the Statement of Work.
Comments Date: 06202000
Comments: Workplan for the Initial Site Investigation, San Bernardino
Comments Date: 06202000
Comments: Engineer Depot-Camp Ono Initial WWII Operational Areas Report,
Comments Date: 06202000
Comments: and Workplan for Proposed Groundwater Monitoring Wells for the
Comments Date: 06202000
Comments: Muscoy Investigation Area submitted. Soil Gas Survey started
Comments Date: 06202000
Comments: at the Source Operable Unit in March 2000. Public meeting held
Comments Date: 06202000
Comments: in San Bernardino to address community concerns on Muscoy Well
Comments Date: 06202000
Comments: locations in June 2000. Settlement conference held in San
Comments Date: 06202000
Comments: Bernardino with City, County, USEPA, Army and Department of
Comments Date: 06202000
Comments: Justice representatives to negotiate reimbursement of past costs
Comments Date: 06202000
Comments: on June 15, 2000.
Comments Date: 06301988
Comments: Removal Action (NWMRK): Air Stripping Towers at Newmark came
Comments Date: 06301988
Comments: on line.
Comments Date: 06301998

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number

NORTH SAN BERNARDINO AREA (Continued) **S100833383**

Comments: Completed Design for treatment of cholorinated VOC's for the
Comments Date: 06301998
Comments: Newmark Operable Unit located in the Bunker Hill Groundwater
Comments Date: 06301998
Comments: Basin. Two treatment plants will treat 17 million gallons of
Comments Date: 06301998
Comments: groundwater per day.
Comments Date: 07202001
Comments: Draft final Soil Gas Survey submitted to the Department for
Comments Date: 07202001
Comments: the Source OU. Comments sent to Army Corps of Engineers.
Comments Date: 07251991
Comments: Groundwater contaminated with PCE and TCE.
Comments Date: 08041993
Comments: ROD for the Newmark Operable Unit completed.
Comments Date: 08301990
Comments: DTSC and the City of San Bernardino entered into an agreement on
Comments Date: 08301990
Comments: 10/31/1986, amended on 04/22/1988, to construct three treatment
Comments Date: 08301990
Comments: systems: Waterman, Newmark and 17th & Sierra. The completion
Comments Date: 08301990
Comments: date of the removal action is 08/30/1990 when all three systems
Comments Date: 08301990
Comments: were online. The Waterman and 17th & Sierra systems are
Comments Date: 08301990
Comments: described in the North San Bernardino Site (ID# 36990001).
Comments Date: 09131995
Comments: DTSC entered into an agreement with U.S. EPA to clean up the
Comments Date: 10031996
Comments: On 08/26/1996 DTSC signed a State-Superfund contract with
Comments Date: 10031996
Comments: U.S. EPA for the Muscoy OU of the Newmark NPL site.
Comments Date: 10281998
Comments: Start-up and operation of a 17 milion gallon per day groundwater
Comments Date: 10281998
Comments: treatment remediation system for the Newmark Operable Unit.
Comments Date: 10301997
Comments: DTSC reviewed and commented on the 100% design submittal for
Comments Date: 10301997
Comments: the Newmark OU.
Comments Date: 09131995
Comments: Newmark Operable Unit.
Comments Date: 09302003
Comments: The remedial design for the Muscoy Operable Unit was completed.
ID Name: CALSTARS CODE
ID Value: 400259-66
ID Name: BEP DATABASE PCODE
ID Value: P43058
Alternate Name: NEWMARK GROUNDWATER CONTAMINATIONNEWMARK WELLFIELD
Special Programs Code: MSCA
Special Programs Name: MULTI-SITE COOPERATIVE AGREEMENT

CA BOND EXP. PLAN:
Reponsible Party: DETAILED SITE EXPENDITURE PLAN
Project Revenue Source Company: Not reported
Project Revenue Source Addr: Not reported

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number

NORTH SAN BERNARDINO AREA (Continued) **S100833383**

Project Revenue Source City,St,Zip: Not reported

Project Revenue Source Desc: Currently there are no identifiable responsible parties. Therefore, Bond funds will be used to investigate and remediate the site. If during the investigation RPs are identified, DHS will pursue appropriate cost recovery actions. In May, 1987, DHS reevaluated the MITRE model hazard ranking score for the site and based on the revised score submitted the package to EPA for possible inclusion of the site on the NPL. EPA has listed one of the well fields (Newmark) in the North San Bernardino Area as a potential NPL site. For more information on the Newmark site, refer to the NPL listings in this Plan.

Site Description: This site is an area of ground water contamination and consists of approximately 15 square miles in the Bunker Hill Ground Water Basin in San Bernardino County. The site includes areas within the following zip codes: 92401, 92404, 92405, 92407, and 92411. In the past four years, the San Bernardino Municipal Water District has removed fourteen domestic supply wells from production because of trichloroethylene (TCE) and tetrachloroethene (PCE) contamination.

Hazardous Waste Desc: There are levels of TCE and PCE in domestic water wells above the State health-based action level for drinking water at this site. TCE was a degreaser used in large quantities for commercial, industrial and aerospace applications in the area. PCE isa similar degreaser and dry cleaning compound that was also commonly used by local businesses.

Threat To Public Health & Env: Ground water in the Bunker Hill Basin is of high natural quality. Fourteen domestic supply wells have been closed. There is evidence that suggests that the contamination is moving in the direction of well fields serving the majority of the population of the Cities of San Bernardino and Riverside. The population served by wells potentially affected by the contamination is at least 200,000. In November, 1986, DHS found the area to constitute an imminent and substantial endangerment to public health and the environment. There is no known current exposure above the drinking water standards.

Site Activity Status: An interagency group consisting of the City of San Bernardino Municipal Water District, the RWQCB (the Santa Ana region), the San Bernardino County Department of Health Services, and DHS (Public Water Supply Branch and TSCD) are coordinating an effort for characterizing and mitigating the contamination. Field site characterization activities were initiated in November, 1987. In October, 1986, DHS entered into a contract with the City of San Bernardino for initial remedial measures. These measures included the design, construction and installation of airstripping towers (with carbon vapor units to control exhaust emissions) in two locations and a carbon filtration water treatment system in one location. The treatment system will replace thefull capacity of the City's water supply. The first airstripping tower system has been in operation since June, 1988. Construction of the second set of towers was started shortly thereafter.

Cortese:

Region:	CORTESE
Envirostor Id:	36990002
Site/Facility Type:	FEDERAL SUPERFUND - LISTED
Cleanup Status:	ACTIVE
Status Date:	4/22/1996
Site Code:	400259
Latitude:	34.182099999999998
Longitude:	-117.3454

CORTESE:

Region:	CORTESE
Facility County Code:	36

MAP FINDINGS

Map ID / Direction / Distance / Distance (ft.)	Site	Database(s)	EDR ID Number / EPA ID Number
	NORTH SAN BERNARDINO AREA (Continued)		**S100833383**

Reg By: CALSI
Reg Id: 36950002

Region: CORTESE
Facility County Code: 36
Reg By: CALSI
Reg Id: 36990001

Region: CORTESE
Facility County Code: 36
Reg By: CALSI
Reg Id: 36990002

ENVIROSTOR:
Site Type: Federal Superfund
Site Type Detailed: State Response or NPL
Acres: 6000
NPL: YES
Regulatory Agencies: US EPA
Lead Agency: US EPA
Program Manager: STEPHEN NIOU
Supervisor: Robert Senga
Division Branch: Cleanup Cypress
Facility ID: 36990002
Site Code: 400259
Assembly: 63
Senate: 31
Special Program: EPA - Multi-Site Cooperative Agreement
Status: Active
Status Date: 4/22/1996
Restricted Use: NO
Site Mgmt. Req.: NONE SPECIFIED
Funding: Responsible Party
Latitude: 34.182099999999998
Longitude: -117.3454
APN: NONE SPECIFIED
Past Use: LAUNDRY SERVICES, PRISON, RESEARCH - WEAPONS
Potential COC: 30022, 30027
Confirmed COC: Not reported
Potential Description: AQUI
Alias Name: NEWMARK WELLFIELD
Alias Type: Alternate Name
Alias Name: 110009268283
Alias Type: EPA (FRS #)
Alias Name: P43058
Alias Type: PCode
Alias Name: 400259
Alias Type: Project Code (Site Code)
Alias Name: 36990002
Alias Type: Envirostor ID Number

Completed Info:
Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: * Cost Recovery Settlements/Decrees
Completed Date: 2004-08-05 00:00:00
Comments: Not reported

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number

NORTH SAN BERNARDINO AREA (Continued) **S100833383**

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Site Inspections/Visit (Non LUR)
Completed Date: 2010-03-24 00:00:00
Comments: Not reported

Completed Area Name: Newmark
Completed Sub Area Name: Not reported
Completed Document Type: Operations and Maintenance Plan
Completed Date: 2009-12-29 00:00:00
Comments: Workplan for the Initial Site Investigation, San Bernardino Engineer Depot-Camp Ono Initial WWII Operational Areas Report, and Workplan for Proposed Groundwater Monitoring Wells for the Muscoy Investigation Area submitted. Soil Gas Survey started at the Source Operable Unit in March 2000. Public meeting held in San Bernardino to address community concerns on Muscoy Well locations in June 2000. Settlement conference held in San Bernardino with City, County, USEPA, Army and Department of Justice representatives to negotiate reimbursement of past costs on June 15, 2000.

Completed Area Name: Newmark
Completed Sub Area Name: Not reported
Completed Document Type: Remedial Action Completion Report
Completed Date: 2004-09-25 00:00:00
Comments: Start-up and operation of a 17 milion gallon per day groundwater treatment remediation system for the Newmark Operable Unit.

Completed Area Name: Newmark
Completed Sub Area Name: Not reported
Completed Document Type: Design/Implementation Workplan
Completed Date: 2002-09-30 00:00:00
Comments: The remedial design for the Muscoy Operable Unit was completed.

Completed Area Name: Muscoy
Completed Sub Area Name: Not reported
Completed Document Type: Record of Decision - Amendment
Completed Date: 1995-03-21 00:00:00
Comments: DTSC reviewed the draft ROD for the Newmark Groundwater Muscoy Plume OU and concurs with US EPA's selected remedy of extraction and treatment of contaminated using granular activated carbon carbon treatment technology and distribution of the treated water to a public water supply agency (and/or reinjection into the acquifer).

Completed Area Name: Muscoy
Completed Sub Area Name: Not reported
Completed Document Type: Remedial Investigation / Feasibility Study
Completed Date: 1994-12-02 00:00:00
Comments: Not reported

Completed Area Name: Newmark
Completed Sub Area Name: Not reported
Completed Document Type: Record of Decision - Amendment
Completed Date: 1993-08-04 00:00:00
Comments: ROD for the Newmark Operable Unit completed.

Completed Area Name: Newmark
Completed Sub Area Name: Not reported

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number

NORTH SAN BERNARDINO AREA (Continued) **S100833383**

Completed Document Type: Remedial Investigation / Feasibility Study
Completed Date: 1993-03-12 00:00:00
Comments: Not reported

Completed Area Name: Newmark
Completed Sub Area Name: Not reported
Completed Document Type: Remedial Investigation / Feasibility Study
Completed Date: 1993-03-12 00:00:00
Comments: Not reported

Completed Area Name: Muscoy
Completed Sub Area Name: Not reported
Completed Document Type: Other Report
Completed Date: 2007-10-11 00:00:00
Comments: Not reported

Completed Area Name: Muscoy
Completed Sub Area Name: Not reported
Completed Document Type: Remedy Constructed: Operating Properly & Successfully
Completed Date: 2007-10-12 00:00:00
Comments: This report was approved by the DTSC.

Completed Area Name: Muscoy
Completed Sub Area Name: Not reported
Completed Document Type: Other Report
Completed Date: 2007-10-12 00:00:00
Comments: Final report was approved by DTSC.

Completed Area Name: Muscoy
Completed Sub Area Name: Not reported
Completed Document Type: Operations and Maintenance Report
Completed Date: 2007-10-12 00:00:00
Comments: The Operational and Funtional Determination is completed and approved by DTSC.

Completed Area Name: Muscoy
Completed Sub Area Name: Not reported
Completed Document Type: Other Report
Completed Date: 2007-06-21 00:00:00
Comments: This is a construction report and was reviewed. No comments are needed.

Completed Area Name: Muscoy
Completed Sub Area Name: Not reported
Completed Document Type: Operations and Maintenance Plan
Completed Date: 2009-12-29 00:00:00
Comments: OSAP acepted

Completed Area Name: Muscoy
Completed Sub Area Name: Not reported
Completed Document Type: Operations and Maintenance Plan
Completed Date: 2009-12-29 00:00:00
Comments: QAPP accepted

Completed Area Name: Muscoy
Completed Sub Area Name: Not reported
Completed Document Type: Operations and Maintenance Plan

MAP FINDINGS

Map ID / Direction / Distance / Distance (ft.)	Site	Database(s)	EDR ID Number / EPA ID Number

NORTH SAN BERNARDINO AREA (Continued) **S100833383**

Completed Date: 2008-09-24 00:00:00
Comments: DTSC concurs with the baseline mitigation plan

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Operations and Maintenance Report
Completed Date: 2007-10-31 00:00:00
Comments: DTSC has reviewed this document and has no comments.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: 5 Year Review Reports
Completed Date: 2008-10-30 00:00:00
Comments: DTSC concurs with the findings in this 5 year review report

Completed Area Name: Muscoy
Completed Sub Area Name: Not reported
Completed Document Type: Correspondence - Received
Completed Date: 2009-09-30 00:00:00
Comments: For Muscoy interim remedy.

Completed Area Name: Newmark
Completed Sub Area Name: Not reported
Completed Document Type: Correspondence - Received
Completed Date: 2010-08-02 00:00:00
Comments: For Newmark Operable Unit.

Future Area Name: Not reported
Future Sub Area Name: Not reported
Future Document Type: Not reported
Future Due Date: Not reported
Schedule Area Name: Source
Schedule Sub Area Name: Not reported
Schedule Document Type: Remedial Investigation Report
Schedule Due Date: 2011-01-30 00:00:00
Schedule Revised Date: Not reported
Schedule Area Name: Newmark
Schedule Sub Area Name: Not reported
Schedule Document Type: Certification
Schedule Due Date: 2008-05-30 00:00:00
Schedule Revised Date: Not reported
Schedule Area Name: PROJECT WIDE
Schedule Sub Area Name: Not reported
Schedule Document Type: Land Use Restriction - Amendment
Schedule Due Date: 2010-09-18 00:00:00
Schedule Revised Date: Not reported

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3 **UNOCAL 76** **CA FID UST** **S101591283**
2378 N STERLING RD **SWEEPS UST** **N/A**
SAN BERNARDINO, CA 92404

CA FID UST:
Facility ID: 36003590
Regulated By: UTNKA
Regulated ID: 00055222
Cortese Code: Not reported
SIC Code: Not reported
Facility Phone: Not reported

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number

UNOCAL 76 (Continued) **S101591283**

Mail To:	Not reported
Mailing Address:	PO BOX 7600
Mailing Address 2:	Not reported
Mailing City,St,Zip:	SAN BERNARDINO 92404
Contact:	Not reported
Contact Phone:	Not reported
DUNs Number:	Not reported
NPDES Number:	Not reported
EPA ID:	Not reported
Comments:	Not reported
Status:	Active

SWEEPS UST:

Status:	A
Comp Number:	55222
Number:	9
Board Of Equalization:	44-001057
Ref Date:	07-28-92
Act Date:	07-28-92
Created Date:	02-29-88
Tank Status:	A
Owner Tank Id:	1
Swrcb Tank Id:	36-000-055222-000001
Actv Date:	08-26-88
Capacity:	12000
Tank Use:	M.V. FUEL
Stg:	P
Content:	REG UNLEADED
Number Of Tanks:	4

Status:	A
Comp Number:	55222
Number:	9
Board Of Equalization:	44-001057
Ref Date:	07-28-92
Act Date:	07-28-92
Created Date:	02-29-88
Tank Status:	A
Owner Tank Id:	2
Swrcb Tank Id:	36-000-055222-000002
Actv Date:	08-26-88
Capacity:	12000
Tank Use:	M.V. FUEL
Stg:	P
Content:	DIESEL
Number Of Tanks:	Not reported

Status:	A
Comp Number:	55222
Number:	9
Board Of Equalization:	44-001057
Ref Date:	07-28-92
Act Date:	07-28-92
Created Date:	02-29-88
Tank Status:	A
Owner Tank Id:	3
Swrcb Tank Id:	36-000-055222-000003

MAP FINDINGS

Map ID / Direction / Distance / Distance (ft.)	Site	Database(s)	EDR ID Number / EPA ID Number

UNOCAL 76 (Continued) **S101591283**

Actv Date: 08-26-88
Capacity: 12000
Tank Use: M.V. FUEL
Stg: P
Content: REG UNLEADED
Number Of Tanks: Not reported

Status: A
Comp Number: 55222
Number: 9
Board Of Equalization: 44-001057
Ref Date: 07-28-92
Act Date: 07-28-92
Created Date: 02-29-88
Tank Status: A
Owner Tank Id: 4
Swrcb Tank Id: 36-000-055222-000004
Actv Date: 08-26-88
Capacity: 12000
Tank Use: M.V. FUEL
Stg: P
Content: REG UNLEADED
Number Of Tanks: Not reported

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4 **CALIF STEEL SVCS** **San Bern. Co. Permit** **S104764570**
1212 S MT VIEW AVE **N/A**
SAN BERNARDINO, CA 92408

San Bern. Co. Permit:
Region: SAN BERNARDINO
Facility ID: FA0001713
Owner: TEHRAN SANATT INC
Permit Number: PT0009274
Permit Category: HAZMAT HANDLER 11-25 EMPLOYEES (W/GEN PRMT)
Facility Status: ACTIVE
Expiration Date: 2011-07-31 00:00:00

Region: SAN BERNARDINO
Facility ID: FA0001713
Owner: TEHRAN SANATT INC
Permit Number: PT0009275
Permit Category: SPECIAL GENERATOR(B)
Facility Status: ACTIVE
Expiration Date: 2011-07-31 00:00:00

---

4 **MONIER LIFETILE LLC** **RCRA-SQG** **1000283319**
1990 EAST RIVERVIEW DRIVE **FINDS** **CAD982004913**
SAN BERNARDINO, CA 92408 **WDS**
San Bern. Co. Permit
HAZNET
EMI

RCRA-SQG:
Date form received by agency: 02/16/1993
Facility name: MONIER ROOF TILE
Facility address: 1990 E RIVERVIEW DR

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number
	MONIER LIFETILE LLC (Continued)		**1000283319**

SAN BERNARDINO, CA 92408
EPA ID: CAD982004913
Contact: MIKE YOUNG
Contact address: 1990 E RIVERVIEW DR
SAN BERNARDINO, CA 92408
Contact country: US
Contact telephone: (909) 796-8324
Contact email: Not reported
EPA Region: 09
Classification: Small Small Quantity Generator
Description: Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:
Owner/operator name: DICK LYONS
Owner/operator address: 1990 E RIVERVIEW
SAN BERNARDINO, CA 92408
Owner/operator country: Not reported
Owner/operator telephone: (909) 796-8324
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Owner/operator name: NOT REQUIRED
Owner/operator address: NOT REQUIRED
NOT REQUIRED, ME 99999
Owner/operator country: Not reported
Owner/operator telephone: (415) 555-1212
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): Unknown
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No
Off-site waste receiver: Verified to be non-commercial

Violation Status: No violations found

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number

MONIER LIFETILE LLC (Continued) **1000283319**

FINDS:

Registry ID: 110002773721

Environmental Interest/Information System

The NEI (National Emissions Inventory) database contains information on stationary and mobile sources that emit criteria air pollutants and their precursors, as well as hazardous air pollutants (HAPs).

US EPA TRIS (Toxics Release Inventory System) contains information from facilities on the amounts of over 300 listed toxic chemicals that these facilities release directly to air, water, land, or that are transported off-site.

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

CA WDS:

Facility ID:	Santa Ana River 36I000380
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:	CAS000001 The 1st 2 characters designate the state. The remaining 7 are assigned by the Regional Board
Subregion:	8
Facility Telephone:	Not reported
Facility Contact:	Not reported
Agency Name:	MONIER LIFETILE LLC
Agency Address:	1990 RIVERVIEW DR
Agency City,St,Zip:	SAN BERNARDINO 924083044
Agency Contact:	Not reported
Agency Telephone:	9097968324
Agency Type:	Private
SIC Code:	0
SIC Code 2:	Not reported
Primary Waste:	Not reported
Primary Waste Type:	Not reported
Secondary Waste:	Not reported
Secondary Waste Type:	Not reported
Design Flow:	0
Baseline Flow:	0
Reclamation:	Not reported
POTW:	Not reported
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

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number

MONIER LIFETILE LLC (Continued) **1000283319**

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 C - Facilities having no waste treatment systems, such as cooling water dischargers or thosewho must comply through best management practices, facilities with passive waste treatment and disposal systems, such as septic systems with subsurface disposal, or dischargers having waste storage systems with land disposal such as dairy waste ponds.

San Bern. Co. Permit:

Region: SAN BERNARDINO
Facility ID: FA0008402
Owner: ZWERNER, MARIE AND KIM
Permit Number: PT0015095
Permit Category: SPECIAL GENERATOR(B)
Facility Status: INACTIVE
Expiration Date: 2008-10-31 00:00:00

Region: SAN BERNARDINO
Facility ID: FA0008402
Owner: ZWERNER, MARIE AND KIM
Permit Number: PT0015096
Permit Category: HAZMAT HANDLER 11-25 EMPLOYEES
Facility Status: INACTIVE
Expiration Date: 2008-10-31 00:00:00

Region: SAN BERNARDINO
Facility ID: FA0004815
Owner: MONIERLIFETILE LLC
Permit Number: PT0001889
Permit Category: ABOVEGROUND PETROLEUM STORAGE (AST) (SPCC)
Facility Status: INACTIVE
Expiration Date: 2002-02-28 00:00:00

Region: SAN BERNARDINO
Facility ID: FA0004815
Owner: MONIERLIFETILE LLC
Permit Number: PT0001888
Permit Category: GENERATOR - 11-25 EMPLOYEES
Facility Status: INACTIVE
Expiration Date: 2002-02-28 00:00:00

Region: SAN BERNARDINO
Facility ID: FA0004815
Owner: MONIERLIFETILE LLC
Permit Number: PT0001887
Permit Category: HAZMAT HANDLER 11-25 EMPLOYEES (W/GEN PRMT)
Facility Status: INACTIVE
Expiration Date: 2002-02-28 00:00:00

HAZNET:

Gepaid: CAD982004913
Contact: Not reported
Telephone: 0000000000
Facility Addr2: Not reported

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number

MONIER LIFETILE LLC (Continued) **1000283319**

Mailing Name: Not reported
Mailing Address: 1990 E RIVERVIEW DR
Mailing City,St,Zip: SAN BERNARDINO, CA 924080000
Gen County: San Bernardino
TSD EPA ID: CAT000613927
TSD County: San Bernardino
Waste Category: Aqueous solution with less than 10% total organic residues
Disposal Method: Transfer Station
Tons: .5210
Facility County: San Bernardino

Gepaid: CAD982004913
Contact: KEVIN O'NEAL/PL MGR
Telephone: 9097968324
Facility Addr2: Not reported
Mailing Name: Not reported
Mailing Address: 1990 E RIVERVIEW DR
Mailing City,St,Zip: SAN BERNARDINO, CA 924080000
Gen County: San Bernardino
TSD EPA ID: Not reported
TSD County: San Bernardino
Waste Category: Aqueous solution with less than 10% total organic residues
Disposal Method: Transfer Station
Tons: 0.7
Facility County: Not reported

Gepaid: CAD982004913
Contact: KEVIN O'NEAL/PL MGR
Telephone: 9097968324
Facility Addr2: Not reported
Mailing Name: Not reported
Mailing Address: 1990 E RIVERVIEW DR
Mailing City,St,Zip: SAN BERNARDINO, CA 924080000
Gen County: San Bernardino
TSD EPA ID: Not reported
TSD County: Los Angeles
Waste Category: Unspecified oil-containing waste
Disposal Method: Treatment, Tank
Tons: 1.37
Facility County: Not reported

Gepaid: CAD982004913
Contact: KEVIN O'NEAL/PL MGR
Telephone: 9097968324
Facility Addr2: Not reported
Mailing Name: Not reported
Mailing Address: 1990 E RIVERVIEW DR
Mailing City,St,Zip: SAN BERNARDINO, CA 924080000
Gen County: San Bernardino
TSD EPA ID: Not reported
TSD County: Sacramento
Waste Category: Off-specification, aged, or surplus inorganics
Disposal Method: Disposal, Other
Tons: 0.24
Facility County: Not reported

Gepaid: CAD982004913

MAP FINDINGS

Map ID / Direction / Distance / Distance (ft.)	Site	Database(s)	EDR ID Number / EPA ID Number

MONIER LIFETILE LLC (Continued) **1000283319**

Contact:	KEVIN O'NEAL/PL MGR
Telephone:	9097968324
Facility Addr2:	Not reported
Mailing Name:	Not reported
Mailing Address:	1990 E RIVERVIEW DR
Mailing City,St,Zip:	SAN BERNARDINO, CA 924080000
Gen County:	San Bernardino
TSD EPA ID:	Not reported
TSD County:	Sacramento
Waste Category:	Unspecified organic liquid mixture
Disposal Method:	Disposal, Other
Tons:	0.02
Facility County:	Not reported

Click this hyperlink while viewing on your computer to access
1 additional CA_HAZNET: record(s) in the EDR Site Report.

EMI:

Year:	1990
County Code:	36
Air Basin:	SC
Facility ID:	3600
Air District Name:	SC
SIC Code:	3272
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	0
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	1
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0

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5 **ROGERS BINDING & MAILING** **CA FID UST** **S101591096**
1905 E RIVERVIEW **SWEEPS UST** **N/A**
SAN BERNARDINO, CA 92408 **San Bern. Co. Permit**

CA FID UST:

Facility ID:	36001415
Regulated By:	UTNKA
Regulated ID:	Not reported
Cortese Code:	Not reported
SIC Code:	Not reported
Facility Phone:	Not reported
Mail To:	Not reported
Mailing Address:	1905 E RIVERVIEW
Mailing Address 2:	Not reported
Mailing City,St,Zip:	SAN BERNARDINO 92408
Contact:	Not reported
Contact Phone:	Not reported
DUNs Number:	Not reported
NPDES Number:	Not reported
EPA ID:	Not reported
Comments:	Not reported
Status:	Active

MAP FINDINGS

Map ID / Direction / Distance / Distance (ft.)	Site	Database(s)	EDR ID Number / EPA ID Number

ROGERS BINDING & MAILING (Continued) **S101591096**

SWEEPS UST:

Status:	A
Comp Number:	9308
Number:	1
Board Of Equalization:	44-020186
Ref Date:	03-24-92
Act Date:	03-24-92
Created Date:	09-09-88
Tank Status:	A
Owner Tank Id:	Not reported
Swrcb Tank Id:	36-000-009308-000001
Actv Date:	09-26-88
Capacity:	1
Tank Use:	UNKNOWN
Stg:	P
Content:	UNKNOWN
Number Of Tanks:	1

San Bern. Co. Permit:

Region:	SAN BERNARDINO
Facility ID:	FA0005785
Owner:	ROGERS BINDING & MAILING
Permit Number:	PT0002481
Permit Category:	LIMITED QUANTITY GENERATOR(B)
Facility Status:	INACTIVE
Expiration Date:	2001-04-30 00:00:00

Region:	SAN BERNARDINO
Facility ID:	FA0005785
Owner:	ROGERS BINDING & MAILING
Permit Number:	PT0002480
Permit Category:	HAZMAT HANDLER 11-25 EMPLOYEES
Facility Status:	INACTIVE
Expiration Date:	2001-04-30 00:00:00

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5 **CANAM METAL PRODUCTS INC** **RCRA-NonGen** **1000686071**
1795 RIVERVIEW DR **FINDS** **CAD983632605**
SAN BERNARDINO, CA 92408 **San Bern. Co. Permit**
HAZNET
EMI

RCRA-NonGen:

Date form received by agency:	04/21/1992
Facility name:	CANAM METAL PRODUCTS INC
Facility address:	1795 RIVERVIEW DR SAN BERNARDINO, CA 92408
EPA ID:	CAD983632605
Contact:	DALE NOBLET
Contact address:	1795 RIVERVIEW DR SAN BERNARDINO, CA 92408
Contact country:	US
Contact telephone:	(714) 796-6833
Contact email:	Not reported
EPA Region:	09
Classification:	Non-Generator
Description:	Handler: Non-Generators do not presently generate hazardous waste

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number

CANAM METAL PRODUCTS INC (Continued) **1000686071**

Owner/Operator Summary:

Owner/operator name:	RIVERVIEW PARTNERS
Owner/operator address:	511 E FIRST ST STE C TUSTIN, CA 92680
Owner/operator country:	Not reported
Owner/operator telephone:	(714) 544-4341
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	01/01/0001
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No
Off-site waste receiver:	Commercial status unknown

Violation Status: No violations found

FINDS:

Registry ID: 110000479456

Environmental Interest/Information System

The NEI (National Emissions Inventory) database contains information on stationary and mobile sources that emit criteria air pollutants and their precursors, as well as hazardous air pollutants (HAPs).

California Hazardous Waste Tracking System - Datamart (HWTS-DATAMART) provides California with information on hazardous waste shipments for generators, transporters, and treatment, storage, and disposal facilities.

US EPA TRIS (Toxics Release Inventory System) contains information from facilities on the amounts of over 300 listed toxic chemicals that these facilities release directly to air, water, land, or that are transported off-site.

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number
	CANAM METAL PRODUCTS INC (Continued)		**1000686071**

San Bern. Co. Permit:

Region: SAN BERNARDINO
Facility ID: FA0001758
Owner: CANAM METAL PRODUCTS INC.
Permit Number: PT0002816
Permit Category: HAZMAT HANDLER 0-10 EMPLOYEES (W/GEN PRMT)
Facility Status: INACTIVE
Expiration Date: 2004-09-30 00:00:00

Region: SAN BERNARDINO
Facility ID: FA0001758
Owner: CANAM METAL PRODUCTS INC.
Permit Number: PT0002818
Permit Category: GENERATOR - 0-10 EMPLOYEES
Facility Status: INACTIVE
Expiration Date: 2004-09-30 00:00:00

HAZNET:

Gepaid: CAD983632605
Contact: LOREN TUTTLE - PLANT MANAGER
Telephone: 9097966833
Facility Addr2: Not reported
Mailing Name: Not reported
Mailing Address: 1795 RIVERVIEW DR
Mailing City,St,Zip: SAN BERNARDINO, CA 924083050
Gen County: San Bernardino
TSD EPA ID: CAD982444481
TSD County: San Bernardino
Waste Category: Waste oil and mixed oil
Disposal Method: Transfer Station
Tons: 0.68
Facility County: San Bernardino

Gepaid: CAD983632605
Contact: STEPHEN PACKER
Telephone: 7028735881
Facility Addr2: Not reported
Mailing Name: Not reported
Mailing Address: 1795 RIVERVIEW DR
Mailing City,St,Zip: SAN BERNARDINO, CA 924083050
Gen County: San Bernardino
TSD EPA ID: CAD008302903
TSD County: Los Angeles
Waste Category: Unspecified organic liquid mixture
Disposal Method: Recycler
Tons: 1.6054
Facility County: San Bernardino

Gepaid: CAD983632605
Contact: STEPHEN PACKER
Telephone: 7028735881
Facility Addr2: Not reported
Mailing Name: Not reported
Mailing Address: 1795 RIVERVIEW DR
Mailing City,St,Zip: SAN BERNARDINO, CA 924083050
Gen County: San Bernardino

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number

CANAM METAL PRODUCTS INC (Continued) **1000686071**

TSD EPA ID: CAD008302903
TSD County: Los Angeles
Waste Category: Other organic solids
Disposal Method: Recycler
Tons: 5.4815
Facility County: San Bernardino

Gepaid: CAD983632605
Contact: STEPHEN PACKER
Telephone: 7028735881
Facility Addr2: Not reported
Mailing Name: Not reported
Mailing Address: 1795 RIVERVIEW DR
Mailing City,St,Zip: SAN BERNARDINO, CA 924083050
Gen County: San Bernardino
TSD EPA ID: CAT080011059
TSD County: Los Angeles
Waste Category: Off-specification, aged, or surplus organics
Disposal Method: Recycler
Tons: 2.0554
Facility County: San Bernardino

Gepaid: CAD983632605
Contact: STEPHEN PACKER
Telephone: 7028735881
Facility Addr2: Not reported
Mailing Name: Not reported
Mailing Address: 1795 RIVERVIEW DR
Mailing City,St,Zip: SAN BERNARDINO, CA 924083050
Gen County: San Bernardino
TSD EPA ID: CAD089466710
TSD County: 0
Waste Category: Unspecified solvent mixture Waste
Disposal Method: Recycler
Tons: .4587
Facility County: San Bernardino

Click this hyperlink while viewing on your computer to access
9 additional CA_HAZNET: record(s) in the EDR Site Report.

EMI:

Year:	1987
County Code:	36
Air Basin:	SC
Facility ID:	45502
Air District Name:	SC
SIC Code:	3444
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	7
Reactive Organic Gases Tons/Yr:	6
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number

CANAM METAL PRODUCTS INC (Continued) **1000686071**

Year:	1990
County Code:	36
Air Basin:	SC
Facility ID:	45502
Air District Name:	SC
SIC Code:	3444
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	6
Reactive Organic Gases Tons/Yr:	6
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0

Year:	1993
County Code:	36
Air Basin:	SC
Facility ID:	45502
Air District Name:	SC
SIC Code:	3444
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	13
Reactive Organic Gases Tons/Yr:	6
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0

Year:	1995
County Code:	36
Air Basin:	SC
Facility ID:	45502
Air District Name:	SC
SIC Code:	3444
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	13
Reactive Organic Gases Tons/Yr:	6
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0

Year:	1996
County Code:	36
Air Basin:	SC
Facility ID:	45502
Air District Name:	SC
SIC Code:	3444

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number

CANAM METAL PRODUCTS INC (Continued) **1000686071**

Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	18
Reactive Organic Gases Tons/Yr:	8
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0

Year:	1997
County Code:	36
Air Basin:	SC
Facility ID:	45502
Air District Name:	SC
SIC Code:	3444
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	12
Reactive Organic Gases Tons/Yr:	8
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0

Year:	1998
County Code:	36
Air Basin:	SC
Facility ID:	45502
Air District Name:	SC
SIC Code:	3444
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	12
Reactive Organic Gases Tons/Yr:	8
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0

Year:	1999
County Code:	36
Air Basin:	SC
Facility ID:	45502
Air District Name:	SC
SIC Code:	3444
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	12
Reactive Organic Gases Tons/Yr:	8
Carbon Monoxide Emissions Tons/Yr:	0

MAP FINDINGS

Map ID / Direction / Distance / Distance (ft.)	Site	Database(s)	EDR ID Number / EPA ID Number

CANAM METAL PRODUCTS INC (Continued) **1000686071**

NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0

Year:	2000
County Code:	36
Air Basin:	SC
Facility ID:	45502
Air District Name:	SC
SIC Code:	3444
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	12
Reactive Organic Gases Tons/Yr:	8
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0

Year:	2001
County Code:	36
Air Basin:	SC
Facility ID:	45502
Air District Name:	SC
SIC Code:	3444
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	0
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0

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5 **NATIONAL TELECOMMUNICATIONS SYSTEMS** **RCRA-SQG** **1000260482**
1817-A RIVERVIEW DR **FINDS** **CAD039499454**
SAN BERNARDINO, CA 92408

RCRA-SQG:

Date form received by agency:	09/01/1996
Facility name:	NATIONAL TELECOMMUNICATIONS SYSTEMS
Facility address:	1817-A RIVERVIEW DR SAN BERNARDINO, CA 92408
EPA ID:	CAD039499454
Contact:	Not reported
Contact address:	Not reported Not reported
Contact country:	Not reported
Contact telephone:	Not reported
Contact email:	Not reported
EPA Region:	09
Land type:	Facility is not located on Indian land. Additional information is not known.
Classification:	Small Small Quantity Generator

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number

NATIONAL TELECOMMUNICATIONS SYSTEMS (Continued) **1000260482**

Description: Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:

Owner/operator name:	RIVERVIEW PROPERTIES INC
Owner/operator address:	NOT REQUIRED NOT REQUIRED, ME 99999
Owner/operator country:	Not reported
Owner/operator telephone:	(415) 555-1212
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Owner/operator name:	NOT REQUIRED
Owner/operator address:	NOT REQUIRED NOT REQUIRED, ME 99999
Owner/operator country:	Not reported
Owner/operator telephone:	(415) 555-1212
Legal status:	Private
Owner/Operator Type:	Operator
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	Unknown
Mixed waste (haz. and radioactive):	Unknown
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	Unknown
Furnace exemption:	Unknown
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No
Off-site waste receiver:	Verified to be non-commercial

Historical Generators:

Date form received by agency:	05/26/1982
Facility name:	NATIONAL TELECOMMUNICATIONS SYSTEMS
Classification:	Large Quantity Generator

Facility Has Received Notices of Violations:

Regulation violated:	FR - 262.10-12.A
Area of violation:	Generators - General
Date violation determined:	01/23/1985
Date achieved compliance:	01/23/1990

MAP FINDINGS

Map ID / Direction / Distance / Distance (ft.)	Site	Database(s)	EDR ID Number / EPA ID Number

NATIONAL TELECOMMUNICATIONS SYSTEMS (Continued) **1000260482**

Violation lead agency: EPA
Enforcement action: Not reported
Enforcement action date: Not reported
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: Not reported
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Evaluation Action Summary:
Evaluation date: 01/23/1985
Evaluation: NON-FINANCIAL RECORD REVIEW
Area of violation: Generators - General
Date achieved compliance: 01/23/1990
Evaluation lead agency: EPA

FINDS:

Registry ID: 110002643514

Environmental Interest/Information System
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

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5 **WORKFLOW DIRECT, INC.** **San Bern. Co. Permit** **S106911183**
1811 E RIVERVIEW DR **N/A**
SAN BERNARDINO, CA 92408

San Bern. Co. Permit:
Region: SAN BERNARDINO
Facility ID: FA0007242
Owner: WORKFLOW MANAGEMENT, INC.
Permit Number: PT0008579
Permit Category: SPECIAL GENERATOR(B)
Facility Status: INACTIVE
Expiration Date: 2003-04-30 00:00:00

Region: SAN BERNARDINO
Facility ID: FA0007242
Owner: WORKFLOW MANAGEMENT, INC.
Permit Number: PT0008580
Permit Category: SPECIAL HANDLER
Facility Status: INACTIVE
Expiration Date: 2003-04-30 00:00:00

MAP FINDINGS

Map ID / Direction / Distance / Distance (ft.)	Site	Database(s)	EDR ID Number / EPA ID Number
5	**HALEY BROS INC** **1905 RIVERVIEW DR** **SAN BERNARDINO, CA 92408**	**San Bern. Co. Permit** **HAZNET**	**S103638413** **N/A**

San Bern. Co. Permit:

Region:	SAN BERNARDINO
Facility ID:	FA0013050
Owner:	HALEY BROS INC
Permit Number:	PT0022946
Permit Category:	HAZMAT HANDLER 11-25 EMPLOYEES
Facility Status:	ACTIVE
Expiration Date:	2011-03-31 00:00:00

HAZNET:

Gepaid:	CAL000071230
Contact:	ROGER IMBRIANI
Telephone:	0000000000
Facility Addr2:	Not reported
Mailing Name:	Not reported
Mailing Address:	1905 RIVERVIEW DR
Mailing City,St,Zip:	SAN BERNARDINO, CA 924083045
Gen County:	San Bernardino
TSD EPA ID:	CAD099452708
TSD County:	Los Angeles
Waste Category:	Unspecified oil-containing waste
Disposal Method:	Recycler
Tons:	1.5512
Facility County:	San Bernardino

5	**KRUGER MCGREW CONSTRUCTION** **1880 E RIVERVIEW DR** **SAN BERNARDINO, CA 92408**	**CA FID UST** **SWEEPS UST** **EMI**	**S101619515** **N/A**

CA FID UST:

Facility ID:	36005591
Regulated By:	UTNKA
Regulated ID:	00049675
Cortese Code:	Not reported
SIC Code:	Not reported
Facility Phone:	Not reported
Mail To:	Not reported
Mailing Address:	P O BOX
Mailing Address 2:	Not reported
Mailing City,St,Zip:	SAN BERNARDINO 92408
Contact:	Not reported
Contact Phone:	Not reported
DUNs Number:	Not reported
NPDES Number:	Not reported
EPA ID:	Not reported
Comments:	Not reported
Status:	Active

SWEEPS UST:

Status:	A
Comp Number:	49675
Number:	9
Board Of Equalization:	44-021133
Ref Date:	09-11-91
Act Date:	09-11-91

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number
	KRUGER MCGREW CONSTRUCTION (Continued)		**S101619515**

Created Date:	02-29-88
Tank Status:	A
Owner Tank Id:	1
Swrcb Tank Id:	36-000-049675-000001
Actv Date:	07-01-85
Capacity:	8000
Tank Use:	M.V. FUEL
Stg:	P
Content:	REG UNLEADED
Number Of Tanks:	4

Status:	A
Comp Number:	49675
Number:	9
Board Of Equalization:	44-021133
Ref Date:	09-11-91
Act Date:	09-11-91
Created Date:	02-29-88
Tank Status:	A
Owner Tank Id:	2
Swrcb Tank Id:	36-000-049675-000002
Actv Date:	07-01-85
Capacity:	10000
Tank Use:	M.V. FUEL
Stg:	P
Content:	LEADED
Number Of Tanks:	Not reported

Status:	A
Comp Number:	49675
Number:	9
Board Of Equalization:	44-021133
Ref Date:	09-11-91
Act Date:	09-11-91
Created Date:	02-29-88
Tank Status:	A
Owner Tank Id:	3
Swrcb Tank Id:	36-000-049675-000003
Actv Date:	07-01-85
Capacity:	10000
Tank Use:	M.V. FUEL
Stg:	P
Content:	DIESEL
Number Of Tanks:	Not reported

Status:	A
Comp Number:	49675
Number:	9
Board Of Equalization:	44-021133
Ref Date:	09-11-91
Act Date:	09-11-91
Created Date:	02-29-88
Tank Status:	A
Owner Tank Id:	4
Swrcb Tank Id:	36-000-049675-000004
Actv Date:	07-01-85
Capacity:	10000

MAP FINDINGS

Map ID / Direction / Distance / Distance (ft.)	Site	Database(s)	EDR ID Number / EPA ID Number

KRUGER MCGREW CONSTRUCTION (Continued) **S101619515**

Tank Use: M.V. FUEL
Stg: P
Content: DIESEL
Number Of Tanks: Not reported

EMI:

Year:	1990
County Code:	36
Air Basin:	SC
Facility ID:	31499
Air District Name:	SC
SIC Code:	5199
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	0
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	1
NOX - Oxides of Nitrogen Tons/Yr:	2
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0

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5 **KRUGER MCGREW CONSTRUCTION** **HIST UST** **U001576058**
1880 RIVERVIEW DR **N/A**
SAN BERNARDINO, CA 92408

HIST UST:

Region:	STATE
Facility ID:	00000049675
Facility Type:	Other
Other Type:	CONSTRUCTION COMPANY
Total Tanks:	0004
Contact Name:	ROBERT G. KRUGER
Telephone:	7148256040
Owner Name:	MCGREW KRUGER INVESTMENTS
Owner Address:	1880 EAST RIVERVIEW DRIVE
Owner City,St,Zip:	SAN BERNARDINO, CA 92408

Tank Num:	001
Container Num:	1
Year Installed:	1979
Tank Capacity:	00008000
Tank Used for:	PRODUCT
Type of Fuel:	UNLEADED
Tank Construction:	Not reported
Leak Detection:	None

Tank Num:	002
Container Num:	2
Year Installed:	1979
Tank Capacity:	00010000
Tank Used for:	PRODUCT
Type of Fuel:	REGULAR
Tank Construction:	Not reported
Leak Detection:	None

MAP FINDINGS

Map ID / Direction / Distance / Distance (ft.)	Site	Database(s)	EDR ID Number / EPA ID Number

KRUGER MCGREW CONSTRUCTION (Continued) **U001576058**

Tank Num: 003
Container Num: 3
Year Installed: 1979
Tank Capacity: 00010000
Tank Used for: PRODUCT
Type of Fuel: DIESEL
Tank Construction: Not reported
Leak Detection: None

Tank Num: 004
Container Num: 4
Year Installed: 1979
Tank Capacity: 00010000
Tank Used for: PRODUCT
Type of Fuel: DIESEL
Tank Construction: Not reported
Leak Detection: None

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5 **HARBER COMPANIES INC** **UST** **U003784802**
1880 RIVERVIEW DR **N/A**
SAN BERNARDINO, CA 92408

UST:
Global ID: 14722
Latitude: 34.08098
Longitude: -117.24779

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5 **HARBER COMPANIES INC** **San Bern. Co. Permit** **S104766822**
1880 E RIVERVIEW DR **HAZNET** **N/A**
SAN BERNARDINO, CA 92408

San Bern. Co. Permit:
Region: SAN BERNARDINO
Facility ID: FA0003700
Owner: BRIAN HARBER
Permit Number: PT0002478
Permit Category: HAZMAT HANDLER 0-10 EMPLOYEES
Facility Status: ACTIVE
Expiration Date: 2011-07-31 00:00:00

Region: SAN BERNARDINO
Facility ID: FA0003700
Owner: BRIAN HARBER
Permit Number: PT0002479
Permit Category: SPECIAL GENERATOR(B)
Facility Status: ACTIVE
Expiration Date: 2011-07-31 00:00:00

Region: SAN BERNARDINO
Facility ID: FA0003700
Owner: BRIAN HARBER
Permit Number: PT0023016
Permit Category: APSA 10,001-100,000 GAL FAC CAPACITY
Facility Status: ACTIVE
Expiration Date: 2010-07-31 00:00:00

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number

HARBER COMPANIES INC (Continued) **S104766822**

Region: SAN BERNARDINO
Facility ID: FA0003700
Owner: BRIAN HARBER
Permit Number: PT0023017
Permit Category: EPCRA FACILITY
Facility Status: ACTIVE
Expiration Date: 2010-07-31 00:00:00

Region: SAN BERNARDINO
Facility ID: FA0003700
Owner: BRIAN HARBER
Permit Number: PT0011691
Permit Category: UST OWNERSHIP/OPERATING PERMIT (PER UST)
Facility Status: INACTIVE
Expiration Date: 2007-07-31 00:00:00

Region: SAN BERNARDINO
Facility ID: FA0003700
Owner: BRIAN HARBER
Permit Number: PT0011692
Permit Category: UST OWNERSHIP/OPERATING PERMIT (PER UST)
Facility Status: INACTIVE
Expiration Date: 2007-07-31 00:00:00

Region: SAN BERNARDINO
Facility ID: FA0003700
Owner: BRIAN HARBER
Permit Number: PT0011693
Permit Category: UST OWNERSHIP/OPERATING PERMIT (PER UST)
Facility Status: INACTIVE
Expiration Date: 2007-07-31 00:00:00

Region: SAN BERNARDINO
Facility ID: FA0003700
Owner: BRIAN HARBER
Permit Number: PT0011694
Permit Category: UST OWNERSHIP/OPERATING PERMIT (PER UST)
Facility Status: INACTIVE
Expiration Date: 2007-07-31 00:00:00

HAZNET:
Gepaid: CAL000276296
Contact: DANA CRAMER
Telephone: 9094781957
Facility Addr2: Not reported
Mailing Name: Not reported
Mailing Address: 1880 E RIVERVIEW DR
Mailing City,St,Zip: SAN BERNARDINO, CA 92408
Gen County: San Bernardino
TSD EPA ID: CAT080013352
TSD County: San Bernardino
Waste Category: Unspecified oil-containing waste
Disposal Method: Recycler
Tons: 0.83
Facility County: San Bernardino

Gepaid: CAL000276296

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number

HARBER COMPANIES INC (Continued) **S104766822**

Contact: JENNY WINCHAK - ACCOUNTING
Telephone: 9094781957
Facility Addr2: Not reported
Mailing Name: Not reported
Mailing Address: 1880 E RIVERVIEW DR
Mailing City,St,Zip: SAN BERNARDINO, CA 92408
Gen County: San Bernardino
TSD EPA ID: CAD099452708
TSD County: Los Angeles
Waste Category: Oil/water separation sludge
Disposal Method: H039
Tons: 2.08
Facility County: San Bernardino

Gepaid: CAL000276296
Contact: DANA CRAMER
Telephone: 9094781957
Facility Addr2: Not reported
Mailing Name: Not reported
Mailing Address: 1880 E RIVERVIEW DR
Mailing City,St,Zip: SAN BERNARDINO, CA 92408
Gen County: San Bernardino
TSD EPA ID: CAD982444481
TSD County: San Bernardino
Waste Category: Aqueous solution with less than 10% total organic residues
Disposal Method: Transfer Station
Tons: 0.37
Facility County: Not reported

Gepaid: CAL000276296
Contact: JENNY WINCHAK - ACCOUNTING
Telephone: 9094781957
Facility Addr2: Not reported
Mailing Name: Not reported
Mailing Address: 1880 E RIVERVIEW DR
Mailing City,St,Zip: SAN BERNARDINO, CA 924080000
Gen County: San Bernardino
TSD EPA ID: AZR000501510
TSD County: 99
Waste Category: Not reported
Disposal Method: H141
Tons: 0.5
Facility County: San Bernardino

Gepaid: CAL000276296
Contact: JENNY WINCHAK - ACCOUNTING
Telephone: 9094781957
Facility Addr2: Not reported
Mailing Name: Not reported
Mailing Address: 1880 E RIVERVIEW DR
Mailing City,St,Zip: SAN BERNARDINO, CA 924080000
Gen County: San Bernardino
TSD EPA ID: AZR000501510
TSD County: 99
Waste Category: Other organic solids
Disposal Method: H141
Tons: 2.8

MAP FINDINGS

Map ID / Direction / Distance / Distance (ft.)	Site	Database(s)	EDR ID Number / EPA ID Number
	HARBER COMPANIES INC (Continued)		**S104766822**

Facility County: San Bernardino

Click this hyperlink while viewing on your computer to access
2 additional CA_HAZNET: record(s) in the EDR Site Report.

5	**SCC CHEMICAL CORP** **1920 RIVERVIEW** **SAN BERNARDINO, CA 92408**	**San Bern. Co. Permit**	**S104768024** **N/A**

San Bern. Co. Permit:

Region: SAN BERNARDINO
Facility ID: FA0006033
Owner: SCC CHEMICAL CORP
Permit Number: PT0017461
Permit Category: HAZMAT HANDLER 0-10 EMPLOYEES
Facility Status: ACTIVE
Expiration Date: 2011-03-31 00:00:00

Region: SAN BERNARDINO
Facility ID: FA0006033
Owner: SCC CHEMICAL CORP
Permit Number: PT0004941
Permit Category: EPCRA FACILITY
Facility Status: ACTIVE
Expiration Date: 2011-03-31 00:00:00

Region: SAN BERNARDINO
Facility ID: FA0006033
Owner: SCC CHEMICAL CORP
Permit Number: PT0004940
Permit Category: RISK MANAGEMENT PLAN - LEVEL III
Facility Status: INACTIVE
Expiration Date: 2002-03-31 00:00:00

Region: SAN BERNARDINO
Facility ID: FA0006033
Owner: SCC CHEMICAL CORP
Permit Number: PT0004942
Permit Category: HAZMAT HANDLER 0-10 EMPLOYEES
Facility Status: INACTIVE
Expiration Date: 2002-03-31 00:00:00

Region: SAN BERNARDINO
Facility ID: FA0006033
Owner: SCC CHEMICAL CORP
Permit Number: PT0004944
Permit Category: CALARP FACILITY PERMIT
Facility Status: INACTIVE
Expiration Date: 2002-03-31 00:00:00

MAP FINDINGS

Map ID / Direction / Distance / Distance (ft.)	Site	Database(s)	EDR ID Number / EPA ID Number
6	**KLEEN-LINE CORP.** **1707 RIVERVIEW DR** **SAN BERNARDINO, CA 92408**	**HIST UST**	**U001576057** **N/A**

HIST UST:

Region:	STATE
Facility ID:	00000030304
Facility Type:	Other
Other Type:	DISTRIBUTOR
Total Tanks:	0001
Contact Name:	AL WALKER
Telephone:	7148892753
Owner Name:	KLEEN-LINE CORPORATION
Owner Address:	1707 EAST RIVERVIEW DRIVE
Owner City,St,Zip:	SAN BERNARDINO, CA 92408
Tank Num:	001
Container Num:	5
Year Installed:	1980
Tank Capacity:	00010000
Tank Used for:	PRODUCT
Type of Fuel:	DIESEL
Tank Construction:	Not reported
Leak Detection:	Visual

6	**WAXIE'S ENTERPRISES INC** **1707 E RIVERVIEW** **SAN BERNARDINO, CA 92408**	**CA FID UST** **SWEEPS UST** **San Bern. Co. Permit**	**S101591060** **N/A**

CA FID UST:

Facility ID:	36001097
Regulated By:	UTNKA
Regulated ID:	00030304
Cortese Code:	Not reported
SIC Code:	Not reported
Facility Phone:	7148892753
Mail To:	Not reported
Mailing Address:	5775 RUFFIN RD
Mailing Address 2:	Not reported
Mailing City,St,Zip:	SAN BERNARDINO 92408
Contact:	Not reported
Contact Phone:	Not reported
DUNs Number:	Not reported
NPDES Number:	Not reported
EPA ID:	Not reported
Comments:	Not reported
Status:	Active

SWEEPS UST:

Status:	A
Comp Number:	30304
Number:	1
Board Of Equalization:	44-020845
Ref Date:	09-11-91
Act Date:	09-11-91
Created Date:	02-29-88
Tank Status:	A
Owner Tank Id:	5
Swrcb Tank Id:	36-000-030304-000001

MAP FINDINGS

Map ID / Direction / Distance / Distance (ft.)	Site	Database(s)	EDR ID Number / EPA ID Number

WAXIE'S ENTERPRISES INC (Continued) **S101591060**

Actv Date: 03-28-90
Capacity: 10000
Tank Use: M.V. FUEL
Stg: P
Content: DIESEL
Number Of Tanks: 1

San Bern. Co. Permit:
Region: SAN BERNARDINO
Facility ID: FA0007232
Owner: CHARLES AND DAVID WAX
Permit Number: PT0002477
Permit Category: HAZMAT HANDLER 11-25 EMPLOYEES
Facility Status: INACTIVE
Expiration Date: 2003-07-31 00:00:00

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6 **WAXIE'S ENTERPRISES INC** **UST** **U003971276**
1707 RIVERVIEW DR **N/A**
SAN BERNARDINO, CA 92408

UST:
Global ID: 14721
Latitude: 34.08036
Longitude: -117.25032

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7 **PARKWAY DISTRIBUTORS** **CA FID UST** **S101591605**
1445 E RIVERVIEW DR **SWEEPS UST** **N/A**
SAN BERNARDINO, CA 92408

CA FID UST:
Facility ID: 36008484
Regulated By: UTNKA
Regulated ID: Not reported
Cortese Code: Not reported
SIC Code: Not reported
Facility Phone: Not reported
Mail To: Not reported
Mailing Address: 4929 WILSHIRE BLVD
Mailing Address 2: Not reported
Mailing City,St,Zip: SAN BERNARDINO 92408
Contact: Not reported
Contact Phone: Not reported
DUNs Number: Not reported
NPDES Number: Not reported
EPA ID: Not reported
Comments: Not reported
Status: Active

SWEEPS UST:
Status: A
Comp Number: 9305
Number: 9
Board Of Equalization: 44-020185
Ref Date: 03-24-92
Act Date: 03-24-92

MAP FINDINGS

Map ID / Direction / Distance / Distance (ft.)	Site	Database(s)	EDR ID Number / EPA ID Number

PARKWAY DISTRIBUTORS (Continued) **S101591605**

Created Date:	09-09-88
Tank Status:	A
Owner Tank Id:	Not reported
Swrcb Tank Id:	36-000-009305-000001
Actv Date:	09-09-88
Capacity:	1
Tank Use:	UNKNOWN
Stg:	P
Content:	UNKNOWN
Number Of Tanks:	3

Status:	A
Comp Number:	9305
Number:	9
Board Of Equalization:	44-020185
Ref Date:	03-24-92
Act Date:	03-24-92
Created Date:	09-09-88
Tank Status:	A
Owner Tank Id:	Not reported
Swrcb Tank Id:	36-000-009305-000002
Actv Date:	09-09-88
Capacity:	1
Tank Use:	UNKNOWN
Stg:	P
Content:	UNKNOWN
Number Of Tanks:	Not reported

Status:	A
Comp Number:	9305
Number:	9
Board Of Equalization:	44-020185
Ref Date:	03-24-92
Act Date:	03-24-92
Created Date:	09-09-88
Tank Status:	A
Owner Tank Id:	Not reported
Swrcb Tank Id:	36-000-009305-000003
Actv Date:	09-09-88
Capacity:	1
Tank Use:	UNKNOWN
Stg:	P
Content:	UNKNOWN
Number Of Tanks:	Not reported

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7 **DAN MCKINNEY CO. INC.** **San Bern. Co. Permit** **S105790533**
1455 E RIVERVIEW DR **N/A**
SAN BERNARDINO, CA 92408

San Bern. Co. Permit:

Region:	SAN BERNARDINO
Facility ID:	FA0007641
Owner:	DAN MC KINNEY CO. INC.
Permit Number:	PT0013134
Permit Category:	HAZMAT HANDLER 0-10 EMPLOYEES
Facility Status:	INACTIVE
Expiration Date:	2008-02-28 00:00:00

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number
7	**AMPAD CORP** **1455 E RIVERVIEW DR** **SAN BERNARDINO, CA 92408**	**RCRA-SQG** **FINDS**	**1000145139** **CAD981394372**

RCRA-SQG:

Date form received by agency:	09/01/1996
Facility name:	AMPAD CORP
Facility address:	1455 E RIVERVIEW DR SAN BERNARDINO, CA 92408
EPA ID:	CAD981394372
Mailing address:	P O BOX 6106 SAN BERNARDINO, CA 92412
Contact:	Not reported
Contact address:	Not reported Not reported
Contact country:	Not reported
Contact telephone:	Not reported
Contact email:	Not reported
EPA Region:	09
Classification:	Small Small Quantity Generator
Description:	Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:

Owner/operator name:	NOT REQUIRED
Owner/operator address:	NOT REQUIRED NOT REQUIRED, ME 99999
Owner/operator country:	Not reported
Owner/operator telephone:	(415) 555-1212
Legal status:	Private
Owner/Operator Type:	Operator
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported
Owner/operator name:	AMPAD CORP
Owner/operator address:	NOT REQUIRED NOT REQUIRED, ME 99999
Owner/operator country:	Not reported
Owner/operator telephone:	(415) 555-1212
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	Unknown
Mixed waste (haz. and radioactive):	Unknown
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	Unknown
Furnace exemption:	Unknown
Used oil fuel burner:	No
Used oil processor:	No

MAP FINDINGS

Map ID / Direction / Distance / Distance (ft.)	Site	Database(s)	EDR ID Number / EPA ID Number

AMPAD CORP (Continued) **1000145139**

User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No
Off-site waste receiver: Verified to be non-commercial

Historical Generators:
Date form received by agency: 02/25/1986
Facility name: AMPAD CORP
Classification: Large Quantity Generator

Violation Status: No violations found

FINDS:

Registry ID: 110002692435

Environmental Interest/Information System
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

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8 **BRYDENSCOT METAL PRODUCTS** **WDS** **S104764411**
1299 RIVERVIEW DR **NPDES** **N/A**
SAN BERNARDINO, CA 92408 **San Bern. Co. Permit**

CA WDS:
Facility ID: Santa Ana River 36I013275
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: CAS000001 The 1st 2 characters designate the state. The remaining 7 are assigned by the Regional Board
Subregion: 8
Facility Telephone: 9097990088
Facility Contact: SCOTT CATHEY
Agency Name: BRYDENSCOT METAL PROD INC
Agency Address: PO Box 5486
Agency City,St,Zip: San Bernardino 924125486
Agency Contact: SCOTT CATHEY
Agency Telephone: 9097990088
Agency Type: ?
SIC Code: 0
SIC Code 2: Not reported
Primary Waste: Not reported
Primary Waste Type: Not reported
Secondary Waste: Not reported
Secondary Waste Type: Not reported

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number

BRYDENSCOT METAL PRODUCTS (Continued) **S104764411**

Design Flow: 0
Baseline Flow: 0
Reclamation: Not reported
POTW: Not reported
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 C - Facilities having no waste treatment systems, such as cooling water dischargers or thosewho must comply through best management practices, facilities with passive waste treatment and disposal systems, such as septic systems with subsurface disposal, or dischargers having waste storage systems with land disposal such as dairy waste ponds.

NPDES:

Npdes Number:	Not reported
Facility Status:	Active
Agency Id:	6591
Region:	8
Regulatory Measure Id:	213407
Order No:	97-03-DWQ
Regulatory Measure Type:	Storm water industrial
Place Id:	210624
WDID:	8 36I013275
Program Type:	INDSTW
Adoption Date Of Regulatory Measure:	Not reported
Effective Date Of Regulatory Measure:	7/21/1997
Expiration Date Of Regulatory Measure:	Not reported
Termination Date Of Regulatory Measure:	Not reported
Discharge Name:	Brydenscot Metal Product Inc
Discharge Address:	Po Box 5486
Discharge City:	San Bernardino
Discharge State:	CA
Discharge Zip:	92412-5486

San Bern. Co. Permit:

Region:	SAN BERNARDINO
Facility ID:	FA0001590
Owner:	CATHEY, SCOTT E
Permit Number:	PT0004343
Permit Category:	GENERATOR - 11-25 EMPLOYEES
Facility Status:	ACTIVE
Expiration Date:	2011-08-31 00:00:00

Region:	SAN BERNARDINO
Facility ID:	FA0001590
Owner:	CATHEY, SCOTT E
Permit Number:	PT0023086
Permit Category:	EPCRA FACILITY
Facility Status:	ACTIVE
Expiration Date:	2011-08-31 00:00:00

Region: SAN BERNARDINO

MAP FINDINGS

Map ID / Direction / Distance / Distance (ft.)	Site	Database(s)	EDR ID Number / EPA ID Number

BRYDENSCOT METAL PRODUCTS (Continued) **S104764411**

Facility ID: FA0001590
Owner: CATHEY, SCOTT E
Permit Number: PT0004344
Permit Category: HAZMAT HANDLER 11-25 EMPLOYEES (W/GEN PRMT)
Facility Status: ACTIVE
Expiration Date: 2011-08-31 00:00:00

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8 **SYSTEMS TECHNOLOGY INC** **San Bern. Co. Permit** **S104905513**
1351 E RIVERVIEW DR **HAZNET** **N/A**
SAN BERNARDINO, CA 92408

San Bern. Co. Permit:
Region: SAN BERNARDINO
Facility ID: FA0001318
Owner: JOHN G. ST. JOHN
Permit Number: PT0001544
Permit Category: GENERATOR - 11-25 EMPLOYEES
Facility Status: ACTIVE
Expiration Date: 2011-05-31 00:00:00

Region: SAN BERNARDINO
Facility ID: FA0001318
Owner: JOHN G. ST. JOHN
Permit Number: PT0001528
Permit Category: HAZMAT HANDLER 11-25 EMPLOYEES (W/GEN PRMT)
Facility Status: ACTIVE
Expiration Date: 2011-05-31 00:00:00

HAZNET:
Gepaid: CAL000234145
Contact: KENNETH GAUTHIER
Telephone: 9097999950
Facility Addr2: Not reported
Mailing Name: Not reported
Mailing Address: 1351 E RIVERVIEW DR
Mailing City,St,Zip: SAN BERNARDINO, CA 924080000
Gen County: San Bernardino
TSD EPA ID: Not reported
TSD County: Los Angeles
Waste Category: Other organic solids
Disposal Method: Transfer Station
Tons: 0.12
Facility County: Not reported

Gepaid: CAL000234145
Contact: KENNETH GAUTHIER
Telephone: 9097999950
Facility Addr2: Not reported
Mailing Name: Not reported
Mailing Address: 1351 E RIVERVIEW DR
Mailing City,St,Zip: SAN BERNARDINO, CA 924080000
Gen County: San Bernardino
TSD EPA ID: Not reported
TSD County: San Bernardino
Waste Category: Aqueous solution with less than 10% total organic residues
Disposal Method: Transfer Station
Tons: 0.31

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number
	SYSTEMS TECHNOLOGY INC (Continued)		**S104905513**

Facility County: Not reported

Gepaid: CAL000234145
Contact: KENNETH GAUTHIER
Telephone: 9097999950
Facility Addr2: Not reported
Mailing Name: Not reported
Mailing Address: 1351 E RIVERVIEW DR
Mailing City,St,Zip: SAN BERNARDINO, CA 924080000
Gen County: San Bernardino
TSD EPA ID: Not reported
TSD County: Los Angeles
Waste Category: Unspecified oil-containing waste
Disposal Method: Not reported
Tons: 1.04
Facility County: Not reported

Gepaid: CAL000234145
Contact: KENNETH GAUTHIER
Telephone: 9097999950
Facility Addr2: Not reported
Mailing Name: Not reported
Mailing Address: 1351 E RIVERVIEW DR
Mailing City,St,Zip: SAN BERNARDINO, CA 924080000
Gen County: San Bernardino
TSD EPA ID: Not reported
TSD County: Los Angeles
Waste Category: Unspecified oil-containing waste
Disposal Method: Recycler
Tons: 2.06
Facility County: Not reported

Gepaid: CAL000234145
Contact: STEVE FOX/CONTROLLER
Telephone: 9097999950
Facility Addr2: Not reported
Mailing Name: Not reported
Mailing Address: 1351 E RIVERVIEW DR
Mailing City,St,Zip: SAN BERNARDINO, CA 924080000
Gen County: San Bernardino
TSD EPA ID: CAD008252405
TSD County: Los Angeles
Waste Category: Other organic solids
Disposal Method: Transfer Station
Tons: 0.12
Facility County: San Bernardino

Click this hyperlink while viewing on your computer to access
13 additional CA_HAZNET: record(s) in the EDR Site Report.

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number
8	**HOBART SALES AND SERVICE** **1350 E RIVERVIEW DR** **SAN BERNARDINO, CA 92408**	**San Bern. Co. Permit**	**S104766968** **N/A**

San Bern. Co. Permit:

Region:	SAN BERNARDINO
Facility ID:	FA0003821
Owner:	HOBART CORP
Permit Number:	PT0008576
Permit Category:	SPECIAL GENERATOR(B)
Facility Status:	INACTIVE
Expiration Date:	2010-08-31 00:00:00

Region:	SAN BERNARDINO
Facility ID:	FA0003821
Owner:	HOBART CORP
Permit Number:	PT0008575
Permit Category:	SPECIAL HANDLER
Facility Status:	INACTIVE
Expiration Date:	2010-08-31 00:00:00

8	**HOBART CORPORATION** **1350 RIVERVIEW DR** **SAN BERNARDINO, CA 92408**	**HIST UST**	**U001576052** **N/A**

HIST UST:

Region:	STATE
Facility ID:	00000002576
Facility Type:	Other
Other Type:	SALES & SERVICE
Total Tanks:	0001
Contact Name:	JOHN LAIRD
Telephone:	7148247030
Owner Name:	HOBART CORPORATION
Owner Address:	1350 E. RIVERVIEW DRIVE
Owner City,St,Zip:	SAN BERNARDINO, CA 92408

Tank Num:	001
Container Num:	1
Year Installed:	1980
Tank Capacity:	00006000
Tank Used for:	PRODUCT
Type of Fuel:	UNLEADED
Tank Construction:	Not reported
Leak Detection:	Vapor Sniff Well, None

9	**SHELL SERVICE STATION** **505 ORANGE SHOW RD** **SAN BERNARDINO, CA 92408**	**LUST**	**S105624557** **N/A**

LUST:

Region:	STATE
Global Id:	T0607100097
Latitude:	34.07896
Longitude:	-117.294698
Case Type:	LUST Cleanup Site
Status:	Completed - Case Closed
Status Date:	1988-06-27 00:00:00

MAP FINDINGS

Map ID / Direction / Distance / Distance (ft.)	Site	Database(s)	EDR ID Number / EPA ID Number

SHELL SERVICE STATION (Continued) **S105624557**

Lead Agency:	SAN BERNARDINO COUNTY LOP
Case Worker:	BM7
Local Agency:	Not reported
RB Case Number:	083600929T
LOC Case Number:	87054
File Location:	Local Agency
Potential Media Affect:	Soil
Potential Contaminants of Concern:	Other Solvent or Non-Petroleum Hydrocarbon
Site History:	Not reported

Click here to access the California GeoTracker records for this facility:

LUST REG 8:

Region:	8
County:	San Bernardino
Regional Board:	Santa Ana Region
Facility Status:	Case Closed
Case Number:	083600929T
Local Case Num:	87054
Case Type:	Soil only
Substance:	Hydrocarbons
Qty Leaked:	Not reported
Abate Method:	Not reported
Cross Street:	E STREET
Enf Type:	CLOS
Funding:	Not reported
How Discovered:	Not reported
How Stopped:	Not reported
Leak Cause:	Not reported
Leak Source:	Not reported
Global ID:	T0607100097
How Stopped Date:	Not reported
Enter Date:	6/20/1988
Review Date:	Not reported
Prelim Assess:	Not reported
Discover Date:	4/3/1986
Enforcement Date:	Not reported
Close Date:	6/27/1988
Workplan:	Not reported
Pollution Char:	Not reported
Remed Plan:	Not reported
Remed Action:	Not reported
Monitoring:	Not reported
Enter Date:	6/20/1988
GW Qualifies:	Not reported
Soil Qualifies:	Not reported
Operator:	Not reported
Facility Contact:	Not reported
Interim:	Not reported
Oversite Program:	LUST
Latitude:	34.07975351
Longitude:	-117.2939317
MTBE Date:	Not reported
Max MTBE GW:	Not reported
MTBE Concentration:	0
Max MTBE Soil:	Not reported
MTBE Fuel:	0

MAP FINDINGS

Map ID / Direction / Distance / Distance (ft.)	Site	Database(s)	EDR ID Number / EPA ID Number

SHELL SERVICE STATION (Continued) **S105624557**

MTBE Tested:	Not Required to be Tested.
MTBE Class:	*
Staff:	CAB
Staff Initials:	BM7
Lead Agency:	Local Agency
Local Agency:	36000L
Hydr Basin #:	UPPER SANTA ANA VALL
Beneficial:	Not reported
Priority:	Not reported
Cleanup Fund Id:	Not reported
Work Suspended:	Not reported
Summary:	Not reported

---

9 **SHELL SERVICE STATION** **LUST** **S105790855**
505 ORANGE SHOW ROAD **N/A**
SAN BERNARDINO, CA 92408

LUST:

Region:	STATE
Global Id:	T0607195783
Latitude:	34.0789406666666
Longitude:	-117.294538
Case Type:	LUST Cleanup Site
Status:	Open - Site Assessment
Status Date:	2003-03-10 00:00:00
Lead Agency:	SANTA ANA RWQCB (REGION 8)
Case Worker:	CAB
Local Agency:	SAN BERNARDINO COUNTY LOP
RB Case Number:	083604076T
LOC Case Number:	2003004
File Location:	Local Agency
Potential Media Affect:	Aquifer used for drinking water supply
Potential Contaminants of Concern:	Fuel Oxygenates, Gasoline, * * TERT-BUTYL ALCOHOL (TBA), * TERT-BUTYL ALCOHOL (TBA)
Site History:	Not reported

Click here to access the California GeoTracker records for this facility:

LUST REG 8:

Region:	8
County:	San Bernardino
Regional Board:	Santa Ana Region
Facility Status:	Pollution Characterization
Case Number:	Not reported
Local Case Num:	2003004
Case Type:	Aquifer affected
Substance:	DIPE, 800661
Qty Leaked:	Not reported
Abate Method:	Not reported
Cross Street:	Not reported
Enf Type:	Not reported
Funding:	Not reported
How Discovered:	Subsurface Monitoring
How Stopped:	Not reported
Leak Cause:	UNK
Leak Source:	UNK
Global ID:	T0607195783

MAP FINDINGS

Map ID / Direction / Distance / Distance (ft.)	Site	Database(s)	EDR ID Number / EPA ID Number

SHELL SERVICE STATION (Continued) **S105790855**

How Stopped Date:	Not reported
Enter Date:	Not reported
Review Date:	Not reported
Prelim Assess:	Not reported
Discover Date:	12/12/2002
Enforcement Date:	Not reported
Close Date:	Not reported
Workplan:	Not reported
Pollution Char:	3/10/2003
Remed Plan:	Not reported
Remed Action:	Not reported
Monitoring:	Not reported
Enter Date:	Not reported
GW Qualifies:	=
Soil Qualifies:	=
Operator:	Not reported
Facility Contact:	Not reported
Interim:	Not reported
Oversite Program:	LUST
Latitude:	0
Longitude:	0
MTBE Date:	4/4/2003
Max MTBE GW:	500
MTBE Concentration:	0
Max MTBE Soil:	5200
MTBE Fuel:	0
MTBE Tested:	MTBE Detected. Site tested for MTBE & MTBE detected
MTBE Class:	*
Staff:	CAB
Staff Initials:	CR2
Lead Agency:	Local Agency
Local Agency:	36000L
Hydr Basin #:	Not reported
Beneficial:	MUN
Priority:	A1
Cleanup Fund Id:	Not reported
Work Suspended:	Not reported

Summary: Not reported

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9 **SHIH-LIAV HAM**
520 ORANGE SHOW RD
SAN BERNARDINO, CA 92408

HIST CORTESE **S101590988**
LUST **N/A**
CA FID UST
SWEEPS UST
HAZNET

CORTESE:

Region:	CORTESE
Facility County Code:	36
Reg By:	LTNKA
Reg Id:	083602513T

LUST:

Region:	STATE
Global Id:	T0607100339
Latitude:	34.079556762
Longitude:	-117.294956081
Case Type:	LUST Cleanup Site

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number

SHIH-LIAV HAM (Continued) **S101590988**

Status:	Open - Remediation
Status Date:	1994-10-19 00:00:00
Lead Agency:	SANTA ANA RWQCB (REGION 8)
Case Worker:	RS
Local Agency:	SAN BERNARDINO COUNTY LOP
RB Case Number:	083602513T
LOC Case Number:	94061
File Location:	Local Agency
Potential Media Affect:	Aquifer used for drinking water supply
Potential Contaminants of Concern:	Gasoline, Fuel Oxygenates
Site History:	Soil and groundwater contamination identified. Soil Vapor Extraction in progress.

Click here to access the California GeoTracker records for this facility:

LUST REG 8:

Region:	8
County:	San Bernardino
Regional Board:	Santa Ana Region
Facility Status:	Pollution Characterization
Case Number:	083602513T
Local Case Num:	94061
Case Type:	Aquifer affected
Substance:	8006619, MTB
Qty Leaked:	Not reported
Abate Method:	Not reported
Cross Street:	"E" STREET
Enf Type:	Not reported
Funding:	Not reported
How Discovered:	Not reported
How Stopped:	Not reported
Leak Cause:	Not reported
Leak Source:	Not reported
Global ID:	T0607100339
How Stopped Date:	Not reported
Enter Date:	11/18/1994
Review Date:	Not reported
Prelim Assess:	Not reported
Discover Date:	Not reported
Enforcement Date:	Not reported
Close Date:	Not reported
Workplan:	10/19/1994
Pollution Char:	1/1/1965
Remed Plan:	Not reported
Remed Action:	Not reported
Monitoring:	Not reported
Enter Date:	11/18/1994
GW Qualifies:	=
Soil Qualifies:	Not reported
Operator:	Not reported
Facility Contact:	Not reported
Interim:	Not reported
Oversite Program:	LUST
Latitude:	34.0799346
Longitude:	-117.2929092
MTBE Date:	5/17/1999
Max MTBE GW:	1500

MAP FINDINGS

Map ID / Direction / Distance / Distance (ft.)	Site	Database(s)	EDR ID Number / EPA ID Number

SHIH-LIAV HAM (Continued) **S101590988**

MTBE Concentration: 1
Max MTBE Soil: Not reported
MTBE Fuel: 0
MTBE Tested: MTBE Detected. Site tested for MTBE & MTBE detected
MTBE Class: B
Staff: RS
Staff Initials: LH6
Lead Agency: Local Agency
Local Agency: 36000L
Hydr Basin #: UPPER SANTA ANA VALL
Beneficial: MUN
Priority: A1
Cleanup Fund Id: Not reported
Work Suspended: Not reported
Summary: ELEVATED LEVELS OF SOIL AND GW CONTAMINATION

CA FID UST:
Facility ID: 36000474
Regulated By: UTNKA
Regulated ID: 00039378
Cortese Code: Not reported
SIC Code: Not reported
Facility Phone: Not reported
Mail To: Not reported
Mailing Address: 520 ORANGE SHOW RD
Mailing Address 2: Not reported
Mailing City,St,Zip: SAN BERNARDINO 92408
Contact: Not reported
Contact Phone: Not reported
DUNs Number: Not reported
NPDES Number: Not reported
EPA ID: Not reported
Comments: Not reported
Status: Active

SWEEPS UST:
Status: A
Comp Number: 39378
Number: 9
Board Of Equalization: 44-000400
Ref Date: 07-28-92
Act Date: 07-28-92
Created Date: 02-29-88
Tank Status: A
Owner Tank Id: Not reported
Swrcb Tank Id: 36-000-039378-000001
Actv Date: 08-23-88
Capacity: 12000
Tank Use: M.V. FUEL
Stg: P
Content: REG UNLEADED
Number Of Tanks: 4

Status: A
Comp Number: 39378
Number: 9

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number

SHIH-LIAV HAM (Continued) **S101590988**

Board Of Equalization:	44-000400
Ref Date:	07-28-92
Act Date:	07-28-92
Created Date:	02-29-88
Tank Status:	A
Owner Tank Id:	002
Swrcb Tank Id:	36-000-039378-000002
Actv Date:	08-23-88
Capacity:	10000
Tank Use:	M.V. FUEL
Stg:	P
Content:	OTHER
Number Of Tanks:	Not reported

Status:	A
Comp Number:	39378
Number:	9
Board Of Equalization:	44-000400
Ref Date:	07-28-92
Act Date:	07-28-92
Created Date:	02-29-88
Tank Status:	A
Owner Tank Id:	UNK
Swrcb Tank Id:	36-000-039378-000003
Actv Date:	08-23-88
Capacity:	10000
Tank Use:	M.V. FUEL
Stg:	P
Content:	LEADED
Number Of Tanks:	Not reported

Status:	A
Comp Number:	39378
Number:	9
Board Of Equalization:	44-000400
Ref Date:	07-28-92
Act Date:	07-28-92
Created Date:	02-29-88
Tank Status:	A
Owner Tank Id:	UNK
Swrcb Tank Id:	36-000-039378-000004
Actv Date:	08-23-88
Capacity:	1000
Tank Use:	OIL
Stg:	W
Content:	OIL WASTE
Number Of Tanks:	Not reported

HAZNET:

Gepaid:	CAC002567670
Contact:	SHIH-LIAV HAM
Telephone:	9098851175
Facility Addr2:	Not reported
Mailing Name:	Not reported
Mailing Address:	520 ORANGE SHOW RD
Mailing City,St,Zip:	SAN BERNARDINO, CA 924080000
Gen County:	San Bernardino

MAP FINDINGS

Map ID / Direction / Distance / Distance (ft.)	Site	Database(s)	EDR ID Number / EPA ID Number

SHIH-LIAV HAM (Continued) **S101590988**

TSD EPA ID: CAT080013352
TSD County: San Bernardino
Waste Category: Waste oil and mixed oil
Disposal Method: Recycler
Tons: 0.83
Facility County: San Bernardino

Gepaid: CAL000331185
Contact: DIGIANT THAKER
Telephone: 9098851175
Facility Addr2: Not reported
Mailing Name: Not reported
Mailing Address: 520 ORANGE SHOW RD
Mailing City,St,Zip: SAN BERNARDINO, CA 924090000
Gen County: San Bernardino
TSD EPA ID: CAD028409019
TSD County: Los Angeles
Waste Category: Tank bottom waste
Disposal Method: H135
Tons: 0.9174
Facility County: San Bernardino

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10 **HALEY BROS, INC.** **San Bern. Co. Permit** **S104766805**
1575 RIVERVIEW DR **N/A**
SAN BERNARDINO, CA 92408

San Bern. Co. Permit:
Region: SAN BERNARDINO
Facility ID: FA0003680
Owner: T.J COBB
Permit Number: PT0009361
Permit Category: HAZMAT HANDLER 0-10 EMPLOYEES
Facility Status: ACTIVE
Expiration Date: 2011-07-31 00:00:00

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11 **STOCK BUILDING SUPPLY** **WDS** **S105558013**
595 E ORANGE SHOW RD **AST** **N/A**
SAN BERNARDINO, CA 92408 **San Bern. Co. Permit**
HAZNET

CA WDS:
Facility ID: Santa Ana River 362700001
Facility Type: Other - Does not fall into the category of Municipal/Domestic, Industrial, Agricultural or Solid Waste (Class I, II or III)
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: CHUCK SMITH
Agency Name: CST
Agency Address: 223 LORETTA WAY
Agency City,St,Zip: CALIMESA 92320
Agency Contact: CHUCK SMITH
Agency Telephone: Not reported
Agency Type: Private

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number

STOCK BUILDING SUPPLY (Continued) **S105558013**

SIC Code: 0
SIC Code 2: Not reported
Primary Waste: Not reported
Primary Waste Type: Not reported
Secondary Waste: Not reported
Secondary Waste Type: Not reported
Design Flow: 0
Baseline Flow: 0
Reclamation: Not reported
POTW: Not reported
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 C - Facilities having no waste treatment systems, such as cooling water dischargers or thosewho must comply through best management practices, facilities with passive waste treatment and disposal systems, such as septic systems with subsurface disposal, or dischargers having waste storage systems with land disposal such as dairy waste ponds.

AST:
Owner: STOCK BUILDING SUPPLY OF CAL,
Total Gallons: 3,570
Certified Unified Program Agencies: San Bernardino

San Bern. Co. Permit:
Region: SAN BERNARDINO
Facility ID: FA0003852
Owner: STOCK BUILDING SUPPLY OF CAL,
Permit Number: PT0009490
Permit Category: HAZMAT HANDLER 51-100 EMPLOYEES (W/GEN PRMT)
Facility Status: INACTIVE
Expiration Date: 2008-04-30 00:00:00

Region: SAN BERNARDINO
Facility ID: FA0003852
Owner: STOCK BUILDING SUPPLY OF CAL,
Permit Number: PT0009491
Permit Category: SPECIAL GENERATOR(B)
Facility Status: INACTIVE
Expiration Date: 2008-04-30 00:00:00

Region: SAN BERNARDINO
Facility ID: FA0003852
Owner: STOCK BUILDING SUPPLY OF CAL,
Permit Number: PT0019930
Permit Category: APSA 1,320-10,000 GAL FAC CAPACITY
Facility Status: INACTIVE
Expiration Date: 2008-04-30 00:00:00

HAZNET:
Gepaid: CAC002637085
Contact: TRINA MCDONALD

MAP FINDINGS

Map ID / Direction / Distance / Distance (ft.)	Site	Database(s)	EDR ID Number / EPA ID Number

STOCK BUILDING SUPPLY (Continued) **S105558013**

Telephone:	8182561200
Facility Addr2:	Not reported
Mailing Name:	Not reported
Mailing Address:	15451 SAN FERNANDO MISSION BLVD
Mailing City,St,Zip:	MISSION HILLS, CA 913451421
Gen County:	San Bernardino
TSD EPA ID:	CAD097030993
TSD County:	Los Angeles
Waste Category:	Unspecified organic liquid mixture
Disposal Method:	H141
Tons:	0.034
Facility County:	San Bernardino

Gepaid:	CAC002637085
Contact:	TRINA MCDONALD
Telephone:	8182561200
Facility Addr2:	Not reported
Mailing Name:	Not reported
Mailing Address:	15451 SAN FERNANDO MISSION BLVD
Mailing City,St,Zip:	MISSION HILLS, CA 913451421
Gen County:	San Bernardino
TSD EPA ID:	CAD097030993
TSD County:	Los Angeles
Waste Category:	Unspecified oil-containing waste
Disposal Method:	H141
Tons:	0.22935
Facility County:	San Bernardino

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12 **EPTC SAN BERNARDINO** **RCRA-SQG** **1000167572**
25720 SAN BERNARDINO AVE **San Bern. Co. Permit** **CAD000631150**
SAN BERNARDINO, CA 92410 **HAZNET**
HWP

RCRA-SQG:

Date form received by agency:	03/04/1999
Facility name:	EPTC SAN BERNARDINO
Site name:	SAN BERNARDINO GEN. STATION
Facility address:	25770 SAN BERNARDINO AVE SAN BERNARDINO, CA 92410
EPA ID:	CAD000631150
Mailing address:	2244 WALNUT GROVE AVE ROOM 405 ROSEMEAD, CA 91770
Contact:	KATHRYN VANDERSLICE
Contact address:	Not reported Not reported
Contact country:	Not reported
Contact telephone:	(626) 302-9320
Contact email:	Not reported
EPA Region:	09
Land type:	Private
Classification:	Small Small Quantity Generator
Description:	Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number

EPTC SAN BERNARDINO (Continued) **1000167572**

Handler Activities Summary:

U.S. importer of hazardous waste:	Unknown
Mixed waste (haz. and radioactive):	Unknown
Recycler of hazardous waste:	Unknown
Transporter of hazardous waste:	Unknown
Treater, storer or disposer of HW:	No
Underground injection activity:	Unknown
On-site burner exemption:	Unknown
Furnace exemption:	Unknown
Used oil fuel burner:	Unknown
Used oil processor:	Unknown
User oil refiner:	Unknown
Used oil fuel marketer to burner:	Unknown
Used oil Specification marketer:	Unknown
Used oil transfer facility:	Unknown
Used oil transporter:	Unknown
Off-site waste receiver:	Verified to be non-commercial

Historical Generators:

Date form received by agency: 10/20/1998
Facility name: EPTC SAN BERNARDINO
Classification: Small Quantity Generator

Date form received by agency: 04/01/1998
Facility name: EPTC SAN BERNARDINO
Classification: Small Quantity Generator

Date form received by agency: 02/27/1996
Facility name: EPTC SAN BERNARDINO
Site name: SOUTHERN CALIFORNIA EDISON
Classification: Large Quantity Generator

Date form received by agency: 03/29/1994
Facility name: EPTC SAN BERNARDINO
Site name: SO. CALIF. EDISON CO.
Classification: Large Quantity Generator

Date form received by agency: 02/28/1992
Facility name: EPTC SAN BERNARDINO
Site name: SO. CALIF. EDISON CO. SAN BERNARDINO GEN
Classification: Large Quantity Generator

Date form received by agency: 08/18/1980
Facility name: EPTC SAN BERNARDINO
Classification: Not a generator, verified

Date form received by agency: 08/18/1980
Facility name: EPTC SAN BERNARDINO
Classification: Small Quantity Generator

Corrective Action Summary:

Event date: 12/20/2007
Event: CA029

Facility Has Received Notices of Violations:

MAP FINDINGS

Map ID / Direction / Distance / Distance (ft.)	Site	Database(s)	EDR ID Number / EPA ID Number

EPTC SAN BERNARDINO (Continued) **1000167572**

Regulation violated: Not reported
Area of violation: TSD IS-Ground-Water Monitoring
Date violation determined: 09/23/1993
Date achieved compliance: 02/01/1995
Violation lead agency: State
Enforcement action: FINAL CIVIL JUDICIAL ACTION FOR COMPLIANCE AND/OR MONETARY PENALTY
Enforcement action date: 02/01/1995
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: Generators - General
Date violation determined: 09/23/1993
Date achieved compliance: 02/01/1995
Violation lead agency: State
Enforcement action: FINAL CIVIL JUDICIAL ACTION FOR COMPLIANCE AND/OR MONETARY PENALTY
Enforcement action date: 02/01/1995
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: TSD - Surface Impoundment Standards
Date violation determined: 09/23/1993
Date achieved compliance: 02/01/1995
Violation lead agency: State
Enforcement action: FINAL CIVIL JUDICIAL ACTION FOR COMPLIANCE AND/OR MONETARY PENALTY
Enforcement action date: 02/01/1995
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: TSD IS-Ground-Water Monitoring
Date violation determined: 09/23/1993
Date achieved compliance: 02/01/1995
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 09/23/1993
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: Not reported

MAP FINDINGS

Map ID / Direction / Distance / Distance (ft.)	Site	Database(s)	EDR ID Number / EPA ID Number

EPTC SAN BERNARDINO (Continued) **1000167572**

Area of violation: Generators - General
Date violation determined: 09/23/1993
Date achieved compliance: 02/01/1995
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 09/23/1993
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: TSD - Surface Impoundment Standards
Date violation determined: 09/23/1993
Date achieved compliance: 02/01/1995
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 09/23/1993
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Evaluation Action Summary:
Evaluation date: 08/19/1993
Evaluation: CASE DEVELOPMENT INSPECTION
Area of violation: TSD IS-Ground-Water Monitoring
Date achieved compliance: 02/01/1995
Evaluation lead agency: State

Evaluation date: 08/19/1993
Evaluation: CASE DEVELOPMENT INSPECTION
Area of violation: TSD - Surface Impoundment Standards
Date achieved compliance: 02/01/1995
Evaluation lead agency: State

Evaluation date: 08/19/1993
Evaluation: CASE DEVELOPMENT INSPECTION
Area of violation: Generators - General
Date achieved compliance: 02/01/1995
Evaluation lead agency: State

San Bern. Co. Permit:
Region: SAN BERNARDINO
Facility ID: FA0006024
Owner: SOUTHERN CALIFORNIA EDISON
Permit Number: PT0020859
Permit Category: ABOVEGROUND PETROLEUM STORAGE (AST) (SPCC)
Facility Status: INACTIVE
Expiration Date: 2010-02-28 00:00:00

Region: SAN BERNARDINO
Facility ID: FA0006024

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number

EPTC SAN BERNARDINO (Continued) **1000167572**

Owner: SOUTHERN CALIFORNIA EDISON
Permit Number: PT0000336
Permit Category: HAZMAT HANDLER 0-10 EMPLOYEES
Facility Status: ACTIVE
Expiration Date: 2011-02-28 00:00:00

HAZNET:
Gepaid: CAD000631150
Contact: STAN MARSH SENIOR ENVIRON SPEC
Telephone: 6263029711
Facility Addr2: Not reported
Mailing Name: Not reported
Mailing Address: PO BOX 800 QUAD 3A
Mailing City,St,Zip: ROSEMEAD, CA 917700000
Gen County: San Bernardino
TSD EPA ID: CAD050806850
TSD County: Los Angeles
Waste Category: Waste oil and mixed oil
Disposal Method: Not reported
Tons: 2.91
Facility County: Not reported

Gepaid: CAD000631150
Contact: STAN MARSH SENIOR ENVIRON SPEC
Telephone: 6263029711
Facility Addr2: Not reported
Mailing Name: Not reported
Mailing Address: PO BOX 800 QUAD 3A
Mailing City,St,Zip: ROSEMEAD, CA 917700000
Gen County: San Bernardino
TSD EPA ID: CAD050806850
TSD County: Los Angeles
Waste Category: Waste oil and mixed oil
Disposal Method: Not reported
Tons: 2.91
Facility County: Not reported

HWP:
EPA Id: CAD000631150
Latitude: 34.077381
Longitude: -117.199893
Facility Type: HAZ WASTE - NON-OPERATING
Cleanup Status: Not reported
Region: CYPRESS, GEOLOGY CAL SUPPORT
Permit Maintenance Lead: Not reported
Permit Renewal Lead: Not reported
Corrective Action Lead: CHRISTINE BUCKLIN
Supervisor: Not reported
Site Code: 400441
Assembly District: 63
Senate District: 31
Public Information Officer: Not reported
Facility Status: Retention Basin Unit Clean Closed on 07/19/06. Corrective action will be conducted: In 1995, A Final Judgment Pursuant to Stipulation required SCE to close its retention basins and boiler chemical cleaning basins according to RCRA closure requirements. The facility

MAP FINDINGS

Map ID / Direction / Distance / Distance (ft.)	Site	Database(s)	EDR ID Number / EPA ID Number

EPTC SAN BERNARDINO (Continued) **1000167572**

operated a square retention basin which measures 50 x50 x14 . The basin was originally built in 1970 s. A liner was installed in 1978 and new liner was installed over the old gunite liner. Soil sampling data detected high concentration of metals in a red clay layer beneath the basin including nickel (97,000 mg/kg), vanadium (3,300 mg/kg), zinc (930 mg/kg), copper (680 mg/kg), lead (490 mg/kg), and total chromium (200 mg/kg). No VOC was detected in soil gas and soil samples. The red layer clay was excavated and removed and the confirmation samples indicated the metals were detected within the background levels. A clean materials was used to backfill the excavation. The Revised Closure Demonstration Report dated March 23, 2006 certified the clean closure of the unit.

Site History: Not reported

HWP:

EPA Id: CAD000631150
Unit Names: Retention Basin
Event Description: Public Notice - Closure
Actual Date: 2006-06-08 00:00:00
Doc Comments: Not reported

EPA Id: CAD000631150
Unit Names: Retention Basin
Event Description: Notice of Deficiency - Closure Plan
Actual Date: 2005-12-14 00:00:00
Doc Comments: Not reported

EPA Id: CAD000631150
Unit Names: Retention Basin
Event Description: Clean Closure Acceptable
Actual Date: 2006-07-19 00:00:00
Doc Comments: Not reported

EPA Id: CAD000631150
Unit Names: Retention Basin
Event Description: Receive Closure Certification
Actual Date: 2006-03-23 00:00:00
Doc Comments: Not reported

EPA Id: CAD000631150
Unit Names: Retention Basin
Event Description: Plan Approved - Closure
Actual Date: 2006-07-19 00:00:00
Doc Comments: Not reported

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12 **SOUTHERN CALIFORNIA EDISON CO.** **NPDES** **S102437822**
25770 SAN BERNARDINO AVE **LUST** **N/A**
SAN BERNARDINO, CA 92408

NPDES:

Npdes Number: Not reported
Facility Status: Terminated
Agency Id: 147488
Region: 8
Regulatory Measure Id: 212162
Order No: 99-08DWQ
Regulatory Measure Type: Storm water construction

MAP FINDINGS

Map ID / Direction / Distance / Distance (ft.)	Site	Database(s)	EDR ID Number / EPA ID Number

SOUTHERN CALIFORNIA EDISON CO. (Continued) **S102437822**

Place Id:	241613
WDID:	8 36C316004
Program Type:	CONSTW
Adoption Date Of Regulatory Measure:	Not reported
Effective Date Of Regulatory Measure:	7/3/2001
Expiration Date Of Regulatory Measure:	Not reported
Termination Date Of Regulatory Measure:	3/23/2007
Discharge Name:	Mountainview Power Co LLC
Discharge Address:	Not reported
Discharge City:	Not reported
Discharge State:	Not reported
Discharge Zip:	Not reported

LUST:

Region:	STATE
Global Id:	T0607100062
Latitude:	34.077658
Longitude:	-117.2413133
Case Type:	LUST Cleanup Site
Status:	Completed - Case Closed
Status Date:	1987-12-17 00:00:00
Lead Agency:	SAN BERNARDINO COUNTY LOP
Case Worker:	CR2
Local Agency:	SAN BERNARDINO COUNTY LOP
RB Case Number:	083600631T
LOC Case Number:	90037
File Location:	Local Agency
Potential Media Affect:	Soil
Potential Contaminants of Concern:	Gasoline
Site History:	Not reported

Click here to access the California GeoTracker records for this facility:

LUST REG 8:

Region:	8
County:	San Bernardino
Regional Board:	Santa Ana Region
Facility Status:	Case Closed
Case Number:	083600631T
Local Case Num:	90037
Case Type:	Soil only
Substance:	Gasoline
Qty Leaked:	Not reported
Abate Method:	Not reported
Cross Street:	RICHARDSON
Enf Type:	CLOS
Funding:	Not reported
How Discovered:	Not reported
How Stopped:	Not reported
Leak Cause:	Not reported
Leak Source:	Not reported
Global ID:	T0607100062
How Stopped Date:	Not reported
Enter Date:	8/6/1987
Review Date:	Not reported
Prelim Assess:	Not reported

MAP FINDINGS

Map ID / Direction / Distance / Distance (ft.)	Site	Database(s)	EDR ID Number / EPA ID Number

SOUTHERN CALIFORNIA EDISON CO. (Continued) **S102437822**

Discover Date:	Not reported
Enforcement Date:	Not reported
Close Date:	12/17/1987
Workplan:	Not reported
Pollution Char:	8/6/1987
Remed Plan:	Not reported
Remed Action:	Not reported
Monitoring:	Not reported
Enter Date:	8/6/1987
GW Qualifies:	Not reported
Soil Qualifies:	Not reported
Operator:	Not reported
Facility Contact:	Not reported
Interim:	Not reported
Oversite Program:	LUST
Latitude:	34.077658
Longitude:	-117.2413133
MTBE Date:	Not reported
Max MTBE GW:	Not reported
MTBE Concentration:	0
Max MTBE Soil:	Not reported
MTBE Fuel:	1
MTBE Tested:	Site NOT Tested for MTBE.Includes Unknown and Not Analyzed.
MTBE Class:	*
Staff:	PAH
Staff Initials:	CR2
Lead Agency:	Local Agency
Local Agency:	36000L
Hydr Basin #:	UPPER SANTA ANA VALL
Beneficial:	Not reported
Priority:	Not reported
Cleanup Fund Id:	Not reported
Work Suspended:	Not reported
Summary:	Not reported

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12 **SOUTHERN CALIFORNIA EDISO** **NPDES** **S104581137**
25770 SAN BERNARDINO **HIST CORTESE** **N/A**
SAN BERNARDINO, CA 92408 **HAZNET**
EMI

NPDES:

Npdes Number:	Not reported
Facility Status:	Historical
Agency Id:	147488
Region:	8
Regulatory Measure Id:	211584
Order No:	Not reported
Regulatory Measure Type:	Enrollee
Place Id:	219755
WDID:	8 362837001
Program Type:	NPDES
Adoption Date Of Regulatory Measure:	Not reported
Effective Date Of Regulatory Measure:	1/19/2005
Expiration Date Of Regulatory Measure:	1/18/2015
Termination Date Of Regulatory Measure:	6/24/2009
Discharge Name:	Mountainview Power Co LLC
Discharge Address:	Not reported
Discharge City:	Not reported

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number
	SOUTHERN CALIFORNIA EDISO (Continued)		**S104581137**

Discharge State: Not reported
Discharge Zip: Not reported

CORTESE:
Region: CORTESE
Facility County Code: 36
Reg By: LTNKA
Reg Id: 083600631T

HAZNET:
Gepaid: CAL000181153
Contact: DAVID KEHRES PLANT MANAGER
Telephone: 9094787900
Facility Addr2: Not reported
Mailing Name: Not reported
Mailing Address: 25770 SAN BERNARDINO AVENUE
Mailing City,St,Zip: SAN BERNARDINO, CA 924083154
Gen County: San Bernardino
TSD EPA ID: Not reported
TSD County: Los Angeles
Waste Category: Asbestos-containing waste
Disposal Method: Disposal, Land Fill
Tons: 4.21
Facility County: Not reported

Gepaid: CAL000181153
Contact: DAVID KEHRES PLANT MANAGER
Telephone: 9094787900
Facility Addr2: Not reported
Mailing Name: Not reported
Mailing Address: 25770 SAN BERNARDINO AVENUE
Mailing City,St,Zip: SAN BERNARDINO, CA 924083154
Gen County: San Bernardino
TSD EPA ID: Not reported
TSD County: Los Angeles
Waste Category: Unspecified solvent mixture Waste
Disposal Method: Transfer Station
Tons: 0.05
Facility County: Not reported

Gepaid: CAL000181153
Contact: DAVID KEHRES PLANT MANAGER
Telephone: 9094787900
Facility Addr2: Not reported
Mailing Name: Not reported
Mailing Address: 25770 SAN BERNARDINO AVENUE
Mailing City,St,Zip: SAN BERNARDINO, CA 924083154
Gen County: San Bernardino
TSD EPA ID: Not reported
TSD County: Los Angeles
Waste Category: Unspecified solvent mixture Waste
Disposal Method: Recycler
Tons: 0.06
Facility County: Not reported

Gepaid: CAL000181153

MAP FINDINGS

Map ID / Direction / Distance / Distance (ft.)	Site	Database(s)	EDR ID Number / EPA ID Number

SOUTHERN CALIFORNIA EDISO (Continued) **S104581137**

Contact:	DAVID KEHRES PLANT MANAGER
Telephone:	9094787900
Facility Addr2:	Not reported
Mailing Name:	Not reported
Mailing Address:	25770 SAN BERNARDINO AVENUE
Mailing City,St,Zip:	SAN BERNARDINO, CA 924083154
Gen County:	San Bernardino
TSD EPA ID:	Not reported
TSD County:	Los Angeles
Waste Category:	Waste oil and mixed oil
Disposal Method:	Recycler
Tons:	0.45
Facility County:	Not reported

Gepaid:	CAL000181153
Contact:	DAVID KEHRES PLANT MANAGER
Telephone:	9094787900
Facility Addr2:	Not reported
Mailing Name:	Not reported
Mailing Address:	25770 SAN BERNARDINO AVENUE
Mailing City,St,Zip:	SAN BERNARDINO, CA 924083154
Gen County:	San Bernardino
TSD EPA ID:	Not reported
TSD County:	Los Angeles
Waste Category:	Alkaline solution without metals (pH > 12.5)
Disposal Method:	Disposal, Land Fill
Tons:	0.35
Facility County:	Not reported

Click this hyperlink while viewing on your computer to access
35 additional CA_HAZNET: record(s) in the EDR Site Report.

EMI:

Year:	2001
County Code:	36
Air Basin:	SC
Facility ID:	121737
Air District Name:	SC
SIC Code:	4911
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Y
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	12
Reactive Organic Gases Tons/Yr:	5
Carbon Monoxide Emissions Tons/Yr:	21
NOX - Oxides of Nitrogen Tons/Yr:	82
SOX - Oxides of Sulphur Tons/Yr:	1
Particulate Matter Tons/Yr:	7
Part. Matter 10 Micrometers & Smllr Tons/Yr:	7

Year:	2002
County Code:	36
Air Basin:	SC
Facility ID:	121737
Air District Name:	SC
SIC Code:	4911
Air District Name:	SOUTH COAST AQMD

MAP FINDINGS

Map ID / Direction / Distance / Distance (ft.)	Site	Database(s)	EDR ID Number / EPA ID Number

SOUTHERN CALIFORNIA EDISO (Continued) **S104581137**

Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	0
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0

Year:	2003
County Code:	36
Air Basin:	SC
Facility ID:	121737
Air District Name:	SC
SIC Code:	4911
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	0
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0

Year:	2004
County Code:	36
Air Basin:	SC
Facility ID:	121737
Air District Name:	SC
SIC Code:	4911
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Y
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	0.000661
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	0.00035
NOX - Oxides of Nitrogen Tons/Yr:	0.0013
SOX - Oxides of Sulphur Tons/Yr:	0.0000083
Particulate Matter Tons/Yr:	0.000075
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0

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13 **LLUMC SUPPORT SERVICES** **CA FID UST** **S101591255**
1269 SAN BERNARDINO **SWEEPS UST** **N/A**
SAN BERNARDINO, CA 92408

CA FID UST:

Facility ID:	36003163
Regulated By:	UTNKA
Regulated ID:	Not reported
Cortese Code:	Not reported
SIC Code:	Not reported
Facility Phone:	9098244379
Mail To:	Not reported
Mailing Address:	1269 SAN BERNARDINO
Mailing Address 2:	Not reported

MAP FINDINGS

Map ID / Direction / Distance / Distance (ft.)	Site	Database(s)	EDR ID Number / EPA ID Number

LLUMC SUPPORT SERVICES (Continued) **S101591255**

Mailing City,St,Zip: SAN BERNARDINO 92408
Contact: Not reported
Contact Phone: Not reported
DUNs Number: Not reported
NPDES Number: Not reported
EPA ID: Not reported
Comments: Not reported
Status: Active

SWEEPS UST:
Status: A
Comp Number: 13101
Number: 1
Board Of Equalization: Not reported
Ref Date: 11-24-92
Act Date: 11-24-92
Created Date: 11-24-92
Tank Status: A
Owner Tank Id: 1
Swrcb Tank Id: 36-000-013101-000001
Actv Date: 11-24-92
Capacity: 19000
Tank Use: M.V. FUEL
Stg: P
Content: REGULAR UNLE
Number Of Tanks: 1

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14 **DALE'S RESTORATIONS** **San Bern. Co. Permit** **S104765673**
1482 S GAGE ST **N/A**
SAN BERNARDINO, CA 92408

San Bern. Co. Permit:
Region: SAN BERNARDINO
Facility ID: FA0002622
Owner: AKUSZEWSKI, DALE
Permit Number: PT0001093
Permit Category: LIMITED QUANTITY GENERATOR(B)
Facility Status: ACTIVE
Expiration Date: 2011-11-30 00:00:00

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14 **BARRYE'S THREAD ROLL** **San Bern. Co. Permit** **S107030301**
1469 S GAGE ST **HAZNET** **N/A**
SAN BERNARDINO, CA 92408

San Bern. Co. Permit:
Region: SAN BERNARDINO
Facility ID: FA0009979
Owner: BRUTON, BARRYE
Permit Number: PT0017068
Permit Category: SPECIAL GENERATOR(B)
Facility Status: ACTIVE
Expiration Date: 2007-09-30 00:00:00

Region: SAN BERNARDINO
Facility ID: FA0009979
Owner: BRUTON, BARRYE

MAP FINDINGS

Map ID / Direction / Distance / Distance (ft.)	Site	Database(s)	EDR ID Number / EPA ID Number

BARRYE'S THREAD ROLL (Continued) **S107030301**

Permit Number: PT0017069
Permit Category: SPECIAL HANDLER
Facility Status: ACTIVE
Expiration Date: 2007-09-30 00:00:00

HAZNET:
Gepaid: CAL000303484
Contact: BARRYE BRUTON
Telephone: 9097969133
Facility Addr2: Not reported
Mailing Name: Not reported
Mailing Address: 1469 S GAGE ST
Mailing City,St,Zip: SAN BERNARDINO, CA 924082835
Gen County: San Bernardino
TSD EPA ID: AZR000501510
TSD County: 99
Waste Category: Other organic solids
Disposal Method: H141
Tons: 1.6856
Facility County: San Bernardino

Gepaid: CAL000303484
Contact: BARRYE BRUTON
Telephone: 9097969133
Facility Addr2: Not reported
Mailing Name: Not reported
Mailing Address: 1469 S GAGE ST
Mailing City,St,Zip: SAN BERNARDINO, CA 924082835
Gen County: San Bernardino
TSD EPA ID: CAD028409019
TSD County: Los Angeles
Waste Category: Other organic solids
Disposal Method: H141
Tons: 1.2
Facility County: San Bernardino

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14 **PREMIUM DISTRIBUTING SHOP** **San Bern. Co. Permit** **S105698247**
1457 S GAGE ST **N/A**
SAN BERNARDINO, CA 92408

San Bern. Co. Permit:
Region: SAN BERNARDINO
Facility ID: FA0007460
Owner: DAN MC KINNEY CO. INC.
Permit Number: PT0012688
Permit Category: SPECIAL GENERATOR(B)
Facility Status: INACTIVE
Expiration Date: 2006-05-31 00:00:00

Region: SAN BERNARDINO
Facility ID: FA0007460
Owner: DAN MC KINNEY CO. INC.
Permit Number: PT0012687
Permit Category: SPECIAL HANDLER
Facility Status: INACTIVE
Expiration Date: 2006-05-31 00:00:00

MAP FINDINGS

Map ID / Direction / Distance / Distance (ft.)	Site	Database(s)	EDR ID Number / EPA ID Number
14	**ENVIRONMENTAL MANAGEMENT TECHNOLOGIES, INC.** **1456 GAGE STREET** **SAN BERNARDINO, CA 92408**	**HWT**	**S109466910** **N/A**

HWT:
Reg Num: 3900
Expiration Date: 2/28/2011

14	**ENVIRONMENTAL MNGMT TECHNOLOGIES INC** **1456 S GAGE ST** **SAN BERNARDINO, CA 92408**	**RCRA-NonGen**	**1010314216** **CAR000183574**

RCRA-NonGen:

Date form received by agency:	04/23/2007
Facility name:	ENVIRONMENTAL MNGMT TECHNOLOGIES INC
Facility address:	1456 S GAGE ST SAN BERNARDINO, CA 92408
EPA ID:	CAR000183574
Mailing address:	PO BOX 5307 SAN BERNARDINO, CA 92412 5307
Contact:	MICHAEL J KELLY
Contact address:	PO BOX 5307 SAN BERNARDINO, CA 92412 5307
Contact country:	US
Contact telephone:	800-579-6834
Contact email:	Not reported
EPA Region:	09
Classification:	Non-Generator
Description:	Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name:	TIM MUNRO MIKE KELLY
Owner/operator address:	Not reported Not reported
Owner/operator country:	Not reported
Owner/operator telephone:	Not reported
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	01/28/2004
Owner/Op end date:	Not reported

Owner/operator name:	TIM MUNRO MIKE KELLY
Owner/operator address:	Not reported Not reported
Owner/operator country:	Not reported
Owner/operator telephone:	Not reported
Legal status:	Private
Owner/Operator Type:	Operator
Owner/Op start date:	01/28/2004
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	Yes

MAP FINDINGS

Map ID / Direction / Distance / Distance (ft.)	Site	Database(s)	EDR ID Number / EPA ID Number

ENVIRONMENTAL MNGMT TECHNOLOGIES INC (Continued) **1010314216**

Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No
Off-site waste receiver:	Commercial status unknown

Violation Status: No violations found

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14 **WESTCRAFT SHUTTERS MANUF CO.** **San Bern. Co. Permit** **S106803306**
1417 S GAGE ST **HAZNET** **N/A**
SAN BERNARDINO, CA 92408

San Bern. Co. Permit:

Region:	SAN BERNARDINO
Facility ID:	FA0012671
Owner:	MCNULTY, TIM
Permit Number:	PT0022076
Permit Category:	HAZMAT HANDLER 0-10 EMPLOYEES
Facility Status:	ACTIVE
Expiration Date:	2011-07-31 00:00:00

Region:	SAN BERNARDINO
Facility ID:	FA0012671
Owner:	MCNULTY, TIM
Permit Number:	PT0022077
Permit Category:	LIMITED QUANTITY GENERATOR(B)
Facility Status:	ACTIVE
Expiration Date:	2011-07-31 00:00:00

Region:	SAN BERNARDINO
Facility ID:	FA0009478
Owner:	SELLARS, MATT & MCNULTY, TIM
Permit Number:	PT0016200
Permit Category:	HAZMAT HANDLER 0-10 EMPLOYEES
Facility Status:	INACTIVE
Expiration Date:	2006-02-28 00:00:00

HAZNET:

Gepaid:	CAL000345903
Contact:	TIM MCNULTY
Telephone:	9097961788
Facility Addr2:	Not reported
Mailing Name:	Not reported
Mailing Address:	1417 S GAGE ST
Mailing City,St,Zip:	SAN BERNARDINO, CA 924082835
Gen County:	San Bernardino
TSD EPA ID:	CAD028409019
TSD County:	Los Angeles
Waste Category:	Paint sludge
Disposal Method:	H061
Tons:	0.6255

MAP FINDINGS

Map ID / Direction / Distance / Distance (ft.)	Site	Database(s)	EDR ID Number / EPA ID Number

WESTCRAFT SHUTTERS MANUF CO. (Continued) **S106803306**

Facility County: San Bernardino

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14 **GONAZALES PAINTING CORP** **San Bern. Co. Permit** **S106718493**
920 E COOLEY AVE G **N/A**
SAN BERNARDINO, CA 92408

San Bern. Co. Permit:
Region: SAN BERNARDINO
Facility ID: FA0009293
Owner: GONZALES PAINTING CORP
Permit Number: PT0015878
Permit Category: HAZMAT HANDLER 26-50 EMPLOYEES (W/GEN PRMT)
Facility Status: INACTIVE
Expiration Date: 2009-09-30 00:00:00

Region: SAN BERNARDINO
Facility ID: FA0009293
Owner: GONZALES PAINTING CORP
Permit Number: PT0015879
Permit Category: GENERATOR - 26-50 EMPLOYEES
Facility Status: INACTIVE
Expiration Date: 2009-09-30 00:00:00

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14 **LIQUID VACUUM** **San Bern. Co. Permit** **S105724290**
1405 S GAGE ST **HAZNET** **N/A**
SAN BERNARDINO, CA 92408

San Bern. Co. Permit:
Region: SAN BERNARDINO
Facility ID: FA0009477
Owner: GREEN, DON
Permit Number: PT0016199
Permit Category: LIMITED QUANTITY GENERATOR(B)
Facility Status: ACTIVE
Expiration Date: 2011-02-28 00:00:00

Region: SAN BERNARDINO
Facility ID: FA0009477
Owner: GREEN, DON
Permit Number: PT0022684
Permit Category: HAZMAT HANDLER 0-10 EMPLOYEES
Facility Status: ACTIVE
Expiration Date: 2010-02-28 00:00:00

HAZNET:
Gepaid: CAL000206168
Contact: DON GREEN/OWNER
Telephone: 9097997479
Facility Addr2: Not reported
Mailing Name: Not reported
Mailing Address: 1405 S GAGE STREET
Mailing City,St,Zip: SAN BERNARDINO, CA 924082835
Gen County: San Bernardino
TSD EPA ID: Not reported
TSD County: Orange
Waste Category: Liquids with halogenated organic compounds > 1000 mg/l

MAP FINDINGS

Map ID / Direction / Distance / Distance (ft.)	Site	Database(s)	EDR ID Number / EPA ID Number

LIQUID VACUUM (Continued) **S105724290**

Disposal Method: Transfer Station
Tons: 0.1
Facility County: Not reported

---

15 **S AND G ROOFING SUPPLY IN** **HIST CORTESE** **S102436129**
1444 TIPPECANOE **LUST** **N/A**
SAN BERNARDINO, CA 92408

CORTESE:
Region: CORTESE
Facility County Code: 36
Reg By: LTNKA
Reg Id: 083601727T

LUST:
Region: STATE
Global Id: T0607100204
Latitude: 34.0740361
Longitude: -117.259953
Case Type: LUST Cleanup Site
Status: Completed - Case Closed
Status Date: 1996-03-06 00:00:00
Lead Agency: SAN BERNARDINO COUNTY LOP
Case Worker: BM7
Local Agency: Not reported
RB Case Number: 083601727T
LOC Case Number: 90141
File Location: Local Agency
Potential Media Affect: Soil
Potential Contaminants of Concern: Gasoline
Site History: Not reported

Click here to access the California GeoTracker records for this facility:

LUST REG 8:
Region: 8
County: San Bernardino
Regional Board: Santa Ana Region
Facility Status: Case Closed
Case Number: 083601727T
Local Case Num: 90141
Case Type: Soil only
Substance: Unleaded Gasoline
Qty Leaked: Not reported
Abate Method: Not reported
Cross Street: VICTORIA
Enf Type: CLOS
Funding: Not reported
How Discovered: Tank Closure
How Stopped: Not reported
Leak Cause: UNK
Leak Source: UNK
Global ID: T0607100204
How Stopped Date: 8/31/1990
Enter Date: 12/16/1990
Review Date: 8/31/1990
Prelim Assess: 11/28/1990

MAP FINDINGS

Map ID / Direction / Distance / Distance (ft.)	Site	Database(s)	EDR ID Number / EPA ID Number

S AND G ROOFING SUPPLY IN (Continued) **S102436129**

Discover Date:	8/31/1990
Enforcement Date:	1/1/1965
Close Date:	3/6/1996
Workplan:	11/28/1990
Pollution Char:	Not reported
Remed Plan:	Not reported
Remed Action:	Not reported
Monitoring:	Not reported
Enter Date:	12/16/1990
GW Qualifies:	Not reported
Soil Qualifies:	Not reported
Operator:	Not reported
Facility Contact:	Not reported
Interim:	Not reported
Oversite Program:	LUST
Latitude:	34.0740361
Longitude:	-117.259953
MTBE Date:	Not reported
Max MTBE GW:	Not reported
MTBE Concentration:	0
Max MTBE Soil:	Not reported
MTBE Fuel:	1
MTBE Tested:	Site NOT Tested for MTBE.Includes Unknown and Not Analyzed.
MTBE Class:	*
Staff:	VJJ
Staff Initials:	BM7
Lead Agency:	Local Agency
Local Agency:	36000L
Hydr Basin #:	UPPER SANTA ANA VALL
Beneficial:	Not reported
Priority:	Not reported
Cleanup Fund Id:	Not reported
Work Suspended:	Not reported
Summary:	DIESEL ALSO

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16 **MERIDIAN RAIL SERVICES** **San Bern. Co. Permit** **S106092684**
1475 COOLEY CT **HAZNET** **N/A**
SAN BERNARDINO, CA 92408

San Bern. Co. Permit:

Region:	SAN BERNARDINO
Facility ID:	FA0009611
Owner:	THE GREENBRIER COMPANIES
Permit Number:	PT0016446
Permit Category:	HAZMAT HANDLER 26-50 EMPLOYEES (W/GEN PRMT)
Facility Status:	ACTIVE
Expiration Date:	2011-05-31 00:00:00

Region:	SAN BERNARDINO
Facility ID:	FA0009611
Owner:	THE GREENBRIER COMPANIES
Permit Number:	PT0021561
Permit Category:	GENERATOR - 26-50 EMPLOYEES
Facility Status:	ACTIVE
Expiration Date:	2011-05-31 00:00:00

Region:	SAN BERNARDINO
Facility ID:	FA0009611

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number

MERIDIAN RAIL SERVICES (Continued) **S106092684**

Owner: THE GREENBRIER COMPANIES
Permit Number: PT0021562
Permit Category: ABOVEGROUND PETROLEUM STORAGE (AST) (SPCC)
Facility Status: INACTIVE
Expiration Date: 2010-05-31 00:00:00

HAZNET:
Gepaid: CAL000234987
Contact: THOMAS PORTER
Telephone: 9094780541
Facility Addr2: Not reported
Mailing Name: Not reported
Mailing Address: 1475 COOLEY CT
Mailing City,St,Zip: SAN BERNARDINO, CA 924080000
Gen County: San Bernardino
TSD EPA ID: Not reported
TSD County: Los Angeles
Waste Category: Other organic solids
Disposal Method: Transfer Station
Tons: 1.50
Facility County: Not reported

Gepaid: CAL000234987
Contact: THOMAS PORTER
Telephone: 9094780541
Facility Addr2: Not reported
Mailing Name: Not reported
Mailing Address: 1475 COOLEY CT
Mailing City,St,Zip: SAN BERNARDINO, CA 924080000
Gen County: San Bernardino
TSD EPA ID: Not reported
TSD County: 99
Waste Category: Other organic solids
Disposal Method: Not reported
Tons: 0.75
Facility County: Not reported

Gepaid: CAL000234987
Contact: THOMAS PORTER
Telephone: 9094780541
Facility Addr2: Not reported
Mailing Name: Not reported
Mailing Address: 1475 COOLEY CT
Mailing City,St,Zip: SAN BERNARDINO, CA 924080000
Gen County: San Bernardino
TSD EPA ID: Not reported
TSD County: 99
Waste Category: Other organic solids
Disposal Method: Disposal, Land Fill
Tons: 2.47
Facility County: Not reported

Gepaid: CAL000234987
Contact: THOMAS PORTER
Telephone: 9094780541
Facility Addr2: Not reported
Mailing Name: Not reported

MAP FINDINGS

Map ID / Direction / Distance / Distance (ft.)	Site	Database(s)	EDR ID Number / EPA ID Number

MERIDIAN RAIL SERVICES (Continued) **S106092684**

Mailing Address: 1475 COOLEY CT
Mailing City,St,Zip: SAN BERNARDINO, CA 924080000
Gen County: San Bernardino
TSD EPA ID: CAT080025711
TSD County: San Bernardino
Waste Category: Waste oil and mixed oil
Disposal Method: Not reported
Tons: 1.29
Facility County: Not reported

Gepaid: CAL000234987
Contact: FRANK GALARZA/MAINT/EHS FOREMA
Telephone: 9094780541
Facility Addr2: Not reported
Mailing Name: Not reported
Mailing Address: 1475 COOLEY CT
Mailing City,St,Zip: SAN BERNARDINO, CA 924080000
Gen County: San Bernardino
TSD EPA ID: NVT330010000
TSD County: 99
Waste Category: Other organic solids
Disposal Method: H132
Tons: 11.675
Facility County: San Bernardino

Click this hyperlink while viewing on your computer to access
6 additional CA_HAZNET: record(s) in the EDR Site Report.

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16 **CET SAN BERNARDINO** **San Bern. Co. Permit** **S104578017**
1430 COOLEY CT **HAZNET** **N/A**
SAN BERNARDINO, CA 92408

San Bern. Co. Permit:
Region: SAN BERNARDINO
Facility ID: FA0013157
Owner: CENTER FOR EMPLOYMENT TRAINING
Permit Number: PT0023152
Permit Category: LIMITED QUANTITY GENERATOR(B)
Facility Status: ACTIVE
Expiration Date: 2011-05-31 00:00:00

Region: SAN BERNARDINO
Facility ID: FA0013157
Owner: CENTER FOR EMPLOYMENT TRAINING
Permit Number: PT0023151
Permit Category: HAZMAT HANDLER 11-25 EMPLOYEES
Facility Status: ACTIVE
Expiration Date: 2011-05-31 00:00:00

Region: SAN BERNARDINO
Facility ID: FA0004179
Owner: JP TECHOLOGIES
Permit Number: PT0005578
Permit Category: GENERATOR - 51-100 EMPLOYEES
Facility Status: INACTIVE
Expiration Date: 2003-04-30 00:00:00

Region: SAN BERNARDINO

MAP FINDINGS

Map ID / Direction / Distance / Distance (ft.)	Site	Database(s)	EDR ID Number / EPA ID Number
	CET SAN BERNARDINO (Continued)		**S104578017**

Facility ID: FA0004179
Owner: JP TECHOLOGIES
Permit Number: PT0005577
Permit Category: HAZMAT HANDLER 51-100 EMPLOYEES (W/GEN PRMT)
Facility Status: INACTIVE
Expiration Date: 2003-04-30 00:00:00

HAZNET:

Gepaid: CAL000105326
Contact: SENSORTRONICS
Telephone: 8183310502
Facility Addr2: Not reported
Mailing Name: Not reported
Mailing Address: 1430 COOLEY CT
Mailing City,St,Zip: SAN BERNARDINO, CA 924082830
Gen County: San Bernardino
TSD EPA ID: CAD008488025
TSD County: Los Angeles
Waste Category: Liquids with pH <UN-> 2 with metals
Disposal Method: Treatment, Tank
Tons: .9172
Facility County: San Bernardino

Gepaid: CAL000105326
Contact: SENSORTRONICS
Telephone: 8183310502
Facility Addr2: Not reported
Mailing Name: Not reported
Mailing Address: 1430 COOLEY CT
Mailing City,St,Zip: SAN BERNARDINO, CA 924082830
Gen County: San Bernardino
TSD EPA ID: CAD093459485
TSD County: Fresno
Waste Category: Photochemicals/photoprocessing waste
Disposal Method: Recycler
Tons: .0625
Facility County: San Bernardino

Gepaid: CAL000105326
Contact: SENSORTRONICS
Telephone: 8183310502
Facility Addr2: Not reported
Mailing Name: Not reported
Mailing Address: 1430 COOLEY CT
Mailing City,St,Zip: SAN BERNARDINO, CA 924082830
Gen County: San Bernardino
TSD EPA ID: CAD008488025
TSD County: Los Angeles
Waste Category: Liquids with pH <UN-> 2 with metals
Disposal Method: Treatment, Tank
Tons: 2.9813
Facility County: San Bernardino

Gepaid: CAL000105326
Contact: SENSORTRONICS
Telephone: 8183310502
Facility Addr2: Not reported

MAP FINDINGS

Map ID / Direction / Distance / Distance (ft.)	Site	Database(s)	EDR ID Number / EPA ID Number

CET SAN BERNARDINO (Continued) **S104578017**

Mailing Name:	Not reported
Mailing Address:	1430 COOLEY CT
Mailing City,St,Zip:	SAN BERNARDINO, CA 924082830
Gen County:	San Bernardino
TSD EPA ID:	CAD050806850
TSD County:	Los Angeles
Waste Category:	Asbestos-containing waste
Disposal Method:	Transfer Station
Tons:	9.2708
Facility County:	San Bernardino

Gepaid:	CAL000105326
Contact:	SENSORTRONICS
Telephone:	8183310502
Facility Addr2:	Not reported
Mailing Name:	Not reported
Mailing Address:	1430 COOLEY CT
Mailing City,St,Zip:	SAN BERNARDINO, CA 924082830
Gen County:	San Bernardino
TSD EPA ID:	CAD050806850
TSD County:	Los Angeles
Waste Category:	Laboratory waste chemicals
Disposal Method:	Transfer Station
Tons:	0.13
Facility County:	San Bernardino

Click this hyperlink while viewing on your computer to access
5 additional CA_HAZNET: record(s) in the EDR Site Report.

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16 **J P TECHNOLOGIES INC** **RCRA-SQG** **1001967403**
1430 COOLEY CT **FINDS** **CAR000068635**
SAN BERNARDINO, CA 92408 **HAZNET**

RCRA-SQG:

Date form received by agency:	03/24/2000
Facility name:	J P TECHNOLOGIES INC
Facility address:	1430 COOLEY CT SAN BERNARDINO, CA 924082830
EPA ID:	CAR000068635
Contact:	WILLIAM SOLYLO
Contact address:	1430 COOLEY CT SAN BERNARDINO, CA 924082830
Contact country:	US
Contact telephone:	(909) 799-8000
Contact email:	Not reported
EPA Region:	09
Classification:	Small Small Quantity Generator
Description:	Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:

Owner/operator name:	SENSORTRONICS
Owner/operator address:	677 ARROW GRAND CR COVINA, CA 91722

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number

J P TECHNOLOGIES INC (Continued) **1001967403**

Owner/operator country: Not reported
Owner/operator telephone: (818) 331-0502
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): Unknown
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No
Off-site waste receiver: Verified to be non-commercial

Hazardous Waste Summary:
Waste code: D000
Waste name: Not Defined

Waste code: D001
Waste name: IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.

Waste code: D002
Waste name: A WASTE WHICH HAS A PH OF LESS THAN 2 OR GREATER THAN 12.5 IS CONSIDERED TO BE A CORROSIVE HAZARDOUS WASTE. SODIUM HYDROXIDE, A CAUSTIC SOLUTION WITH A HIGH PH, IS OFTEN USED BY INDUSTRIES TO CLEAN OR DEGREASE PARTS. HYDROCHLORIC ACID, A SOLUTION WITH A LOW PH, IS USED BY MANY INDUSTRIES TO CLEAN METAL PARTS PRIOR TO PAINTING. WHEN THESE CAUSTIC OR ACID SOLUTIONS BECOME CONTAMINATED AND MUST BE DISPOSED, THE WASTE WOULD BE A CORROSIVE HAZARDOUS WASTE.

Waste code: D009
Waste name: MERCURY

Waste code: D011
Waste name: SILVER

Waste code: D039
Waste name: TETRACHLOROETHYLENE

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number

J P TECHNOLOGIES INC (Continued) **1001967403**

Waste code: F003
Waste name: THE FOLLOWING SPENT NON-HALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NON-HALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NON-HALOGENATED SOLVENTS, AND, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005, AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Waste code: F005
Waste name: THE FOLLOWING SPENT NON-HALOGENATED SOLVENTS: TOLUENE, METHYL ETHYL KETONE, CARBON DISULFIDE, ISOBUTANOL, PYRIDINE, BENZENE, 2-ETHOXYETHANOL, AND 2-NITROPROPANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE NON-HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F002, OR F004; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Violation Status: No violations found

FINDS:

Registry ID: 110002934193

Environmental Interest/Information System
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

HAZNET:

Gepaid: CAR000068635
Contact: J P TECHNOLOGIES INC
Telephone: 0000000000
Facility Addr2: Not reported
Mailing Name: Not reported
Mailing Address: 1430 COOLEY CT
Mailing City,St,Zip: SAN BERNARDINO, CA 924080000
Gen County: San Bernardino
TSD EPA ID: CAD008488025
TSD County: Los Angeles
Waste Category: Liquids with pH <UN-> 2 with metals
Disposal Method: Treatment, Tank
Tons: 3.4401
Facility County: San Bernardino

Gepaid: CAR000068635
Contact: J P TECHNOLOGIES INC
Telephone: 0000000000
Facility Addr2: Not reported
Mailing Name: Not reported

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number

J P TECHNOLOGIES INC (Continued) **1001967403**

Mailing Address: 1430 COOLEY CT
Mailing City,St,Zip: SAN BERNARDINO, CA 924080000
Gen County: San Bernardino
TSD EPA ID: CAD093459485
TSD County: Fresno
Waste Category: Photochemicals/photoprocessing waste
Disposal Method: Recycler
Tons: .1250
Facility County: San Bernardino

Gepaid: CAR000068635
Contact: J P TECHNOLOGIES INC
Telephone: 0000000000
Facility Addr2: Not reported
Mailing Name: Not reported
Mailing Address: 1430 COOLEY CT
Mailing City,St,Zip: SAN BERNARDINO, CA 924080000
Gen County: San Bernardino
TSD EPA ID: CAT000613976
TSD County: Orange
Waste Category: Hydrocarbon solvents (benzene, hexane, Stoddard, etc.)
Disposal Method: Transfer Station
Tons: .0708
Facility County: San Bernardino

Gepaid: CAR000068635
Contact: J P TECHNOLOGIES INC
Telephone: 0000000000
Facility Addr2: Not reported
Mailing Name: Not reported
Mailing Address: 1430 COOLEY CT
Mailing City,St,Zip: SAN BERNARDINO, CA 924080000
Gen County: San Bernardino
TSD EPA ID: CAD050806850
TSD County: Los Angeles
Waste Category: Laboratory waste chemicals
Disposal Method: Transfer Station
Tons: .0125
Facility County: San Bernardino

Gepaid: CAR000068635
Contact: J P TECHNOLOGIES INC
Telephone: 0000000000
Facility Addr2: Not reported
Mailing Name: Not reported
Mailing Address: 1430 COOLEY CT
Mailing City,St,Zip: SAN BERNARDINO, CA 924080000
Gen County: San Bernardino
TSD EPA ID: CAD050806850
TSD County: Los Angeles
Waste Category: Laboratory waste chemicals
Disposal Method: Treatment, Tank
Tons: .1100
Facility County: San Bernardino

MAP FINDINGS

Map ID / Direction / Distance / Distance (ft.)	Site	Database(s)	EDR ID Number / EPA ID Number
	J P TECHNOLOGIES INC (Continued)		**1001967403**

Click this hyperlink while viewing on your computer to access
11 additional CA_HAZNET: record(s) in the EDR Site Report.

16	**GARNER HOLT PRODUCTIONS** **825 E COOLEY AVE** **SAN BERNARDINO, CA 92408**	**San Bern. Co. Permit** **HAZNET**	**S103886974** **N/A**

San Bern. Co. Permit:

Region:	SAN BERNARDINO
Facility ID:	FA0003408
Owner:	HOLT, GARNER
Permit Number:	PT0003862
Permit Category:	LIMITED QUANTITY GENERATOR(B)
Facility Status:	ACTIVE
Expiration Date:	2011-04-30 00:00:00

Region:	SAN BERNARDINO
Facility ID:	FA0003408
Owner:	HOLT, GARNER
Permit Number:	PT0003863
Permit Category:	HAZMAT HANDLER- 51-99 EMPLOYEES
Facility Status:	ACTIVE
Expiration Date:	2011-04-30 00:00:00

HAZNET:

Gepaid:	CAL000196759
Contact:	MICHELLE BERG - OPERATIONS MGR
Telephone:	9097993030
Facility Addr2:	Not reported
Mailing Name:	Not reported
Mailing Address:	825 EAST COOLEY AVENUE
Mailing City,St,Zip:	SAN BERNARDINO, CA 924080000
Gen County:	San Bernardino
TSD EPA ID:	CAT080033681
TSD County:	Los Angeles
Waste Category:	Unspecified aqueous solution
Disposal Method:	Disposal, Land Fill
Tons:	0.37
Facility County:	Not reported

Gepaid:	CAL000196759
Contact:	ELEANORA CLIFFORD-ASSISTANT VP
Telephone:	9097993030
Facility Addr2:	Not reported
Mailing Name:	Not reported
Mailing Address:	825 EAST COOLEY AVENUE
Mailing City,St,Zip:	SAN BERNARDINO, CA 924080000
Gen County:	San Bernardino
TSD EPA ID:	Not reported
TSD County:	99
Waste Category:	Waste oil and mixed oil
Disposal Method:	Not reported
Tons:	0.22
Facility County:	Not reported

Gepaid:	CAL000196759
Contact:	ELEANORA CLIFFORD-ASSISTANT VP

MAP FINDINGS

Map ID / Direction / Distance / Distance (ft.)	Site	Database(s)	EDR ID Number / EPA ID Number

GARNER HOLT PRODUCTIONS (Continued) **S103886974**

Telephone:	9097993030
Facility Addr2:	Not reported
Mailing Name:	Not reported
Mailing Address:	825 EAST COOLEY AVENUE
Mailing City,St,Zip:	SAN BERNARDINO, CA 924080000
Gen County:	San Bernardino
TSD EPA ID:	Not reported
TSD County:	99
Waste Category:	Waste oil and mixed oil
Disposal Method:	Recycler
Tons:	0.22
Facility County:	Not reported

Gepaid:	CAL000196759
Contact:	GARNER HOLT
Telephone:	0000000000
Facility Addr2:	Not reported
Mailing Name:	Not reported
Mailing Address:	825 COOLEY
Mailing City,St,Zip:	SAN BERNARDINO, CA 924080000
Gen County:	San Bernardino
TSD EPA ID:	CAD028409019
TSD County:	Los Angeles
Waste Category:	Unspecified organic liquid mixture
Disposal Method:	Treatment, Tank
Tons:	0.2293
Facility County:	San Bernardino

Gepaid:	CAL000196759
Contact:	GARNER HOLT
Telephone:	0000000000
Facility Addr2:	Not reported
Mailing Name:	Not reported
Mailing Address:	825 COOLEY
Mailing City,St,Zip:	SAN BERNARDINO, CA 924080000
Gen County:	San Bernardino
TSD EPA ID:	CAT080013352
TSD County:	Los Angeles
Waste Category:	Tank bottom waste
Disposal Method:	Recycler
Tons:	.2293
Facility County:	San Bernardino

Click this hyperlink while viewing on your computer to access
1 additional CA_HAZNET: record(s) in the EDR Site Report.

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17 **GROUND HOG INC.** **San Bern. Co. Permit** **S105159190**
1470 S VICTORIA CT **N/A**
SAN BERNARDINO, CA 92408

San Bern. Co. Permit:

Region:	SAN BERNARDINO
Facility ID:	FA0003574
Owner:	GROUND HOG INC.
Permit Number:	PT0001092
Permit Category:	HAZMAT HANDLER 0-10 EMPLOYEES
Facility Status:	ACTIVE
Expiration Date:	2011-01-31 00:00:00

MAP FINDINGS

Map ID / Direction / Distance / Distance (ft.)	Site	Database(s)	EDR ID Number / EPA ID Number

GROUND HOG INC. (Continued) **S105159190**

Region: SAN BERNARDINO
Facility ID: FA0003574
Owner: GROUND HOG INC.
Permit Number: PT0001091
Permit Category: LIMITED QUANTITY GENERATOR(B)
Facility Status: ACTIVE
Expiration Date: 2011-01-31 00:00:00

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17 **LIFE CARE SOLUTIONS, INC.** **San Bern. Co. Permit** **S106911125**
1440 S VICTORIA CT **N/A**
SAN BERNARDINO, CA 92408

San Bern. Co. Permit:
Region: SAN BERNARDINO
Facility ID: FA0010854
Owner: LIFE CARE SOLUTIONS, INC
Permit Number: PT0018651
Permit Category: HAZMAT HANDLER 0-10 EMPLOYEES
Facility Status: ACTIVE
Expiration Date: 2011-03-31 00:00:00

Region: SAN BERNARDINO
Facility ID: FA0006538
Owner: MHCS INC
Permit Number: PT0009705
Permit Category: HAZMAT HANDLER 0-10 EMPLOYEES
Facility Status: INACTIVE
Expiration Date: 2004-08-31 00:00:00

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18 **WATERMAN LANDFILL** **SWF/LF** **S102362065**
NE OF INTERSECTION OF WATERMAN & I-10 **N/A**
SAN BERNARDINO, CA

SWF/LF (SWIS):
Region: STATE
Facility ID: 36-CR-0059
Lat/Long: 34.07082 / -117.27276
Owner Name: Glenborough Corporation
Owner Telephone: Not reported
Owner Address: Not reported
Owner Address2: 27720 Jefferson Ave
Owner City,St,Zip: Temecula, CA 92390
Operator: Not reported
Operator Phone: Not reported
Operator Address: Not reported
Operator Address2: Not reported
Operator City,St,Zip: Not reported
Operator's Status: Closed
Permit Date: Not reported
Permit Status: Not reported
Permitted Acreage: Not reported
Activity: Solid Waste Disposal Site
Regulation Status: Pre-regulations
Landuse Name: Commercial
GIS Source: GPS
Category: Disposal

MAP FINDINGS

Map ID / Direction / Distance / Distance (ft.)	Site	Database(s)	EDR ID Number / EPA ID Number

WATERMAN LANDFILL (Continued) **S102362065**

Unit Number: 01
Inspection Frequency: Quarterly
Accepted Waste: Not reported
Closure Date: Not reported
Closure Type: 12/31/1960
Disposal Acreage: 0
SWIS Num: 36-CR-0059
Waste Discharge Requirement Num: Not reported
Program Type: 0
Permitted Throughput with Units: Estimated
Actual Throughput with Units: 0
Permitted Capacity with Units: Not reported
Remaining Capacity: 0
Remaining Capacity with Units: 0

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19 **STRUCTURAL MATERIALS COMPANY** **San Bern. Co. Permit** **S105698338**
1515 S WATERMAN AVE **N/A**
SAN BERNARDINO, CA 92408

San Bern. Co. Permit:
Region: SAN BERNARDINO
Facility ID: FA0007599
Owner: PRITCHARD, BILL
Permit Number: PT0013056
Permit Category: HAZMAT HANDLER 0-10 EMPLOYEES
Facility Status: ACTIVE
Expiration Date: 2011-08-31 00:00:00

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19 **ROOFER'S WHOLESALE SUPPLY** **San Bern. Co. Permit** **S102042197**
1515 S WATERMAN AVE **HAZNET** **N/A**
SAN BERNARDINO, CA 92408

San Bern. Co. Permit:
Region: SAN BERNARDINO
Facility ID: FA0005800
Owner: MASON, DOUGLAS ROLAND
Permit Number: PT0006394
Permit Category: SPECIAL HANDLER
Facility Status: INACTIVE
Expiration Date: 2002-11-30 00:00:00

Region: SAN BERNARDINO
Facility ID: FA0005800
Owner: MASON, DOUGLAS ROLAND
Permit Number: PT0006395
Permit Category: SPECIAL GENERATOR(B)
Facility Status: INACTIVE
Expiration Date: 2002-11-30 00:00:00

HAZNET:
Gepaid: CAL000216290
Contact: NEAL DIETZ - VP
Telephone: 9098843297
Facility Addr2: Not reported
Mailing Name: Not reported
Mailing Address: PO BOX 6044

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number

ROOFER'S WHOLESALE SUPPLY (Continued) **S102042197**

Mailing City,St,Zip:	SAN BERNARDINO, CA 924120000
Gen County:	San Bernardino
TSD EPA ID:	Not reported
TSD County:	99
Waste Category:	Not reported
Disposal Method:	Not reported
Tons:	16.85
Facility County:	Not reported

Gepaid:	CAL000216290
Contact:	NEAL DIETZ - VP
Telephone:	9098843297
Facility Addr2:	Not reported
Mailing Name:	Not reported
Mailing Address:	PO BOX 6044
Mailing City,St,Zip:	SAN BERNARDINO, CA 924120000
Gen County:	San Bernardino
TSD EPA ID:	Not reported
TSD County:	Los Angeles
Waste Category:	Unspecified solvent mixture Waste
Disposal Method:	Transfer Station
Tons:	0.40
Facility County:	Not reported

Gepaid:	CAL000216290
Contact:	NEAL DIETZ - VP
Telephone:	9098843297
Facility Addr2:	Not reported
Mailing Name:	Not reported
Mailing Address:	PO BOX 6044
Mailing City,St,Zip:	SAN BERNARDINO, CA 924120000
Gen County:	San Bernardino
TSD EPA ID:	Not reported
TSD County:	Los Angeles
Waste Category:	Adhesives
Disposal Method:	Transfer Station
Tons:	0.84
Facility County:	Not reported

Gepaid:	CAL000216290
Contact:	NEAL DIETZ - VP
Telephone:	9098843297
Facility Addr2:	Not reported
Mailing Name:	Not reported
Mailing Address:	PO BOX 6044
Mailing City,St,Zip:	SAN BERNARDINO, CA 924120000
Gen County:	San Bernardino
TSD EPA ID:	Not reported
TSD County:	Los Angeles
Waste Category:	Latex waste
Disposal Method:	Recycler
Tons:	0.22
Facility County:	Not reported

MAP FINDINGS

Map ID / Direction / Distance / Distance (ft.)	Site	Database(s)	EDR ID Number / EPA ID Number
19	**SAN BERNARDINO GOLF CLUB** **1494 S WATERMAN AVE** **SAN BERNARDINO, CA 92408**	**San Bern. Co. Permit** **HAZNET**	**S103369271** **N/A**

San Bern. Co. Permit:

Region:	SAN BERNARDINO
Facility ID:	FA0005891
Owner:	GROSSMAN, IVAN
Permit Number:	PT0004362
Permit Category:	HAZMAT HANDLER 0-10 EMPLOYEES
Facility Status:	ACTIVE
Expiration Date:	2011-04-30 00:00:00

Region:	SAN BERNARDINO
Facility ID:	FA0005891
Owner:	GROSSMAN, IVAN
Permit Number:	PT0004363
Permit Category:	SPECIAL GENERATOR(B)
Facility Status:	ACTIVE
Expiration Date:	2011-04-30 00:00:00

HAZNET:

Gepaid:	CAL000070084
Contact:	WALTER HAMMOND SUPERINTENDENT
Telephone:	9098852414
Facility Addr2:	Not reported
Mailing Name:	Not reported
Mailing Address:	1494 S WATERMAN AVE
Mailing City,St,Zip:	SAN BERNARDINO, CA 924082805
Gen County:	San Bernardino
TSD EPA ID:	CAD028409019
TSD County:	Los Angeles
Waste Category:	Other inorganic solid waste
Disposal Method:	Transfer Station
Tons:	1.25
Facility County:	Not reported

Gepaid:	CAL000070084
Contact:	WALTER HAMMOND SUPERINTENDENT
Telephone:	9098852414
Facility Addr2:	Not reported
Mailing Name:	Not reported
Mailing Address:	1494 S WATERMAN AVE
Mailing City,St,Zip:	SAN BERNARDINO, CA 924082805
Gen County:	San Bernardino
TSD EPA ID:	CAT080013352
TSD County:	San Bernardino
Waste Category:	Oil/water separation sludge
Disposal Method:	Recycler
Tons:	3.33
Facility County:	San Bernardino

Gepaid:	CAL000070084
Contact:	WALTER HAMMOND SUPERINTENDENT
Telephone:	9098852414
Facility Addr2:	Not reported
Mailing Name:	Not reported
Mailing Address:	1494 S WATERMAN AVE
Mailing City,St,Zip:	SAN BERNARDINO, CA 924082805

MAP FINDINGS

Map ID / Direction / Distance / Distance (ft.)	Site	Database(s)	EDR ID Number / EPA ID Number

SAN BERNARDINO GOLF CLUB (Continued) **S103369271**

Gen County: San Bernardino
TSD EPA ID: Not reported
TSD County: San Bernardino
Waste Category: Aqueous solution with less than 10% total organic residues
Disposal Method: Transfer Station
Tons: 0.07
Facility County: Not reported

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20 **DEXTER CHASSIS GROUP** **San Bern. Co. Permit** **S108214342**
1400 E VICTORIA AVE **HAZNET** **N/A**
SAN BERNARDINO, CA 92408 **HWP**

San Bern. Co. Permit:
Region: SAN BERNARDINO
Facility ID: FA0011314
Owner: DEXTER AXLE
Permit Number: PT0019549
Permit Category: GENERATOR - 51-100 EMPLOYEES
Facility Status: INACTIVE
Expiration Date: 2008-12-31 00:00:00

Region: SAN BERNARDINO
Facility ID: FA0011314
Owner: DEXTER AXLE
Permit Number: PT0019550
Permit Category: HAZMAT HANDLER 26-50 EMPLOYEES (W/GEN PRMT)
Facility Status: INACTIVE
Expiration Date: 2008-12-31 00:00:00

HAZNET:
Gepaid: CAL000220268
Contact: BRENDA LEVY
Telephone: 9094789121
Facility Addr2: Not reported
Mailing Name: Not reported
Mailing Address: 383 E 16TH ST
Mailing City,St,Zip: CHICAGO HEIGHTS, IL 604110000
Gen County: San Bernardino
TSD EPA ID: CAD981696420
TSD County: Los Angeles
Waste Category: Unspecified oil-containing waste
Disposal Method: Recycler
Tons: 0.68
Facility County: Not reported

Gepaid: CAL000316232
Contact: GARY KUNKLER
Telephone: 9097962908
Facility Addr2: Not reported
Mailing Name: Not reported
Mailing Address: 2900 INDUSTRIAL PKWY E
Mailing City,St,Zip: ELKHART, IN 465160000
Gen County: San Bernardino
TSD EPA ID: CAD008364432
TSD County: Los Angeles
Waste Category: Other organic solids
Disposal Method: H141

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number

DEXTER CHASSIS GROUP (Continued) **S108214342**

Tons: 0.0325
Facility County: San Bernardino

Gepaid: CAL000316232
Contact: GARY KUNKLER
Telephone: 9097962908
Facility Addr2: Not reported
Mailing Name: Not reported
Mailing Address: 2900 INDUSTRIAL PKWY E
Mailing City,St,Zip: ELKHART, IN 465160000
Gen County: San Bernardino
TSD EPA ID: CAD008364432
TSD County: Los Angeles
Waste Category: Unspecified oil-containing waste
Disposal Method: H141
Tons: 0.59
Facility County: San Bernardino

Gepaid: CAL000316232
Contact: GARY KUNKLER
Telephone: 9097962908
Facility Addr2: Not reported
Mailing Name: Not reported
Mailing Address: 2900 INDUSTRIAL PKWY E
Mailing City,St,Zip: ELKHART, IN 465160000
Gen County: San Bernardino
TSD EPA ID: CAD008364432
TSD County: Los Angeles
Waste Category: Waste oil and mixed oil
Disposal Method: H141
Tons: 0.209
Facility County: San Bernardino

Gepaid: CAL000316232
Contact: GARY KUNKLER
Telephone: 9097962908
Facility Addr2: Not reported
Mailing Name: Not reported
Mailing Address: 2900 INDUSTRIAL PKWY E
Mailing City,St,Zip: ELKHART, IN 465160000
Gen County: San Bernardino
TSD EPA ID: CAD008364432
TSD County: Los Angeles
Waste Category: Paint sludge
Disposal Method: H141
Tons: 2.48115
Facility County: San Bernardino

Click this hyperlink while viewing on your computer to access
3 additional CA_HAZNET: record(s) in the EDR Site Report.

HWP:
EPA Id: CAT000646190
Latitude: 34.074391
Longitude: -117.256162
Facility Type: HAZ WASTE - NON-OPERATING
Cleanup Status: Not reported

MAP FINDINGS

Map ID / Direction / Distance / Distance (ft.)	Site	Database(s)	EDR ID Number / EPA ID Number

DEXTER CHASSIS GROUP (Continued) **S108214342**

Region:	CYPRESS, GEOLOGY CAL SUPPORT
Permit Maintenance Lead:	Not reported
Permit Renewal Lead:	Not reported
Corrective Action Lead:	Not reported
Supervisor:	Not reported
Site Code:	Not reported
Assembly District:	Not reported
Senate District:	Not reported
Public Information Officer:	Not reported
Facility Status:	Not reported
Site History:	Not reported

HWP:

EPA Id:	CAT000646190
Unit Names:	CONTAIN1
Event Description:	Initial Submittal
Actual Date:	1980-11-19 00:00:00
Doc Comments:	Not reported
EPA Id:	CAT000646190
Unit Names:	CONTAIN1
Event Description:	Approved Request
Actual Date:	1981-08-04 00:00:00
Doc Comments:	Not reported

---

21 **ROOFERS ASPHALT EQUIPMENT CO.** **HIST UST** **1000228447**
9975 S. WATERMAN AVENUE **N/A**
SAN BERNARDINO, CA 92408

HIST UST:

Region:	STATE
Facility ID:	00000009884
Facility Type:	Other
Other Type:	SELL USED TRUCKS & E
Total Tanks:	0002
Contact Name:	Not reported
Telephone:	7148841275
Owner Name:	ROOFERS ASPHALT EQUIPMENT CO.
Owner Address:	9975 S. WATERMAN AVENUE
Owner City,St,Zip:	SAN BERNARDINO, CA 92408
Tank Num:	001
Container Num:	1-B
Year Installed:	1981
Tank Capacity:	00006000
Tank Used for:	PRODUCT
Type of Fuel:	UNLEADED
Tank Construction:	Not reported
Leak Detection:	Visual
Tank Num:	002
Container Num:	1-A
Year Installed:	1969
Tank Capacity:	00010000
Tank Used for:	PRODUCT
Type of Fuel:	DIESEL
Tank Construction:	Not reported

MAP FINDINGS

Map ID / Direction / Distance / Distance (ft.)	Site	Database(s)	EDR ID Number / EPA ID Number
	ROOFERS ASPHALT EQUIPMENT CO. (Continued)		**1000228447**

Leak Detection: Visual

21	**ROOFERS WHOLESALE SUPPLY CO IN** **9973 S WATERMAN AV** **SAN BERNARDINO, CA 92408**	**CA FID UST** **SWEEPS UST** **EMI**	**S101591027** **N/A**

CA FID UST:

Facility ID:	36000876
Regulated By:	UTNKA
Regulated ID:	00009884
Cortese Code:	Not reported
SIC Code:	Not reported
Facility Phone:	Not reported
Mail To:	Not reported
Mailing Address:	9973 S WATERMAN AVE
Mailing Address 2:	Not reported
Mailing City,St,Zip:	SAN BERNARDINO 92408
Contact:	Not reported
Contact Phone:	Not reported
DUNs Number:	Not reported
NPDES Number:	Not reported
EPA ID:	Not reported
Comments:	Not reported
Status:	Active

SWEEPS UST:

Status:	A
Comp Number:	9884
Number:	9
Board Of Equalization:	Not reported
Ref Date:	03-24-92
Act Date:	03-24-92
Created Date:	02-29-88
Tank Status:	A
Owner Tank Id:	1-B
Swrcb Tank Id:	36-000-009884-000001
Actv Date:	08-25-88
Capacity:	6000
Tank Use:	M.V. FUEL
Stg:	P
Content:	REG UNLEADED
Number Of Tanks:	2

Status:	A
Comp Number:	9884
Number:	9
Board Of Equalization:	Not reported
Ref Date:	03-24-92
Act Date:	03-24-92
Created Date:	02-29-88
Tank Status:	A
Owner Tank Id:	1-A
Swrcb Tank Id:	36-000-009884-000002
Actv Date:	08-25-88
Capacity:	10000
Tank Use:	M.V. FUEL
Stg:	P

MAP FINDINGS

Map ID / Direction / Distance / Distance (ft.)	Site	Database(s)	EDR ID Number / EPA ID Number

ROOFERS WHOLESALE SUPPLY CO IN (Continued) **S101591027**

Content: DIESEL
Number Of Tanks: Not reported

EMI:

Year:	1987
County Code:	36
Air Basin:	SC
Facility ID:	88
Air District Name:	SC
SIC Code:	5199
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	0
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0

Year:	1990
County Code:	36
Air Basin:	SC
Facility ID:	88
Air District Name:	SC
SIC Code:	5033
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	0
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0

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22 **FERGS** **HIST UST** **U001576046**
9539 S. WATERMAN AVE. **N/A**
SAN BERNARDINO, CA 92408

HIST UST:

Region:	STATE
Facility ID:	00000046038
Facility Type:	Gas Station
Other Type:	Not reported
Total Tanks:	0003
Contact Name:	Not reported
Telephone:	7143813795
Owner Name:	MONGKHON VIRIYAPANTHU
Owner Address:	9539 S. WATERMAN AVE.
Owner City,St,Zip:	SAN BERNARDINO, CA 92408

Tank Num:	001
Container Num:	1
Year Installed:	Not reported

MAP FINDINGS

Map ID / Direction / Distance / Distance (ft.)	Site	Database(s)	EDR ID Number / EPA ID Number

FERGS (Continued) **U001576046**

Tank Capacity: 00007500
Tank Used for: PRODUCT
Type of Fuel: UNLEADED
Tank Construction: Not reported
Leak Detection: Pressure Test

Tank Num: 002
Container Num: 2
Year Installed: Not reported
Tank Capacity: 00007500
Tank Used for: PRODUCT
Type of Fuel: PREMIUM
Tank Construction: Not reported
Leak Detection: Pressure Test

Tank Num: 003
Container Num: 3
Year Installed: Not reported
Tank Capacity: 00007500
Tank Used for: PRODUCT
Type of Fuel: REGULAR
Tank Construction: Not reported
Leak Detection: Pressure Test

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22 **TEXACO** **CA FID UST** **S101591399**
9539 S WATERMAN AVE **SWEEPS UST** **N/A**
SAN BERNARDINO, CA 92408

CA FID UST:
Facility ID: 36006184
Regulated By: UTNKA
Regulated ID: 00046038
Cortese Code: Not reported
SIC Code: Not reported
Facility Phone: Not reported
Mail To: Not reported
Mailing Address: 11244 ROSARITA
Mailing Address 2: Not reported
Mailing City,St,Zip: SAN BERNARDINO 92408
Contact: Not reported
Contact Phone: Not reported
DUNs Number: Not reported
NPDES Number: Not reported
EPA ID: Not reported
Comments: Not reported
Status: Active

SWEEPS UST:
Status: A
Comp Number: 46038
Number: 9
Board Of Equalization: 44-021076
Ref Date: 11-11-91
Act Date: 07-28-92
Created Date: 02-29-88
Tank Status: A
Owner Tank Id: 1

MAP FINDINGS

Map ID / Direction / Distance / Distance (ft.)	Site	Database(s)	EDR ID Number / EPA ID Number

TEXACO (Continued) **S101591399**

Swrcb Tank Id:	36-000-046038-000001
Actv Date:	08-25-88
Capacity:	7500
Tank Use:	M.V. FUEL
Stg:	P
Content:	REG UNLEADED
Number Of Tanks:	3
Status:	A
Comp Number:	46038
Number:	9
Board Of Equalization:	44-021076
Ref Date:	11-11-91
Act Date:	07-28-92
Created Date:	02-29-88
Tank Status:	A
Owner Tank Id:	2
Swrcb Tank Id:	36-000-046038-000002
Actv Date:	08-25-88
Capacity:	7500
Tank Use:	M.V. FUEL
Stg:	P
Content:	REG UNLEADED
Number Of Tanks:	Not reported
Status:	A
Comp Number:	46038
Number:	9
Board Of Equalization:	44-021076
Ref Date:	11-11-91
Act Date:	07-28-92
Created Date:	02-29-88
Tank Status:	A
Owner Tank Id:	3
Swrcb Tank Id:	36-000-046038-000003
Actv Date:	08-25-88
Capacity:	7500
Tank Use:	M.V. FUEL
Stg:	P
Content:	LEADED
Number Of Tanks:	Not reported

---

22 **LEONARD OJENA** **CA FID UST** **S101591018**
9501 S WATERMAN **SWEEPS UST** **N/A**
SAN BERNARDINO, CA 92408

CA FID UST:

Facility ID:	36000813
Regulated By:	UTNKA
Regulated ID:	Not reported
Cortese Code:	Not reported
SIC Code:	Not reported
Facility Phone:	Not reported
Mail To:	Not reported
Mailing Address:	24129 NORMAN DR
Mailing Address 2:	Not reported
Mailing City,St,Zip:	SAN BERNARDINO 92408
Contact:	Not reported

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number
	LEONARD OJENA (Continued)		**S101591018**

Contact Phone: Not reported
DUNs Number: Not reported
NPDES Number: Not reported
EPA ID: Not reported
Comments: Not reported
Status: Active

SWEEPS UST:
Status: Not reported
Comp Number: 10557
Number: Not reported
Board Of Equalization: 44-020284
Ref Date: Not reported
Act Date: Not reported
Created Date: Not reported
Tank Status: Not reported
Owner Tank Id: Not reported
Swrcb Tank Id: 36-000-010557-000001
Actv Date: Not reported
Capacity: 1
Tank Use: UNKNOWN
Stg: PRODUCT
Content: UNKNOWN
Number Of Tanks: 3

Status: Not reported
Comp Number: 10557
Number: Not reported
Board Of Equalization: 44-020284
Ref Date: Not reported
Act Date: Not reported
Created Date: Not reported
Tank Status: Not reported
Owner Tank Id: Not reported
Swrcb Tank Id: 36-000-010557-000002
Actv Date: Not reported
Capacity: 1
Tank Use: UNKNOWN
Stg: PRODUCT
Content: UNKNOWN
Number Of Tanks: Not reported

Status: Not reported
Comp Number: 10557
Number: Not reported
Board Of Equalization: 44-020284
Ref Date: Not reported
Act Date: Not reported
Created Date: Not reported
Tank Status: Not reported
Owner Tank Id: Not reported
Swrcb Tank Id: 36-000-010557-000003
Actv Date: Not reported
Capacity: 1
Tank Use: UNKNOWN
Stg: PRODUCT
Content: UNKNOWN

MAP FINDINGS

Map ID / Direction / Distance / Distance (ft.)	Site	Database(s)	EDR ID Number / EPA ID Number
	LEONARD OJENA (Continued)		**S101591018**

Number Of Tanks: Not reported

23	**ITT TECHNICAL INSTITUTE** **630 E BRIER DR STE 160** **SAN BERNARDINO, CA 92408**	**San Bern. Co. Permit**	**S105698227** **N/A**

San Bern. Co. Permit:
Region: SAN BERNARDINO
Facility ID: FA0004021
Owner: ITT EDUCATIONAL SERVICES INC
Permit Number: PT0008809
Permit Category: SPECIAL HANDLER
Facility Status: INACTIVE
Expiration Date: 2005-08-31 00:00:00

Region: SAN BERNARDINO
Facility ID: FA0004021
Owner: ITT EDUCATIONAL SERVICES INC
Permit Number: PT0008810
Permit Category: SPECIAL GENERATOR(B)
Facility Status: INACTIVE
Expiration Date: 2005-08-31 00:00:00

24	**VERIZON-SMART PARK** **401 VANDERBILT WAY** **SAN BERNARDINO, CA 92410**	**San Bern. Co. Permit**	**S104905613** **N/A**

San Bern. Co. Permit:
Region: SAN BERNARDINO
Facility ID: FA0003581
Owner: VERIZON CALIFORNIA, INC.
Permit Number: PT0008240
Permit Category: HAZMAT HANDLER 0-10 EMPLOYEES
Facility Status: ACTIVE
Expiration Date: 2011-04-30 00:00:00

24	**SB CITY FIRE STATION #231** **450 E VANDERBILT WAY** **SAN BERNARDINO, CA 92408**	**San Bern. Co. Permit** **HAZNET**	**S108202341** **N/A**

San Bern. Co. Permit:
Region: SAN BERNARDINO
Facility ID: FA0002088
Owner: SAN BERNARDINO CITY FIRE DEPT
Permit Number: PT0010994
Permit Category: UST OWNERSHIP/OPERATING PERMIT (PER UST)
Facility Status: ACTIVE
Expiration Date: 2011-07-31 00:00:00

Region: SAN BERNARDINO
Facility ID: FA0002088
Owner: SAN BERNARDINO CITY FIRE DEPT
Permit Number: PT0021104
Permit Category: EPCRA FACILITY
Facility Status: ACTIVE

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number

SB CITY FIRE STATION #231 (Continued) **S108202341**

Expiration Date: 2011-07-31 00:00:00

Region: SAN BERNARDINO
Facility ID: FA0002088
Owner: SAN BERNARDINO CITY FIRE DEPT
Permit Number: PT0004148
Permit Category: HAZMAT HANDLER 0-10 EMPLOYEES
Facility Status: ACTIVE
Expiration Date: 2011-07-31 00:00:00

Region: SAN BERNARDINO
Facility ID: FA0002088
Owner: SAN BERNARDINO CITY FIRE DEPT
Permit Number: PT0021103
Permit Category: UST OWNERSHIP/OPERATING PERMIT (PER UST)
Facility Status: INACTIVE
Expiration Date: 2010-07-31 00:00:00

Region: SAN BERNARDINO
Facility ID: FA0002088
Owner: SAN BERNARDINO CITY FIRE DEPT
Permit Number: PT0018811
Permit Category: ABOVEGROUND PETROLEUM STORAGE (AST) (SPCC)
Facility Status: INACTIVE
Expiration Date: 2008-07-31 00:00:00

HAZNET:
Gepaid: CAC002625536
Contact: JUDY CROTEAU
Telephone: 9093845388
Facility Addr2: Not reported
Mailing Name: Not reported
Mailing Address: 450 E VANDERBILT WAY
Mailing City,St,Zip: SAN BERNARDINO, CA 924083552
Gen County: San Bernardino
TSD EPA ID: CAT080013352
TSD County: Los Angeles
Waste Category: Oil/water separation sludge
Disposal Method: H039
Tons: 1.0425
Facility County: San Bernardino

Gepaid: CAC002600932
Contact: JUDY CROTEAU
Telephone: 9098443321
Facility Addr2: Not reported
Mailing Name: Not reported
Mailing Address: 200 E 3RD ST
Mailing City,St,Zip: SAN BERNARDINO, CA 92410
Gen County: San Bernardino
TSD EPA ID: CAT080013352
TSD County: Los Angeles
Waste Category: Oil/water separation sludge
Disposal Method: Recycler
Tons: 1.04
Facility County: San Bernardino

MAP FINDINGS

Map ID / Direction / Distance / Distance (ft.)	Site	Database(s)	EDR ID Number / EPA ID Number

SB CITY FIRE STATION #231 (Continued) **S108202341**

Gepaid:	CAC002586538
Contact:	DOUGLAS DEPREE/FIRE MARSHALL
Telephone:	9093845388
Facility Addr2:	Not reported
Mailing Name:	Not reported
Mailing Address:	200 E 3RD ST
Mailing City,St,Zip:	SAN BERNARDINO, CA 92410
Gen County:	San Bernardino
TSD EPA ID:	CAT080013352
TSD County:	Los Angeles
Waste Category:	Oil/water separation sludge
Disposal Method:	Recycler
Tons:	2
Facility County:	Not reported

---

24 **CI-SAN BDNO FIRE STN 11** **UST** **U003785116**
450 E VANDERBILT WAY **N/A**
SAN BERNARDINO, CA 92408

UST:

Global ID:	15109
Latitude:	34.06873
Longitude:	-117.27586

---

25 **SHELL #1930** **LUST** **S109285033**
1930 S WATERMAN AVE **N/A**
SAN BERNARDINO, CA 92408

LUST:

Region:	STATE
Global Id:	T0607100153
Latitude:	34.066183
Longitude:	-117.279193
Case Type:	LUST Cleanup Site
Status:	Completed - Case Closed
Status Date:	1991-06-18 00:00:00
Lead Agency:	SANTA ANA RWQCB (REGION 8)
Case Worker:	CAB
Local Agency:	SAN BERNARDINO COUNTY LOP
RB Case Number:	083601302T
LOC Case Number:	90054
File Location:	Not reported
Potential Media Affect:	Aquifer used for drinking water supply
Potential Contaminants of Concern:	Gasoline
Site History:	Not reported

Click here to access the California GeoTracker records for this facility:

MAP FINDINGS

Map ID / Direction / Distance / Distance (ft.)	Site	Database(s)	EDR ID Number / EPA ID Number
25	**SHELL SERVICE STATION** **1930 WATERMAN** **SAN BERNARDINO, CA 92408**	**HIST CORTESE** **LUST**	**S104791949** **N/A**

CORTESE:

Region:	CORTESE
Facility County Code:	36
Reg By:	LTNKA
Reg Id:	083601302T

LUST REG 8:

Region:	8
County:	San Bernardino
Regional Board:	Santa Ana Region
Facility Status:	Case Closed
Case Number:	083601302T
Local Case Num:	90054
Case Type:	Aquifer affected
Substance:	Gasoline
Qty Leaked:	Not reported
Abate Method:	Not reported
Cross Street:	HOSPITALITY
Enf Type:	None Taken
Funding:	Not reported
How Discovered:	OM
How Stopped:	Not reported
Leak Cause:	UNK
Leak Source:	UNK
Global ID:	T0607100153
How Stopped Date:	Not reported
Enter Date:	9/8/1989
Review Date:	Not reported
Prelim Assess:	8/4/1989
Discover Date:	6/7/1989
Enforcement Date:	1/1/1965
Close Date:	6/18/1991
Workplan:	Not reported
Pollution Char:	1/16/1991
Remed Plan:	Not reported
Remed Action:	Not reported
Monitoring:	Not reported
Enter Date:	9/8/1989
GW Qualifies:	Not reported
Soil Qualifies:	Not reported
Operator:	Not reported
Facility Contact:	Not reported
Interim:	Not reported
Oversite Program:	LUST
Latitude:	34.0672462
Longitude:	-117.2789076
MTBE Date:	Not reported
Max MTBE GW:	Not reported
MTBE Concentration:	0
Max MTBE Soil:	Not reported
MTBE Fuel:	1
MTBE Tested:	Site NOT Tested for MTBE.Includes Unknown and Not Analyzed.
MTBE Class:	*
Staff:	CAB
Staff Initials:	CR2

MAP FINDINGS

Map ID / Direction / Distance / Distance (ft.)	Site	Database(s)	EDR ID Number / EPA ID Number

SHELL SERVICE STATION (Continued) **S104791949**

Lead Agency: Regional Board
Local Agency: 36000L
Hydr Basin #: UPPER SANTA ANA VALL
Beneficial: Not reported
Priority: Not reported
Cleanup Fund Id: Not reported
Work Suspended: Not reported
Summary: Not reported

---

25 **SHELL SERVICE STATION** **RCRA-SQG** **1006805345**
1930 S WATERMAN AVE **FINDS** **CAR000126078**
SAN BERNARDINO, CA 92408 **HAZNET**

RCRA-SQG:
Date form received by agency: 08/16/2002
Facility name: SHELL SERVICE STATION
Facility address: 1930 S WATERMAN AVE
S A P 135888
SAN BERNARDINO, CA 924083525
EPA ID: CAR000126078
Mailing address: P O BOX 2648
HOUSTON, TX 772522648
Contact: SONDRA BIENVENU
Contact address: P O BOX 2648
HOUSTON, TX 772522648
Contact country: US
Contact telephone: (713) 241-5036
Contact email: Not reported
EPA Region: 09
Classification: Small Small Quantity Generator
Description: Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:
Owner/operator name: EQUILON ENTERPRISES L L C
Owner/operator address: P O BOX 2648
HOUSTON, TX 77252
Owner/operator country: Not reported
Owner/operator telephone: (713) 241-5036
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): Unknown
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number
	SHELL SERVICE STATION (Continued)		**1006805345**

Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No
Off-site waste receiver: Verified to be non-commercial

Hazardous Waste Summary:

Waste code: D001
Waste name: IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.

Waste code: D018
Waste name: BENZENE

Violation Status: No violations found

FINDS:

Registry ID: 110013308358

Environmental Interest/Information System

California Hazardous Waste Tracking System - Datamart (HWTS-DATAMART) provides California with information on hazardous waste shipments for generators, transporters, and treatment, storage, and disposal facilities.

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

HAZNET:

Gepaid: CAR000126078
Contact: N CORTEZ/ENVT'L DATA ANALYST
Telephone: 2818742224
Facility Addr2: Not reported
Mailing Name: Not reported
Mailing Address: 12700 NORTHBOROUGH DRIVE MFT 240-G
Mailing City,St,Zip: Houston, TX 770672508
Gen County: San Bernardino
TSD EPA ID: CAD008364432
TSD County: Los Angeles
Waste Category: Other organic solids
Disposal Method: Recycler
Tons: 0.01
Facility County: Not reported

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number

SHELL SERVICE STATION (Continued) **1006805345**

Gepaid:	CAR000126078
Contact:	R HULL/ENV. REPORTING ANALYST
Telephone:	2818742224
Facility Addr2:	S A P 135888
Mailing Name:	Not reported
Mailing Address:	12700 NORTHBOROUGH DR 300G03
Mailing City,St,Zip:	Houston, TX 770670000
Gen County:	San Bernardino
TSD EPA ID:	CAD008302903
TSD County:	Los Angeles
Waste Category:	Other organic solids
Disposal Method:	H141
Tons:	0.03
Facility County:	San Bernardino

Gepaid:	CAR000126078
Contact:	R HULL/ENV. REPORTING ANALYST
Telephone:	2818742224
Facility Addr2:	S A P 135888
Mailing Name:	Not reported
Mailing Address:	12700 NORTHBOROUGH DR 300G03
Mailing City,St,Zip:	Houston, TX 770670000
Gen County:	San Bernardino
TSD EPA ID:	CAD008830290
TSD County:	Not reported
Waste Category:	Other organic solids
Disposal Method:	H141
Tons:	0.04
Facility County:	San Bernardino

Gepaid:	CAR000126078
Contact:	R HULL/ENV. REPORTING ANALYST
Telephone:	2818742224
Facility Addr2:	Not reported
Mailing Name:	Not reported
Mailing Address:	12700 NORTHBOROUGH DR 300G03
Mailing City,St,Zip:	Houston, TX 770670000
Gen County:	San Bernardino
TSD EPA ID:	CAD008302903
TSD County:	Los Angeles
Waste Category:	Other organic solids
Disposal Method:	Transfer Station
Tons:	0.05
Facility County:	San Bernardino

Gepaid:	CAR000126078
Contact:	Sondra Bienvenu
Telephone:	7132415036
Facility Addr2:	Not reported
Mailing Name:	Not reported
Mailing Address:	PO BOX 2648
Mailing City,St,Zip:	Houston, TX 772522648
Gen County:	San Bernardino
TSD EPA ID:	Not reported
TSD County:	San Bernardino
Waste Category:	Other empty containers 30 gallons or more
Disposal Method:	Disposal, Other

MAP FINDINGS

Map ID / Direction / Distance / Distance (ft.)	Site	Database(s)	EDR ID Number / EPA ID Number

SHELL SERVICE STATION (Continued) **1006805345**

Tons: 13.50
Facility County: Not reported

Click this hyperlink while viewing on your computer to access
2 additional CA_HAZNET: record(s) in the EDR Site Report.

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25 **WATERMAN SHELL** **LUST** **U001576086**
1930 S WATERMAN AVE **UST** **N/A**
SAN BERNARDINO, CA 92408 **HIST UST**
San Bern. Co. Permit
HAZNET

LUST:

Region:	STATE
Global Id:	T0607190543
Latitude:	34.066082345
Longitude:	-117.2791326
Case Type:	LUST Cleanup Site
Status:	Open - Verification Monitoring
Status Date:	2009-10-29 00:00:00
Lead Agency:	SANTA ANA RWQCB (REGION 8)
Case Worker:	CAB
Local Agency:	Not reported
RB Case Number:	Not reported
LOC Case Number:	2002025
File Location:	Local Agency
Potential Media Affect:	Aquifer used for drinking water supply
Potential Contaminants of Concern:	Fuel Oxygenates, Gasoline
Site History:	Not reported

Click here to access the California GeoTracker records for this facility:

LUST REG 8:

Region:	8
County:	San Bernardino
Regional Board:	Santa Ana Region
Facility Status:	No Action
Case Number:	Not reported
Local Case Num:	2002025
Case Type:	Aquifer affected
Substance:	Gasoline
Qty Leaked:	Not reported
Abate Method:	Not reported
Cross Street:	EAST HOSPITALITY LANE
Enf Type:	Not reported
Funding:	Not reported
How Discovered:	GWM
How Stopped:	Not reported
Leak Cause:	UNK
Leak Source:	UNK
Global ID:	T0607190543
How Stopped Date:	Not reported
Enter Date:	Not reported
Review Date:	Not reported
Prelim Assess:	Not reported
Discover Date:	12/14/2001
Enforcement Date:	Not reported

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number

WATERMAN SHELL (Continued) **U001576086**

Close Date: Not reported
Workplan: Not reported
Pollution Char: Not reported
Remed Plan: Not reported
Remed Action: Not reported
Monitoring: Not reported
Enter Date: Not reported
GW Qualifies: =
Soil Qualifies: =
Operator: Not reported
Facility Contact: Not reported
Interim: Not reported
Oversite Program: LUST
Latitude: 0
Longitude: 0
MTBE Date: 10/10/2002
Max MTBE GW: 91000
MTBE Concentration: 0
Max MTBE Soil: 7500
MTBE Fuel: 1
MTBE Tested: MTBE Detected. Site tested for MTBE & MTBE detected
MTBE Class: *
Staff: CAB
Staff Initials: LH6
Lead Agency: Local Agency
Local Agency: 36000L
Hydr Basin #: Not reported
Beneficial: MUN
Priority: Not reported
Cleanup Fund Id: Not reported
Work Suspended: Not reported
Summary: Not reported

UST:
Global ID: 14697
Latitude: 34.06599313
Longitude: -117.279045

HIST UST:
Region: STATE
Facility ID: 00000036276
Facility Type: Gas Station
Other Type: Not reported
Total Tanks: 0004
Contact Name: RIEKER & JOHNSON
Telephone: 7148849606
Owner Name: SHELL OIL CO
Owner Address: P.O. BOX 4848
Owner City,St,Zip: Not reported

Tank Num: 001
Container Num: #4
Year Installed: Not reported
Tank Capacity: 00009700
Tank Used for: PRODUCT
Type of Fuel: DIESEL

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number

WATERMAN SHELL (Continued) **U001576086**

Tank Construction: Not reported
Leak Detection: Stock Inventor

Tank Num: 002
Container Num: #3
Year Installed: Not reported
Tank Capacity: 00009700
Tank Used for: PRODUCT
Type of Fuel: UNLEADED
Tank Construction: Not reported
Leak Detection: Stock Inventor

Tank Num: 003
Container Num: #2
Year Installed: Not reported
Tank Capacity: 00009700
Tank Used for: PRODUCT
Type of Fuel: PREMIUM
Tank Construction: Not reported
Leak Detection: Stock Inventor

Tank Num: 004
Container Num: #1
Year Installed: Not reported
Tank Capacity: 00009700
Tank Used for: PRODUCT
Type of Fuel: REGULAR
Tank Construction: Not reported
Leak Detection: Stock Inventor

San Bern. Co. Permit:
Region: SAN BERNARDINO
Facility ID: FA0007229
Owner: INLAND PETROLEUM PRODUCTS
Permit Number: PT0002418
Permit Category: HAZMAT HANDLER - UST ONLY
Facility Status: ACTIVE
Expiration Date: 2011-07-31 00:00:00

Region: SAN BERNARDINO
Facility ID: FA0007229
Owner: INLAND PETROLEUM PRODUCTS
Permit Number: PT0011988
Permit Category: UST OWNERSHIP/OPERATING PERMIT (PER UST)
Facility Status: ACTIVE
Expiration Date: 2011-07-31 00:00:00

Region: SAN BERNARDINO
Facility ID: FA0007229
Owner: INLAND PETROLEUM PRODUCTS
Permit Number: PT0011989
Permit Category: UST OWNERSHIP/OPERATING PERMIT (PER UST)
Facility Status: ACTIVE
Expiration Date: 2011-07-31 00:00:00

Region: SAN BERNARDINO
Facility ID: FA0007229

MAP FINDINGS

Map ID / Direction / Distance / Distance (ft.)	Site	Database(s)	EDR ID Number / EPA ID Number

WATERMAN SHELL (Continued) **U001576086**

Owner: INLAND PETROLEUM PRODUCTS
Permit Number: PT0011990
Permit Category: UST OWNERSHIP/OPERATING PERMIT (PER UST)
Facility Status: ACTIVE
Expiration Date: 2011-07-31 00:00:00

Region: SAN BERNARDINO
Facility ID: FA0007229
Owner: INLAND PETROLEUM PRODUCTS
Permit Number: PT0011991
Permit Category: UST OWNERSHIP/OPERATING PERMIT (PER UST)
Facility Status: INACTIVE
Expiration Date: 2006-07-31 00:00:00

HAZNET:
Gepaid: CAC002174265
Contact: JAMES JOHNSON
Telephone: 9098849606
Facility Addr2: Not reported
Mailing Name: Not reported
Mailing Address: 1930 S WATERMAN
Mailing City,St,Zip: SAN BERNARDINO, CA 924080000
Gen County: San Bernardino
TSD EPA ID: CAD008302903
TSD County: Los Angeles
Waste Category: Other organic solids
Disposal Method: Transfer Station
Tons: 0.125
Facility County: San Bernardino

---

25 **DBA INLAND PETROLEIM PROD** **HIST UST** **U001576040**
1930 S WATERMAN AVE **HAZNET** **N/A**
SAN BERNARDINO, CA 92408

HIST UST:
Region: STATE
Facility ID: 00000012744
Facility Type: Gas Station
Other Type: Not reported
Total Tanks: 0004
Contact Name: R RIEKER/J JOHNSON
Telephone: 7148849606
Owner Name: SHELL OIL COMPANY
Owner Address: P.O. BOX 4848
Owner City,St,Zip: ANAHEIM, CA 92803

Tank Num: 001
Container Num: 1
Year Installed: 83
Tank Capacity: 00000000
Tank Used for: PRODUCT
Type of Fuel: UNLEADED
Tank Construction: 1/4 inches
Leak Detection: Stock Inventor, Groundwater Monitoring Well, 10

Tank Num: 002
Container Num: 3

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number

DBA INLAND PETROLEIM PROD (Continued) **U001576040**

Year Installed: 83
Tank Capacity: 00000000
Tank Used for: PRODUCT
Type of Fuel: PREMIUM
Tank Construction: 1/4 inches
Leak Detection: Stock Inventor, Groundwater Monitoring Well, 10

Tank Num: 003
Container Num: 2
Year Installed: 83
Tank Capacity: 00000000
Tank Used for: PRODUCT
Type of Fuel: REGULAR
Tank Construction: 1/4 inches
Leak Detection: Stock Inventor, Groundwater Monitoring Well, 10

Tank Num: 004
Container Num: 4
Year Installed: 83
Tank Capacity: 00000000
Tank Used for: PRODUCT
Type of Fuel: DIESEL
Tank Construction: 1/4 inches
Leak Detection: Stock Inventor, Groundwater Monitoring Well, 10

HAZNET:
Gepaid: CAL000336728
Contact: JAMES JOHNSON/PRES
Telephone: 9098828691
Facility Addr2: Not reported
Mailing Name: Not reported
Mailing Address: 1930 S WATERMAN AVE
Mailing City,St,Zip: SAN BERNARDINO, CA 92408
Gen County: San Bernardino
TSD EPA ID: CAD981696420
TSD County: Los Angeles
Waste Category: Unspecified aqueous solution
Disposal Method: H141
Tons: 1.617
Facility County: San Bernardino

Gepaid: CAL000336728
Contact: JAMES JOHNSON/PRES
Telephone: 9098828691
Facility Addr2: Not reported
Mailing Name: Not reported
Mailing Address: 1930 S WATERMAN AVE
Mailing City,St,Zip: SAN BERNARDINO, CA 92408
Gen County: San Bernardino
TSD EPA ID: CAD028409019
TSD County: Los Angeles
Waste Category: Aqueous solution with less than 10% total organic residues
Disposal Method: H135
Tons: 0.189
Facility County: San Bernardino

MAP FINDINGS

Map ID / Direction / Distance / Distance (ft.)	Site	Database(s)	EDR ID Number / EPA ID Number
25	**WATERMAN/I-10 SHELL** **1930 S WATERMAN** **SAN BERNARDINO, CA 92408**	**CA FID UST** **SWEEPS UST** **HAZNET**	**S101619527** **N/A**

CA FID UST:

Facility ID:	36008119
Regulated By:	UTNKA
Regulated ID:	00012744
Cortese Code:	Not reported
SIC Code:	Not reported
Facility Phone:	Not reported
Mail To:	Not reported
Mailing Address:	3281 E GUASTI
Mailing Address 2:	Not reported
Mailing City,St,Zip:	SAN BERNARDINO 92408
Contact:	Not reported
Contact Phone:	Not reported
DUNs Number:	Not reported
NPDES Number:	Not reported
EPA ID:	Not reported
Comments:	Not reported
Status:	Active

SWEEPS UST:

Status:	A
Comp Number:	12744
Number:	3
Board Of Equalization:	44-000074
Ref Date:	10-21-92
Act Date:	10-21-92
Created Date:	02-29-88
Tank Status:	A
Owner Tank Id:	1
Swrcb Tank Id:	36-000-012744-000001
Actv Date:	10-21-92
Capacity:	10000
Tank Use:	M.V. FUEL
Stg:	P
Content:	REG UNLEADED
Number Of Tanks:	4

Status:	A
Comp Number:	12744
Number:	3
Board Of Equalization:	44-000074
Ref Date:	10-21-92
Act Date:	10-21-92
Created Date:	02-29-88
Tank Status:	A
Owner Tank Id:	3
Swrcb Tank Id:	36-000-012744-000002
Actv Date:	10-21-92
Capacity:	10000
Tank Use:	M.V. FUEL
Stg:	P
Content:	PRM UNLEADED
Number Of Tanks:	Not reported

Status:	A

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number

WATERMAN/I-10 SHELL (Continued) **S101619527**

Comp Number:	12744
Number:	3
Board Of Equalization:	44-000074
Ref Date:	10-21-92
Act Date:	10-21-92
Created Date:	02-29-88
Tank Status:	A
Owner Tank Id:	2
Swrcb Tank Id:	36-000-012744-000003
Actv Date:	10-21-92
Capacity:	10000
Tank Use:	M.V. FUEL
Stg:	P
Content:	PRM UNLEADED
Number Of Tanks:	Not reported

Status:	A
Comp Number:	12744
Number:	3
Board Of Equalization:	44-000074
Ref Date:	10-21-92
Act Date:	10-21-92
Created Date:	02-29-88
Tank Status:	A
Owner Tank Id:	4
Swrcb Tank Id:	36-000-012744-000004
Actv Date:	10-21-92
Capacity:	10000
Tank Use:	M.V. FUEL
Stg:	P
Content:	DIESEL
Number Of Tanks:	Not reported

HAZNET:

Gepaid:	CAL000162014
Contact:	SONDRA BIENVENU
Telephone:	7132412258
Facility Addr2:	Not reported
Mailing Name:	Not reported
Mailing Address:	EQUILON ENTERPRISES LLC
Mailing City,St,Zip:	HOUSTON, TX 772104453
Gen County:	San Bernardino
TSD EPA ID:	Not reported
TSD County:	Santa Cruz
Waste Category:	Waste oil and mixed oil
Disposal Method:	Not reported
Tons:	0.45
Facility County:	Not reported

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number
26	**COMPUTERIZED DIAGNOSTIC IMAGING** **1884 BUSINESS CENTER DR** **SAN BERNARDINO, CA 92408**	**RCRA-SQG** **FINDS** **San Bern. Co. Permit** **HAZNET**	**1001217499** **CAR000035774**

RCRA-SQG:

Date form received by agency:	01/28/1998
Facility name:	COMPUTERIZED DIAGNOSTIC IMAGING
Facility address:	1884 BUSINESS CENTER DR SAN BERNARDINO, CA 92408
EPA ID:	CAR000035774
Mailing address:	4000 14TH ST STE 109 RIVERSIDE, CA 92501
Contact:	DENISE LESLIE
Contact address:	4000 14TH ST STE 109 RIVERSIDE, CA 92501
Contact country:	US
Contact telephone:	(909) 276-7500
Contact email:	Not reported
EPA Region:	09
Classification:	Small Small Quantity Generator
Description:	Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:

Owner/operator name:	COMPUTERIZED DIAGNOSTIC IMAG
Owner/operator address:	2020 IOWA AVE STE 103 RIVERSIDE, CA 92507
Owner/operator country:	Not reported
Owner/operator telephone:	(909) 781-2270
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	Unknown
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No
Off-site waste receiver:	Verified to be non-commercial

Hazardous Waste Summary:

Waste code:	D000

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number

COMPUTERIZED DIAGNOSTIC IMAGING (Continued) **1001217499**

Waste name: Not Defined

Waste code: D011
Waste name: SILVER

Violation Status: No violations found

FINDS:

Registry ID: 110002920714

Environmental Interest/Information System
California Hazardous Waste Tracking System - Datamart (HWTS-DATAMART) provides California with information on hazardous waste shipments for generators, transporters, and treatment, storage, and disposal facilities.

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

San Bern. Co. Permit:
Region: SAN BERNARDINO
Facility ID: FA0009836
Owner: SAN BERNARDINO IMAGING LLC
Permit Number: PT0016764
Permit Category: SPECIAL GENERATOR(B)
Facility Status: INACTIVE
Expiration Date: 2009-09-30 00:00:00

Region: SAN BERNARDINO
Facility ID: FA0009836
Owner: SAN BERNARDINO IMAGING LLC
Permit Number: PT0016763
Permit Category: SPECIAL HANDLER
Facility Status: INACTIVE
Expiration Date: 2009-09-30 00:00:00

HAZNET:
Gepaid: CAR000035774
Contact: COMPUTERIZED DIAGNOSTIC IMAG
Telephone: 9097812270
Facility Addr2: Not reported
Mailing Name: Not reported
Mailing Address: 4000 14TH ST STE 109
Mailing City,St,Zip: RIVERSIDE, CA 925010000
Gen County: San Bernardino
TSD EPA ID: CAD981402522
TSD County: Kern
Waste Category: Photochemicals/photoprocessing waste
Disposal Method: Recycler
Tons: .2293
Facility County: San Bernardino

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number

COMPUTERIZED DIAGNOSTIC IMAGING (Continued) **1001217499**

Gepaid: CAR000035774
Contact: COMPUTERIZED DIAGNOSTIC IMAG
Telephone: 9097812270
Facility Addr2: Not reported
Mailing Name: Not reported
Mailing Address: 4000 14TH ST STE 109
Mailing City,St,Zip: RIVERSIDE, CA 925010000
Gen County: San Bernardino
TSD EPA ID: CAD983604000
TSD County: San Bernardino
Waste Category: Photochemicals/photoprocessing waste
Disposal Method: Recycler
Tons: .2293
Facility County: San Bernardino

Gepaid: CAR000035774
Contact: DENISE LESLIE DIRECTOR IMG SER
Telephone: 9092767500
Facility Addr2: Not reported
Mailing Name: Not reported
Mailing Address: 4000 14TH ST STE 109
Mailing City,St,Zip: RIVERSIDE, CA 925010000
Gen County: San Bernardino
TSD EPA ID: Not reported
TSD County: Kern
Waste Category: Photochemicals/photoprocessing waste
Disposal Method: Recycler
Tons: 0.66
Facility County: Not reported

Gepaid: CAR000035774
Contact: COMPUTERIZED DIAGNOSTIC IMAG
Telephone: 9097812270
Facility Addr2: Not reported
Mailing Name: Not reported
Mailing Address: 4000 14TH ST STE 109
Mailing City,St,Zip: RIVERSIDE, CA 925010000
Gen County: San Bernardino
TSD EPA ID: CAD983604000
TSD County: San Bernardino
Waste Category: Photochemicals/photoprocessing waste
Disposal Method: Recycler
Tons: .7505
Facility County: San Bernardino

Gepaid: CAR000035774
Contact: COMPUTERIZED DIAGNOSTIC IMAG
Telephone: 9097812270
Facility Addr2: Not reported
Mailing Name: Not reported
Mailing Address: 4000 14TH ST STE 109
Mailing City,St,Zip: RIVERSIDE, CA 925010000
Gen County: San Bernardino
TSD EPA ID: CAD983604000
TSD County: San Bernardino
Waste Category: Photochemicals/photoprocessing waste
Disposal Method: Recycler

MAP FINDINGS

Map ID / Direction / Distance / Distance (ft.)	Site	Database(s)	EDR ID Number / EPA ID Number

COMPUTERIZED DIAGNOSTIC IMAGING (Continued) **1001217499**

Tons: 1.1465
Facility County: San Bernardino

Click this hyperlink while viewing on your computer to access
3 additional CA_HAZNET: record(s) in the EDR Site Report.

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27 **TOSCO/ 76 STATION #4975 (#30776)** **LUST** **S109285227**
1950 S WATERMAN AVE **N/A**
SAN BERNARDINO, CA 92408

LUST:

Region:	STATE
Global Id:	T0607100491
Latitude:	34.0656623
Longitude:	-117.2789076
Case Type:	LUST Cleanup Site
Status:	Open - Remediation
Status Date:	2000-10-12 00:00:00
Lead Agency:	SAN BERNARDINO COUNTY LOP
Case Worker:	LH6
Local Agency:	SAN BERNARDINO COUNTY LOP
RB Case Number:	083603227T
LOC Case Number:	98043
File Location:	Local Agency
Potential Media Affect:	Aquifer used for drinking water supply
Potential Contaminants of Concern:	Gasoline, Fuel Oxygenates
Site History:	THE CASE CLOSURE SUMMARY HAS BEEN PREPARED AND THE CASE IS BEING CONSIDERED FOR CLOSURE.

Click here to access the California GeoTracker records for this facility:

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27 **MOBIL #11-E13** **HIST CORTESE** **S104754602**
1950 **LUST** **N/A**
LA HABRA, CA 90631

CORTESE:

Region:	CORTESE
Facility County Code:	30
Reg By:	LTNKA
Reg Id:	083000479T

Region:	CORTESE
Facility County Code:	30
Reg By:	LTNKA
Reg Id:	083003268T

LUST REG 8:

Region:	8
County:	San Bernardino
Regional Board:	Santa Ana Region
Facility Status:	Remediation Plan
Case Number:	083603227T
Local Case Num:	98043
Case Type:	Aquifer affected
Substance:	8006619, MTB
Qty Leaked:	Not reported

MAP FINDINGS

Map ID Direction Distance Distance (ft.)	Site	Database(s)	EDR ID Number EPA ID Number

MOBIL #11-E13 (Continued) **S104754602**

Abate Method:	Not reported
Cross Street:	HOSPITALITY
Enf Type:	VER
Funding:	Not reported
How Discovered:	Not reported
How Stopped:	Not reported
Leak Cause:	Not reported
Leak Source:	Not reported
Global ID:	T0607100491
How Stopped Date:	Not reported
Enter Date:	9/16/1998
Review Date:	Not reported
Prelim Assess:	Not reported
Discover Date:	7/14/1998
Enforcement Date:	Not reported
Close Date:	Not reported
Workplan:	Not reported
Pollution Char:	4/27/1999
Remed Plan:	10/12/2000
Remed Action:	Not reported
Monitoring:	Not reported
Enter Date:	9/16/1998
GW Qualifies:	=
Soil Qualifies:	Not reported
Operator:	Not reported
Facility Contact:	Not reported
Interim:	Not reported
Oversite Program:	LUST
Latitude:	34.0656623
Longitude:	-117.2789076
MTBE Date:	9/5/2001
Max MTBE GW:	47000
MTBE Concentration:	1
Max MTBE Soil:	Not reported
MTBE Fuel:	0
MTBE Tested:	MTBE Detected. Site tested for MTBE & MTBE detected
MTBE Class:	C
Staff:	NOM
Staff Initials:	LH6
Lead Agency:	Local Agency
Local Agency:	36000L
Hydr Basin #:	UPPER SANTA ANA VALL
Beneficial:	MUN
Priority:	A1
Cleanup Fund Id:	Not reported
Work Suspended:	Not reported
Summary:	JANUARY 1999 TWO GW MONITORING WELLS INSTALLED.

Count: 195 records

ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
COLTON	S106929587	MONTECITO MEMORIAL PARK	BARTON / WATERMAN RD	92324	SWEEPS UST
COLTON	S105697379	F P AUTO REPAIR	498 LA CADENA DR UNIT A / B	92324	San Bern. Co. Permit
COLTON	S106911212	AUTO REPAIR-REBUILD ENGINES & TRANS	498 LA CADENA DR B	92324	San Bern. Co. Permit
COLTON	S109598641	TEST AMERICA	1014 E COOLEY DR STE A / F	92324	San Bern. Co. Permit
COLTON	S110496927	ASHLEY FURNITURE-SLF	1801 COOLEY LN	92324	San Bern. Co. Permit
COLTON	S110071707	PULMOCARE	673 E COOLEY DR	92324	San Bern. Co. Permit
COLTON	S105023357	SO CAL GAS/COLTON 1 (FOGG	N.E. CORNER OF 6TH / FOG	92324	HIST CORTESE
COLTON	S106924853	CONDOSTA TRACTORS CO INC	10617 HUNTS LN	92324	SWEEPS UST
COLTON	S110326677	R & S EQUIPMENT REPAIR	460 E M ST	92324	San Bern. Co. Permit
COLTON	A100345941	PACIFIC RAIL INDUSTRIES	785 E M ST	92324	AST
COLTON	A100345656	COLTON IRON & METAL COMPANY	790 E M ST	92324	AST
COLTON	1012175576	SA RECYCLING LLC, DBA COLTON IRON & META	790 E. MST	92324	RCRA-LQG
COLTON	S110375405	S & S INSTALATION INC DBA PACIFIC STAINLESS	294 W OLIVE ST	92324	San Bern. Co. Permit, HAZNET
COLTON	S110495469	J & S FORKLIFT SERVICES INC	300 W OLIVE ST	92324	DRYCLEANERS
COLTON	S106911419	J&S FORKLIFT SERVICES, INC	300 W OLIVE ST UNIT C / D	92324	San Bern. Co. Permit
COLTON	S108419374	IMAGO	300 W OLIVE ST	92324	San Bern. Co. Permit
COLTON	S106926612	GENERAL AMERICAN TRANSPORTATION	PEPPER ST / CLOVER AVE	92324	SWEEPS UST, ENVIROSTOR
COLTON	A100345547	BISHOP'S CENTRAL STORES	791 N PEPPER AVE	92324	AST
COLTON	1004676291	BOB HUBBARD HORSE TRANS	12082 RIVERSIDE AVE	92324	RCRA-SQG, FINDS
COLTON	S108724314	JUARITOS CITRUS DISTRIBUTION	2901 S RIVERSIDE AVE	92324	San Bern. Co. Permit
COLTON	S108724315	FREDDY'S IRONWORKS	2901 S RIVERSIDE AVE	92324	San Bern. Co. Permit
COLTON	S108724316	JAT TRUCKING INC	2901 S RIVERSIDE AVE	92324	San Bern. Co. Permit
COLTON	S108724317	SOUTHSIDE METAL	2901 S RIVERSIDE AVE	92324	San Bern. Co. Permit
COLTON	S108724329	ALLIED STORAGE CONTAINERS	2901 S RIVERSIDE AVE	92324	San Bern. Co. Permit
COLTON	S108724330	A & SONS TOWING	2901 S RIVERSIDE AVE	92324	San Bern. Co. Permit, HAZNET
COLTON	S108724313	JOAQUIN'S WELDING	2901 S RIVERSIDE AVE	92324	San Bern. Co. Permit
COLTON	S109849373	SPEEDY MOBILE LUBE	2901 S RIVERSIDE AVE	92324	San Bern. Co. Permit
COLTON	S109459449	STEEL ROAD III	N SIDE OF STEEL RD W OF I 215	92324	NPDES
COLTON	A100345576	CAL NEV PIPELINE	2051 W SLOVER AVE	92324	AST
COLTON	S110493745	COLTON IRON & METAL	790 E ST	92324	ENVIROSTOR
COLTON	S110656348	GSD RENTALS INC	1600 E STEEL RD	92324	San Bern. Co. Permit
COLTON	S110656314	REPUBLIC SERVICES-COLTON	2059 E STEEL RD	92324	San Bern. Co. Permit
COLTON	S104163982	TERMINAL STATIONS, INC.	23659 STEEL RD	92324	HIST CORTESE, SWEEPS UST
COLTON	S106925385	DIETRICH INT'L TRUCK SALES	23607 STEEL RD	92324	SWEEPS UST
COLTON	S110496961	COLTON DENTAL GROUP	251 E VALLEY BLVD	92324	San Bern. Co. Permit
COLTON	A100345905	MOSS BROS FORD	1900 W VALLEY BLVD	92324	AST
COLTON	A100346242	VALLEY TRUCK FILTERS & PARTS	2006 W VALLEY BLVD	92324	AST
COLTON	S106387342	FORMER E-Z SERVE FACILIT Y #100779	847 VALLEY BLVD	92324	LUST
COLTON	S110496925	ARROWBACK MEDICAL GROUP, INC.	900 E WASHINGTON ST	92324	San Bern. Co. Permit
COLTON	S110497005	ONE STOP AUTO CARE	1703 E WASHINGTON ST	92324	San Bern. Co. Permit
COLTON	A100345827	JIFFY LUBE	1701 E WASHINGTON ST	92324	AST
COLTON	S101301137	ARCO #6144	22895 WASHINGTON ST	92324	HIST CORTESE, LUST, SWEEPS US

Count: 195 records

ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
COLTON	S109285034	ARCO #6144	22895 W WASHINGTON ST	92324	LUST
COLTON	S110655014	FIVE POINT AUTO SERVICE	1221 E WASHINGTON ST	92324	LUST
LOMA LINDA	S109349341	MOUNTAIN VIEW CLEANERS	11175 MOUNTAIN VIEW AVE	92354	San Bern. Co. Permit
LOMA LINDA	S106077092	MOUNTAIN VIEW CLEANERS	11175 MOUNTAIN VIEW AVE	92354	DRYCLEANERS, HAZNET
LOMA LINDA	S109349342	MOUNTAIN VIEW CLEANERS	11175 S MT VIEW AVE STE B	92354	San Bern. Co. Permit
LOMA LINDA	S107030321	MISSION LANE TRACT #16323	PEPPER ST BETWEEN MISSION / VAN LEVAN	92354	San Bern. Co. Permit
LOMA LINDA	S110326661	STOCK ALL SERVICES	24756 REDLANDS BLVD	92354	San Bern. Co. Permit
LOMA LINDA	S108087246	BED TECH	24735 REDLANDS BLVD	92354	San Bern. Co. Permit
LOMA LINDA	S104763255	ACTION CONSTRUCTION SPECIALIST	24769 REDLANDS BLVD	92354	San Bern. Co. Permit
LOMA LINDA	S106910789	D&G CUSTOM CYCLES	25153 REDLANDS BLVD	92354	San Bern. Co. Permit
LOMA LINDA	S106112194	BOB'S AUTOMOTIVE	24565 REDLANDS BLVD	92354	San Bern. Co. Permit
LOMA LINDA	S109254298	EAGLE SCREEN PRINTING	24711 REDLANDS BLVD	92354	San Bern. Co. Permit, HAZNET
LOMA LINDA	S108419350	AUTOMETRICS	24565 REDLANDS BLVD	92354	San Bern. Co. Permit, HAZNET
LOMA LINDA	1000174019	CIRCLE K #591	25313 VICTORIA AVE	92354	RCRA-NonGen, FINDS, CA FID UST, HIST UST
LUDLOW	S106931900	SANTA FE RAILWAY COMPANY	SANTA FE REPAIR SHOP	92408	SWEEPS UST
REDLANDS	S108985868	VICTAULIC COMPANY - REDLANDS DIST.	26682 ALMOND AVEBUILDING 1	92374	San Bern. Co. Permit
REDLANDS	S108536454	HYDRO TEK SYSTEMS	2353 ALMOND AVE	92374	San Bern. Co. Permit
REDLANDS	S108087264	DR. JAMES CARTER	ALMOND STBETWEEN NEVADA / CALIFORNIA ST	92374	San Bern. Co. Permit
REDLANDS	1001959750	CONNING ASSET MGMT CO	25884 C BUSINESS CENTER DR	92374	RCRA-SQG, FINDS, HAZNET
REDLANDS	S104771358	HOLISTICS OPTIONS VETERINARY CARE	25837 BUSINESS CENTER DR	92374	San Bern. Co. Permit
REDLANDS	S110656310	REDLANDS USD TRANS YRD	956 E CENTRAL AVE	92374	San Bern. Co. Permit
REDLANDS	A100346028	REDLANDS FORD	1121 W COLTON AVE	92374	AST
REDLANDS	S110656369	SEVEN OAKS MEDICAL CENTER	1901 W LUGONIA AVE	92374	San Bern. Co. Permit
REDLANDS	S108540519	ALL AMERICAN CLEANERS	1752 E LUGONIA AVE	92374	DRYCLEANERS, HAZNET
REDLANDS	S108724357	ARROWHEAD ORTHOPEDICS	1901 W LUGONIA AVE	92374	San Bern. Co. Permit
REDLANDS	S108724370	CHICK-FIL-A @ CITRUS PLAZA	27520 LUGONIA AVE	92374	San Bern. Co. Permit
REDLANDS	S108087326	RED ROBIN GOURMET BURGERS & SPIRITS	27476 LUGONIA AVE	92374	San Bern. Co. Permit
REDLANDS	S106911379	NIKO NIKO SUSHI	27510 LUGONIA AVE STE E	92374	San Bern. Co. Permit
REDLANDS	S106803305	PARTY AMERICA	27588 LUGONIA AVE STE C	92374	San Bern. Co. Permit
REDLANDS	S106911477	MI TORTILLA	27510 W LUGONIA AVE STE B	92374	San Bern. Co. Permit
REDLANDS	S110656371	VERIZON WIRELESS - LUGONIA	1330 E LUGONIA AVE	92374	San Bern. Co. Permit
REDLANDS	S109254332	REDLANDS UNOCAL	27300 LUGONIA AVE	92374	San Bern. Co. Permit
REDLANDS	S109849351	BEST GROVE	NEC ALABAMA / PALMETO	92374	San Bern. Co. Permit
REDLANDS	S109849236	PIONEER INDUSTRIAL CENTER	9425 NEVADA ST	92374	San Bern. Co. Permit
REDLANDS	S109598383	ADVANCED INNOVATIONS WEST, LLC	9425 NEVADA ST	92374	San Bern. Co. Permit, HAZNET
REDLANDS	S101301246	CITY OF REDLANDS CALIFORNIA STREET LANDFILL	1950 NEVADA ST	92374	HIST CORTESE, LUST, EMI
REDLANDS	S105298664	KRAGEN AUTO PARTS #1562	515 N ORANGE AVE	92374	San Bern. Co. Permit
REDLANDS	S109285214	TOSCO/ 76 STATION #6019	901 N ORANGE AVE	92374	LUST
REDLANDS	S108240192	ALPINE SHUTTER CRAFT	1107 PARK AVE A / B	92374	San Bern. Co. Permit
REDLANDS	S110496932	BAYER CROPSCIENCE	27223 PIONEER AVE	92374	San Bern. Co. Permit
REDLANDS	S105974419	WELL-ORANGE ST	1449 PLANT D-10	92374	San Bern. Co. Permit
REDLANDS	S110656381	AUTOZONE #4049	1998 W REDLANDS BLVD	92374	San Bern. Co. Permit
REDLANDS	S110071676	PROLOGIS PARK RIVERBLUFF	27352 RIVER BLUFF/ALABAMA	92374	San Bern. Co. Permit
REDLANDS	S110656326	WELL - SAN BERNARDINO AVE. "MUNI"	1720 E SAN BERNARDINO AVE	92374	San Bern. Co. Permit
REDLANDS	1009216647	MOUNTAINVIEW POWER COMPANY LLC	2492 W SAN BERNARDINO AVE	92374	RCRA-LQG

Count: 195 records

ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
REDLANDS	S107030279	MOUNTAINVIEW POWER CO LLC	2492 SAN BERNARDINO AVE	92374	AST, San Bern. Co. Permit
REDLANDS	S109254420	ABANDONED UST	27495 SAN BERNARDINO AVE	92374	San Bern. Co. Permit
REDLANDS	A100346051	SALTON, INC	2301 W SAN BERNARDINO AVE	92374	AST
REDLANDS	S109461569	TRACT 16689 UNIVERSITY GROVE III	SWQ SAN BERNARDINO AVE / DEARBORN ST	92374	NPDES
REDLANDS	S110116479	CARRIAGE CLEANERS	1221 W WABUSH AVE	92374	DRYCLEANERS
SAN BERNARDINO	S108985938	ATCHISON, TOPEKA & SANTA FE	1170 W 03RD STREET		SLIC
SAN BERNARDINO	1000419812	DIETRICH TRUCK SALES	HWY 10 INTERCHANGE	92408	RCRA-SQG, FINDS, HAZNET
SAN BERNARDINO	S108985789	CITRUS DENTAL	242 E AIRPORT DR	92408	San Bern. Co. Permit
SAN BERNARDINO	S106910684	ASSOCIATED PRINTING SCHOOLS,INC.	114 E AIRPORT DR	92408	San Bern. Co. Permit
SAN BERNARDINO	S110656372	TGC WEST	722 S ALLEN ST	92408	San Bern. Co. Permit
SAN BERNARDINO	S106911160	UNITED REFRIGERATION INC	777 S ALLEN ST	92408	San Bern. Co. Permit
SAN BERNARDINO	S110326746	ALLEN ENGINEERING CONTRACTOR INC	1199 S AMOS ST	92408	San Bern. Co. Permit
SAN BERNARDINO	S110656340	TRI COUNTY PUMP COMPANY	241 S ARROWHEAD AVE	92408	San Bern. Co. Permit
SAN BERNARDINO	S107592104	J & J DEVELOPING	205 BENEDICT RD	92408	San Bern. Co. Permit
SAN BERNARDINO	S110071722	URBAN TRUCK REPAIR SERVICE	101 W BENEDICT ST	92408	San Bern. Co. Permit
SAN BERNARDINO	S110495879	REDLINED CHOPPERS	1364 CAMINO REAL	92408	DRYCLEANERS
SAN BERNARDINO	S110071644	BECK'S AUTO CENTER	1364 CAMINO REAL	92408	San Bern. Co. Permit
SAN BERNARDINO	S110168999	AVENGER CYCLE WORKS	1364 CAMINO REAL	92408	San Bern. Co. Permit
SAN BERNARDINO	S109849362	AFFORDABLE MARINE & AUTO	1364 CAMINO REAL	92408	San Bern. Co. Permit
SAN BERNARDINO	S109849374	AMERICA'S BODY SHOP & COLLISION RPR	1364 S CAMINO REAL RD UNIT 100	92408	San Bern. Co. Permit
SAN BERNARDINO	S110497000	NEIGHBOR CARE	720 CARNEGIE DR	92408	San Bern. Co. Permit
SAN BERNARDINO	S106910775	CONSOLIDATED REPROGRAPHIC	250 E CAROLINE ST	92408	San Bern. Co. Permit
SAN BERNARDINO	S110656342	E-COMMERCE FULFILLMENT CENTER	825 E CENTRAL AVE	92408	San Bern. Co. Permit
SAN BERNARDINO	S110496991	KOMAR DISTRIBUTION SERVICES	786 E CENTRAL AVE	92408	San Bern. Co. Permit
SAN BERNARDINO	S110168967	KOHLER CO	675 E CENTRAL AVE	92408	San Bern. Co. Permit
SAN BERNARDINO	U004061618	ECONO LUBE & TUNE #65	222 E CLUB CENTER DR	92408	UST
SAN BERNARDINO	S106910919	INLAND SPINE/ORTHO MED CT	2195 CLUB CENTER DR	92408	San Bern. Co. Permit
SAN BERNARDINO	S104767790	LINCARE INC	1802 COMMERCENTER WEST G	92408	San Bern. Co. Permit
SAN BERNARDINO	S110496980	H & H GENERAL CONTRACTORS INC	254 E DRAKE DR	92408	San Bern. Co. Permit
SAN BERNARDINO	S110497007	PACTIV	786 A E CENTRAL AVE	92408	San Bern. Co. Permit
SAN BERNARDINO	A100345625	CENTER CHEVROLET	1355 S E ST	92408	AST
SAN BERNARDINO	S100925144	SCE, ETIWANDA GENERATING STAT.	8996 ETIWANDA AVE		Toxic Pits
SAN BERNARDINO	S110168989	SEY REEN AUTO TECH	2373 S GARDENA ST 3	92408	San Bern. Co. Permit
SAN BERNARDINO	S110168922	FRANKLIN AUTO REPAIR	2373 S GARDENA ST UNIT C	92408	San Bern. Co. Permit
SAN BERNARDINO	S105026048	USAF GEORGE AFB CUDDEBACK	GEORGE AFB		HIST CORTESE
SAN BERNARDINO	S105026049	BX SERVICE	GEORGE AFB		HIST CORTESE
SAN BERNARDINO	S105026050	VEHICLE MAINT FAC	GEORGE AFB		HIST CORTESE
SAN BERNARDINO	S106090872	CONSTRUCTION FLUID PWR	775 S GIFFORD AVE	92408	San Bern. Co. Permit, HAZNET
SAN BERNARDINO	S106797656	CSCO SCREW COMPANY	775 S GIFFORD AVE	92408	ENVIROSTOR
SAN BERNARDINO	S106910779	CSCO SCREW PRODUCTS	775 S GIFFORD AVE	92408	San Bern. Co. Permit
SAN BERNARDINO	S105974462	INTERIOR PARTS	765 S GIFFORD AVE	92408	San Bern. Co. Permit
SAN BERNARDINO	S109254361	BAY CITY EQUIPMENT IND. INC.	766 S GIFFORD AVE	92408	San Bern. Co. Permit
SAN BERNARDINO	S110168907	BEST IRONWORKS	765 S GIFFORD AVE	92408	San Bern. Co. Permit
SAN BERNARDINO	S110590747	LA PLEBE TRUCKING	1493 GOULD ST	92408	HWT
SAN BERNARDINO	S110496999	MYNOR AUTO SALES	976 HOPE ST	92408	San Bern. Co. Permit
SAN BERNARDINO	S107592119	OLIVE GARDEN #1278	460 HOSPITALITY LN	92408	San Bern. Co. Permit
SAN BERNARDINO	S105698275	ST. MINA'S CLEANERS	645 E HOSPITALITY LN	92408	San Bern. Co. Permit

Count: 195 records

ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
SAN BERNARDINO	S104771504	U.S.A. CLEANERS	228 E HOSPITALITY LN	92408	San Bern. Co. Permit
SAN BERNARDINO	S103658672	CRYSTAL CLEANERS	420 HOSPITALITY LN,#A-7	92408	DRYCLEANERS, HAZNET
SAN BERNARDINO	S110656359	UNIVERSAL INSTITUTE INC	155 W HOSPITALITY LN	92408	San Bern. Co. Permit
SAN BERNARDINO	S109598520	CHIPOTLE MEXICAN GRILL #956	1092 E HOSPITALITY LN	92408	San Bern. Co. Permit
SAN BERNARDINO	S104763092	A M S (ACOUSTICAL MATERIAL SRVCS	456 E INDUSTRIAL RD	92408	San Bern. Co. Permit
SAN BERNARDINO	S108724328	NORTON AIRCRAFT MAINTENANCE SERVICE	255 S LELAND NORTON WAYHANGER 763, BAY 3	92408	San Bern. Co. Permit
SAN BERNARDINO	S106911243	MC DONNELL DOUGLAS	105 S LELAND NORTON WAY	92408	San Bern. Co. Permit
SAN BERNARDINO	S106446762	S B VALLEY COLLEGE TRANSPORTATION	264 S LELAND NORTON WAY	92408	San Bern. Co. Permit
SAN BERNARDINO	S110071651	CERTIFIED AVIATION SVCS LLC	105 S LELAND NORTON/BLDG 795 WAY STE 1	92408	San Bern. Co. Permit
SAN BERNARDINO	A100346056	SB INTL AIRPORT AUTHORITY	294 S LELAND NORTON WAY	92408	AST
SAN BERNARDINO	S107736453	HIGHLAND AVENUE AUXILIARY FIELD	(5 MILES W OF)		ENVIROSTOR
SAN BERNARDINO	S104549232	SALTER COMPANY (NORTON AFB)	N/A MILL STREET		SLIC
SAN BERNARDINO	S104549233	SOUTHERN PACIFIC RAIL YARD	NA MILL STREET		SLIC
SAN BERNARDINO	S108543100	SOUTHERN PACIFIC RAIL YARD	NA MILL STREET		SLIC
SAN BERNARDINO	S108985941	U.S. AIR FORCE - NORTON AFB (FORMER)	MILL STREET		SLIC
SAN BERNARDINO	S104768235	MILL ST BODY/PAINT/FRAME	595 E MILL ST	92408	San Bern. Co. Permit
SAN BERNARDINO	S106911458	N & N AUTO REPAIR	595 E MILL ST	92408	San Bern. Co. Permit
SAN BERNARDINO	S109598530	COTT BEVERAGES	570 E MILL ST	92408	San Bern. Co. Permit
SAN BERNARDINO	S110496939	BURLINGTON COAT FACTORY DIST CENTER	570 E MILL ST	92408	San Bern. Co. Permit
SAN BERNARDINO	S110071713	MILL STREET OIL & BRAKE	385 E MILL ST	92408	San Bern. Co. Permit
SAN BERNARDINO	S106911263	NEVAREZ AUTO REPAIR	179 W MILLS ST	92408	San Bern. Co. Permit
SAN BERNARDINO	S110656360	FORMER TOM'S TAX SERVICE	697 S MOUNTAIN VIEW AVE	92408	San Bern. Co. Permit
SAN BERNARDINO	S109821508	BLACKLAND PROPERTIES SITE	NE OF WATERMAN AVE / VANDERBILT WAY		SWF/LF
SAN BERNARDINO	S110326747	TOMBYLL PLASTICS INC	236 W ORANGE SHOW RD	92408	San Bern. Co. Permit
SAN BERNARDINO	S110168945	P R PRINTING	290 W ORANGE SHOW RD STE 103	92408	San Bern. Co. Permit
SAN BERNARDINO	S110326702	VISTA PAINT	414 REDLANDS BLVD	92408	San Bern. Co. Permit
SAN BERNARDINO	S107592103	IMPERIAL TRANSMISSIONS	571 E REDLANDS BLVD	92408	San Bern. Co. Permit
SAN BERNARDINO	S110656386	WARREN PACKAGING	879 E RIALTO AVE	92408	San Bern. Co. Permit
SAN BERNARDINO	S110326666	CAL-CRAFT DESIGN INT'L INC	1615 RIVERVIEW DR	92408	San Bern. Co. Permit, HAZNET
SAN BERNARDINO	S107448052	MARK'S AUTO RESTORATION	1920 RIVERVIEW DR	92408	San Bern. Co. Permit
SAN BERNARDINO	S110326724	GLYCO ENV SERVICES	892 E SANTA FE ST	92408	San Bern. Co. Permit, HAZNET
SAN BERNARDINO	S110590740	GLYCO ENVIRONMENTAL SERVICES	892 E SANTA FE ST	92408	HWT
SAN BERNARDINO	S109349290	BRINKS INC	248 S SIERRA WAY	92408	San Bern. Co. Permit
SAN BERNARDINO	A100345578	CAL TRANS EQPMT SVC #8	320 S SIERRA WAY	92408	AST
SAN BERNARDINO	A100345646	CITY OF SBDO CORP SVC YARD	182 S SIERRA WAY	92408	AST
SAN BERNARDINO	A100346037	S B D FBO SERVICES, LLC BLUE'S AVIATION SERVICE	2895 U ST	92408	AST
SAN BERNARDINO	1004675623	LOCKHEED MARTIN WELL 6	1271 S TIPPECANOE TRAILER A	92408	RCRA-SQG, FINDS, HAZNET
SAN BERNARDINO	S101591442	AMINA OIL CO	10359 TIPPECANOE	92408	CA FID UST, SWEEPS UST
SAN BERNARDINO	S105698324	TRANSPRO, INC	1390 S TIPPECANOE AVE	92408	San Bern. Co. Permit
SAN BERNARDINO	S110497002	NORTHGATE #11	7776 TIPPECANOE ST	92408	San Bern. Co. Permit
SAN BERNARDINO	S110326603	INLAND EMPIRE ENVIRONMENTAL	1150 S TIPPECANOE AVE	92408	SWF/LF
SAN BERNARDINO	S109821506	CEDAR SPRINGS DISPOSAL SITE	UNDER SILVERWOOD LAKE, IN A STATE PARK		SWF/LF
SAN BERNARDINO	A100346112	SB CITY FIRE STATION #231	450 E VANDERBILT LN	92408	AST
SAN BERNARDINO	S109349303	COUNTY FIRE-VEHICLE SERVICES	2824 E W ST BLDG 302	92408	AST, San Bern. Co. Permit
SAN BERNARDINO	S110496946	CARBIDE SAW & TOOL INC	336 S WATERMAN AVE	92408	San Bern. Co. Permit
SAN BERNARDINO	S110497034	THE LAB	738 S WATERMAN AVE	92408	San Bern. Co. Permit

Count: 195 records

ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
SAN BERNARDINO	A100346074	SCE-CARDIFF SUBSTATION	151 N WATERMAN AVE	92408	AST
SAN BERNARDINO COUNT	M200000047	VICEROY RESOURCES CORP	CASTLE MOUNTAIN MINE		MINES
SAN BERNARDINO COUNT	M200000117	VICEROY RESOURCES CORP	CASTLE MOUNTAIN MINE		MINES
SAN BERNARDINO COUNT	M300006013	VICEROY RESOURCES CORP	CASTLE MOUNTAIN MINE		MINES
SAN BERNARDINO COUNT	M300002206	VICEROY RESOURCES CORP	CASTLE MOUNTAIN MINE		MINES
SAN BERNARDINO COUNT	S103442535	FORT IRWIN LUCKY FUSE DISPOSAL	FORT IRWIN		WMUDS/SWAT, HIST CORTESE, CHI
SAN BERNARDINO COUNT	M300003171	HI-GRADE MATERIALS CO.	LUCERNE VALLEY PIT & PLANT		MINES
SAN BERNARDINO COUNT	M300000964	MITSUBISHI CEMENT CO	LUCERNE VALLEY (CUSHENBURY PLANT)		MINES
SAN BERNARDINO COUNT	M300006407	OMYA CALIFORNIA, INC.	OMYA CALIFORNIA QUARRY		MINES
SAN BERNARDINO COUNT	M300003163	CEMEX, INC.	REDLANDS PLANT		MINES
SAN BERNARDINO COUNT	M300003175	ROBERTSONS READY MIX, INC.	REDLANDS EXCAVATION		MINES
SAN BERNARDINO COUNT	M300003168	VULCAN MATERIALS CO.	SAN BERNARDINO (#010)		MINES
SAN BERNARDINO COUNT	M300003174	HOLLIDAY TRUCKING, INC.	SAN BERARDINO PIT		MINES
SAN BERNARDINO COUNT	M300006411	CEMEX CALIFORNIA CEMENT LLC.	WHITE MOUNTAIN QUARRY		MINES
YUCAIPA	S110071562	SCE-TENNESSEE SUBSTATION	18TH ST / "E" AVE	92374	San Bern. Co. Permit

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.

FEDERAL RECORDS

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: 12/31/2010
Date Data Arrived at EDR: 01/13/2011
Date Made Active in Reports: 01/28/2011
Number of Days to Update: 15

Source: EPA
Telephone: N/A
Last EDR Contact: 01/13/2011
Next Scheduled EDR Contact: 04/25/2011
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: 12/31/2010
Date Data Arrived at EDR: 01/13/2011
Date Made Active in Reports: 01/28/2011
Number of Days to Update: 15

Source: EPA
Telephone: N/A
Last EDR Contact: 01/13/2011
Next Scheduled EDR Contact: 04/25/2011
Data Release Frequency: Quarterly

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: 12/31/2010
Date Data Arrived at EDR: 01/13/2011
Date Made Active in Reports: 01/28/2011
Number of Days to Update: 15

Source: EPA
Telephone: N/A
Last EDR Contact: 01/13/2011
Next Scheduled EDR Contact: 04/25/2011
Data Release Frequency: Quarterly

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

NPL LIENS: Federal Superfund Liens

Federal Superfund Liens. Under the authority granted the USEPA by CERCLA of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner received notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

Date of Government Version: 10/15/1991	Source: EPA
Date Data Arrived at EDR: 02/02/1994	Telephone: 202-564-4267
Date Made Active in Reports: 03/30/1994	Last EDR Contact: 11/22/2010
Number of Days to Update: 56	Next Scheduled EDR Contact: 02/28/2011
	Data Release Frequency: No Update Planned

CERCLIS: Comprehensive Environmental Response, Compensation, and Liability Information System

CERCLIS 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). CERCLIS contains sites which are either proposed to or on the National Priorities List (NPL) and sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 09/30/2010	Source: EPA
Date Data Arrived at EDR: 10/01/2010	Telephone: 703-412-9810
Date Made Active in Reports: 01/28/2011	Last EDR Contact: 12/30/2010
Number of Days to Update: 119	Next Scheduled EDR Contact: 04/11/2011
	Data Release Frequency: Quarterly

CERCLIS-NFRAP: CERCLIS No Further Remedial Action Planned

Archived sites are sites that have been removed and archived from the inventory of CERCLIS 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 this 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. This 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 a potential NPL site.

Date of Government Version: 06/23/2009	Source: EPA
Date Data Arrived at EDR: 09/02/2009	Telephone: 703-412-9810
Date Made Active in Reports: 09/21/2009	Last EDR Contact: 12/01/2010
Number of Days to Update: 19	Next Scheduled EDR Contact: 03/14/2011
	Data Release Frequency: Quarterly

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: 05/06/2010	Source: Environmental Protection Agency
Date Data Arrived at EDR: 05/11/2010	Telephone: 202-564-6023
Date Made Active in Reports: 08/09/2010	Last EDR Contact: 11/01/2010
Number of Days to Update: 90	Next Scheduled EDR Contact: 02/14/2011
	Data Release Frequency: Varies

CORRACTS: Corrective Action Report

CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 05/25/2010	Source: EPA
Date Data Arrived at EDR: 06/02/2010	Telephone: 800-424-9346
Date Made Active in Reports: 10/04/2010	Last EDR Contact: 11/22/2010
Number of Days to Update: 124	Next Scheduled EDR Contact: 02/28/2011
	Data Release Frequency: Quarterly

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.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 02/17/2010
Date Data Arrived at EDR: 02/19/2010
Date Made Active in Reports: 05/17/2010
Number of Days to Update: 87

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 01/06/2011
Next Scheduled EDR Contact: 04/18/2011
Data Release Frequency: Quarterly

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: 02/17/2010
Date Data Arrived at EDR: 02/19/2010
Date Made Active in Reports: 05/17/2010
Number of Days to Update: 87

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 01/06/2011
Next Scheduled EDR Contact: 04/18/2011
Data Release Frequency: Quarterly

RCRA-SQG: RCRA - Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

Date of Government Version: 02/17/2010
Date Data Arrived at EDR: 02/19/2010
Date Made Active in Reports: 05/17/2010
Number of Days to Update: 87

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 01/06/2011
Next Scheduled EDR Contact: 04/18/2011
Data Release Frequency: Quarterly

RCRA-CESQG: RCRA - 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). Conditionally exempt small quantity generators (CESQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

Date of Government Version: 02/17/2010
Date Data Arrived at EDR: 02/19/2010
Date Made Active in Reports: 05/17/2010
Number of Days to Update: 87

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 01/06/2011
Next Scheduled EDR Contact: 04/18/2011
Data Release Frequency: Varies

RCRA-NonGen: RCRA - Non 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). Non-Generators do not presently generate hazardous waste.

Date of Government Version: 02/17/2010
Date Data Arrived at EDR: 02/19/2010
Date Made Active in Reports: 05/17/2010
Number of Days to Update: 87

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 01/06/2011
Next Scheduled EDR Contact: 04/18/2011
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

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: 01/05/2011
Date Data Arrived at EDR: 01/14/2011
Date Made Active in Reports: 01/28/2011
Number of Days to Update: 14

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 12/10/2010
Next Scheduled EDR Contact: 03/28/2011
Data Release Frequency: Varies

US INST CONTROL: Sites with Institutional Controls

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: 01/05/2011
Date Data Arrived at EDR: 01/14/2011
Date Made Active in Reports: 01/28/2011
Number of Days to Update: 14

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 12/10/2010
Next Scheduled EDR Contact: 03/28/2011
Data Release Frequency: Varies

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: 07/09/2010
Date Data Arrived at EDR: 07/09/2010
Date Made Active in Reports: 08/17/2010
Number of Days to Update: 39

Source: National Response Center, United States Coast Guard
Telephone: 202-267-2180
Last EDR Contact: 01/07/2011
Next Scheduled EDR Contact: 04/18/2011
Data Release Frequency: Annually

HMIRS: Hazardous Materials Information Reporting System

Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 04/06/2010
Date Data Arrived at EDR: 04/07/2010
Date Made Active in Reports: 05/27/2010
Number of Days to Update: 50

Source: U.S. Department of Transportation
Telephone: 202-366-4555
Last EDR Contact: 01/05/2011
Next Scheduled EDR Contact: 04/18/2011
Data Release Frequency: Annually

DOT OPS: Incident and Accident Data

Department of Transporation, Office of Pipeline Safety Incident and Accident data.

Date of Government Version: 01/12/2010
Date Data Arrived at EDR: 02/09/2010
Date Made Active in Reports: 04/12/2010
Number of Days to Update: 62

Source: Department of Transporation, Office of Pipeline Safety
Telephone: 202-366-4595
Last EDR Contact: 11/09/2010
Next Scheduled EDR Contact: 02/21/2011
Data Release Frequency: Varies

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.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 05/07/2010
Date Data Arrived at EDR: 06/18/2010
Date Made Active in Reports: 08/17/2010
Number of Days to Update: 60

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 12/08/2010
Next Scheduled EDR Contact: 03/21/2011
Data Release Frequency: Quarterly

US BROWNFIELDS: A Listing of Brownfields Sites

Included in the listing are brownfields properties addresses by Cooperative Agreement Recipients and brownfields properties addressed by Targeted Brownfields Assessments. Targeted Brownfields Assessments-EPA's Targeted Brownfields Assessments (TBA) program is designed to help states, tribes, and municipalities--especially those without EPA Brownfields Assessment Demonstration Pilots--minimize the uncertainties of contamination often associated with brownfields. Under the TBA program, EPA provides funding and/or technical assistance for environmental assessments at brownfields sites throughout the country. Targeted Brownfields Assessments supplement and work with other efforts under EPA's Brownfields Initiative to promote cleanup and redevelopment of brownfields. Cooperative Agreement Recipients-States, political subdivisions, territories, and Indian tribes become Brownfields Cleanup Revolving Loan Fund (BCRLF) cooperative agreement recipients when they enter into BCRLF cooperative agreements with the U.S. EPA. EPA selects BCRLF cooperative agreement recipients based on a proposal and application process. BCRLF cooperative agreement recipients must use EPA funds provided through BCRLF cooperative agreement for specified brownfields-related cleanup activities.

Date of Government Version: 06/24/2010
Date Data Arrived at EDR: 06/25/2010
Date Made Active in Reports: 08/17/2010
Number of Days to Update: 53

Source: Environmental Protection Agency
Telephone: 202-566-2777
Last EDR Contact: 12/30/2010
Next Scheduled EDR Contact: 04/11/2011
Data Release Frequency: Semi-Annually

DOD: Department of Defense Sites

This data set consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 11/10/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 62

Source: USGS
Telephone: 703-692-8801
Last EDR Contact: 01/21/2011
Next Scheduled EDR Contact: 05/02/2011
Data Release Frequency: Semi-Annually

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: 12/31/2009
Date Data Arrived at EDR: 08/12/2010
Date Made Active in Reports: 12/02/2010
Number of Days to Update: 112

Source: U.S. Army Corps of Engineers
Telephone: 202-528-4285
Last EDR Contact: 12/13/2010
Next Scheduled EDR Contact: 03/28/2011
Data Release Frequency: Varies

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: 12/09/2005
Date Data Arrived at EDR: 12/11/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 31

Source: Department of the Navy
Telephone: 843-820-7326
Last EDR Contact: 11/22/2010
Next Scheduled EDR Contact: 03/07/2011
Data Release Frequency: Varies

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.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 10/01/2010
Date Data Arrived at EDR: 10/29/2010
Date Made Active in Reports: 01/28/2011
Number of Days to Update: 91

Source: Department of Justice, Consent Decree Library
Telephone: Varies
Last EDR Contact: 01/03/2011
Next Scheduled EDR Contact: 04/18/2011
Data Release Frequency: Varies

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: 06/01/2010
Date Data Arrived at EDR: 06/16/2010
Date Made Active in Reports: 08/17/2010
Number of Days to Update: 62

Source: EPA
Telephone: 703-416-0223
Last EDR Contact: 12/10/2010
Next Scheduled EDR Contact: 03/28/2011
Data Release Frequency: Annually

UMTRA: Uranium Mill Tailings Sites

Uranium ore was mined by private companies for federal government use in national defense programs. When the mills shut down, large piles of the sand-like material (mill tailings) remain after uranium has been extracted from the ore. Levels of human exposure to radioactive materials from the piles are low; however, in some cases tailings were used as construction materials before the potential health hazards of the tailings were recognized.

Date of Government Version: 12/14/2009
Date Data Arrived at EDR: 09/29/2010
Date Made Active in Reports: 10/04/2010
Number of Days to Update: 5

Source: Department of Energy
Telephone: 505-845-0011
Last EDR Contact: 11/29/2010
Next Scheduled EDR Contact: 03/14/2011
Data Release Frequency: Varies

DEBRIS REGION 9: Torres Martinez Reservation Illegal Dump Site Locations

A listing of illegal dump sites location on the Torres Martinez Indian Reservation located in eastern Riverside County and northern Imperial County, California.

Date of Government Version: 01/12/2009
Date Data Arrived at EDR: 05/07/2009
Date Made Active in Reports: 09/21/2009
Number of Days to Update: 137

Source: EPA, Region 9
Telephone: 415-947-4219
Last EDR Contact: 12/22/2010
Next Scheduled EDR Contact: 04/11/2011
Data Release Frequency: No Update Planned

ODI: Open Dump Inventory

An open dump is defined as a disposal facility that does not comply with one or more of the Part 257 or Part 258 Subtitle D Criteria.

Date of Government Version: 06/30/1985
Date Data Arrived at EDR: 08/09/2004
Date Made Active in Reports: 09/17/2004
Number of Days to Update: 39

Source: Environmental Protection Agency
Telephone: 800-424-9346
Last EDR Contact: 06/09/2004
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

MINES: Mines Master Index File

Contains all mine identification numbers issued for mines active or opened since 1971. The data also includes violation information.

Date of Government Version: 08/04/2010
Date Data Arrived at EDR: 09/09/2010
Date Made Active in Reports: 12/02/2010
Number of Days to Update: 84

Source: Department of Labor, Mine Safety and Health Administration
Telephone: 303-231-5959
Last EDR Contact: 09/09/2010
Next Scheduled EDR Contact: 03/21/2011
Data Release Frequency: Semi-Annually

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: 12/31/2008
Date Data Arrived at EDR: 01/13/2010
Date Made Active in Reports: 02/18/2010
Number of Days to Update: 36

Source: EPA
Telephone: 202-566-0250
Last EDR Contact: 12/17/2010
Next Scheduled EDR Contact: 03/14/2011
Data Release Frequency: Annually

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: 12/31/2006
Date Data Arrived at EDR: 09/29/2010
Date Made Active in Reports: 12/02/2010
Number of Days to Update: 64

Source: EPA
Telephone: 202-260-5521
Last EDR Contact: 12/29/2010
Next Scheduled EDR Contact: 04/11/2011
Data Release Frequency: Every 4 Years

FTTS: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)

FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act). To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25

Source: EPA/Office of Prevention, Pesticides and Toxic Substances
Telephone: 202-566-1667
Last EDR Contact: 11/29/2010
Next Scheduled EDR Contact: 03/14/2011
Data Release Frequency: Quarterly

FTTS INSP: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)

A listing of FIFRA/TSCA Tracking System (FTTS) inspections and enforcements.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25

Source: EPA
Telephone: 202-566-1667
Last EDR Contact: 11/29/2010
Next Scheduled EDR Contact: 03/14/2011
Data Release Frequency: Quarterly

HIST FTTS: FIFRA/TSCA Tracking System Administrative Case Listing

A complete administrative case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2007
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

HIST FTTS INSP: FIFRA/TSCA Tracking System Inspection & Enforcement Case Listing

A complete inspection and enforcement case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

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

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: 12/31/2008
Date Data Arrived at EDR: 01/06/2010
Date Made Active in Reports: 02/10/2010
Number of Days to Update: 35

Source: EPA
Telephone: 202-564-4203
Last EDR Contact: 11/01/2010
Next Scheduled EDR Contact: 02/14/2011
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: 04/24/2010
Date Data Arrived at EDR: 04/29/2010
Date Made Active in Reports: 05/17/2010
Number of Days to Update: 18

Source: Environmental Protection Agency
Telephone: 202-564-5088
Last EDR Contact: 12/23/2010
Next Scheduled EDR Contact: 04/11/2011
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: 02/01/2010
Date Data Arrived at EDR: 04/22/2010
Date Made Active in Reports: 08/09/2010
Number of Days to Update: 109

Source: EPA
Telephone: 202-566-0500
Last EDR Contact: 01/21/2011
Next Scheduled EDR Contact: 05/02/2011
Data Release Frequency: Annually

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: 03/18/2010
Date Data Arrived at EDR: 04/06/2010
Date Made Active in Reports: 05/27/2010
Number of Days to Update: 51

Source: Nuclear Regulatory Commission
Telephone: 301-415-7169
Last EDR Contact: 12/13/2010
Next Scheduled EDR Contact: 03/28/2011
Data Release Frequency: Quarterly

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: 07/13/2010
Date Data Arrived at EDR: 07/14/2010
Date Made Active in Reports: 08/09/2010
Number of Days to Update: 26

Source: Environmental Protection Agency
Telephone: 202-343-9775
Last EDR Contact: 01/13/2011
Next Scheduled EDR Contact: 04/25/2011
Data Release Frequency: Quarterly

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

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: 04/14/2010
Date Data Arrived at EDR: 04/16/2010
Date Made Active in Reports: 05/27/2010
Number of Days to Update: 41

Source: EPA
Telephone: (415) 947-8000
Last EDR Contact: 12/10/2010
Next Scheduled EDR Contact: 03/28/2011
Data Release Frequency: Quarterly

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

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: 12/31/2007
Date Data Arrived at EDR: 02/25/2010
Date Made Active in Reports: 05/12/2010
Number of Days to Update: 76

Source: EPA/NTIS
Telephone: 800-424-9346
Last EDR Contact: 11/30/2010
Next Scheduled EDR Contact: 03/07/2011
Data Release Frequency: Biennially

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 EPAa??s Federal Facilities Restoration and Reuse Office is involved in cleanup activities.

Date of Government Version: 06/23/2009
Date Data Arrived at EDR: 01/15/2010
Date Made Active in Reports: 02/10/2010
Number of Days to Update: 26

Source: Environmental Protection Agency
Telephone: 703-603-8704
Last EDR Contact: 01/11/2011
Next Scheduled EDR Contact: 04/25/2011
Data Release Frequency: Varies

US HIST CDL: National Clandestine Laboratory Register

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: 09/01/2007
Date Data Arrived at EDR: 11/19/2008
Date Made Active in Reports: 03/30/2009
Number of Days to Update: 131

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 03/23/2009
Next Scheduled EDR Contact: 06/22/2009
Data Release Frequency: No Update Planned

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

PCB TRANSFORMER: PCB Transformer Registration Database
The database of PCB transformer registrations that includes all PCB registration submittals.

Date of Government Version: 01/01/2008
Date Data Arrived at EDR: 02/18/2009
Date Made Active in Reports: 05/29/2009
Number of Days to Update: 100

Source: Environmental Protection Agency
Telephone: 202-566-0517
Last EDR Contact: 11/10/2010
Next Scheduled EDR Contact: 02/14/2011
Data Release Frequency: Varies

COAL ASH DOE: Sleam-Electric Plan Operation Data
A listing of power plants that store ash in surface ponds.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 08/07/2009
Date Made Active in Reports: 10/22/2009
Number of Days to Update: 76

Source: Department of Energy
Telephone: 202-586-8719
Last EDR Contact: 01/18/2011
Next Scheduled EDR Contact: 05/02/2011
Data Release Frequency: Varies

FEMA UST: Underground Storage Tank Listing
A listing of all FEMA owned underground storage tanks.

Date of Government Version: 01/01/2010
Date Data Arrived at EDR: 02/16/2010
Date Made Active in Reports: 04/12/2010
Number of Days to Update: 55

Source: FEMA
Telephone: 202-646-5797
Last EDR Contact: 01/17/2011
Next Scheduled EDR Contact: 05/02/2011
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: 11/09/2009
Date Data Arrived at EDR: 12/18/2009
Date Made Active in Reports: 02/10/2010
Number of Days to Update: 54

Source: Environmental Protection Agency
Telephone: N/A
Last EDR Contact: 12/21/2010
Next Scheduled EDR Contact: 03/28/2011
Data Release Frequency: Varies

SCRD DRYCLEANERS: State Coalition for Remediation of Drycleaners Listing
The State Coalition for Remediation of Drycleaners was established in 1998, with support from the U.S. EPA Office of Superfund Remediation and Technology Innovation. It is comprised of representatives of states with established drycleaner remediation programs. Currently the member states are Alabama, Connecticut, Florida, Illinois, Kansas, Minnesota, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Texas, and Wisconsin.

Date of Government Version: 08/31/2010
Date Data Arrived at EDR: 09/01/2010
Date Made Active in Reports: 12/02/2010
Number of Days to Update: 92

Source: Environmental Protection Agency
Telephone: 615-532-8599
Last EDR Contact: 01/24/2011
Next Scheduled EDR Contact: 05/09/2011
Data Release Frequency: Varies

STATE AND LOCAL RECORDS

HIST CAL-SITES: Calsites Database
The Calsites database contains potential or confirmed hazardous substance release properties. In 1996, California EPA reevaluated and significantly reduced the number of sites in the Calsites database. No longer updated by the state agency. It has been replaced by ENVIROSTOR.

Date of Government Version: 08/08/2005
Date Data Arrived at EDR: 08/03/2006
Date Made Active in Reports: 08/24/2006
Number of Days to Update: 21

Source: Department of Toxic Substance Control
Telephone: 916-323-3400
Last EDR Contact: 02/23/2009
Next Scheduled EDR Contact: 05/25/2009
Data Release Frequency: No Update Planned

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

CA BOND EXP. PLAN: Bond Expenditure Plan

Department of Health Services developed a site-specific expenditure plan as the basis for an appropriation of Hazardous Substance Cleanup Bond Act funds. It is not updated.

Date of Government Version: 01/01/1989
Date Data Arrived at EDR: 07/27/1994
Date Made Active in Reports: 08/02/1994
Number of Days to Update: 6

Source: Department of Health Services
Telephone: 916-255-2118
Last EDR Contact: 05/31/1994
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

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: 11/08/2010
Date Data Arrived at EDR: 12/17/2010
Date Made Active in Reports: 01/25/2011
Number of Days to Update: 39

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 11/09/2010
Next Scheduled EDR Contact: 02/21/2011
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

SWF/LF (SWIS): Solid Waste Information System

Active, Closed and Inactive Landfills. SWF/LF records typically contain an inve ntory of solid waste disposal facilities or landfills. These may be active or i nactive facilities or open dumps that failed to meet RCRA Section 4004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 11/22/2010
Date Data Arrived at EDR: 11/23/2010
Date Made Active in Reports: 01/25/2011
Number of Days to Update: 63

Source: Department of Resources Recycling and Recovery
Telephone: 916-341-6320
Last EDR Contact: 11/23/2010
Next Scheduled EDR Contact: 03/07/2011
Data Release Frequency: Quarterly

WMUDS/SWAT: Waste Management Unit Database

Waste Management Unit Database System. WMUDS is used by the State Water Resources Control Board staff and the Regional Water Quality Control Boards for program tracking and inventory of waste management units. WMUDS is composed of the following databases: Facility Information, Scheduled Inspections Information, Waste Management Unit Information, SWAT Program Information, SWAT Report Summary Information, SWAT Report Summary Data, Chapter 15 (formerly Subchapter 15) Information, Chapter 15 Monitoring Parameters, TPCA Program Information, RCRA Program Information, Closure Information, and Interested Parties Information.

Date of Government Version: 04/01/2000
Date Data Arrived at EDR: 04/10/2000
Date Made Active in Reports: 05/10/2000
Number of Days to Update: 30

Source: State Water Resources Control Board
Telephone: 916-227-4448
Last EDR Contact: 11/22/2010
Next Scheduled EDR Contact: 02/28/2011
Data Release Frequency: Quarterly

NPDES: NPDES Permits Listing

A listing of NPDES permits, including stormwater.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 11/22/2010
Date Data Arrived at EDR: 11/23/2010
Date Made Active in Reports: 01/28/2011
Number of Days to Update: 66

Source: State Water Resources Control Board
Telephone: 916-445-9379
Last EDR Contact: 11/23/2010
Next Scheduled EDR Contact: 03/07/2011
Data Release Frequency: Quarterly

WDS: Waste Discharge System
Sites which have been issued waste discharge requirements.

Date of Government Version: 06/19/2007
Date Data Arrived at EDR: 06/20/2007
Date Made Active in Reports: 06/29/2007
Number of Days to Update: 9

Source: State Water Resources Control Board
Telephone: 916-341-5227
Last EDR Contact: 11/29/2010
Next Scheduled EDR Contact: 03/14/2011
Data Release Frequency: Quarterly

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). This listing is no longer updated by the state agency.

Date of Government Version: 01/04/2011
Date Data Arrived at EDR: 01/05/2011
Date Made Active in Reports: 01/25/2011
Number of Days to Update: 20

Source: CAL EPA/Office of Emergency Information
Telephone: 916-323-3400
Last EDR Contact: 01/05/2011
Next Scheduled EDR Contact: 04/18/2011
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].

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

SWRCY: Recycler Database
A listing of recycling facilities in California.

Date of Government Version: 11/18/2010
Date Data Arrived at EDR: 12/23/2010
Date Made Active in Reports: 01/28/2011
Number of Days to Update: 36

Source: Department of Conservation
Telephone: 916-323-3836
Last EDR Contact: 12/23/2010
Next Scheduled EDR Contact: 04/04/2011
Data Release Frequency: Quarterly

LUST: Geotracker's Leaking Underground Fuel Tank Report
Leaking Underground Storage Tank Incident Reports. LUST records contain an inventory of reported leaking underground storage tank incidents. Not all states maintain these records, and the information stored varies by state. For more information on a particular leaking underground storage tank sites, please contact the appropriate regulatory agency.

Date of Government Version: 12/16/2010
Date Data Arrived at EDR: 12/16/2010
Date Made Active in Reports: 01/28/2011
Number of Days to Update: 43

Source: State Water Resources Control Board
Telephone: see region list
Last EDR Contact: 12/16/2010
Next Scheduled EDR Contact: 04/04/2011
Data Release Frequency: Quarterly

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.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 02/01/2001
Date Data Arrived at EDR: 02/28/2001
Date Made Active in Reports: 03/29/2001
Number of Days to Update: 29

Source: California Regional Water Quality Control Board North Coast (1)
Telephone: 707-570-3769
Last EDR Contact: 11/01/2010
Next Scheduled EDR Contact: 02/14/2011
Data Release Frequency: No Update Planned

LUST REG 2: Fuel Leak List

Leaking Underground Storage Tank locations. Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano, Sonoma counties.

Date of Government Version: 09/30/2004
Date Data Arrived at EDR: 10/20/2004
Date Made Active in Reports: 11/19/2004
Number of Days to Update: 30

Source: California Regional Water Quality Control Board San Francisco Bay Region (2)
Telephone: 510-622-2433
Last EDR Contact: 12/16/2010
Next Scheduled EDR Contact: 04/04/2011
Data Release Frequency: Quarterly

LUST REG 3: Leaking Underground Storage Tank Database

Leaking Underground Storage Tank locations. Monterey, San Benito, San Luis Obispo, Santa Barbara, Santa Cruz counties.

Date of Government Version: 05/19/2003
Date Data Arrived at EDR: 05/19/2003
Date Made Active in Reports: 06/02/2003
Number of Days to Update: 14

Source: California Regional Water Quality Control Board Central Coast Region (3)
Telephone: 805-542-4786
Last EDR Contact: 05/17/2011
Next Scheduled EDR Contact: 05/02/2011
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
Date Data Arrived at EDR: 04/23/2001
Date Made Active in Reports: 05/21/2001
Number of Days to Update: 28

Source: California Regional Water Quality Control Board San Diego Region (9)
Telephone: 858-637-5595
Last EDR Contact: 12/22/2010
Next Scheduled EDR Contact: 04/11/2011
Data Release Frequency: No Update Planned

LUST REG 5: Leaking Underground Storage Tank Database

Leaking Underground Storage Tank locations. Alameda, Alpine, Amador, Butte, Colusa, Contra Costa, Calveras, El Dorado, Fresno, Glenn, Kern, Kings, Lake, Lassen, Madera, Mariposa, Merced, Modoc, Napa, Nevada, Placer, Plumas, Sacramento, San Joaquin, Shasta, Solano, Stanislaus, Sutter, Tehama, Tulare, Tuolumne, Yolo, Yuba counties.

Date of Government Version: 07/01/2008
Date Data Arrived at EDR: 07/22/2008
Date Made Active in Reports: 07/31/2008
Number of Days to Update: 9

Source: California Regional Water Quality Control Board Central Valley Region (5)
Telephone: 916-464-4834
Last EDR Contact: 01/03/2011
Next Scheduled EDR Contact: 04/18/2011
Data Release Frequency: Quarterly

LUST REG 6L: Leaking Underground Storage Tank Case Listing

For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 09/09/2003
Date Data Arrived at EDR: 09/10/2003
Date Made Active in Reports: 10/07/2003
Number of Days to Update: 27

Source: California Regional Water Quality Control Board Lahontan Region (6)
Telephone: 530-542-5572
Last EDR Contact: 12/10/2010
Next Scheduled EDR Contact: 03/28/2011
Data Release Frequency: No Update Planned

LUST REG 6V: Leaking Underground Storage Tank Case Listing

Leaking Underground Storage Tank locations. Inyo, Kern, Los Angeles, Mono, San Bernardino counties.

Date of Government Version: 06/07/2005
Date Data Arrived at EDR: 06/07/2005
Date Made Active in Reports: 06/29/2005
Number of Days to Update: 22

Source: California Regional Water Quality Control Board Victorville Branch Office (6)
Telephone: 760-241-7365
Last EDR Contact: 12/10/2010
Next Scheduled EDR Contact: 03/28/2011
Data Release Frequency: No Update Planned

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

LUST REG 7: Leaking Underground Storage Tank Case Listing
Leaking Underground Storage Tank locations. Imperial, Riverside, San Diego, Santa Barbara counties.

Date of Government Version: 02/26/2004
Date Data Arrived at EDR: 02/26/2004
Date Made Active in Reports: 03/24/2004
Number of Days to Update: 27

Source: California Regional Water Quality Control Board Colorado River Basin Region (7)
Telephone: 760-776-8943
Last EDR Contact: 11/01/2011
Next Scheduled EDR Contact: 02/14/2011
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
Date Data Arrived at EDR: 02/15/2005
Date Made Active in Reports: 03/28/2005
Number of Days to Update: 41

Source: California Regional Water Quality Control Board Santa Ana Region (8)
Telephone: 909-782-4496
Last EDR Contact: 01/17/2011
Next Scheduled EDR Contact: 05/02/2011
Data Release Frequency: Varies

LUST REG 4: Underground Storage Tank Leak List
Los Angeles, Ventura counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 09/07/2004
Date Data Arrived at EDR: 09/07/2004
Date Made Active in Reports: 10/12/2004
Number of Days to Update: 35

Source: California Regional Water Quality Control Board Los Angeles Region (4)
Telephone: 213-576-6710
Last EDR Contact: 12/06/2010
Next Scheduled EDR Contact: 03/21/2011
Data Release Frequency: No Update Planned

CA FID UST: Facility Inventory Database
The Facility Inventory Database (FID) contains a historical listing of active and inactive underground storage tank locations from the State Water Resource Control Board. Refer to local/county source for current data.

Date of Government Version: 10/31/1994
Date Data Arrived at EDR: 09/05/1995
Date Made Active in Reports: 09/29/1995
Number of Days to Update: 24

Source: California Environmental Protection Agency
Telephone: 916-341-5851
Last EDR Contact: 12/28/1998
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

SLIC: Statewide SLIC Cases
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: 12/16/2010
Date Data Arrived at EDR: 12/16/2010
Date Made Active in Reports: 01/28/2011
Number of Days to Update: 43

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 12/16/2010
Next Scheduled EDR Contact: 04/04/2011
Data Release Frequency: Varies

SLIC REG 1: Active Toxic Site Investigations
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/03/2003
Date Data Arrived at EDR: 04/07/2003
Date Made Active in Reports: 04/25/2003
Number of Days to Update: 18

Source: California Regional Water Quality Control Board, North Coast Region (1)
Telephone: 707-576-2220
Last EDR Contact: 11/01/2010
Next Scheduled EDR Contact: 02/14/2011
Data Release Frequency: No Update Planned

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

SLIC REG 2: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/30/2004
Date Data Arrived at EDR: 10/20/2004
Date Made Active in Reports: 11/19/2004
Number of Days to Update: 30

Source: Regional Water Quality Control Board San Francisco Bay Region (2)
Telephone: 510-286-0457
Last EDR Contact: 12/16/2010
Next Scheduled EDR Contact: 04/04/2011
Data Release Frequency: Quarterly

SLIC REG 3: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 05/18/2006
Date Data Arrived at EDR: 05/18/2006
Date Made Active in Reports: 06/15/2006
Number of Days to Update: 28

Source: California Regional Water Quality Control Board Central Coast Region (3)
Telephone: 805-549-3147
Last EDR Contact: 01/17/2011
Next Scheduled EDR Contact: 05/02/2011
Data Release Frequency: Semi-Annually

SLIC REG 4: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 11/17/2004
Date Data Arrived at EDR: 11/18/2004
Date Made Active in Reports: 01/04/2005
Number of Days to Update: 47

Source: Region Water Quality Control Board Los Angeles Region (4)
Telephone: 213-576-6600
Last EDR Contact: 01/03/2011
Next Scheduled EDR Contact: 04/18/2011
Data Release Frequency: Varies

SLIC REG 5: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/01/2005
Date Data Arrived at EDR: 04/05/2005
Date Made Active in Reports: 04/21/2005
Number of Days to Update: 16

Source: Regional Water Quality Control Board Central Valley Region (5)
Telephone: 916-464-3291
Last EDR Contact: 12/10/2010
Next Scheduled EDR Contact: 03/28/2011
Data Release Frequency: Semi-Annually

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: 11/22/2010
Next Scheduled EDR Contact: 02/28/2011
Data Release Frequency: Semi-Annually

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: 11/22/2010
Next Scheduled EDR Contact: 02/28/2011
Data Release Frequency: No Update Planned

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

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: 11/01/2010
Next Scheduled EDR Contact: 02/14/2011
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: 12/10/2010
Next Scheduled EDR Contact: 03/28/2011
Data Release Frequency: Semi-Annually

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: 11/08/2010
Next Scheduled EDR Contact: 02/21/2011
Data Release Frequency: Annually

UST: Active UST Facilities

Active UST facilities gathered from the local regulatory agencies

Date of Government Version: 12/16/2010
Date Data Arrived at EDR: 12/16/2010
Date Made Active in Reports: 01/20/2011
Number of Days to Update: 35

Source: SWRCB
Telephone: 916-480-1028
Last EDR Contact: 12/16/2010
Next Scheduled EDR Contact: 04/04/2011
Data Release Frequency: Semi-Annually

UST MENDOCINO: Mendocino County UST Database

A listing of underground storage tank locations in Mendocino County.

Date of Government Version: 09/23/2009
Date Data Arrived at EDR: 09/23/2009
Date Made Active in Reports: 10/01/2009
Number of Days to Update: 8

Source: Department of Public Health
Telephone: 707-463-4466
Last EDR Contact: 12/06/2010
Next Scheduled EDR Contact: 03/21/2011
Data Release Frequency: Annually

HIST UST: Hazardous Substance Storage Container Database

The Hazardous Substance Storage Container Database is a historical listing of UST sites. Refer to local/county source for current data.

Date of Government Version: 10/15/1990
Date Data Arrived at EDR: 01/25/1991
Date Made Active in Reports: 02/12/1991
Number of Days to Update: 18

Source: State Water Resources Control Board
Telephone: 916-341-5851
Last EDR Contact: 07/26/2001
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

LIENS: Environmental Liens Listing

A listing of property locations with environmental liens for California where DTSC is a lien holder.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 12/08/2010
Date Data Arrived at EDR: 12/09/2010
Date Made Active in Reports: 01/25/2011
Number of Days to Update: 47

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 01/17/2011
Next Scheduled EDR Contact: 05/02/2011
Data Release Frequency: Varies

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

CHMIRS: California Hazardous Material Incident Report System

California Hazardous Material Incident Reporting System. CHMIRS contains information on reported hazardous material incidents (accidental releases or spills).

Date of Government Version: 12/31/2009
Date Data Arrived at EDR: 07/21/2010
Date Made Active in Reports: 08/20/2010
Number of Days to Update: 30

Source: Office of Emergency Services
Telephone: 916-845-8400
Last EDR Contact: 11/01/2010
Next Scheduled EDR Contact: 02/14/2011
Data Release Frequency: Varies

LDS: Land Disposal Sites Listing

The Land Disposal program regulates of waste discharge to land for treatment, storage and disposal in waste management units.

Date of Government Version: 12/16/2010
Date Data Arrived at EDR: 12/16/2010
Date Made Active in Reports: 01/25/2011
Number of Days to Update: 40

Source: State Water Qualilty Control Board
Telephone: 866-480-1028
Last EDR Contact: 12/16/2010
Next Scheduled EDR Contact: 04/04/2011
Data Release Frequency: Quarterly

AST: Aboveground Petroleum Storage Tank Facilities

Registered Aboveground Storage Tanks.

Date of Government Version: 08/01/2009
Date Data Arrived at EDR: 09/10/2009
Date Made Active in Reports: 10/01/2009
Number of Days to Update: 21

Source: State Water Resources Control Board
Telephone: 916-341-5712
Last EDR Contact: 01/10/2011
Next Scheduled EDR Contact: 04/25/2011
Data Release Frequency: Quarterly

MCS: Military Cleanup Sites Listing

The State Water Resources Control Board and nine Regional Water Quality Control Boards partner with the Department of Defense (DoD) through the Defense and State Memorandum of Agreement (DSMOA) to oversee the investigation and remediation of water quality issues at military facilities.

Date of Government Version: 12/16/2010
Date Data Arrived at EDR: 12/16/2010
Date Made Active in Reports: 01/25/2011
Number of Days to Update: 40

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 12/16/2010
Next Scheduled EDR Contact: 04/04/2011
Data Release Frequency: Quarterly

NOTIFY 65: Proposition 65 Records

Proposition 65 Notification Records. NOTIFY 65 contains facility notifications about any release which could impact drinking water and thereby expose the public to a potential health risk.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 10/21/1993
Date Data Arrived at EDR: 11/01/1993
Date Made Active in Reports: 11/19/1993
Number of Days to Update: 18

Source: State Water Resources Control Board
Telephone: 916-445-3846
Last EDR Contact: 12/22/2010
Next Scheduled EDR Contact: 04/11/2011
Data Release Frequency: No Update Planned

DEED: Deed Restriction Listing

Site Mitigation and Brownfields Reuse Program Facility Sites with Deed Restrictions & Hazardous Waste Management Program Facility Sites with Deed / Land Use Restriction. The DTSC Site Mitigation and Brownfields Reuse Program (SMBRP) list includes sites cleaned up under the program's oversight and generally does not include current or former hazardous waste facilities that required a hazardous waste facility permit. The list represents deed restrictions that are active. Some sites have multiple deed restrictions. The DTSC Hazardous Waste Management Program (HWMP) has developed a list of current or former hazardous waste facilities that have a recorded land use restriction at the local county recorder's office. The land use restrictions on this list were required by the DTSC HWMP as a result of the presence of hazardous substances that remain on site after the facility (or part of the facility) has been closed or cleaned up. The types of land use restriction include deed notice, deed restriction, or a land use restriction that binds current and future owners.

Date of Government Version: 12/14/2010
Date Data Arrived at EDR: 12/14/2010
Date Made Active in Reports: 01/25/2011
Number of Days to Update: 42

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 12/14/2010
Next Scheduled EDR Contact: 03/28/2011
Data Release Frequency: Semi-Annually

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: 11/08/2010
Date Data Arrived at EDR: 12/17/2010
Date Made Active in Reports: 01/25/2011
Number of Days to Update: 39

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 11/09/2010
Next Scheduled EDR Contact: 02/21/2011
Data Release Frequency: Quarterly

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: 09/15/2010
Date Data Arrived at EDR: 09/16/2010
Date Made Active in Reports: 09/29/2010
Number of Days to Update: 13

Source: Department of Toxic Substance Control
Telephone: 916-327-4498
Last EDR Contact: 12/13/2010
Next Scheduled EDR Contact: 03/28/2011
Data Release Frequency: Annually

WIP: Well Investigation Program Case List

Well Investigation Program case in the San Gabriel and San Fernando Valley area.

Date of Government Version: 07/03/2009
Date Data Arrived at EDR: 07/21/2009
Date Made Active in Reports: 08/03/2009
Number of Days to Update: 13

Source: Los Angeles Water Quality Control Board
Telephone: 213-576-6726
Last EDR Contact: 01/03/2011
Next Scheduled EDR Contact: 04/18/2011
Data Release Frequency: Varies

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.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 08/19/2010
Date Data Arrived at EDR: 08/23/2010
Date Made Active in Reports: 09/29/2010
Number of Days to Update: 37

Source: Department of Toxic Substances Control
Telephone: 916-255-6504
Last EDR Contact: 01/03/2011
Next Scheduled EDR Contact: 04/18/2011
Data Release Frequency: Varies

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: 11/08/2010
Date Data Arrived at EDR: 12/17/2010
Date Made Active in Reports: 01/25/2011
Number of Days to Update: 39

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 11/09/2010
Next Scheduled EDR Contact: 02/21/2011
Data Release Frequency: Quarterly

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.

Date of Government Version: 12/31/2009
Date Data Arrived at EDR: 07/07/2010
Date Made Active in Reports: 08/12/2010
Number of Days to Update: 36

Source: California Environmental Protection Agency
Telephone: 916-255-1136
Last EDR Contact: 01/19/2011
Next Scheduled EDR Contact: 05/02/2011
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: 12/31/2008
Date Data Arrived at EDR: 09/29/2010
Date Made Active in Reports: 10/18/2010
Number of Days to Update: 19

Source: California Air Resources Board
Telephone: 916-322-2990
Last EDR Contact: 12/30/2010
Next Scheduled EDR Contact: 04/11/2011
Data Release Frequency: Varies

HAULERS: Registered Waste Tire Haulers Listing

A listing of registered waste tire haulers.

Date of Government Version: 11/22/2010
Date Data Arrived at EDR: 11/23/2010
Date Made Active in Reports: 01/25/2011
Number of Days to Update: 63

Source: Integrated Waste Management Board
Telephone: 916-341-6422
Last EDR Contact: 11/23/2010
Next Scheduled EDR Contact: 03/07/2011
Data Release Frequency: Varies

ENVIROSTOR: EnviroStor Database

The Department of Toxic Substances Control's (DTSC's) Site Mitigation and Brownfields Reuse Program's (SMBRP's) EnviroStor database identifes sites that have known contamination or sites for which there may be reasons to investigate further. The database includes the following site types: Federal Superfund sites (National Priorities List (NPL)); State Response, including Military Facilities and State Superfund; Voluntary Cleanup; and School sites. EnviroStor provides similar information to the information that was available in CalSites, and provides additional site information, including, but not limited to, identification of formerly-contaminated properties that have been released for reuse, properties where environmental deed restrictions have been recorded to prevent inappropriate land uses, and risk characterization information that is used to assess potential impacts to public health and the environment at contaminated sites.

Date of Government Version: 11/08/2010
Date Data Arrived at EDR: 12/17/2010
Date Made Active in Reports: 01/25/2011
Number of Days to Update: 39

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 11/09/2010
Next Scheduled EDR Contact: 02/21/2011
Data Release Frequency: Quarterly

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

HWP: EnviroStor Permitted Facilities Listing
Detailed information on permitted hazardous waste facilities and corrective action ("cleanups") tracked in EnviroStor.

Date of Government Version: 08/09/2010
Date Data Arrived at EDR: 08/11/2010
Date Made Active in Reports: 08/20/2010
Number of Days to Update: 9

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 12/10/2010
Next Scheduled EDR Contact: 02/21/2011
Data Release Frequency: Quarterly

HWT: Registered Hazardous Waste Transporter Database
A listing of hazardous waste transporters. In California, unless specifically exempted, it is unlawful for any person to transport hazardous wastes unless the person holds a valid registration issued by DTSC. A hazardous waste transporter registration is valid for one year and is assigned a unique registration number.

Date of Government Version: 01/17/2011
Date Data Arrived at EDR: 01/18/2011
Date Made Active in Reports: 01/28/2011
Number of Days to Update: 10

Source: Department of Toxic Substances Control
Telephone: 916-440-7145
Last EDR Contact: 01/18/2011
Next Scheduled EDR Contact: 05/02/2011
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: 12/09/2010
Date Data Arrived at EDR: 12/17/2010
Date Made Active in Reports: 01/25/2011
Number of Days to Update: 39

Source: Department of Public Health
Telephone: 916-558-1784
Last EDR Contact: 12/14/2010
Next Scheduled EDR Contact: 03/28/2011
Data Release Frequency: Varies

PROC: Certified Processors Database
A listing of certified processors.

Date of Government Version: 11/17/2010
Date Data Arrived at EDR: 12/23/2010
Date Made Active in Reports: 01/28/2011
Number of Days to Update: 36

Source: Department of Conservation
Telephone: 916-323-3836
Last EDR Contact: 12/23/2010
Next Scheduled EDR Contact: 04/04/2011
Data Release Frequency: Quarterly

TRIBAL RECORDS

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: 12/31/2005
Date Data Arrived at EDR: 12/08/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 34

Source: USGS
Telephone: 202-208-3710
Last EDR Contact: 01/21/2011
Next Scheduled EDR Contact: 05/02/2011
Data Release Frequency: Semi-Annually

INDIAN ODI: Report on the Status of Open Dumps on Indian Lands
Location of open dumps on Indian land.

Date of Government Version: 12/31/1998
Date Data Arrived at EDR: 12/03/2007
Date Made Active in Reports: 01/24/2008
Number of Days to Update: 52

Source: Environmental Protection Agency
Telephone: 703-308-8245
Last EDR Contact: 11/09/2010
Next Scheduled EDR Contact: 02/21/2011
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

INDIAN LUST R4: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Florida, Mississippi and North Carolina.

Date of Government Version: 08/27/2010
Date Data Arrived at EDR: 08/30/2010
Date Made Active in Reports: 10/04/2010
Number of Days to Update: 35

Source: EPA Region 4
Telephone: 404-562-8677
Last EDR Contact: 11/01/2010
Next Scheduled EDR Contact: 02/14/2011
Data Release Frequency: Semi-Annually

INDIAN LUST R7: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Iowa, Kansas, and Nebraska

Date of Government Version: 11/04/2009
Date Data Arrived at EDR: 05/04/2010
Date Made Active in Reports: 07/07/2010
Number of Days to Update: 64

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 12/03/2010
Next Scheduled EDR Contact: 02/14/2011
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.

Date of Government Version: 09/01/2010
Date Data Arrived at EDR: 11/05/2010
Date Made Active in Reports: 01/28/2011
Number of Days to Update: 84

Source: EPA Region 1
Telephone: 617-918-1313
Last EDR Contact: 11/02/2010
Next Scheduled EDR Contact: 02/14/2011
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: 11/16/2010
Date Data Arrived at EDR: 11/19/2010
Date Made Active in Reports: 01/28/2011
Number of Days to Update: 70

Source: EPA Region 8
Telephone: 303-312-6271
Last EDR Contact: 11/01/2010
Next Scheduled EDR Contact: 02/14/2011
Data Release Frequency: Quarterly

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: 11/19/2010
Date Data Arrived at EDR: 11/19/2010
Date Made Active in Reports: 01/28/2011
Number of Days to Update: 70

Source: Environmental Protection Agency
Telephone: 415-972-3372
Last EDR Contact: 11/01/2010
Next Scheduled EDR Contact: 02/14/2011
Data Release Frequency: Quarterly

INDIAN LUST R10: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Alaska, Idaho, Oregon and Washington.

Date of Government Version: 11/12/2010
Date Data Arrived at EDR: 11/12/2010
Date Made Active in Reports: 01/28/2011
Number of Days to Update: 77

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 11/01/2010
Next Scheduled EDR Contact: 02/14/2011
Data Release Frequency: Quarterly

INDIAN LUST R6: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in New Mexico and Oklahoma.

Date of Government Version: 11/04/2010
Date Data Arrived at EDR: 11/05/2010
Date Made Active in Reports: 01/28/2011
Number of Days to Update: 84

Source: EPA Region 6
Telephone: 214-665-6597
Last EDR Contact: 11/01/2010
Next Scheduled EDR Contact: 02/14/2011
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

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: 11/12/2010
Date Data Arrived at EDR: 11/12/2010
Date Made Active in Reports: 01/28/2011
Number of Days to Update: 77

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 11/01/2010
Next Scheduled EDR Contact: 02/14/2011
Data Release Frequency: Quarterly

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: 11/19/2010
Date Data Arrived at EDR: 11/19/2010
Date Made Active in Reports: 01/28/2011
Number of Days to Update: 70

Source: EPA Region 9
Telephone: 415-972-3368
Last EDR Contact: 11/01/2010
Next Scheduled EDR Contact: 02/14/2011
Data Release Frequency: Quarterly

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: 11/16/2010
Date Data Arrived at EDR: 11/19/2010
Date Made Active in Reports: 01/28/2011
Number of Days to Update: 70

Source: EPA Region 8
Telephone: 303-312-6137
Last EDR Contact: 11/01/2010
Next Scheduled EDR Contact: 02/14/2011
Data Release Frequency: Quarterly

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: 11/01/2010
Date Data Arrived at EDR: 12/02/2010
Date Made Active in Reports: 01/28/2011
Number of Days to Update: 57

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 11/09/2010
Next Scheduled EDR Contact: 02/14/2011
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: 11/10/2010
Date Data Arrived at EDR: 12/01/2010
Date Made Active in Reports: 01/28/2011
Number of Days to Update: 58

Source: EPA Region 6
Telephone: 214-665-7591
Last EDR Contact: 11/01/2010
Next Scheduled EDR Contact: 02/14/2011
Data Release Frequency: Semi-Annually

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: 02/11/2010
Date Data Arrived at EDR: 02/11/2010
Date Made Active in Reports: 04/12/2010
Number of Days to Update: 60

Source: EPA Region 5
Telephone: 312-886-6136
Last EDR Contact: 11/01/2010
Next Scheduled EDR Contact: 02/14/2011
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

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: 08/27/2010
Date Data Arrived at EDR: 08/30/2010
Date Made Active in Reports: 10/04/2010
Number of Days to Update: 35

Source: EPA Region 4
Telephone: 404-562-9424
Last EDR Contact: 11/01/2010
Next Scheduled EDR Contact: 02/14/2011
Data Release Frequency: Semi-Annually

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: 09/01/2010
Date Data Arrived at EDR: 11/05/2010
Date Made Active in Reports: 01/28/2011
Number of Days to Update: 84

Source: EPA, Region 1
Telephone: 617-918-1313
Last EDR Contact: 11/02/2010
Next Scheduled EDR Contact: 02/14/2011
Data Release Frequency: Varies

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: 04/02/2008
Date Data Arrived at EDR: 04/22/2008
Date Made Active in Reports: 05/19/2008
Number of Days to Update: 27

Source: EPA, Region 1
Telephone: 617-918-1102
Last EDR Contact: 01/05/2010
Next Scheduled EDR Contact: 04/18/2011
Data Release Frequency: Varies

INDIAN VCP R7: Voluntary Cleanup Priority Lisitng

A listing of voluntary cleanup priority sites located on Indian Land located in Region 7.

Date of Government Version: 03/20/2008
Date Data Arrived at EDR: 04/22/2008
Date Made Active in Reports: 05/19/2008
Number of Days to Update: 27

Source: EPA, Region 7
Telephone: 913-551-7365
Last EDR Contact: 04/20/2009
Next Scheduled EDR Contact: 07/20/2009
Data Release Frequency: Varies

EDR PROPRIETARY RECORDS

Manufactured Gas Plants: 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

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

COUNTY RECORDS

ALAMEDA COUNTY:

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: 01/06/2011	Source: Alameda County Environmental Health Services
Date Data Arrived at EDR: 01/07/2011	Telephone: 510-567-6700
Date Made Active in Reports: 01/25/2011	Last EDR Contact: 01/03/2011
Number of Days to Update: 18	Next Scheduled EDR Contact: 04/18/2011
	Data Release Frequency: Semi-Annually

Underground Tanks

Underground storage tank sites located in Alameda county.

Date of Government Version: 01/06/2011	Source: Alameda County Environmental Health Services
Date Data Arrived at EDR: 01/07/2011	Telephone: 510-567-6700
Date Made Active in Reports: 01/20/2011	Last EDR Contact: 01/03/2011
Number of Days to Update: 13	Next Scheduled EDR Contact: 04/18/2011
	Data Release Frequency: Semi-Annually

CONTRA COSTA COUNTY:

Site List

List includes sites from the underground tank, hazardous waste generator and business plan/2185 programs.

Date of Government Version: 11/22/2010	Source: Contra Costa Health Services Department
Date Data Arrived at EDR: 11/23/2010	Telephone: 925-646-2286
Date Made Active in Reports: 01/25/2011	Last EDR Contact: 11/22/2010
Number of Days to Update: 63	Next Scheduled EDR Contact: 02/21/2011
	Data Release Frequency: Semi-Annually

FRESNO COUNTY:

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: 01/14/2011	Source: Dept. of Community Health
Date Data Arrived at EDR: 01/18/2011	Telephone: 559-445-3271
Date Made Active in Reports: 01/28/2011	Last EDR Contact: 01/17/2011
Number of Days to Update: 10	Next Scheduled EDR Contact: 05/02/2011
	Data Release Frequency: Semi-Annually

KERN COUNTY:

Underground Storage Tank Sites & Tank Listing

Kern County Sites and Tanks Listing.

Date of Government Version: 08/31/2010	Source: Kern County Environment Health Services Department
Date Data Arrived at EDR: 09/01/2010	Telephone: 661-862-8700
Date Made Active in Reports: 09/30/2010	Last EDR Contact: 11/22/2010
Number of Days to Update: 29	Next Scheduled EDR Contact: 02/28/2011
	Data Release Frequency: Quarterly

LOS ANGELES COUNTY:

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

San Gabriel Valley Areas of Concern
San Gabriel Valley areas where VOC contamination is at or above the MCL as designated by region 9 EPA office.

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: EPA Region 9
Telephone: 415-972-3178
Last EDR Contact: 12/22/2010
Next Scheduled EDR Contact: 04/11/2011
Data Release Frequency: No Update Planned

HMS: Street Number List
Industrial Waste and Underground Storage Tank Sites.

Date of Government Version: 10/28/2010
Date Data Arrived at EDR: 12/14/2010
Date Made Active in Reports: 01/25/2011
Number of Days to Update: 42

Source: Department of Public Works
Telephone: 626-458-3517
Last EDR Contact: 01/17/2011
Next Scheduled EDR Contact: 05/02/2011
Data Release Frequency: Semi-Annually

List of Solid Waste Facilities
Solid Waste Facilities in Los Angeles County.

Date of Government Version: 10/25/2010
Date Data Arrived at EDR: 10/27/2010
Date Made Active in Reports: 11/17/2010
Number of Days to Update: 21

Source: La County Department of Public Works
Telephone: 818-458-5185
Last EDR Contact: 01/24/2011
Next Scheduled EDR Contact: 05/09/2011
Data Release Frequency: Varies

City of Los Angeles Landfills
Landfills owned and maintained by the City of Los Angeles.

Date of Government Version: 03/05/2009
Date Data Arrived at EDR: 03/10/2009
Date Made Active in Reports: 04/08/2009
Number of Days to Update: 29

Source: Engineering & Construction Division
Telephone: 213-473-7869
Last EDR Contact: 11/22/2010
Next Scheduled EDR Contact: 03/07/2011
Data Release Frequency: Varies

Site Mitigation List
Industrial sites that have had some sort of spill or complaint.

Date of Government Version: 02/09/2010
Date Data Arrived at EDR: 02/12/2010
Date Made Active in Reports: 03/04/2010
Number of Days to Update: 20

Source: Community Health Services
Telephone: 323-890-7806
Last EDR Contact: 10/25/2010
Next Scheduled EDR Contact: 05/09/2011
Data Release Frequency: Annually

City of El Segundo Underground Storage Tank
Underground storage tank sites located in El Segundo city.

Date of Government Version: 10/26/2010
Date Data Arrived at EDR: 11/01/2010
Date Made Active in Reports: 11/18/2010
Number of Days to Update: 17

Source: City of El Segundo Fire Department
Telephone: 310-524-2236
Last EDR Contact: 01/24/2011
Next Scheduled EDR Contact: 05/06/2011
Data Release Frequency: Semi-Annually

City of Long Beach Underground Storage Tank
Underground storage tank sites located in the city of Long Beach.

Date of Government Version: 03/28/2003
Date Data Arrived at EDR: 10/23/2003
Date Made Active in Reports: 11/26/2003
Number of Days to Update: 34

Source: City of Long Beach Fire Department
Telephone: 562-570-2563
Last EDR Contact: 11/01/2010
Next Scheduled EDR Contact: 02/14/2011
Data Release Frequency: Annually

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

City of Torrance Underground Storage Tank
Underground storage tank sites located in the city of Torrance.

Date of Government Version: 10/22/2010
Date Data Arrived at EDR: 10/27/2010
Date Made Active in Reports: 11/18/2010
Number of Days to Update: 22

Source: City of Torrance Fire Department
Telephone: 310-618-2973
Last EDR Contact: 01/17/2011
Next Scheduled EDR Contact: 05/02/2011
Data Release Frequency: Semi-Annually

MARIN COUNTY:

Underground Storage Tank Sites
Currently permitted USTs in Marin County.

Date of Government Version: 10/28/2010
Date Data Arrived at EDR: 11/16/2010
Date Made Active in Reports: 11/18/2010
Number of Days to Update: 2

Source: Public Works Department Waste Management
Telephone: 415-499-6647
Last EDR Contact: 01/10/2011
Next Scheduled EDR Contact: 04/25/2011
Data Release Frequency: Semi-Annually

NAPA COUNTY:

Sites With Reported Contamination
A listing of leaking underground storage tank sites located in Napa county.

Date of Government Version: 07/09/2008
Date Data Arrived at EDR: 07/09/2008
Date Made Active in Reports: 07/31/2008
Number of Days to Update: 22

Source: Napa County Department of Environmental Management
Telephone: 707-253-4269
Last EDR Contact: 12/06/2010
Next Scheduled EDR Contact: 03/21/2011
Data Release Frequency: No Update Planned

Closed and Operating Underground Storage Tank Sites
Underground storage tank sites located in Napa county.

Date of Government Version: 01/15/2008
Date Data Arrived at EDR: 01/16/2008
Date Made Active in Reports: 02/08/2008
Number of Days to Update: 23

Source: Napa County Department of Environmental Management
Telephone: 707-253-4269
Last EDR Contact: 12/06/2010
Next Scheduled EDR Contact: 03/21/2011
Data Release Frequency: No Update Planned

ORANGE COUNTY:

List of Industrial Site Cleanups
Petroleum and non-petroleum spills.

Date of Government Version: 11/03/2010
Date Data Arrived at EDR: 11/19/2010
Date Made Active in Reports: 01/28/2011
Number of Days to Update: 70

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 11/16/2010
Next Scheduled EDR Contact: 02/28/2011
Data Release Frequency: Annually

List of Underground Storage Tank Cleanups
Orange County Underground Storage Tank Cleanups (LUST).

Date of Government Version: 11/03/2010
Date Data Arrived at EDR: 11/19/2010
Date Made Active in Reports: 01/28/2011
Number of Days to Update: 70

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 11/16/2010
Next Scheduled EDR Contact: 02/28/2011
Data Release Frequency: Quarterly

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

List of Underground Storage Tank Facilities
Orange County Underground Storage Tank Facilities (UST).

Date of Government Version: 11/03/2010
Date Data Arrived at EDR: 11/19/2010
Date Made Active in Reports: 01/20/2011
Number of Days to Update: 62

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 11/16/2010
Next Scheduled EDR Contact: 02/28/2011
Data Release Frequency: Quarterly

PLACER COUNTY:

Master List of Facilities
List includes aboveground tanks, underground tanks and cleanup sites.

Date of Government Version: 09/13/2010
Date Data Arrived at EDR: 09/14/2010
Date Made Active in Reports: 09/29/2010
Number of Days to Update: 15

Source: Placer County Health and Human Services
Telephone: 530-889-7312
Last EDR Contact: 12/13/2010
Next Scheduled EDR Contact: 03/28/2011
Data Release Frequency: Semi-Annually

RIVERSIDE COUNTY:

Listing of Underground Tank Cleanup Sites
Riverside County Underground Storage Tank Cleanup Sites (LUST).

Date of Government Version: 12/08/2010
Date Data Arrived at EDR: 12/09/2010
Date Made Active in Reports: 01/28/2011
Number of Days to Update: 50

Source: Department of Environmental Health
Telephone: 951-358-5055
Last EDR Contact: 12/09/2010
Next Scheduled EDR Contact: 04/11/2011
Data Release Frequency: Quarterly

Underground Storage Tank Tank List
Underground storage tank sites located in Riverside county.

Date of Government Version: 12/08/2010
Date Data Arrived at EDR: 12/09/2010
Date Made Active in Reports: 01/20/2011
Number of Days to Update: 42

Source: Department of Environmental Health
Telephone: 951-358-5055
Last EDR Contact: 12/09/2010
Next Scheduled EDR Contact: 04/11/2011
Data Release Frequency: Quarterly

SACRAMENTO COUNTY:

Toxic Site Clean-Up List
List of sites where unauthorized releases of potentially hazardous materials have occurred.

Date of Government Version: 11/03/2010
Date Data Arrived at EDR: 01/20/2011
Date Made Active in Reports: 01/28/2011
Number of Days to Update: 8

Source: Sacramento County Environmental Management
Telephone: 916-875-8406
Last EDR Contact: 01/10/2011
Next Scheduled EDR Contact: 04/25/2011
Data Release Frequency: Quarterly

Master Hazardous Materials Facility List
Any business that has hazardous materials on site - hazardous material storage sites, underground storage tanks, waste generators.

Date of Government Version: 11/03/2010
Date Data Arrived at EDR: 01/20/2011
Date Made Active in Reports: 01/28/2011
Number of Days to Update: 8

Source: Sacramento County Environmental Management
Telephone: 916-875-8406
Last EDR Contact: 01/10/2011
Next Scheduled EDR Contact: 04/25/2011
Data Release Frequency: Quarterly

SAN BERNARDINO COUNTY:

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

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: 12/08/2010
Date Data Arrived at EDR: 12/09/2010
Date Made Active in Reports: 01/28/2011
Number of Days to Update: 50

Source: San Bernardino County Fire Department Hazardous Materials Division
Telephone: 909-387-3041
Last EDR Contact: 11/22/2010
Next Scheduled EDR Contact: 02/28/2011
Data Release Frequency: Quarterly

SAN DIEGO COUNTY:

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: 09/09/2010
Date Data Arrived at EDR: 09/15/2010
Date Made Active in Reports: 09/29/2010
Number of Days to Update: 14

Source: Hazardous Materials Management Division
Telephone: 619-338-2268
Last EDR Contact: 12/21/2010
Next Scheduled EDR Contact: 03/28/2011
Data Release Frequency: Quarterly

Solid Waste Facilities

San Diego County Solid Waste Facilities.

Date of Government Version: 10/01/2010
Date Data Arrived at EDR: 11/16/2010
Date Made Active in Reports: 01/25/2011
Number of Days to Update: 70

Source: Department of Health Services
Telephone: 619-338-2209
Last EDR Contact: 11/01/2010
Next Scheduled EDR Contact: 02/14/2011
Data Release Frequency: Varies

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: 12/21/2010
Next Scheduled EDR Contact: 03/28/2011
Data Release Frequency: No Update Planned

SAN FRANCISCO COUNTY:

Local Oversite Facilities

A listing of leaking underground storage tank sites located in San Francisco county.

Date of Government Version: 09/19/2008
Date Data Arrived at EDR: 09/19/2008
Date Made Active in Reports: 09/29/2008
Number of Days to Update: 10

Source: Department Of Public Health San Francisco County
Telephone: 415-252-3920
Last EDR Contact: 11/22/2010
Next Scheduled EDR Contact: 02/28/2011
Data Release Frequency: Quarterly

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Underground Storage Tank Information
Underground storage tank sites located in San Francisco county.

Date of Government Version: 11/29/2010
Date Data Arrived at EDR: 12/14/2010
Date Made Active in Reports: 01/20/2011
Number of Days to Update: 37

Source: Department of Public Health
Telephone: 415-252-3920
Last EDR Contact: 11/29/2010
Next Scheduled EDR Contact: 02/28/2011
Data Release Frequency: Quarterly

SAN JOAQUIN COUNTY:

San Joaquin Co. UST
A listing of underground storage tank locations in San Joaquin county.

Date of Government Version: 12/29/2010
Date Data Arrived at EDR: 01/04/2011
Date Made Active in Reports: 01/20/2011
Number of Days to Update: 16

Source: Environmental Health Department
Telephone: N/A
Last EDR Contact: 12/23/2010
Next Scheduled EDR Contact: 04/11/2011
Data Release Frequency: Semi-Annually

SAN MATEO COUNTY:

Business Inventory
List includes Hazardous Materials Business Plan, hazardous waste generators, and underground storage tanks.

Date of Government Version: 11/22/2010
Date Data Arrived at EDR: 11/23/2010
Date Made Active in Reports: 01/28/2011
Number of Days to Update: 66

Source: San Mateo County Environmental Health Services Division
Telephone: 650-363-1921
Last EDR Contact: 01/24/2011
Next Scheduled EDR Contact: 04/04/2011
Data Release Frequency: Annually

Fuel Leak List
A listing of leaking underground storage tank sites located in San Mateo county.

Date of Government Version: 12/17/2010
Date Data Arrived at EDR: 12/20/2010
Date Made Active in Reports: 01/28/2011
Number of Days to Update: 39

Source: San Mateo County Environmental Health Services Division
Telephone: 650-363-1921
Last EDR Contact: 12/17/2010
Next Scheduled EDR Contact: 04/04/2011
Data Release Frequency: Semi-Annually

SANTA CLARA COUNTY:

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

LOP Listing
A listing of leaking underground storage tanks located in Santa Clara county.

Date of Government Version: 05/29/2009
Date Data Arrived at EDR: 06/01/2009
Date Made Active in Reports: 06/15/2009
Number of Days to Update: 14

Source: Department of Environmental Health
Telephone: 408-918-3417
Last EDR Contact: 12/06/2010
Next Scheduled EDR Contact: 03/21/2011
Data Release Frequency: Annually

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Hazardous Material Facilities
Hazardous material facilities, including underground storage tank sites.

Date of Government Version: 08/31/2009
Date Data Arrived at EDR: 08/31/2009
Date Made Active in Reports: 09/18/2009
Number of Days to Update: 18

Source: City of San Jose Fire Department
Telephone: 408-535-7694
Last EDR Contact: 12/13/2010
Next Scheduled EDR Contact: 02/28/2011
Data Release Frequency: Annually

SOLANO COUNTY:

Leaking Underground Storage Tanks
A listing of leaking underground storage tank sites located in Solano county.

Date of Government Version: 12/08/2010
Date Data Arrived at EDR: 12/17/2010
Date Made Active in Reports: 01/28/2011
Number of Days to Update: 42

Source: Solano County Department of Environmental Management
Telephone: 707-784-6770
Last EDR Contact: 12/06/2010
Next Scheduled EDR Contact: 03/21/2011
Data Release Frequency: Quarterly

Underground Storage Tanks
Underground storage tank sites located in Solano county.

Date of Government Version: 12/08/2010
Date Data Arrived at EDR: 12/29/2010
Date Made Active in Reports: 01/20/2011
Number of Days to Update: 22

Source: Solano County Department of Environmental Management
Telephone: 707-784-6770
Last EDR Contact: 12/06/2010
Next Scheduled EDR Contact: 03/21/2011
Data Release Frequency: Quarterly

SONOMA COUNTY:

Leaking Underground Storage Tank Sites
A listing of leaking underground storage tank sites located in Sonoma county.

Date of Government Version: 01/05/2011
Date Data Arrived at EDR: 01/07/2011
Date Made Active in Reports: 01/28/2011
Number of Days to Update: 21

Source: Department of Health Services
Telephone: 707-565-6565
Last EDR Contact: 01/03/2011
Next Scheduled EDR Contact: 04/18/2011
Data Release Frequency: Quarterly

SUTTER COUNTY:

Underground Storage Tanks
Underground storage tank sites located in Sutter county.

Date of Government Version: 12/13/2010
Date Data Arrived at EDR: 12/14/2010
Date Made Active in Reports: 01/20/2011
Number of Days to Update: 37

Source: Sutter County Department of Agriculture
Telephone: 530-822-7500
Last EDR Contact: 12/13/2010
Next Scheduled EDR Contact: 03/28/2011
Data Release Frequency: Semi-Annually

VENTURA COUNTY:

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.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 10/26/2010
Date Data Arrived at EDR: 11/30/2010
Date Made Active in Reports: 01/28/2011
Number of Days to Update: 59

Source: Ventura County Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 11/22/2010
Next Scheduled EDR Contact: 03/07/2011
Data Release Frequency: Quarterly

Inventory of Illegal Abandoned and Inactive Sites
Ventura County Inventory of Closed, Illegal Abandoned, and Inactive Sites.

Date of Government Version: 08/01/2009
Date Data Arrived at EDR: 10/05/2009
Date Made Active in Reports: 10/13/2009
Number of Days to Update: 8

Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 01/10/2011
Next Scheduled EDR Contact: 04/25/2011
Data Release Frequency: Annually

Listing of Underground Tank Cleanup Sites
Ventura County Underground Storage Tank Cleanup Sites (LUST).

Date of Government Version: 05/29/2008
Date Data Arrived at EDR: 06/24/2008
Date Made Active in Reports: 07/31/2008
Number of Days to Update: 37

Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 11/22/2010
Next Scheduled EDR Contact: 03/07/2011
Data Release Frequency: Quarterly

Underground Tank Closed Sites List
Ventura County Operating Underground Storage Tank Sites (UST)/Underground Tank Closed Sites List.

Date of Government Version: 11/29/2010
Date Data Arrived at EDR: 12/20/2010
Date Made Active in Reports: 01/20/2011
Number of Days to Update: 31

Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 12/20/2010
Next Scheduled EDR Contact: 04/04/2011
Data Release Frequency: Quarterly

YOLO COUNTY:

Underground Storage Tank Comprehensive Facility Report
Underground storage tank sites located in Yolo county.

Date of Government Version: 10/05/2010
Date Data Arrived at EDR: 10/15/2010
Date Made Active in Reports: 11/18/2010
Number of Days to Update: 34

Source: Yolo County Department of Health
Telephone: 530-666-8646
Last EDR Contact: 01/10/2011
Next Scheduled EDR Contact: 04/11/2011
Data Release Frequency: Annually

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: 12/31/2007
Date Data Arrived at EDR: 08/26/2009
Date Made Active in Reports: 09/11/2009
Number of Days to Update: 16

Source: Department of Environmental Protection
Telephone: 860-424-3375
Last EDR Contact: 12/01/2010
Next Scheduled EDR Contact: 03/07/2011
Data Release Frequency: Annually

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

NJ MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2009
Date Data Arrived at EDR: 07/22/2010
Date Made Active in Reports: 08/26/2010
Number of Days to Update: 35

Source: Department of Environmental Protection
Telephone: N/A
Last EDR Contact: 01/21/2011
Next Scheduled EDR Contact: 05/02/2011
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: 10/28/2010
Date Data Arrived at EDR: 11/09/2010
Date Made Active in Reports: 12/17/2010
Number of Days to Update: 38

Source: Department of Environmental Conservation
Telephone: 518-402-8651
Last EDR Contact: 11/09/2010
Next Scheduled EDR Contact: 02/21/2011
Data Release Frequency: Annually

PA MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2008
Date Data Arrived at EDR: 12/01/2009
Date Made Active in Reports: 12/14/2009
Number of Days to Update: 13

Source: Department of Environmental Protection
Telephone: 717-783-8990
Last EDR Contact: 11/22/2010
Next Scheduled EDR Contact: 03/07/2011
Data Release Frequency: Annually

RI MANIFEST: Manifest information
Hazardous waste manifest information

Date of Government Version: 12/31/2009
Date Data Arrived at EDR: 07/19/2010
Date Made Active in Reports: 08/26/2010
Number of Days to Update: 38

Source: Department of Environmental Management
Telephone: 401-222-2797
Last EDR Contact: 11/29/2010
Next Scheduled EDR Contact: 03/14/2011
Data Release Frequency: Annually

WI MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2009
Date Data Arrived at EDR: 07/06/2010
Date Made Active in Reports: 07/26/2010
Number of Days to Update: 20

Source: Department of Natural Resources
Telephone: N/A
Last EDR Contact: 12/16/2010
Next Scheduled EDR Contact: 04/04/2011
Data Release Frequency: Annually

Oil/Gas Pipelines: This data was obtained by EDR from the USGS in 1994. It is referred to by USGS as GeoData Digital Line Graphs from 1:100,000-Scale Maps. It was extracted from the transportation category including some oil, but primarily gas pipelines.

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.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

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, available in select counties across the country, was obtained by EDR in 2003 & 2009 from the Federal Emergency Management Agency (FEMA). Data depicts 100-year and 500-year flood zones as defined by FEMA.

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002 and 2005 from the U.S. Fish and Wildlife Service.

STREET AND ADDRESS INFORMATION

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APPENDIX E

Initial Site Assessment Checklist

Print Form

Caltrans Metric

Initial Site Assessment (ISA) Checklist

Project Information

District _____ County _____ Route _____ Post Mile _____ EA _____

Description

The SART-Phase III project extends from Waterman Avenue in the City of San Bernardino, along the south side of the Santa Ana River to California Street, in the City of Redlands, County of San Bernardino, California

Is the project on the HW Study Minimal-Risk Projects List (HW1)? _____

Project Manager _____ phone # _____

Project Engineer _____ phone # _____

Project Screening

Attach the project location map to this checklist to show location of all known and/or potential HW sites identified.

1. Project Features: New R/W? NO Excavation?: YES Railroad Involvement?: NO

   Structure demolition/modification? NO Subsurface utility relocation? NO

2. Project Setting

   Rural or Urban URBAN

   Current land uses VACANT

   Adjacent land uses COMMERCIAL, LIGHT INDUSTRIAL

   (industrial, light industry, commercial, agricultural, residential, etc.)

3. Check federal, State, and local environmental and health regulatory agency records as necessary, to see if any known hazardous waste site is in or near the project area. If a known site is identified, show its location on the attached map and attach additional sheets, as needed, to provide pertinent information for the proposed project.

4. Conduct Field Inspection. Date Feb 14, 2011 Use the attached map to locate potential or known HW sites.

   STORAGE STRUCTURES/PIPELINES:

   Underground tanks NO Surface tanks NO

   Sumps NO Ponds NO

   Drums NO Basins NO

   Transformers NO Landfill YES

   Other _____

Initial Site Assessment (ISA) Checklist

(continued)

CONTAMINATION: (spills, leaks, illegal dumping, etc.)

Surface staining NO Oil sheen NO

Odors NO Vegetation damage NO

Other

HAZARDOUS MATERIALS: (asbestos, lead, etc.)

Buildings N/A Spray-on fireproofing N/A

Pipe wrap N/A Friable tile N/A

Acoustical plaster N/A Serpentine N/A

Paint N/A Other

5. Additional record search, as necessary, of subsequent land uses that could have resulted in a hazardous waste site. Use the attached map to show the location of potential hazardous waste sites.

   See EDR DATA MAP and RADIUS REPORT in APPEDIX D

6. Other comments and/or observations:

ISA Determination

Does the project have potential hazardous waste involvement? NO If there is known or potential hazardous waste involvement, is additional ISA work needed before task orders can be prepared for the Investigation? NO If "YES," explain; then give an estimate of additional time required:

A brief memo should be prepared to transmit the ISA conclusions to the Project Manager and Project Engineer.

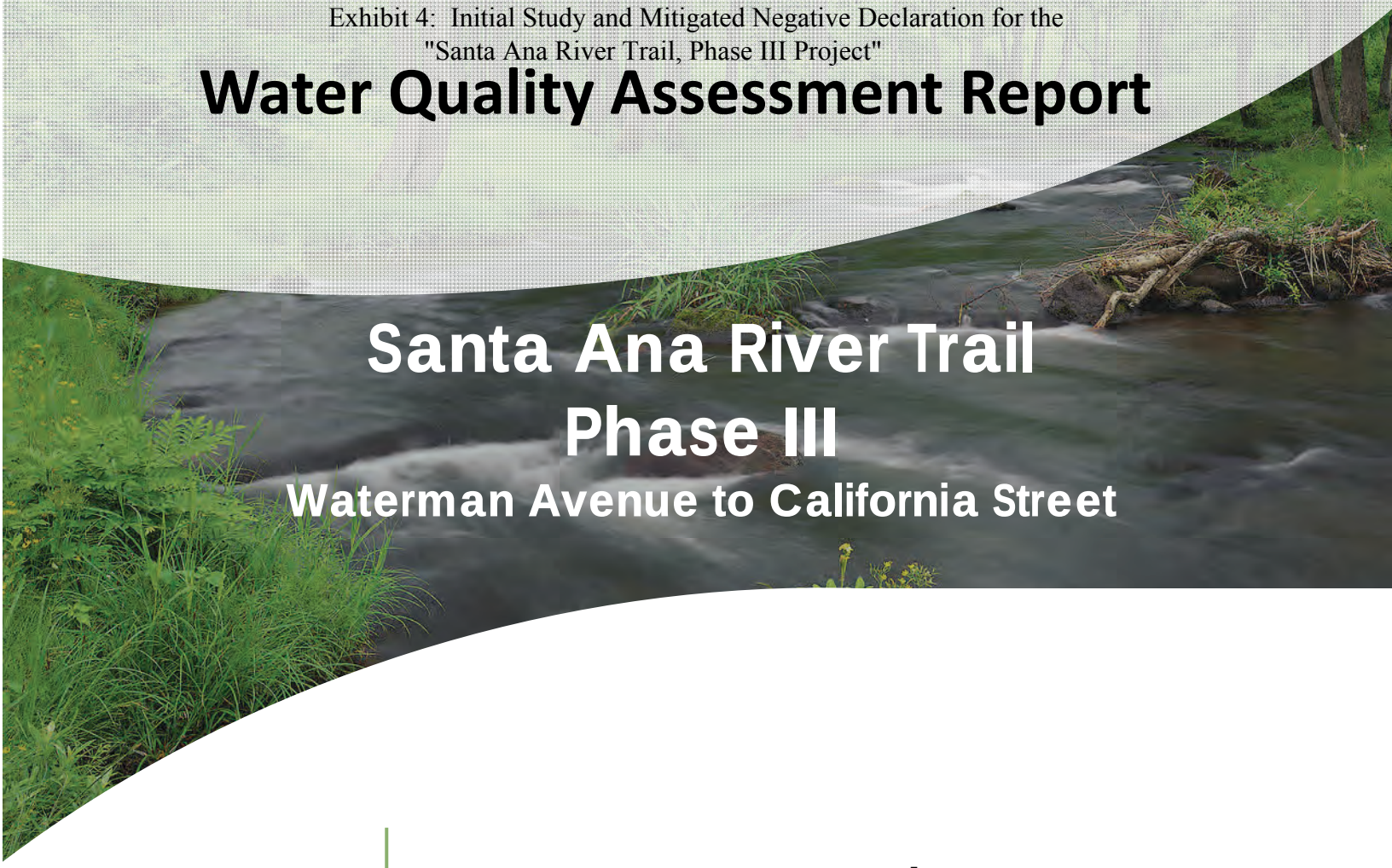
ISA Conducted By: M. Kevin Osmun **Date:** Feb 28, 2011

APPENDIX 4

Exhibit 4: Initial Study and Mitigated Negative Declaration for the "Santa Ana River Trail, Phase III Project"

Exhibit 4: Initial Study and Mitigated Negative Declaration for the "Santa Ana River Trail, Phase III Project"

Water Quality Assessment Report



Santa Ana River Trail
Phase III
Waterman Avenue to California Street

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WQAR Preparation:

WQAR Preparation Date: June 9, 2011
Updated: October 4, 2011

AEI CASC CONSULTING

Water Quality Assessment Report

SANTA ANA RIVER TRAIL PHASE III

WATERMAN AVENUE TO CALIFORNIA STREET

PREPARED FOR:

COUNTY OF SAN BERNARDINO
REGIONAL PARKS DEPARTMENT

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SEPTEMBER 2011

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EXECUTIVE SUMMARY

The proposed Project consists of the development of an approximately 3.8-mile long, paved section of the Santa Ana River Trail, beginning at Waterman Avenue in San Bernardino, CA, and ending at California Street in Redlands, CA. The trail alignment within the proposed Project limits, in its existing condition, is an unpaved pathway which includes at-grade intersections at each cross street. The purpose of the proposed trail Project is to facilitate access to and usage of the pathway, while increasing patron safety. This will be accomplished by not only paving the natural dirt surface of the trail, but also by converting all at-grade street intersections to grade-separated crossings. This allows patrons to continue safely along the trail unimpeded by local traffic and allows traffic to move more freely, thus reducing the probability of accidents.

Construction of the Project has the potential to impact water quality unless pollutant minimization and/or preventative measures are implemented. In accordance with requirements of the San Bernardino County MS4 NPDES Permit and the California Construction NPDES General Permit, a Storm Water Pollution Prevention Plan (SWPPP) will be developed and implemented for this Project. Implementation of the SWPPP is expected to:

- Provide sufficient and appropriate measures to protect the quality of receiving waters from dischargers of storm water from the construction site.
- Provide sufficient and appropriate measures to protect the quality of groundwaters from construction related materials and activities.

Similar to the construction phase, the post-construction or operational phase of the Project also has the potential to impact water quality. In order to alleviate these potential impacts, a Water Quality Management Plan (WQMP) will be developed and implemented in accordance with the requirements of the San Bernardino County Stormwater Program's Model Quality Management Plan (Guidance Document). Implementation of the WQMP is expected to achieve the purpose of the WQMP which is to:

- Provide sufficient and appropriate measures to protect the quality of receiving waters from dischargers of storm water from the construction site.
- Provide sufficient and appropriate measures to protect the quality of groundwaters from construction related materials and activities.

Pending proper implementation and maintenance of the aforementioned conditions, the proposed Project's impacts to water quality are expected to be minimized or reduced to a level sufficient to protect receiving waters.

1. INTRODUCTION

The County of San Bernardino, in association with the City of San Bernardino and the City of Redlands, proposes to provide a new addition to the Santa Ana River Trail (SART). The proposed Project is located within the City of San Bernardino and the City of Redlands with the southwestern proposed Project limits in the City of San Bernardino at the intersection of the Santa Ana River and Waterman Avenue and the northeastern proposed Project limits in the City of Redlands at the intersection of the Santa Ana River and California Street. The purpose of this report is to evaluate impacts of this proposed Project on potentially affected receiving waters and their beneficial uses. This report is intended to evaluate the existing surface and groundwater resources and the potential effects of the proposed Project on these receiving waters.

1.1. PROJECT PURPOSE AND NEED

The purpose of the proposed Project is to bring continuity and safety to the existing SART within the proposed Project limits. The existing trail currently breaks at each street and railroad crossing, causing pedestrians and bike riders to cross these intersections at their own risk to resume travel along the trail. The proposed Project will establish continuous trail sections at each street crossing to alleviate this hazard and allow traffic to move more freely, with fewer interruptions. Also, by providing less conflict among traffic movements, the probability of accidents will decline.

The section of trail from Waterman Avenue easterly to California Street (Project limits) is currently in an unimproved dirt state. The proposed Project will replace the present dirt trail with a hardened asphalt concrete surface that meets the existing downstream paved section west of Waterman Avenue. The proposed paved trail section will provide pedestrians and bike riders a travel way that is easier to access and will present less of a terrain hazard to navigate.

1.2. PROJECT DESCRIPTION

Portions of the SART in the City of San Bernardino and further west have already been improved. The proposed Project will extend the SART improvements eastward from the current terminus near the City of San Bernardino's Hospitality Lane area towards San Bernardino County unincorporated areas and the City of Redlands. The Project's southeastern limit is the River's crossing at Waterman Avenue in San Bernardino. The northeastern limit is located at California Street and the existing dirt pathway in Redlands.

The proposed Project will convert a narrow, 3.8-mile long swath of disturbed and undisturbed areas located adjacent to the Santa Ana River to a paved, 14 to 20-foot-wide, 2-lane trail. The Project will also convert each existing at-grade street crossing to a fully grade separated crossing in which the proposed trail will travel beneath each existing bridge. To accomplish this, the Project will utilize stabilization measures such as retaining walls and concreted rock slope protection to provide sufficient area for the proposed trail along the side slopes of the River beneath the existing bridges.

1.3. APPROACH TO WATER QUALITY ASSESSMENT

The purpose of this Water Quality Assessment Report is to determine whether the proposed Santa Ana River Trail Phase III Project will have an adverse impact on water quality. The determination of impacts is based two key Project phases: the construction phase and the post-construction or operational phase.

Construction Phase Impacts

- In-channel construction
- On-bank construction

Post-construction Phase Impacts

- Change in impervious surface
- Change in land use intensity

2. REGULATORY SETTING

Discharges into waters of the United States are subject to the regulatory authority of the U.S. Army Corps of Engineers (Corps) under Section 404 of the Federal Clean Water Act (CWA); the State Water Resources Control Board (SWRCB) and the applicable Regional Water Quality Control Board (RWQCB) under Sections 303, 401, and 402 of the CWA and the California Porter-Cologne Water Quality Act; and by the California Department of Fish and Game (CDFG) under Sections 1601-1603 of the California Fish and Game Code.

2.1. FEDERAL REQUIREMENTS

2.1.1. SECTION 303

Section 303(d) of the Clean Water Act requires that the State adopt water quality objectives for surface waters. The Basin Plan contains water quality objectives that are considered necessary to protect the designated beneficial uses of surface waters in the Santa Ana River Watershed. Section 303(d) also requires the State to develop a list of water bodies that are not achieving their beneficial uses (impaired waters) and subsequent numeric Total Maximum Daily Loads (TMDL) for whichever constituents or conditions that prevent a water body from achieving its beneficial uses. This list is called the 303(d) list of impaired water bodies.

The TMDL is the total amount of a constituent that can be discharged while meeting water quality objectives and protecting beneficial uses. It is the sum of the individual load allocations for point source inputs (e.g., an industrial plant), load allocations for nonpoint source inputs (e.g., runoff from urban areas) and natural background, with a margin of safety.

The most recent 303(d) impaired waters list for the State was approved by the SWRCB in 2010 and shows that the Santa Ana River (Reach 5) is not listed for any impairments, therefore the proposed Project will not generate a Pollutant of Concern for which the discharger (County of San Bernardino) will be required to mitigate using medium to high removal rate efficiency BMPs. Verification that the Santa Ana River (Reach 5) is not listed for impairments or TMDLs can be accessed on the internet on the SWRCB website at:

http://www.waterboards.ca.gov/water_issues/programs/tmdl/303d_lists2006_approved.shtml

2.1.2. SECTION 401

Section 401 of the CWA specifies that any applicant for a federal license or permit to conduct any activity, including but not limited to the construction or operation of facilities that may result in any discharge into navigable waters, shall provide the federal licensing or permitting agency with a certification from the State in which the discharge originates or will originate from the State agency with jurisdiction over those waters (SARWQCB) that the proposed Project will comply with water quality standards, protect beneficial uses, meet water quality objectives, and comply with the State anti-degradation policy.

2.1.3. SECTION 402

Direct discharges of pollutants into waters of the United States are not allowed, except in accordance with the National Pollution Discharge Elimination System (NPDES) program established in Section 402 of the CWA. The major purpose of the NPDES program is to protect human health and the environment. Pursuant to the NPDES program, permits that apply to storm water discharges from MS4s, specific industrial activities, and construction activities (1 acre or more) have been issued. NPDES permits establish enforceable effluent limitations on discharges, require monitoring of discharges, designate reporting requirements, and require the permittee to implement BMPs. Industrial (point source) storm water permits are required to meet effluent limitations using BMPs that comply with municipal permits that are governed by the Maximum Extent Practicable (MEP) Standard or Best Available Technology (BAT)/Best Control Technology (BCT) Standards.

2.1.4. SECTION 404

The Corps regulates discharges or fills into waters of the United States under Section 404 of the CWA via the Nationwide Permit (NWP) or Individual Permit program. There are several categories of NWPs, and these can be used for proposed Projects that fall under specific categories. A Preconstruction Notification (PCN) to the Corps' district engineer is required for most activities that result in the loss of greater than 0.1 acres of waters of the U.S. The Corps reviews the PCN on a case-by-case basis to determine whether the adverse effects (on the aquatic environment) of proposed work are minimal. The Corps will also determine whether a particular drainage course is considered Waters of the U.S. and whether it is subject to regulation under Section 404.

2.2. STATE REQUIREMENTS

2.2.1. PORTER-COLOGNE WATER QUALITY CONTROL ACT

The Porter-Cologne Act establishes a regulatory program to protect water quality and beneficial uses of State waters. It empowers the Regional Boards to formulate and adopt, for all areas within the regions, a Basin Plan that designates beneficial uses and establishes such water quality objectives that in its judgment will ensure reasonable protection of beneficial uses. Each Regional Board establishes water quality objectives that will ensure the reasonable protection of beneficial uses. The Water Code provides flexibility for some change in water quality, provided that beneficial uses are not adversely affected.

2.2.2. CALIFORNIA FISH AND GAME CODE SECTIONS 1601-1603

The California Department of Fish and Game (CDFG), through provisions of the California Fish and Game Code (Sections 1601-1603), is empowered to issue agreements for any alteration of a river, stream, or lake where fish or wildlife resources may be adversely affected. Streams and rivers are defined by the presence of a channel bed and banks and at least an intermittent flow of water. CDFG typically extends the limits of its jurisdiction laterally beyond the channel banks for streams that support riparian vegetation. In these situations, the outer edge of the riparian vegetation is generally used as the lateral extent of the stream and CDFG jurisdiction. The California Fish and Game Code Section 1602 requires any person, State or local governmental agency, or public utility to notify the CDFG before beginning any activity that will result in one or more of the following: (1) substantial obstruction or diversion of the natural flow of a river, stream, or lake, (2) substantial change in or use of any material from the bed,

channel, or bank of a river, stream, or lake, or (3) deposit or disposal of debris, waste, or other material containing crumbled, flaked, or ground pavement where it can pass into a river, stream, or lake. The Fish and Game Code Section 1602 applies to all perennial, intermittent, and ephemeral rivers, streams, and lakes in the State.

2.2.3. STATE REQUIREMENTS UNDER SECTION 402 OF THE FEDERAL CLEAN WATER ACT

In accordance with National Pollution Discharge Elimination System (NPDES) regulations, the State requires that most construction activities disturbing 1 acre or more of soil comply with the State General Construction Permit (NO. CAS000002). In order to obtain authorization for proposed storm water discharge pursuant to this permit, the landowner (discharger) is required to submit a Notice of Intent to the SWRCB, prepare a SWPPP, and implement BMPs detailed in the SWPPP during construction activities. Dischargers are required to implement BMPs to the BAT/BCT Standard to reduce or eliminate storm water pollution. The purpose of the SWPPP is to prevent all construction pollutants from contacting storm water and to keep all products of erosion from moving off-site into receiving waters.

2.2.4. STATEWIDE CONSTRUCTION ACTIVITY GENERAL NPDES PERMIT REQUIREMENTS

The Construction General Permit requires all discharges where construction activity disturbs 1 acre or more to:

- Develop and implement a SWPPP that specifies BMPs to prevent construction pollutants from making contact with storm water and with the intent of keeping all products of erosion from moving off-site into receiving waters.
- Eliminate or reduce non-storm water discharges to MS4s and other waters; and
- Perform inspections of all BMPs.

The discharger must obtain Construction General Permit coverage prior to any soil disturbance. Coverage under this permit would not commence until the discharger develops an adequate SWPPP for the Project. The SWPPP must be implemented at the appropriate level to protect water quality at all times from earth disturbance to final stabilization. The SWPPP's major objectives are to:

- Identify all pollutant sources, including sources of sediment, from the construction site;
- Indentify non-storm water discharges;
- Construct and implement BMPs to reduce or eliminate pollutants in storm water discharges and authorized non-storm water discharges; and
- Develop a maintenance schedule for all post-construction BMPs designed to reduce or eliminate pollutants.

The Construction General Permit requires development and implementation of a monitoring program. The program must be implemented at the start of construction activity and must include inspections that:

- Identify areas contributing to storm water discharge;

- Evaluate whether BMPs identified in the SWPPP are adequate and functioning properly; and
- Evaluate whether additional control practices or corrective maintenance activities are needed.

In the case of the proposed Project, the discharger (County of San Bernardino) will obtain coverage under the San Bernardino County NPDES MS4 Permit (NPDES Permit No. CAS618036). This Permit requires the discharger to mitigate any potential water quality impacts of the proposed Project during both the construction and post-construction phases. Coverage under this MS4 Permit indirectly complies with the requirements of the Construction General Permit.

2.3. LOCAL REQUIREMENTS

NPDES permits for construction activities and the Municipal Separate Storm Sewer System (MS4) permits are enforced at the regional level by the RWQCBs. The Permit relevant to the proposed Project would be the San Bernardino County MS4 Permit (NPDES Permit No. CAS618036), of which the Cities of Redlands and San Bernardino are permittees. The cities of Redlands and San Bernardino do not have additional NPDES requirements for the proposed project.

2.3.1. MUNICIPAL NPDES PERMIT

The County of San Bernardino is covered under the NPDES MS4 Permit (Order No. R8-2010-0036; NPDES No. CAS618036) program as individual Urbanized Areas as designated by the Bureau of Census. The primary objectives of the local storm water program are to (1) effectively prohibit non-storm water discharges, and (2) reduce the discharge of pollutants from storm water conveyance systems to the Maximum Extent Practicable (MEP statutory standard). The primary goal of the MS4 permit is to stop polluted discharges from entering the storm drain system and local receiving waters.

2.3.2. WATER QUALITY MANAGEMENT PLAN

The San Bernardino County Stormwater Program's Model Water Quality Management Plan (WQMP) Guidance requires Category projects to implement Site Design BMPs, Source Control BMPs, Treatment Control BMPs, or equivalent treatment control alternatives. The proposed Project triggers the requirement for a WQMP, as it falls into Category 7, defined by the following:

> "Developments of 2,500 square feet of impervious surface or more adjacent to (within 200 feet) or discharging directly into environmentally sensitive areas such as areas designated in the Ocean Plan as areas of special biological significance or water bodies listed on the CWA Section 303(d) list of impaired waters." (County, 2005)

The WQMP will analyze if the proposed hydraulic regime will cause a Hydrologic Condition of Concern and if the changes would have a significant adverse impact on downstream conditions. In addition, Low Impact Development (LID) BMPs will be included in the Project's design where technically feasible. During the Project design phase, the increase in flows and potential pollutants of concern will be addressed through the hydrology and Water Quality Management Plan analyses.

3. AFFECTED ENVIRONMENT

3.1. SURFACE WATER RESOURCES

The proposed Project is located in the Santa Ana River Watershed. Specifically, the proposed Project is located within the Bunker Hill-B Management Zone (RWQCB, 1995). The Santa Ana River Watershed encompasses approximately 2,800 square miles and includes much of Orange County, the northwestern corner of Riverside County, the southwestern corner of San Bernardino County, as well as a small portion of Los Angeles County (USGS, 1981; SAWPA, 2011). The Santa Ana River is approximately 96 miles long and is comprised of 6 reaches, with Reach 1 beginning at the Pacific Ocean and Reach 6 ending at the headwaters upstream of Seven Oaks Dam in Highland, CA (USGS: Viewer, 2011). The proposed Project is located within Reach 5 of the River, with its southwestern limit in the City San Bernardino and its northeastern limit in the City of Redlands (RWQCB, 1995).

The watershed is located in the Peninsular Ranges and Transverse Ranges of Southern California. The highest elevations of the watershed occur in the San Bernardino Mountains (San Gorgonio Peak – 11,485 ft) and eastern San Gabriel Mountains (Transverse Ranges; Mt. Baldy – 10,080 ft) and in the San Jacinto Mountains (Peninsular Ranges; Mt. San Jacinto – 10,804 ft). Further downstream, the Santa Ana Mountains and the Chino Hills form a topographic high before the river flows into the Coastal Plain (Orange County) and into the Pacific Ocean. Average annual precipitation within the watershed limits ranges from 12 inches per year in the coastal plain to 18 inches per year in the inland valleys, with the San Bernardino Mountains reaching 40 inches or more (SAWPA, 2011). Most of the precipitation occurs between October and March in the form of rain with erratic amounts of snow in the higher elevations.

3.2. GROUNDWATER RESOURCES

According to the California Department of Water Resources, the proposed Project lies within the Upper Santa Ana Valley Groundwater Basin; specifically in the Bunker Hill Subbasin, which has a surface area of approximately 89,600 acres (120 square miles). This subbasin is bounded by the San Gabriel Mountains, San Bernardino Mountains, and Crafton Hills, as well as several faults. The Banning fault serves as the southern boundary, the Redlands fault serves as the east boundary, the San Andreas fault roughly serves as the northern boundary, the Glen Helen fault lies along the northwest boundary, and the San Jacinto fault serves as the southwest boundary. The Santa Ana River, Mill Creek, and Lytle Creek are the main tributary streams in the Bunker Hill Subbasin (Water, 2004).

Historically, recharge to the Bunker Hill Subbasin has been by means of infiltration of runoff from the nearby San Gabriel and San Bernardino Mountains. Water bodies contributing to the subbasin's recharge include the Santa Ana River, Mill Creek, and Lytle Creek. Together, these 3 sources contribute more than 60 percent of the total recharge to the groundwater system (USGS, 1989). Minor contributors include Cajon Creek, San Timoteo Creek, and most of the creeks flowing southward out of the San Bernardino Mountains. The subbasin is also replenished by deep percolation of water from precipitation and resulting runoff, percolation from delivered water, and water spread in streambeds and spreading grounds (Water Resources, 2004).

The proposed Project will not be directing flows into the groundwater subbasin. Due to the average groundwater depth from the surface being approximately 100 feet (USGS), the Project is not expected to have an effect on the groundwater in the area.

3.3. TOPOGRAPHY

Regionally, the proposed Project is located within Inland Valley, specifically along the southerly edge of the Santa Ana River in San Bernardino and Redlands, California. Topography of the proposed Project area is consistent with that of inland valleys. Mainly composed of relatively flat terrain, topography maintains a constant mild grade with a northeasterly high point and a southwesterly low point.

The proposed Project site lies approximately 9 miles downstream of the Santa Ana River headwaters in an alluvial plain (USDA, 2011). The proposed Project location is at approximately 1,067 feet above sea level with an elevation range from 1,004 feet to 1,130 feet (USGS: Seamless, 2011).

3.4. SOILS RUNOFF POTENTIAL

As summarized in Table 1, soils are classified by the United States Natural Resource Conservation Service into four (4) Hydrologic Soils Groups based on the soil's runoff potential. Hydrologic Soil Group is a term that represents a group of soils having similar runoff potential under similar storm and cover conditions. Soil properties that influence runoff potential are those that influence the minimum rate of infiltration for bare soil after prolonged wetting and when not frozen. These properties are depth to a seasonally high water table, saturated hydraulic conductivity after prolonged wetting, and depth to a layer with a very slow water transmission rate.

TABLE 1: HYDROLOGIC SOIL GROUP CHARACTERISTICS

Hydrologic Soil Group	Approx. % of Project	Soil Type	Soil Characteristics
Group A	51.6	Sand, Loamy Sand, Sandy Loam	Low runoff potential and high infiltration rates even when thoroughly wetted. Consists of deep, well to excessively drained sands or gravels and have a high rate of water transmission.
Group B	48.4	Silt Loam, Loam	Moderate infiltration rate when thoroughly wetted. Consists of moderately deep to deep, moderately well to well drained soils with moderately fine to moderately coarse textures.
Group C	0	Sandy Clay Loam	Low infiltration rates when thoroughly wetted. Consists of soils that contain a layer that impedes downward movement of water and soils with moderately fine to fine textures.
Group D	0	Clay Loam, Silty Clay Loam, Sandy Clay, Silty Clay, Clay	Very low infiltration rates when thoroughly wetted. Consists of clay soils with high swelling potential, soils with a permanent high water table, soils with a clay layer at or near the surface and shallow soils over nearly impervious material.

Source: Natural Resources Conservation Service, 2011.

The Project site contains four different types of soils: Grangeville Fine Sandy Loam (Gr), Grangeville Fine Sandy Loam, Saline-Alkali (Gs), Psamments and Fluvents, Frequently Flooded (Ps), and Tujunga Loamy Sand, 0 to 5 percent slopes (TuB). As indicated in Table 1, soils belonging to Hydrologic Soil Group A have a low runoff potential and high infiltration rate when thoroughly wetted. The majority of the Project site is comprised of Tujunga Loamy Sand, which is considered to be part of Hydrologic Soil Group A. The remaining 3 soil types found on-site are considered to be part of Hydrologic Soil Group B, which has a moderate infiltration rate (USDA, 2011). The existing Project site, being composed of strictly Hydrologic Soil Group A and B soils, is considered to have a low runoff potential; however, once improved, the proposed paved surface will cause runoff to increase.

3.5. SOILS EROSION POTENTIAL

Similar to the Hydrologic Soils Group classification, various soil types have associative "K" factors. A soil's "K" factor directly correlates to its erosion potential such that the higher the value, the higher the potential erodibility of the soil. As discussed in the above section, the majority of the Project site is comprised of Tujunga Loamy Sand which has an associative "K" factor of 0.20 (USDA, 2011). A soil with a "K" factor of 0.20 is considered to have a moderately low erosion potential, which in addition to relatively flat terrain and a fairly short construction schedule (~ 1 year), generates a low sediment risk associated with the proposed Project.

As discussed in Section 2.1.1, Reach 5 of the Santa Ana River is not listed as a water body impaired due to sedimentation/ siltation or turbidity. Additionally, Santa Ana River (Reach 5) does not provide the beneficial uses of COLD, SPAWN, and MIGRATORY, as depicted in Table 3; beneficial uses which could be adversely impacted by construction activities. Based on the assessment of the combination of these receiving water characteristics, the proposed Project presents a low receiving water risk.

3.6. CLIMATE AND PRECIPITATION

The proposed Project area is located in an area with a moderate climate. The area experiences an annual rainfall of approximately 15 inches, with the majority of precipitation occurring between December and February. Average winter temperatures range from lows in the 30's to highs in the 60's. Average summer temperatures range from lows in the 70's to highs in the 90's. The area is also subject to "Santa Ana" winds on occasion between October and March, which consist mostly of sometimes strong gusts blowing from the north and northeast (SBCVB, 2009).

3.7. POPULATION AND LAND USE

In general, the land surrounding the Santa Ana River Trail (SART) Phase III Project consists of residential and commercial areas, as well as open space associated with the Santa Ana River.

3.7.1 CITY OF SAN BERNARDINO

As of 2010, the estimated population of San Bernardino was 209,924 (Census, 2010). Land uses surrounding the proposed Project site within San Bernardino city limits consist primarily of heavy industrial areas (IH) along the south side of the Santa Ana River, with relatively small urban areas (RU) toward the San Bernardino-Redlands border. North of the Santa Ana River, land uses consist primarily of

light industrial areas (IL), with the San Bernardino International Airport (Public Facility) occupying a relatively smaller area toward the northeast (City of San Bernardino, 2007).

3.7.2 CITY OF REDLANDS

As of 2010, the estimated population of Redlands was 68,747 (Census, 2010). Land uses surrounding the proposed Project site within Redlands city limits consist primarily of neighborhood convenience center areas (C-2) along the south side of the Santa Ana River, with relatively small general industrial areas (M-2) toward the Redlands-San Bernardino border. North of the Santa Ana River, land uses consist primarily of light industrial areas (M-1), with the San Bernardino International Airport (Public Facility) occupying a relatively smaller area toward the northwest (City of Redlands, 2007).

3.8. EXISTING WATER QUALITY

Water quality data collected by the United States Geological Survey (USGS) from 2009 to 2010 for the Santa Ana River at E Street, near San Bernardino, California is summarized in Table 2 (USGS, 2010). The location of the water quality gauge is approximately 1.3 miles downstream of the proposed Project area.

TABLE 2: SANTA ANA RIVER WATER QUALITY DATA, 2009-2010

Constituent	11/5 2009	12/2 2009	12/8 2009	12/14 2009	1/7 2010	1/18 2010	1/20 2010	1/22 2010	2/3 2010	2/22 2010	3/5 2010	3/30 2010	4/12 2010	5/3 2010
Discharge, instantaneous, ft^3/s	0.64	2.5	62	93	4	23	170	3,250	5.2	228	16	0.99	221	0.35
Temperature, water, °C	18.5	15.5	10.5	12	7.5	13.5	9	11	18	11.5	12	17	14	22
Suspended sediment, fall diameter (deionized water), percent smaller than 0.002 mm	--	--	70	--	--	--	68	23	--	--	--	--	--	--
Suspended sediment, fall diameter (deionized water), percent smaller than 0.004 mm	--	--	89	--	--	--	86	29	--	--	--	--	--	--
Suspended sediment, fall diameter (deionized water), percent smaller than 0.008 mm	--	--	94	--	--	--	92	43	--	--	--	--	--	--
Suspended sediment, fall diameter (deionized water), percent smaller than 0.016 mm	--	--	97	--	--	--	95	55	--	--	--	--	--	--

Suspended sediment, fall diameter (deionized water), percent smaller than 0.031 mm	--	--	97	--	--	--	95	65	--	--	--	--	--	--
Suspended sediment, sieve diameter, percent smaller than 0.0625 mm	62	83	98	87	100	97	96	69	99	70	97	100	77	69
Suspended sediment, sieve diameter, percent smaller than 0.125 mm	--	--	98	90	--	99	96	73	100	77	97	--	85	--
Suspended sediment, sieve diameter, percent smaller than 0.25 mm	--	--	98	95	--	100	97	82	--	89	98	--	92	--
Suspended sediment, sieve diameter, percent smaller than 0.5 mm	--	--	100	100	--	--	99	92	--	99	100	--	98	--
Suspended sediment, sieve diameter, percent smaller than 1 mm	--	--	--	--	--	--	100	98	--	100	--	--	100	--
Suspended sediment, sieve diameter, percent smaller than 2 mm	--	--	--	--	--	--	--	100	--	--	--	--	--	--
Suspended sediment concentration, mg/L	8	22	1,680	703	116	85	2,020	6,390	63	1,160	108	56	650	10
Suspended sediment discharge, tons per day	0.01	0.15	281	177	1.3	5.3	927	56,100	0.88	714	4.7	0.15	388	0.01

Source: USGS Water-Data Report, 2010.

3.9. BENEFICIAL USES

Beneficial uses of receiving waters are defined in the Santa Ana RWQCB's Basin Plan as those necessary for the survival or wellbeing of humans, plants, and wildlife. Examples of beneficial uses include drinking water supplies, swimming, industrial and agricultural water supply, and the support of freshwater and marine habitats and their organisms.

3.9.1. BENEFICIAL USES FOR SURFACE WATERS

Beneficial uses of water are defined in the Basin Plan as those necessary for the survival or wellbeing of humans, plants, and wildlife. Examples of beneficial uses include drinking water supplies, swimming, industrial and agricultural water supply, and the support of freshwater and marine habitats and their

organisms. Drainage from the site is currently and would continue to be discharged into Santa Ana River Reach 5. Santa Ana RWQCB-designated beneficial uses for these water features are summarized in Table 3 (RWQCB, 1995).

TABLE 3: DESIGNATED BENEFICIAL USES OF SANTA ANA RIVER REACH 5

Beneficial Use Description	Santa Ana River (Reach 5)
Agricultural Supply (AGR): Waters used for farming, horticulture, or ranching, including, but not limited to, irrigation, stock watering, and support of vegetation for range grazing.	X
Warm Freshwater Habitat (WARM): Waters that support warmwater ecosystems that may include, but are not limited to, preservation and enhancement of aquatic habitats, vegetation, fish and wildlife, including invertebrates.	X
Industrial Process Supply (PROC): Waters that are used for industrial activities and depend primarily on water quality. These uses may include, but are not limited to, process water supply and all uses of water related to product manufacture or food preparation.	
Groundwater Recharge (GWR): Waters used for natural or artificial recharge of groundwater for purposes that may include, but are not limited to, future extraction, maintaining water quality, or halting of saltwater intrusion into freshwater aquifers.	X
Commercial and Sportfishing (COMM): Waters that are used for commercial or recreational collection of fish or other organisms, including those collected for bait. These uses may include, but are not limited to, uses involving organisms intended for human consumption.	
Navigation (NAV): Waters that are used for shipping, travel or other transportation by private, commercial or military vessels.	
Hydropower Generation (POW): Waters that are used for hydroelectric power generation.	
Municipal and Domestic Supply (MUN): Waters used for community, military, or individual water supply systems including, but not limited to, drinking water supply.	X
Limited Warm Freshwater Habitat (LWRM): Waters that support warmwater ecosystems which are severely limited in diversity and abundance as the result of concrete-lined watercourses and low, shallow dry weather flows which result in extreme temperature, pH, and/or dissolved oxygen conditions. Naturally reproducing finfish populations are not expected to occur in LWRM waters.	
Rare, Threatened or Endangered Species (RARE): Waters that support habitats necessary for the survival and successful maintenance of plant or animal species designated under State or Federal law as rare, threatened or endangered.	X
Cold Freshwater Habitat (COLD): Waters that support coldwater ecosystems and may include, but are not limited to, preservations and enhancement of aquatic habitats, vegetation, fish and wildlife, including invertebrates.	
Spawning, Reproduction and Development (SPWN): Waters that support high quality aquatic habitats necessary for reproduction and early development of fish and wildlife.	
Marine Habitat (MAR): Waters that support marine ecosystems that include, but are not limited to, preservation and enhancement of marine habitats, vegetation (e.g., kelp), fish and shellfish and wildlife (e.g., marine mammals and shorebirds).	
Shellfish Harvesting (SHEL): Waters that support habitats necessary for shellfish (e.g., clams, oysters, limpets, abalone, shrimp, crab, lobster, sea urchins and mussels) collected for human consumption, commercial or sport purposes.	
Estuarine Habitat (EST): Waters that support estuarine ecosystems, which may include, but are not limited to, preservation and enhancement of estuarine habitats, vegetation, fish, and shellfish, and wildlife, such as waterfowl, shorebirds, and marine mammals.	
Preservation of Biological Habitats of Special Significance (BIOL): Waters that support designated areas or habitats, including, but not limited to, established refuges, parks, sanctuaries, ecological reserves or preserves, and Areas of Special Biological Significance (ASBS), where the preservation and enhancement of natural resources requires special protection.	

Water Contact Recreation (REC-1): Waters that are used for recreational activities involving body contact with water where ingestion of water is reasonably possible. Uses include, but are not limited to, swimming, water-skiing, skin and scuba diving, surfing, white water activities, fishing, and use of natural hot springs.	X
Non-contact Water Recreation (REC-2): Waters that are used for recreational activities involving proximity to water, but not normally involving body contact with water where ingestion of water would be reasonably possible. These uses may include, but are not limited to, picnicking, sunbathing, hiking, beachcombing, camping, boating, tidepool and marine life study, hunting sightseeing and aesthetic enjoyment in conjunction with the above activities.	X
Wildlife Habitat (WILD): Water that support wildlife habitats including, but not limited to, the preservation and enhancement of vegetation and prey species used by waterfowl and other wildlife.	X

Source: Water Quality Control Plan, Santa Ana River Basin (8), Santa Ana Regional Water Quality Control Board, 2008.

3.9.2. BENEFICIAL USES FOR GROUNDWATER

The Project site is located in the Bunker Hill-B Groundwater Basin within the larger Upper Santa River Groundwater Basin. Beneficial uses for groundwater in the Bunker Hill-B Groundwater Basin are summarized in Table 4 (RWQCB, 1995).

TABLE 4: DESIGNATED BENEFICIAL USES OF THE BUNKER HILL-B GROUNDWATER BASIN

Beneficial Use	Description
Agricultural Supply (AGR)	Waters used for farming, horticulture, or ranching, including, but not limited to, irrigation, stock watering, and support of vegetation for range grazing.
Industrial Process Supply (PROC)	Waters used for industrial activities that depend primarily on water quality, which include process water supply and all uses of water related to product manufacture or food preparation.
Industrial Service Supply (IND)	Waters used for industrial activities that do not depend primarily on water quality such as mining, cooling water supply, hydraulic conveyance, gravel washing, fire protection, and oil well re-pressurization.
Municipal and Domestic Supply (MUN)	Waters used for community, military, or individual water supply systems including, but not limited to, drinking water supply.

Source: *Water Quality Control Plan, Santa Ana River Basin (8)*, Santa Ana Regional Water Quality Control Board, 1995.

4. ENVIRONMENTAL CONSEQUENCES

4.1. IMPACT ASSESSMENT METHODOLOGY

The purpose of this Water Quality Assessment Report is to analyze the difference between the existing conditions and the proposed Project build conditions with respect to water quality impacts. The assessment takes the following into consideration:

- Discharges into an Environmentally Sensitive Area (ESA)
- Pollutants of Concern (Pollutants associated with the Project and pollutants impairing receiving waters)
- Impervious area and relation to amount of runoff (increase or decrease)
- Application of BMPs (types of BMPs, new technologies, effectiveness)

The total disturbed area of the proposed 20-foot wide, 3.8-mile long pedestrian and bicycle trail would be approximately 24.6 acres and would increase the impervious area within the proposed Project limits by approximately 9.2 acres. The added impervious area would be approximately 0.0005% of the total Santa Ana River watershed area [2,800 square miles (1,792,000 acres)]; therefore, the area that changes from pervious to impervious would be minimal, and unlikely to significantly impact the 100- and 50-year flows of the Santa Ana River. In respect to the relatively smaller rain events (1-, 2-, and 5-year), flows within the river are highly dependent upon, and regulated by, releases upstream by Seven Oaks Dam and the City of San Bernardino Wastewater Treatment Plant. In conclusion, the added impervious area will not have a significant impact on the watershed characteristics; however, the proposed Project will be required to implement mitigation measures to minimize and prevent adverse water quality impacts during construction of the Project and into perpetuity.

4.2. CONSTRUCTION IMPACTS

The development of the Santa Ana River Trail within the proposed Project limits would result in construction activities that have a potential to cause erosion, sedimentation, and the discharge of polluted storm water and non-storm water runoff from the Project site. Clearing of vegetation and grading will be performed on approximately 11.9 acres which could lead to exposed or stockpiled soils susceptible to peak storm water runoff flows. Also, the compaction of soils by heavy construction machinery may reduce the infiltration capacity of soils (exposed during construction) and increase runoff and erosion potential. The presence of significant amounts of raw materials for trail construction, including concrete, asphalt, mortar, and slurry, may lead to storm water runoff contamination or groundwater contamination. If uncontrolled, pollutants associated with these materials could lead to water quality problems including sediment-laden runoff, prohibited non-storm water discharges, and ultimately the degradation of downstream receiving waters or groundwater. Table 5 lists potential pollutants related to construction and the type of area each pollutant can be found in.

TABLE 5: POTENTIAL CONSTRUCTION POLLUTANTS

Material Type	Pollutant	Visually Observable	Typical Location
Diesel Fuel	Petroleum distillates, naphthalene, xylene	Sheen/Stain	Staging area
Gasoline	Benzene, toluene, xylene, MTBE	Sheen/Stain	Staging area
Hydraulic Oil	Mineral oil, trace additives	Sheen/Stain	Staging area
Engine Oil	Mineral oil, additives, combustion byproducts	Sheen/Stain	Staging area
Transmission Oil	Mineral oil, trace additives	Sheen/Stain	Staging area
Engine Coolant	Ethylene and propylene glycol, heavy metals	Green/red	Staging area
Grease	Petroleum hydrocarbons	Sheen/Stain	Staging area
Kerosene	Petroleum hydrocarbons	Sheen/Stain	Staging area
Fertilizer	Nitrogen, phosphorus	No	Material storage area
Pesticide	Water-insoluble chlorinated hydrocarbons, organophosphates, carbonates, and pyrethrums.	Varies	Material storage area
Herbicide	Chlorinated hydrocarbons, organophosphates	Varies	Material storage area
Soil Amendments		No	Material storage area
Concrete (wet)	Fly ash, heavy metals, Portland cement	White solid	Streets & building pads
Concrete coring slurry	Turbidity and pH	Gray liquid	Building construction & streets
Concrete sawing slurry	Turbidity and pH	Gray liquid	Building construction & streets
Cement	Aluminum calcium iron oxide, calcium sulfate	Gray powder	Building construction & streets
Grout	Silica sand, Portland cement	White powder	Block wall & Building construction
Paint	Ethylene glycol, titanium oxide, VOC	Colored liquid	Building construction
Sealers	Diacetone alcohol,		Building construction & Streets
Adhesives	COD/ Pheno.ls/ SVOC	White/yellow	Building construction
Sanitary waste	Human waste	Yes	Staging areas & all construction areas
	Animal waste	Yes	All areas
Asphalt	Asphalt fumes, cutback asphalt,	Black material	Streets
Curing Compounds	Glass Oxide, urea-extended phenol	Creamy white	Building construction & Streets
Waste wash water	Residuals and modifications to pH	Suds, foam, froth	All areas
Wood Preservatives	Arsenic, Chromium (Total), Copper, and Zinc	Amber liquid	Building construction
Cleaning Solvents	Perchloroethylene, methylene chloride, TCE	Varies	Staging areas
Sediment	Soil, turbidity, dust	Muddy	All areas
Vegetation	Organic matter	Yes	All areas
Solid Waste	Floatable and blowable trash and debris	Yes	All areas

TABLE 5: POTENTIAL CONSTRUCTION POLLUTANTS

Material Type	Pollutant	Visually Observable	Typical Location
Tile			Building construction & material storage areas
Historic land use contaminants (if applicable)			

4.2.1. STORM WATER POLLUTION PREVENTION PLAN (SWPPP)

As stated in Section 2.2.4., the discharger (County of San Bernardino) will obtain coverage under the San Bernardino County NPDES MS4 Permit (NPDES Permit No. CAS618036). Coverage under this MS4 Permit indirectly complies with the requirements of the current Statewide Construction Activity General NPDES Permit (2009-0009-DWQ, NPDES No. CAS000002). Under the Construction General Permit, the project proponent is required to implement BMPs to prevent the degradation of existing water quality during construction. Consequently, a Storm Water Pollution Prevention Plan (SWPPP) will be prepared in compliance with the NPDES permit and the local San Bernardino County MS4 permit to facilitate the implementation of specific Best Management Practices (BMPs). These BMPs will reduce or eliminate construction pollutants, such as those listed in Table 6, from entering the channel, and if properly designed, implemented, and maintained as required by the NPDES permit, then construction impacts to water quality will be reduced to a level sufficient for protection of receiving waters or groundwaters. Table 6 provides a list of potential BMPs to be considered during construction.

TABLE 6: POTENTIAL CONSTRUCTION BMPS

BMP Description	
EC-1 Scheduling	NS-2 Dewatering Operations
EC-2 Preservation Of Existing Vegetation	NS-3 Paving and Grinding Operations
EC-4 Hydroseeding	NS-6 Illicit Connection/Discharge
EC-7 Geotextiles and Mats	NS-7 Potable Water/Irrigation
EC-8 Wood Mulching	NS-8 Vehicle and Equipment Cleaning
EC-10 Velocity Dissipation Devices	NS-9 Vehicle and Equipment Fueling
EC-11 Slope Drains	NS-10 Vehicle and Equipment Maintenance
EC-12 Streambank Stabilization	NS-12 Concrete Curing
EC-15 Soil Preparation/Roughening	NS-13 Concrete Finishing
EC-16 Non-Vegetative Stabilization	NS-15 Demolition Adjacent to Water
WM-1 Material Delivery and Storage	SE-1 Silt Fence
WM-2 Material Use	SE-4 Check Dams
WM-3 Stockpile Management	SE-5 Fiber Rolls
WM-4 Spill Prevention and Control	SE-6 Gravel Bag Berm
WM-5 Solid Waste Management	SE-7 Street Sweeping and Vacuuming
WM-6 Hazardous Waste Management	SE-8 Sandbag Barrier

WM-7 Contaminated Soil Management	SE-10 Storm Drain Inlet Protection
WM-8 Concrete Waste Management	WE-1 Wind Erosion Control
WM-9 Sanitary/Septic Waste Management	TC-1 Stabilized Construction Entrance/Exit
WM-10 Liquid Waste Management	TC-2 Stabilized Construction Roadway
NS-1 Water Conservation Practices	

Source: California Stormwater Quality Association (CASQA), 2011.

4.3. POST-CONSTRUCTION IMPACTS

The development of the Santa Ana River Trail Phase III Project has the potential to create hydrologic conditions that may impact receiving waters. These Hydrologic Conditions of Concern (HCOCs) are evaluated by analyzing pollutants potentially generated by the Project improvements, pollutants generated by activities at the facilities, and pollutants associated with the site that may cause or contribute to exceedances of water quality standards in receiving waters. Conditions to be considered within the HCOC evaluation include changes between the pre-development and post-development runoff from the site that may destabilize downstream receiving waters. In the case of the proposed Project, trail construction activities include the creation of an approximately 9.2-acre, paved surface in a currently unimproved area. Due to such an increase in impervious area, the proposed Project will subsequently exhibit an increase in runoff. This additional runoff has the potential to cause an HCOC, and must be addressed in order to mitigate associated post-construction impacts of the proposed Project.

Traditionally, parking lots and highways are paved, and experience the pollutants shown in Table 7. However, the proposed Project is not considered as belonging to either of these categories due to the expected usage (bike and pedestrian trail). Minor vehicular access will be experienced for maintenance purposes which, with limited access, will not contribute the level of pollutants typically generated by vehicles on streets, roads, highways, and in parking lots. The potential pollutants of concern for the proposed Project are shown in Table 7.

TABLE 7: POTENTIAL POLLUTANTS OF CONCERN

Pollutant Type	Parking Lots (>5,000 ft^2)	Streets/ Highways/ Freeways	Proposed Santa Ana River Trail
Bacteria/Viruses	P(3)	P(3)	**E**
Heavy Metals	E	E	**P(4)**
Nutrients	P(1)	P(1)	**N**
Pesticides	P(1)	P(1)	**N**
Organic Compounds	E(2)	E(2)	**P(4)**
Sediments	P(1)	E	**E**
Trash & Debris	E	E	**E**
Oxygen Demanding Substances	P(1)	P(1)	**N**
Oil & Grease	E	E	**P(4)**

TABLE 7: POTENTIAL POLLUTANTS OF CONCERN

Pollutant Type	Parking Lots (>5,000 ft^2)	Streets/ Highways/ Freeways	Proposed Santa Ana River Trail

Source: San Bernardino County Stormwater Program, 2005.

E = Expected
P = Potential
N = Not Expected
(1) A potential pollutant if landscaping or open area is present on site.
(2) Including petroleum hydrocarbons.
(3) Bacterial indicators are routinely detected in pavement runoff.
(4) Minimal due to maintenance vehicles.

4.3.1. WATER QUALITY MANAGEMENT PLAN (WQMP)

The proposed Santa Ana River Trail (SART) Phase III Project discharges directly into Santa Ana River Reach 5, which presently provides a beneficial use of "RARE". RARE waters are considered Environmentally Sensitive Areas, as they support the habitats necessary for the survival and successful maintenance of plant or animal species designated under state or federal law as rare, threatened or endangered (RWQCB, 1995).

The San Bernardino County Stormwater Program's Model Water Quality Management Plan (WQMP) Guidance requires Category projects to implement Site Design BMPs, Source Control BMPs, Treatment Control BMPs, or equivalent treatment control alternatives. The proposed Project triggers the requirement for a WQMP, as it falls into Category 7, defined by the following:

> "Developments of 2,500 square feet of impervious surface or more adjacent to (within 200 feet) or discharging directly into environmentally sensitive areas such as areas designated in the Ocean Plan as areas of special biological significance or water bodies listed on the CWA Section 303(d) list of impaired waters." (County, 2005)

The WQMP will address the proposed Project's potential pollutants of concern, and include Low Impact Development (LID) BMPs designed to mitigate these pollutants. Tables 8 and 9 identify the potential Source Control and Treatment Control BMPs that should be considered during the design of the Project and the preparation of the WQMP.

Site Design BMPs are measures implemented in appropriate areas throughout the Project that minimize storm water runoff, minimize the Project's impervious footprint, conserve natural areas within Project limits, or even minimize impacts associated with directly connected impervious areas. Potential Site Design BMPs to be considered during the design of the Project and the preparation of the WQMP include but are not limited to the following measures:

- Runoff from developed areas may be reduced by using alternative materials or surfaces with a lower Coefficient of Runoff, or "C-Factor".
- Construct walkways, trails, driveways, and other low-traffic areas with open-jointed paving materials or permeable surfaces, such as pervious concrete, porous asphalt, unit pavers, and granular materials.

- Construct walkways, trails, and driveways to the minimum widths necessary, provided that public safety and a pedestrian friendly environment are not compromised.
- Maximize canopy interception and water conservation by preserving existing native trees and shrubs, and planting additional native or drought tolerant trees and large shrubs.
- Minimize the use of impervious surfaces, such as decorative concrete, in the landscape design.
- Use natural drainage systems.
- Where landscaping is proposed, drain impervious sidewalks, walkways, trails, and patios into adjacent landscaping.
- Add permanent vegetative stabilization of disturbed soils where appropriate.
- All disturbed soil areas will be vegetated with grasses and forbs to provide erosion control and provide biofiltration for storm water runoff.

TABLE 8: SOURCE CONTROL BMPS

Source Control BMPs	
Education of Property Owners	Efficient Irrigation (SD-12)
Activity Restrictions	Storm Drain Signage (SD-13)
Spill Contingency Plan	Energy Dissipaters
Employee Training/Education Program	Litter Control
Street Sweeping	Protect Slopes and Channels
Common Areas Catch Basin Inspection	Pervious Pavement (SD-20)
Landscape Planning (SD-10)	Alternative Building Materials (SD-21)
Hillside Landscaping	Outdoor Work Areas (SD-35)

Source: San Bernardino County Stormwater Program, 2005.

TABLE 9: TREATMENT CONTROL BMPS

Treatment Control BMPs	
Vegetated Buffer Strip (TC-31)	Flow Based
Vegetated Swale (TC-30)	
Multiple Systems (TC-60)	
Manufactured/Proprietary Devices (MP Series)	
Bioretention (TC-32)	Volume Based
Wet Pond (TC-20)	
Constructed Wetland	
Extended Detention Basin (TC-22)	
Water Quality Inlet (TC-50)	
Retention/Irrigation (TC-12)	
Infiltration Basin (TC-11)	
Infiltration Trench (Caltrans, CTSW-RT-09-239.06, April 2010)	
Media Filter (TC-40)	
Manufactured/Proprietary Devices (MP Series)	

Source: San Bernardino County Stormwater Program, 2005; Caltrans, CTSW-RT-09-239.06, April 2010.

APPENDIX A

VICINITY MAP

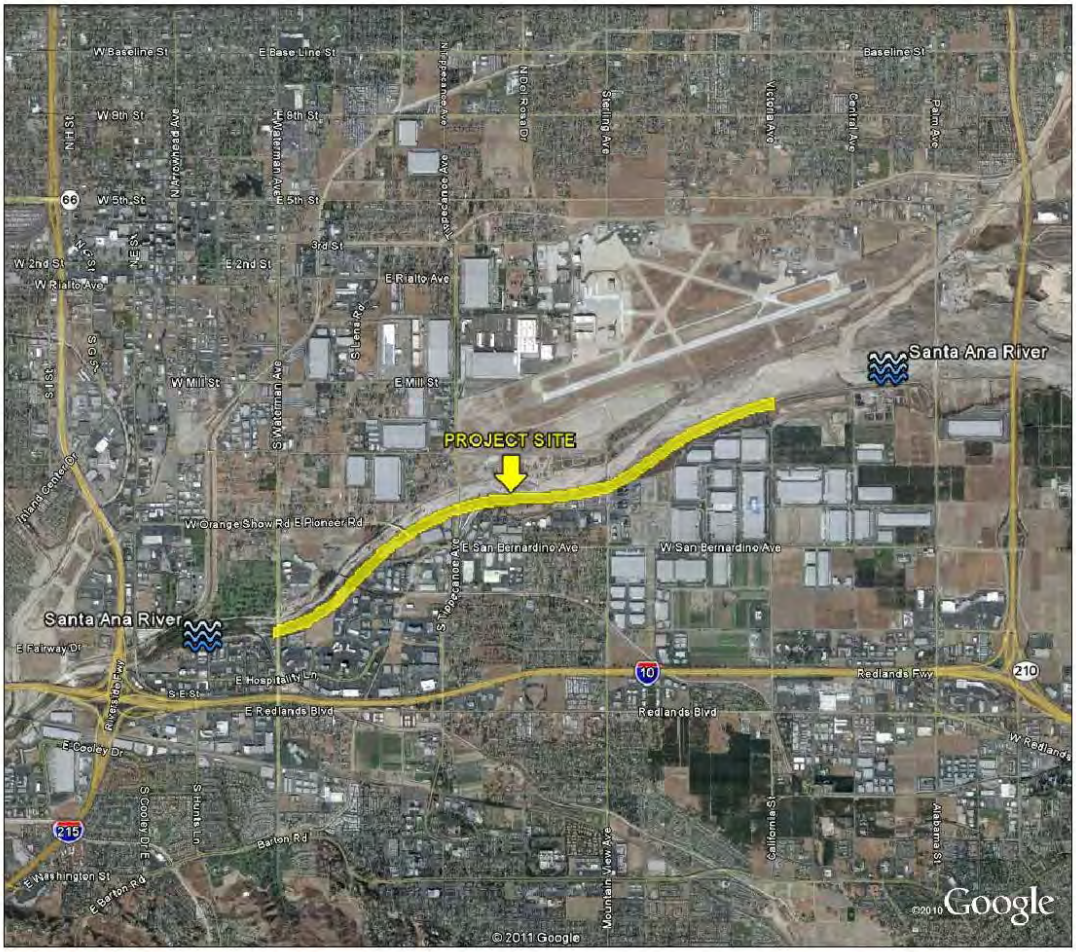
RECEIVING WATERS MAP

Exhibit 4: Initial Study and Mitigated Negative Declaration for the "Santa Ana River Trail, Phase III Project"

Exhibit 4: Initial Study and Mitigated Negative Declaration for the "Santa Ana River Trail, Phase III Project"

SHEET 1 OF 1

VICINITY MAP
FOR
SANTA ANA RIVER TRAIL PHASE III
CITY OF SAN BERNARDINO, CITY OF REDLANDS



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N.T.S.

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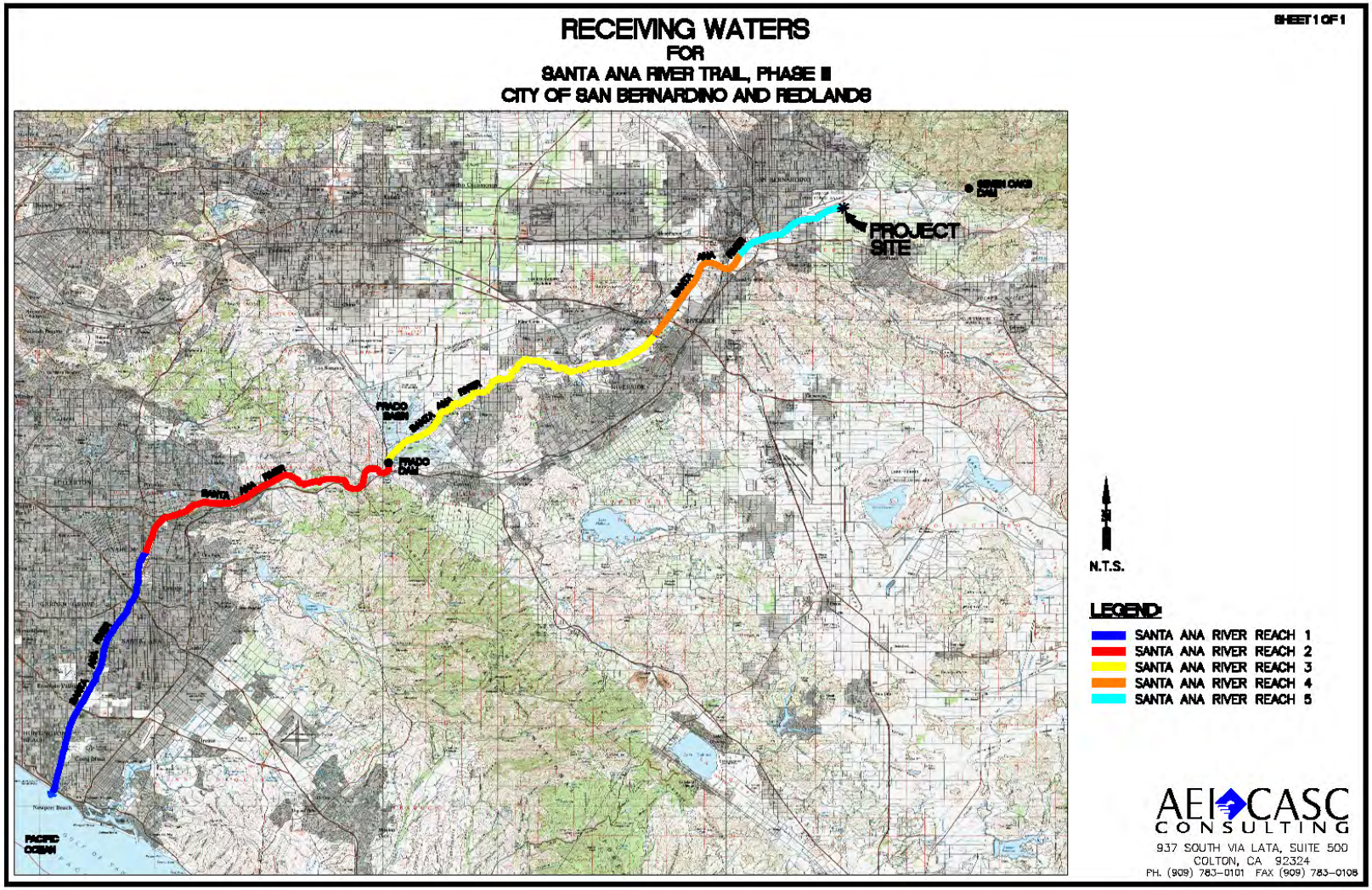
Exhibit 4: Initial Study and Mitigated Negative Declaration for the
"Santa Ana River Trail, Phase III Project"



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APPENDIX 5

Exhibit 4: Initial Study and Mitigated Negative Declaration for the "Santa Ana River Trail, Phase III Project"

LOCATION HYDRAULIC STUDY

SANTA ANA RIVER TRAIL PHASE III PROJECT

FROM WATERMAN AVENUE TO CALIFORNIA STREET

IN THE

CITY OF SAN BERNARDINO AND CITY OF REDLANDS

FEDERAL AID NUMBER: STPLER – 5954 (083)

Prepared for:

CALIFORNIA DEPARTMENT OF TRANSPORTATION, DISTRICT 8

Prepared by:

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(909) 783-0101
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June 8, 2011

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FIGURE 3: SANTA ANA RIVER TRAIL PHASE III CONSTRUCTION PLANS

FIGURE 4: UPPER SANTA ANA RIVER (SEVEN OAKS DAM) 100 YEAR WITH PROJECT FLOODWAY AND FLOODPLAIN DELINEATION PLAN VIEW, SHEETS 1 OF 3, 2 OF 3 AND 3 OF 3

FIGURE 5: FEMA FLOOD INSURANCE RATE MAPS, SAN BERNARDINO COUNTY, SHEETS 1 OF 5, 2 OF 5, 3 OF 5, 4 OF 5, AND 5 OF 5

I. LOCATION HYDRAULIC STUDY FORM

Dist.: 08 County: San Bernardino County Rte.: N/A K.P.: N/A
EA: N/A Bridge No.: N/A

City: City of San Bernardino and City of Redlands
Project Name and Location: Santa Ana Trail Phase III (SART Phase III) Project

Floodplain Description:
See Section III

1. Description of Proposal (include any physical barriers i.e. concrete barriers, soundwalls, etc. and design elements to minimize floodplain impacts)

See Section II

2. ADT: Current N/A Projected N/A

3. Hydraulic Data: Base Flood Q_{100} = See Attachment "A"
WSE_{100} = See Attachment "A"

The flood of record, if greater than Q_{100}:
Q= N/A m^3 / s WSE= N/A

Overtopping flood Q = N/A WSE = N/A

Are NFIP maps and studies available? YES X NO

4. Is the highway location alternative within a regulatory floodway?
YES X NO

5. Attach map with flood limits outlined showing all buildings or other improvements within the base floodplain. (See Figure 2)

Potential Q_{100} backwater damages:

A. Residences? NO X YES
B. Other Bldgs? NO X YES
C. Crops? NO X YES
D. Natural and beneficial

FLOODPLAIN VALUES? NO X YES

(See Section IV)

6. Type of Traffic:

A. Emergency supply or evacuation route? NO___N/A___YES__N/A___
B. Emergency vehicle access? NO___N/A___YES__N/A___
C. Practicable detour available? NO___N/A___YES__N/A___
D. School bus or mail route? NO___N/A___YES __N/A___

7. Estimated duration of traffic interruption for 100-year event hours: N/A

8. Estimated value of Q_{100} flood damages (if any) – low risk level.

A.	Roadway	$0
B	Property	$0
	Total	$0

9. Assessment of Level of Risk Low___X_____
Moderate_____
High_____

For High Risk projects, during design phase, additional Design Study Risk Analysis may be necessary to determine design alternative.

Signature – Hydraulic Project Engineer (Item numbers 1, 3, 4, 5, 7, 8, 9)

_____ Date__08/16/10_____
Ceazar Aguilar, PE
AEI-CASC Consulting

Is there any longitudinal encroachment, significant encroachment, or any support of incompatible Floodplain development? NO___X_____YES_____

If yes, provide evaluation and discussion of practicability of alternatives in accordance with 23 CFR 650.113

Information developed to comply with the Federal requirement for the Location Hydraulic Study shall be retained in the project files.

Signature – County of San Bernardino (Item numbers 1, 2, 3, 4, 5, 6, 7, 8, 9)

_____ Date_____
Granville M. Bowman, PE
Director of Public Works

II. PROJECT DESCRIPTION

The proposed Santa Ana River Trail Phase III (SART, Phase III) construction project runs along the south bank of the Santa Ana River and extends from Waterman Avenue to California Street for a total length of approximately 19,992 feet or 3.79 miles (see Figures 1 and 2). For the most part, 10-foot section of the proposed trail is paved with AC. For segments under existing bridges, 14-foot section of the trail is paved with PCC. Shoulder backing areas are provided for convenience and safety considerations. These areas vary in width from 2 to 5 feet (see Figure 3).

The trail improvements located along the top of the river bank will not have an effect on the existing 100-year floodplain surface elevation and velocity of the Santa Ana River. On the other hand, the proposed trail improvements under the existing bridges will have a very minor effect on the hydraulic characteristics of the river. In an effort to minimize this effect, construction of fill encroachment into the river bed will be off-set by cutting into the existing side slope to provide additional flow conveyance (see Figure 3). Constructing the trail improvements in this manner at the bridge crossings will minimize any significant affects to the existing or pre-project hydraulic characteristics of the river.

III. FLOODPLAIN DESCRIPTION

The floodplain study for the Santa Ana River was previously prepared by the U.S. Army Corps of Engineers (USACOE) in 1987 and revised in 1990 using the HEC-2 model (see Reference 1). The scope of this model extends from the Seven Oaks Dam to Prado Dam. The study was separated into three segments. The first segment starts from the Prado Dam and ends at the downstream end of the confluence point with Lytle – Warm Creek. The second segment is the Lytle – Warm Creek confluence and the third segment extends from the upstream end of the Lytle – Warm Creek confluence up to Seven Oaks Dam.

The proposed Santa Ana River Trail Phase III (SART, Phase III) construction project is located within the third segment, between Waterman Avenue (RM 28.10) and California Street (RM 31.68), as shown on Figure 4 (1 of 3 and 2 of 3). It will cross under the existing Waterman Avenue Bridge, Orange Show Road Bridge and Tippecanoe Bridge crossings. Future bridge crossings under the BNSF railroad and over the Mission Zanja Creek are beyond the scope of this project. Cul-de-sac or turnaround areas are provided at the east side of the BNSF railroad and west side of the Mission Zanja Creek confluence with the Santa Ana River.

The segment of the Santa Ana River that is affected by the SART Phase III project is currently mapped by the Federal Emergency Management Agency (FEMA) with the following special flood hazard zones:

- Zone AE, designated as “100-year floodplain hazard with base flood elevations determined”.
- Zone A, designated as “100-year floodplain hazard with no base flood elevations determined”.
- Zone X (with hatching), designated as “areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depth of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood”.

- Zone X (clear or no hatching), designated as "areas determined to be outside the 0.2% annual chance floodplain".

The FEMA maps are shown on Figure 5 (1 of 5 thru 5 of 5). For the most part, the floodplain limits are contained within the existing river banks and correspond closely to the USACOE floodplain study as shown on Figure 1 (1 of 3 thru 3 of 3).

In 2003, WRC Consulting Services, Inc. (WRC) prepared a floodplain study in support of the SART, Phase III project (see Reference 2). The study limits extend from Waterman Avenue (RM 28.10) to Alabama Street (RM 32.74), which is approximately 5,600 feet upstream and east of the limit of the SART Phase III construction project (see Figure 4, 1 of 3 thru 3 of 3). Additionally, WRC's study included analysis of the BNSF railroad crossing and Mission Zanja Creek bridge crossing. As previously mentioned, the SART Phase III construction project does not currently include these two bridge crossings. It is assumed that those crossings will be constructed in the future.

The study was performed using the HEC-RAS model and consisted of the following hydraulic models:

- Model 1 – Based on the previous USACOE flood plain study.
- Model 2 – Based on the modified USACOE flood plain study. The modification involves changes to the pier data for the 3 bridges and a new bridge at Orange Show Road.
- Model 3 – Based on Model 2 that includes the proposed trail improvements.

Model 1 was prepared based upon the 1986 and 1987 topographic maps with 5-foot contours. Model 2 was developed using the Orange Show Road Bridge plans and aerial/ground survey data. Model 2 served as the baseline condition for comparison with the proposed trail improvements condition. Hydraulic data used for Models 2 and 3 such as channel roughness coefficients, downstream hydraulic control, and channel and bank stationing were obtained from Model 1.

The 100-year flow rates that were used in the floodplain study are shown on Table 1.

Table 1: 100-Year Peak Discharge

SEGMENT (RIVER MILE)	100-YEAR FLOW
RM 26.98 – RM 27.56	70,000
RM 27.60 – RM 27.62	68,211
RM 27.64 – RM 27.77	52,000
RM 27.94 – RM 28.57	36,500
RM 28.58 – RM 33.27	33,000
RM 33.28 – RM 33.37	28,000

Waterman Avenue Bridge, Orange Show Road Bridge and Tippecanoe Bridge crossings are approximately located in RM 28.10, 29.06, and 29.51, respectively.

According to WRC's report, the results of the analysis indicate that no significant impacts to the river hydraulics are anticipated with the construction of the proposed trail improvements. Table 2 shows the hydraulic results of the three bridge crossings obtained from WRC's report. The floodplain limits are shown on Figure 4.

Table 2: Hydraulic Results

BRIDGE LOCATION	MODEL 2		MODEL 3		
	FLOODPLAIN ELEVATION	VELOCITY	FLOODPLAIN ELEVATION	VELOCITY	ELEVATION DIFFERENCE
Waterman Avenue	997.86	6.56	997.86	6.56	0.00
	998.20	6.44	998.20	6.43	0.00
Orange Show Road	1025.01	7.29	1024.95	7.39	-0.15
	1026.09	6.27	1026.06	6.33	0.06
Tippecanoe Avenue	1042.38	10.48	1042.37	10.56	0.03
	1044.73	7.68	1042.54	7.75	2.19

IV. FLOODPLAIN VALUES

The SART Phase III construction project has been engineered to provide a recreational trail without adversely impacting the hydraulic functionality of the Santa Ana River floodplain while preserving existing land uses. Construction of the new trail and associated improvements preserves the capacity of the river to manage the 100-year storm flow and enhances recreational uses. In addition, the scenic quality of the Santa Ana River floodplain will be preserved. Removal of vegetation will be limited. Trail improvements will result in very minor and limited impacts to the river in the area of the existing bridges, which will be fully mitigated. The appearance of the trail improvements incorporates detailed design elements that will provide safety to the trail user and assure scenic continuity. The project will result in drainage preservation of one of the primary regional rivers, thereby maintaining floodplain values.

V. REFERENCES

1. U.S. Army Corps of Engineers, Los Angeles District (August 1991), *"Santa Ana River Mainstem Project including Santiago Creek"*.

2. WRC Consulting Services, Inc. (April 2003), *"Santa Ana River Trail Phase III Hydraulic Design and Analysis"*.

3. Federal Emergency Management Agency (August 2008), *"Flood Insurance Rate Map for San Bernardino County, Map Numbers 0671C8684H, 0671C8703H, and 06071C8701H"*.

DeLORME
XMap® 7
NORTON
AIR FORCE BASE
SAN BERNARDINO
SARTA PHASE III PROJECT
CALIFORNIA STREET
I-10
WATERMAN AVENUE
LOMA LINDA
Data use subject to license.
© DeLorme. XMap® 7
www.delorme.com
MN (12.4° E)
0 1000 2000 3000 4000 5000
Data Zoom 12-6

FIGURE 1

SART PHASE III PROJECT
California St
10
W San Bernardino Ave
Marigold
Redlands Fwy
Mountain View Ave
S Tippecanoe Ave
Orange Show Rd
E Central Ave
E Mill St
S Lena Rd
E Pioneer Rd
S Waterman Ave
E Hospitality Ln
V Orange Show Rd

FIGURE 2

COUNTY OF SAN BERNARDINO
DEPARTMENT OF PUBLIC WORKS

TRANSPORTATION/REGIONAL PARKS DEPARTEMENT

COUNTY OF SAN BERNARDINO 1853

PLANS FOR CONSTRUCTION ON

SANTA ANA RIVER TRAIL PHASE III

WATERMAN AVE TO CALIFORNIA ST

AREA: CITY OF SAN BERNARDINO AND REDLANDS

INDEX OF SHEETS

1	TITLE SHEET
2	INDEX SHEET
3–4	TYPICAL SECTIONS AND MISC DETAILS
5–25	PLAN & PROFILE SHEETS
26	DETAILS

THE FOLLOWING SPECIAL DRAWINGS AND COUNTY STANDARDS ARE ATTACHED TO THE SPECIAL PROVISIONS:

WORK ORDER NO. H13463 FEDERAL AID NO. STPLER-5954(083)

LENGTH = 3.8 MI.

PRELIMINARY
Subject to Revision

TO BE SUPPLEMENTED BY THE FOLLOWING CALTRANS STANDARD PLANS DATED MAY, 2006.

THIS PROJECT REQUIRES A CONTRACTOR'S LICENSE CLASS "A" OR CLASS C12

COUNTY OF SAN BERNARDINO

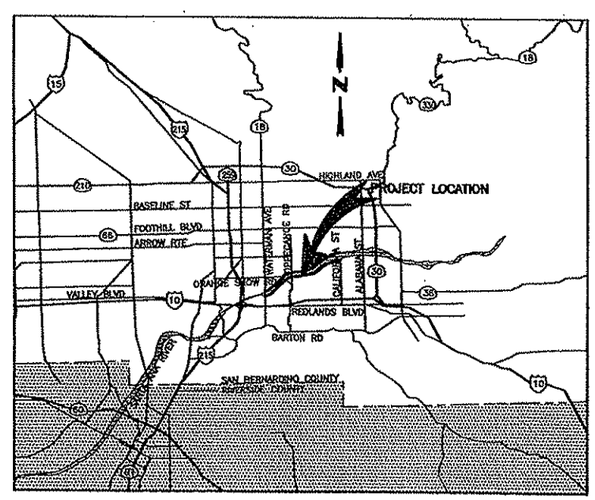
APPROVED BY: _____ _____
GRANVILLE M. BOWMAN, DIRECTOR OF PUBLIC WORKS, R.C.E. 13681 DATE

GENERAL NOTES

U. THE FACT THAT ANY UTILITY FACILITY IS SHOWN OR NOT SHOWN UPON THE PLANS SHALL NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY UNDER SECTION 8-1.10 "UTILITY AND NON-HIGHWAY FACILITIES," OF THE CALTRANS STANDARD SPECIFICATIONS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY, PURSUANT THERETO, TO ASCERTAIN THE LOCATION OF ANY UTILITY FACILITY WHICH MAY BE SUBJECT TO DAMAGE BY REASON OF THE CONTRACTOR'S OPERATIONS.

1. ALL STATIONING NOTES ON PLAN REFER TO THE C.L. IMP. XXXXX ROAD OR SIDE STREET.
2. DIMENSIONS ARE SUBJECT TO TOLERANCES SPECIFIED IN THE CALTRANS STANDARD SPECIFICATIONS.
3. ALL PAVEMENT WIDTH DIMENSIONS SHOWN ON THE PLANS ARE TO THE EDGE OF PAVEMENT OR TO THE TOP OF CURB, UNLESS OTHERWISE NOTED.
4. TRANSITIONS AND WARPING SHALL BE AS SHOWN AND AS DETERMINED BY THE ENGINEER.
5. ASPHALT CONCRETE OVERLAYS SHALL BE FEATHERED TO MEET EXISTING AS SHOWN ON THE PLANS OR AS DETERMINED BY THE ENGINEER.
6. ALL TREES & VEGETATION OUTSIDE THE LIMITS OF EXCAVATION AND EMBANKMENT SLOPE LINES, SHALL BE PROTECTED IN PLACE.

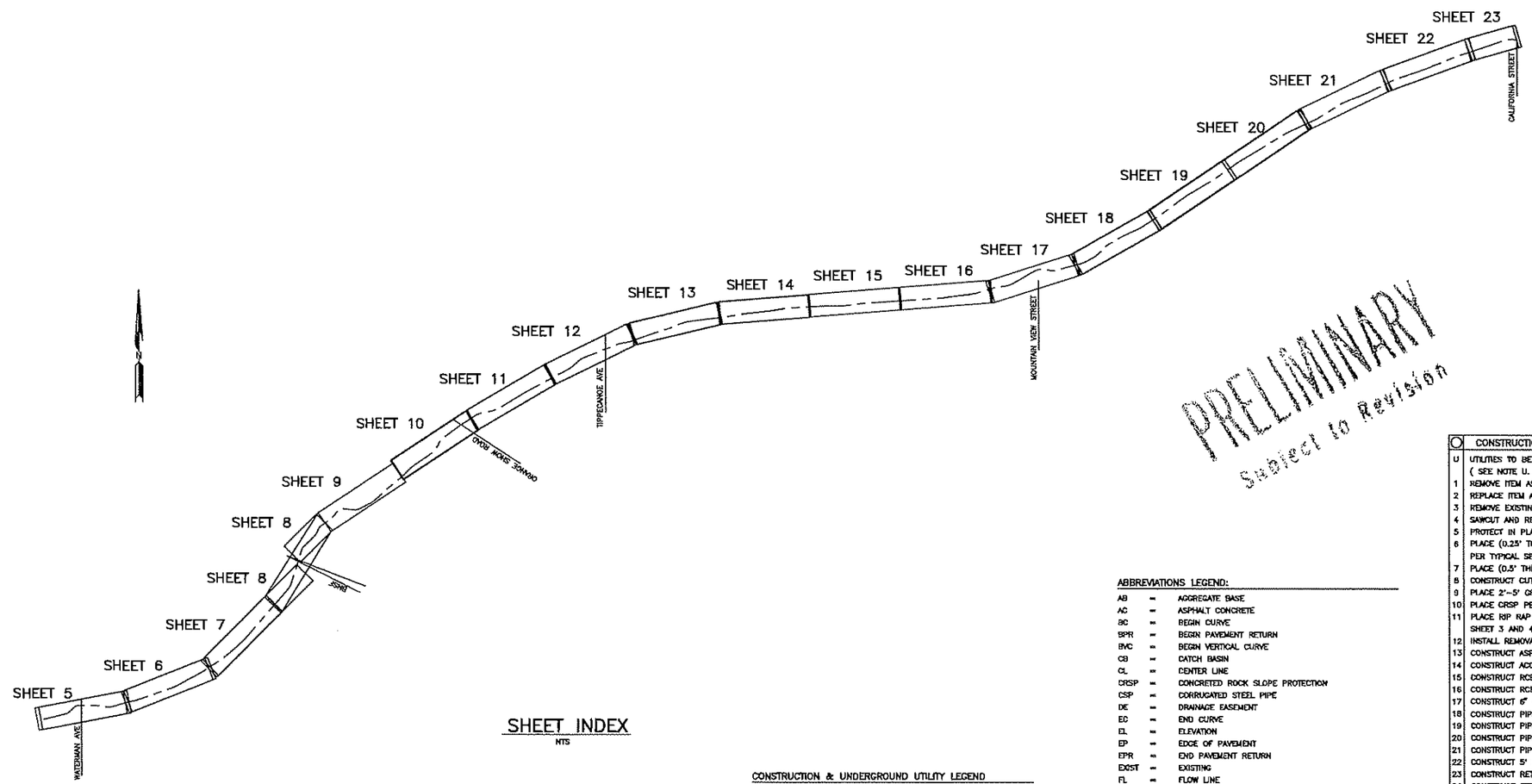
BENCH MARK:



LOCATION MAP
NOT TO SCALE

FIGURE 3

MARK	CHANGES	RESIDENT ENGINEER	DATE
	NO CHANGES		
	FIELD CHANGES	SNT. NO.	TOT. SHTS.



SHEET INDEX

NTS

PRELIMINARY
Subject to Revision

CONSTRUCTION NOTES:

U	UTILITIES TO BE RELOCATED BY OTHERS (SEE NOTE U. OF GENERAL NOTES ON SHEET NO. 1)
1	REMOVE ITEM AS INDICATED
2	REPLACE ITEM AS INDICATED
3	REMOVE EXISTING CONCRETE STRUCTURE
4	SAWCUT AND REMOVE EXISTING ASPHALT CONCRETE PAVEMENT
5	PROTECT IN PLACE
6	PLACE (0.25' THK) ASPHALT CONCRETE OVER (1' THK) COMPACTED SUBGRADE PER TYPICAL SECTIONS SHEET 3
7	PLACE (0.5' THK) PPC PAVEMENT PER TYPICAL SECTIONS SHEET 3 AND 4
8	CONSTRUCT CUT OFF-WALL PER DETAIL SHEET 4
9	PLACE 2'-5' GRADED DIRT SHOULDER (PER PLAN)
10	PLACE CRSP PER TYPICAL SECTION SHEET 3 (TYPE PER PLAN)
11	PLACE RIP RAP STONE (1/4 TON) PER SPECIFICATIONS AND TYPICAL SECTIONS SHEET 3 AND 4 (TYPE PER PLAN)
12	INSTALL REMOVABLE BOLLARDS PER DETAILS SHEET 28
13	CONSTRUCT ASPHALT CONCRETE TURNAROUND AREA PER PLAN AND DETAILS SHEET 4
14	CONSTRUCT ACCESS RAMPS PER PLAN, PROFILE AND SECTIONS SHEET 23, 24 AND 25
15	CONSTRUCT RCB INTLET PER CALTRANS STD PLAN D86A
16	CONSTRUCT RCB OUTLET PER CALTRANS STD PLAN D85
17	CONSTRUCT 6" CONCRETE CURB A1-6 PER CALTRANS STD PLAN A87A
18	CONSTRUCT PIPE OUTLET STRUCTURE PER SBC STD DWG 209
19	CONSTRUCT PIPE OUTLET TYPE A (H=15') PER CALTRANS STD PLAN D90
20	CONSTRUCT PIPE CULVERT HEADWALL STRAIGHT PER CALTRANS STD PLAN D89
21	CONSTRUCT PIPE ANCHORS PER CALTRANS STD PLAN XXXX
22	CONSTRUCT 5' X 5' RCB BOX CULVERT PER CALTRANS STD PLAN D81
23	CONSTRUCT RETANNING WALL PER CALTRANS STD PLAN XXX
24	CONSTRUCT STDRM DRAIN CLEANOUT
25	CONSTRUCT CONCRETE COLLAR FOR RCP SBCFCD SP 157
26	CONSTRUCT PIPE HEADWALL PER CALTRANS STD D89 AND DETAILS ON SHEET X
27	CONSTRUCT TYPE 1 RETAINING WALL PER CALTRANS STD. B3-1 & DETAILS ON SHT. X
28	CONSTRUCT CSP RISER PER DETAIL SHEET 26 (SIZE PER PLAN)
29	CONSTRUCT EXPANSION JOINT PER CALTRANS STD PLAN B3-8
30	CONSTRUCT 16" PIPE GATE PER SBCFCD STD PLAN 209
31	CONSTRUCT 6' CHAIN LINK FENCE PER PLAN
32	FURNISH AND INSTALL 24"ø RCP (1500D)
33	FURNISH AND INSTALL 36"ø RCP (2000D)
34	FURNISH AND INSTALL 84"ø RCP (2000D)
35	INSTALL FITTING 45° ELBOW
36	CONSTRUCT DRIVEWAY APPROACH PER SBC STD DWG 128
37	CONSTRUCT CONCRETE V-DITCH PER PLAN AND DETAIL SHEET 4

ABBREVIATIONS LEGEND:

AB	=	AGGREGATE BASE
AC	=	ASPHALT CONCRETE
BC	=	BEGIN CURVE
BPR	=	BEGIN PAVEMENT RETURN
BVC	=	BEGIN VERTICAL CURVE
CB	=	CATCH BASIN
CL	=	CENTER LINE
CRSP	=	CONCRETED ROCK SLOPE PROTECTION
CSP	=	CORRUGATED STEEL PIPE
DE	=	DRAINAGE EASEMENT
EC	=	END CURVE
EL	=	ELEVATION
EP	=	EDGE OF PAVEMENT
EPR	=	END PAVEMENT RETURN
EXIST	=	EXISTING
FL	=	FLOW LINE
EVC	=	END VERTICAL CURVE
HDWL	=	HEAD WALL
IMP	=	IMPROVEMENT
OG	=	ORIGINAL GROUND
PL	=	PROPERTY LINE
PG	=	PROFILE GRADE
RSP	=	ROCK SLOPE PROTECTION
R/W	=	RIGHT OF WAY
SBC	=	SAN BERNARDINO COUNTY
SE	=	SLOPE EASEMENT
STD	=	STANDARD
SUR	=	SURVEY
TFC	=	TOP FACE OF CURB
THK	=	THICK
TRE	=	TEMPORARY RIGHT OF ENTRY

CONSTRUCTION & UNDERGROUND UTILITY LEGEND

- ASPHALT CONCRETE PAVEMENT
- COMPACTED SUBGRADE
- PORTLAND CEMENT CONCRETE
- GRADED EARTH
- CONC ROCK SLOPE PROTECTION
- PROPOSED SLOPE
- EXISTING SLOPE
- —G— GAS LINE
- —S— SEWER MAIN
- —W— WATER LINE
- —E— ELECTRIC LINE
- —T— TELEPHONE LINE

MARK	DATE	APPR.	REVISIONS

MARK	DATE	APPR.	REVISIONS

MARK	CHANGES		
	NO CHANGES	RESIDENT ENGINEER	DATE

FIELD CHANGES

REGISTERED PROFESSIONAL ENGINEER Erwin R. Fogerson 49060 Exp. 9/30/12 CIVIL STATE OF CALIFORNIA

ERWIN FOGERSON, P.E. — DATE
CHIEF DESIGN ENGINEER

COUNTY OF SAN BERNARDINO
DEPARTMENT OF PUBLIC WORKS

DRAWN BY	DESIGNED BY	PROJ. ENGR.
CB/CH	ADS	CHRIS NGUYEN

SUBMITTED BY

CHRIS NGUYEN, P.E. — DATE
PROJECT ENGINEER

JOHN LATEKO — DATE
YARD X SUPERVISOR
(MAINTENANCE REVIEW)

MOHAM AL-RAYES — DATE
RESIDENT ENGINEER
(CONSTRUCTIBILITY REVIEW)

RECOMMENDED /APPROVED BY

MASIH KASEY, P.E. — DATE
DEPUTY DIRECTOR

GRANVILLE M. BOWMAN, P.E. — DATE
DIRECTOR OF PUBLIC WORKS

SANTA ANA RIVER TRAIL
PHASE III

SHEET INDEX, LEGENDS
AND CONSTRUCTION NOTES

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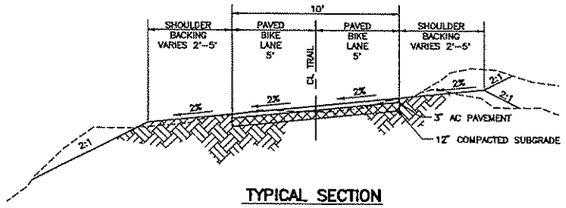
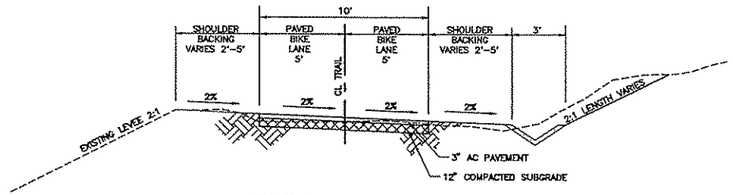
JL XXXX	H13463	AS SHOWN	2	X



TYPICAL SECTION
NTS



TYPICAL SECTION F-F
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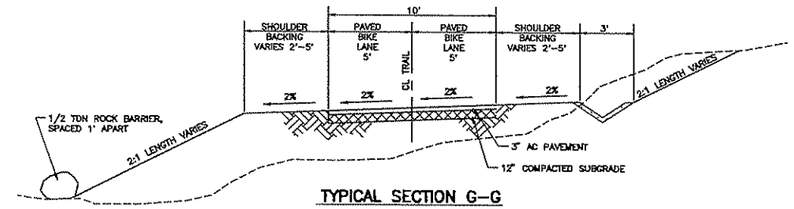

TYPICAL SECTION G-G
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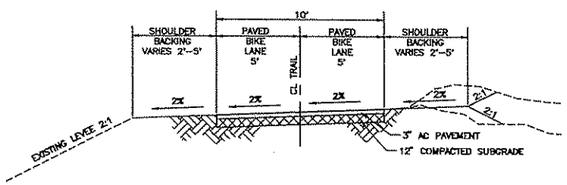
ROCK BARRIER

V-DITCH & SHOULDER



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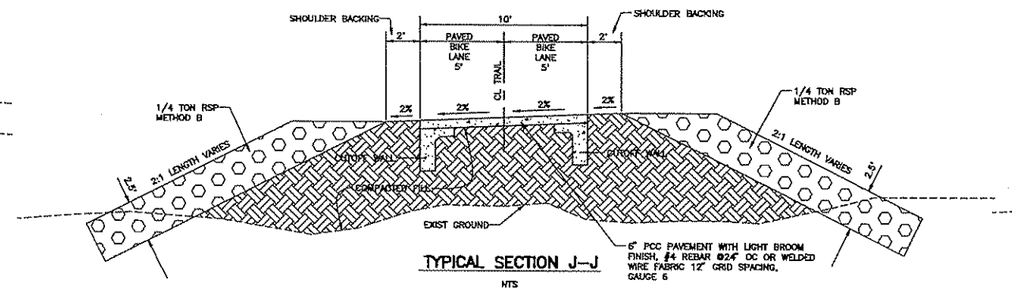

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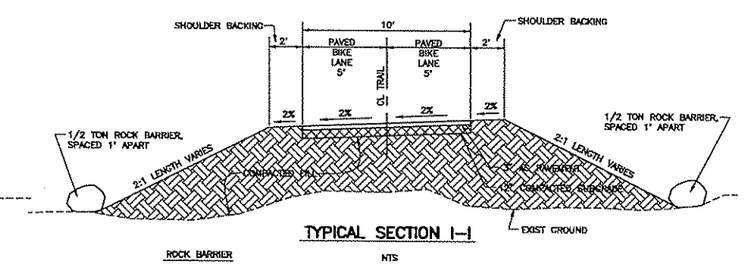
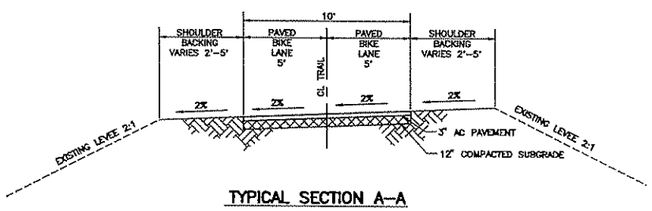


TYPICAL SECTION I-I
NTS

ROCK BARRIER



TYPICAL SECTION A-A
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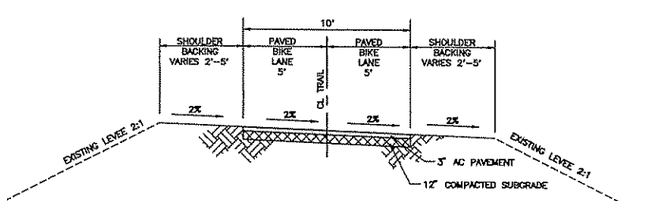

TYPICAL SECTION E-E
NTS

PRELIMINARY
Subject to Revision

MARK	DATE	APPR.	REVISIONS

MARK	DATE	APPR.	REVISIONS

MARK	CHANGES	
	NO CHANGES	RESIDENT ENGINEER DATE

FIELD CHANGES

REGISTERED PROFESSIONAL ENGINEER — Erwin R. Fogerson — 49060 — Exp. 6/30/12 — CIVIL — STATE OF CALIFORNIA

ERWIN FOGERSON, P.E. DATE
CHIEF DESIGN ENGINEER

COUNTY OF SAN BERNARDINO
DEPARTMENT OF PUBLIC WORKS

DRAWN BY	DESIGNED BY	PROJ. ENGR.
CB/CH	ADS	CHRIS NGUYEN

SUBMITTED BY

CHRIS NGUYEN, P.E. DATE
PROJECT ENGINEER

JOHN LATSKO DATE
YARD X SUPERVISOR
(MAINTENANCE REVIEW)

NIDHAM AL-RAYES DATE
RESIDENT ENGINEER
(CONSTRUCTIBILITY REVIEW)

RECOMMENDED /APPROVED BY

MAZIN KASEY, P.E. DATE
DEPUTY DIRECTOR

GRANVILLE M. BOWMAN, P.E. DATE
DIRECTOR OF PUBLIC WORKS

SANTA ANA RIVER TRAIL
PHASE III
TYPICAL SECTIONS &
MISCELLANEOUS DETAILS

J.L. REF.	W.O. NO.	SCALE	SHT. NO.	TOT. SHTS.
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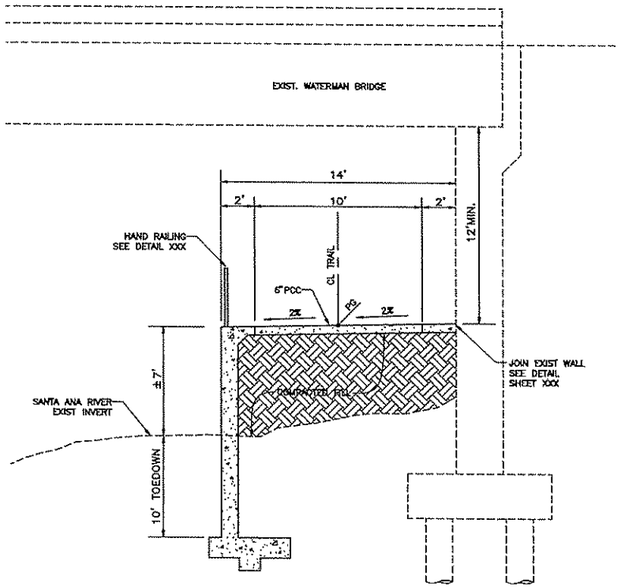
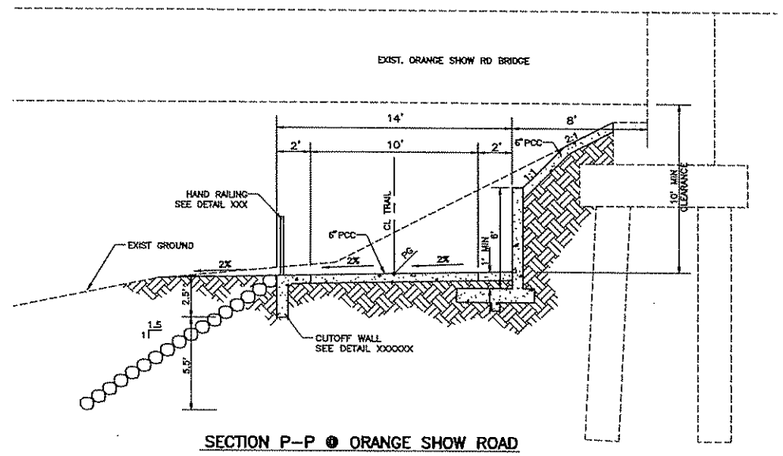


SECTION D–D @ WATERMAN AVE
NTS



SECTION P–P @ ORANGE SHOW ROAD
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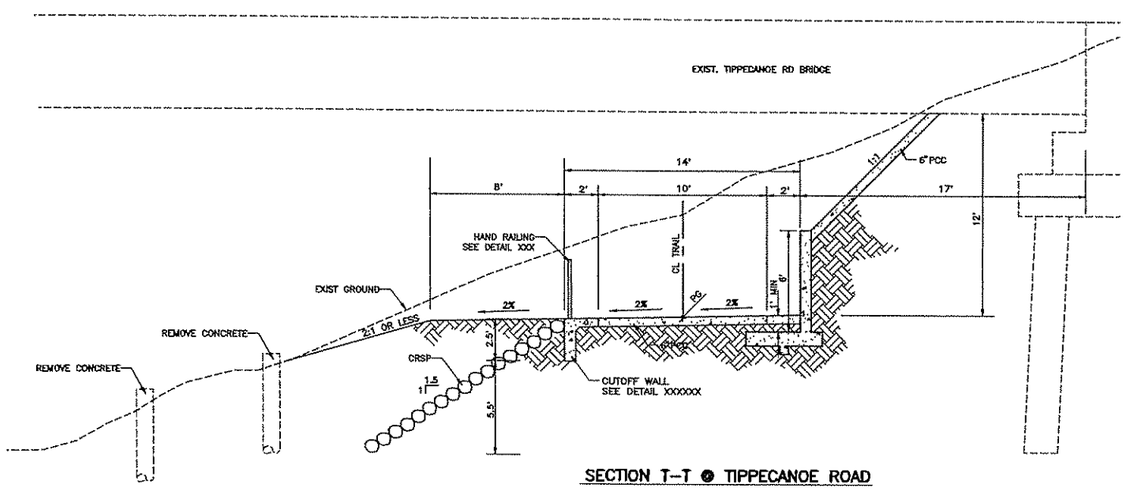

SECTION T–T @ TIPPECANOE ROAD
NTS

PRELIMINARY
Subject to Revision

MARK	DATE	APPR.	REVISIONS

MARK	DATE	APPR.	REVISIONS

MARK	CHANGES	
	NO CHANGES	RESIDENT ENGINEER DATE

FIELD CHANGES

REGISTERED PROFESSIONAL ENGINEER Erwin R. Fogerson 49060 Exp. 9/30/12 CIVIL STATE OF CALIFORNIA

ERWIN FOGERSON, P.E. DATE
CHIEF DESIGN ENGINEER

COUNTY OF SAN BERNARDINO
DEPARTMENT OF PUBLIC WORKS

DRAWN BY	DESIGNED BY	PROJ. ENGR.
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SUBMITTED BY

CHRIS NGUYEN, P.E. DATE
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JOHN LATSKO DATE
YARD X SUPERVISOR
(MAINTENANCE REVIEW)

NIDHAM AL-RAYES DATE
RESIDENT ENGINEER
(CONSTRUCTIBILITY REVIEW)

RECOMMENDED /APPROVED BY

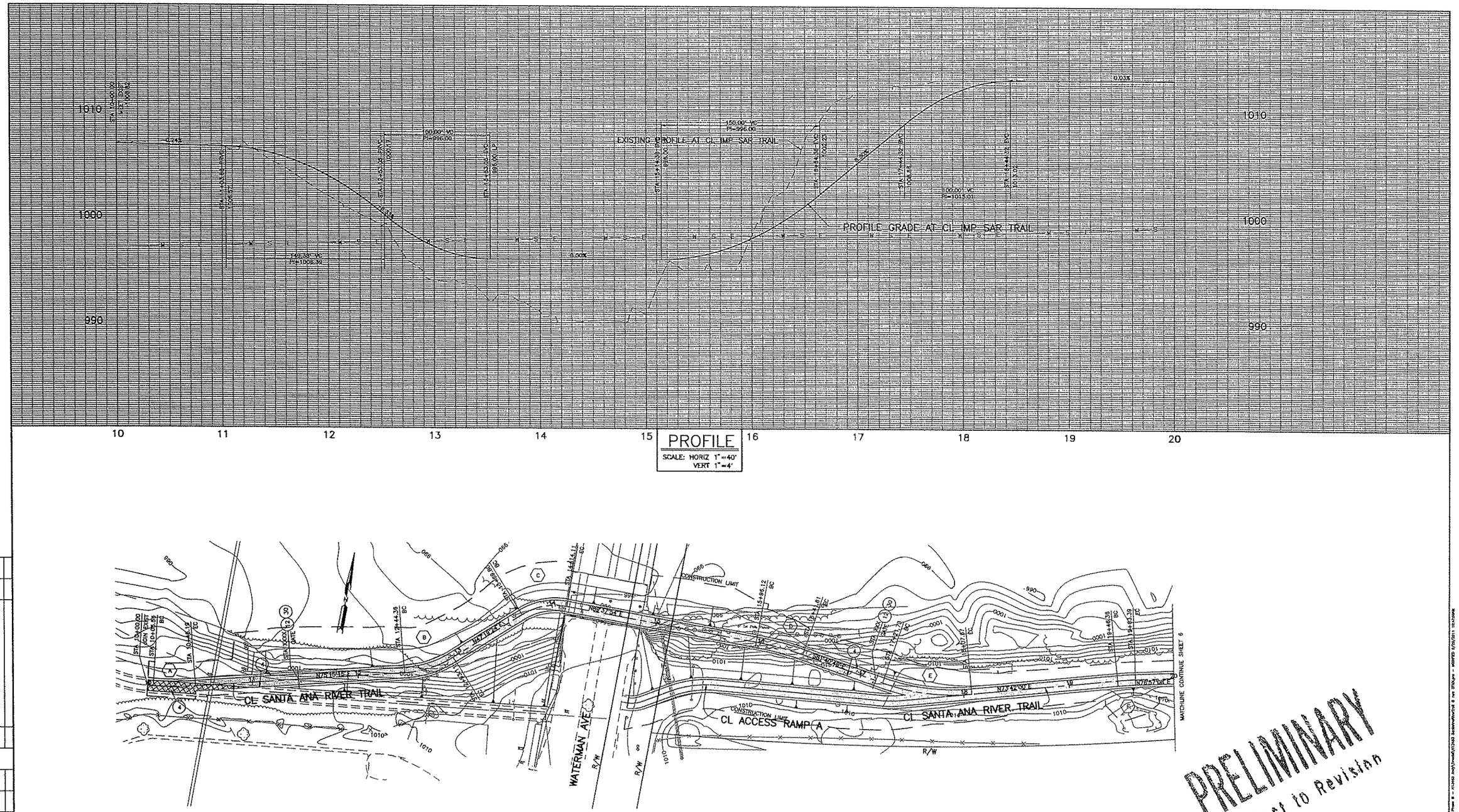
MAZIN KASEY, P.E. DATE
DEPUTY DIRECTOR

GRANVILLE M. BOWMAN, P.E. DATE
DIRECTOR OF PUBLIC WORKS

SANTA ANA RIVER TRAIL
PHASE III

TYPICAL SECTIONS &
MISCELLANEOUS DETAILS

J.L. REF.	W.O. NO.	SCALE	SHT. NO.	TOT. SHTS.
JL XXXX	H13463	AS SHOWN	4	X



CL CURVE DATA				
	Δ	R	L	T
A	7°45'37"	300'	40.63'	20.35'
B	27°5'51"	100'	46.75'	24.87'
C	42°18'31"	60'	44.31'	23.22'
D	8°41'17"	300'	45.49'	22.79'
E	26°37'11"	200'	85.94'	43.64'
F	3°15'07"	300'	17.03'	8.52'

GRAPHIC SCALE 1"=40'
0 40 80 120

MARK	CHANGES		
	NO CHANGES	RESIDENT ENGINEER	DATE

FIELD CHANGES

REGISTERED PROFESSIONAL ENGINEER — ERWIN R. FOGERSON — 49060 — Exp. 9/30/12 — CIVIL — STATE OF CALIFORNIA

ERWIN FOGERSON, P.E. — CHIEF DESIGN ENGINEER — DATE

COUNTY OF SAN BERNARDINO
DEPARTMENT OF PUBLIC WORKS

DRAWN BY: CB/CH | DESIGNED BY: ADS | PROJ. ENGR.: CHRIS NGUYEN

SUBMITTED BY

CHRIS NGUYEN, P.E. — PROJECT ENGINEER — DATE

JOHN LATSKO — YARD X SUPERVISOR (MAINTENANCE REVIEW) — DATE

NIDHAM AL-RAYES — RESIDENT ENGINEER (CONSTRUCTIBILITY REVIEW) — DATE

RECOMMENDED /APPROVED BY

WAZIR KASEY, P.E. — DEPUTY DIRECTOR — DATE

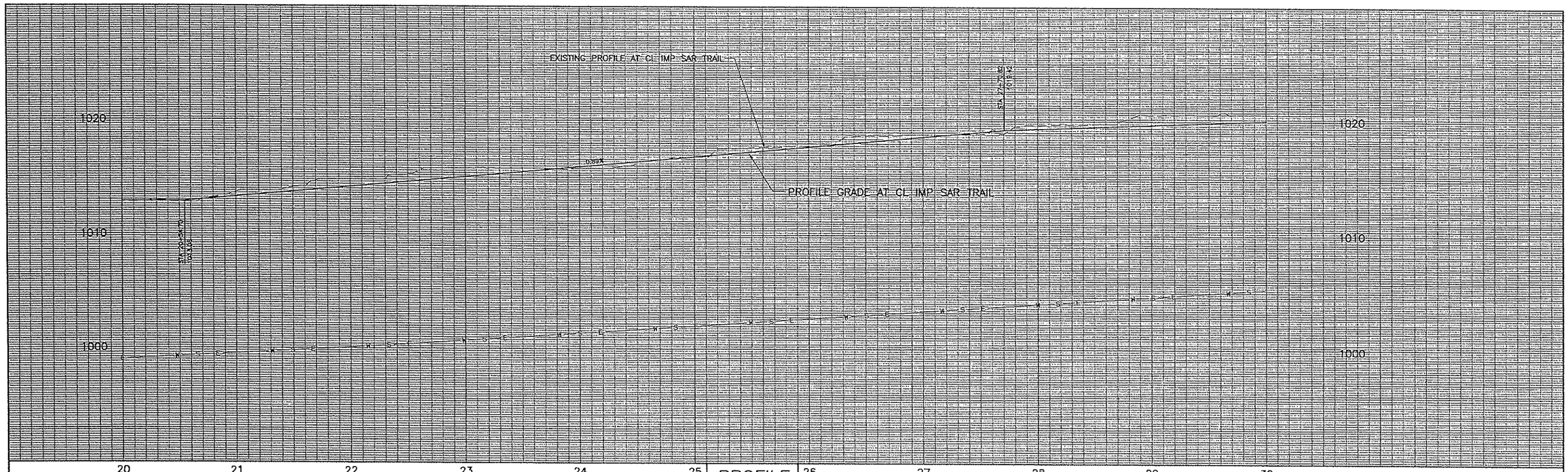
GRANVILLE W. BOWMAN, P.E. — DIRECTOR OF PUBLIC WORKS — DATE

SANTA ANA RIVER TRAIL
PHASE III
WATERMAN AVE TO CALIFORNIA ST
FROM STA 10+00 TO STA 20+00

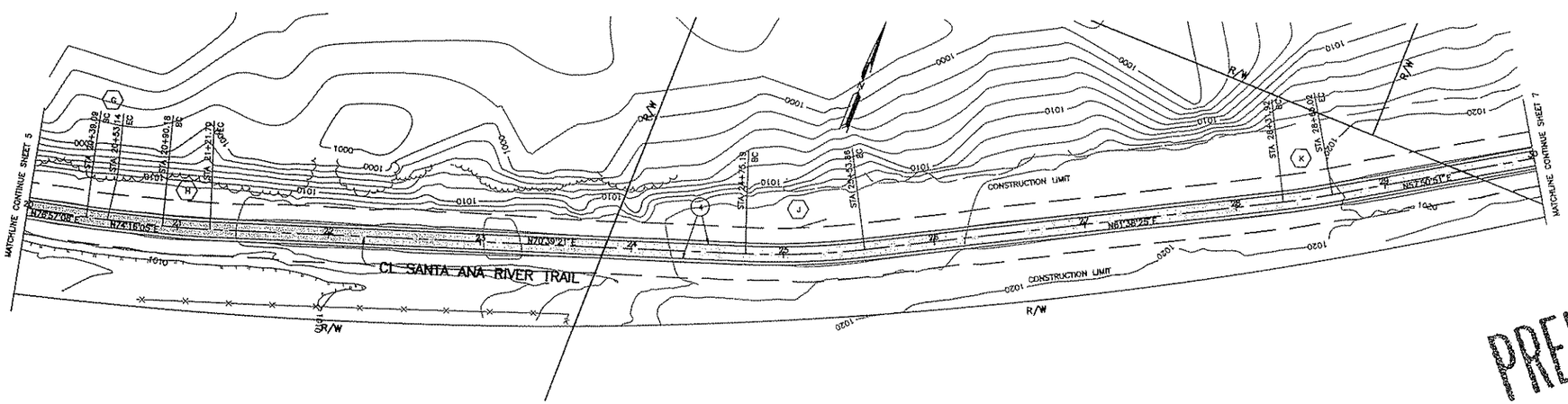
J.L. REF.	W.O. NO.	PLAN SCALE	SHT. NO.	TOT. SHTS.
JL XXXX	H13463	1" = 40'	5	X

MARK	REVISIONS	APPR.	DATE

MARK	REVISIONS	APPR.	DATE



PROFILE
SCALE: HORIZ 1"=40'
VERT 1"=4'



PRELIMINARY
Subject to Revision

CL CURVE DATA				
	Δ	R	L	T
G	2°41'03"	300'	14.05'	7.03'
H	3°38'44"	500'	31.52'	15.77'
J	9°00'56"	500'	78.68'	39.42'
K	3°47'34"	500'	33.10'	16.56'

GRAPHIC SCALE 1"=40'
0 40 80 120

MARK	CHANGES	
	NO CHANGES	RESIDENT ENGINEER DATE

FIELD CHANGES

REGISTERED PROFESSIONAL ENGINEER Erwin R. Fogerson 49060 Exp. 9/30/12 CIVIL STATE OF CALIFORNIA

ERWIN FOGERSON, P.E. DATE
CHIEF DESIGN ENGINEER

COUNTY OF SAN BERNARDINO
DEPARTMENT OF PUBLIC WORKS

DRAWN BY	DESIGNED BY	PROJ. ENGR.
CB/CH	ADS	CHRIS NGUYEN

SUBMITTED BY

CHRIS NGUYEN, P.E. DATE
PROJECT ENGINEER

JOHN LATSKO DATE
YARD X SUPERVISOR
(MAINTENANCE REVIEW)

NOMAN AL-RAYES DATE
RESIDENT ENGINEER
(CONSTRUCTIBILITY REVIEW)

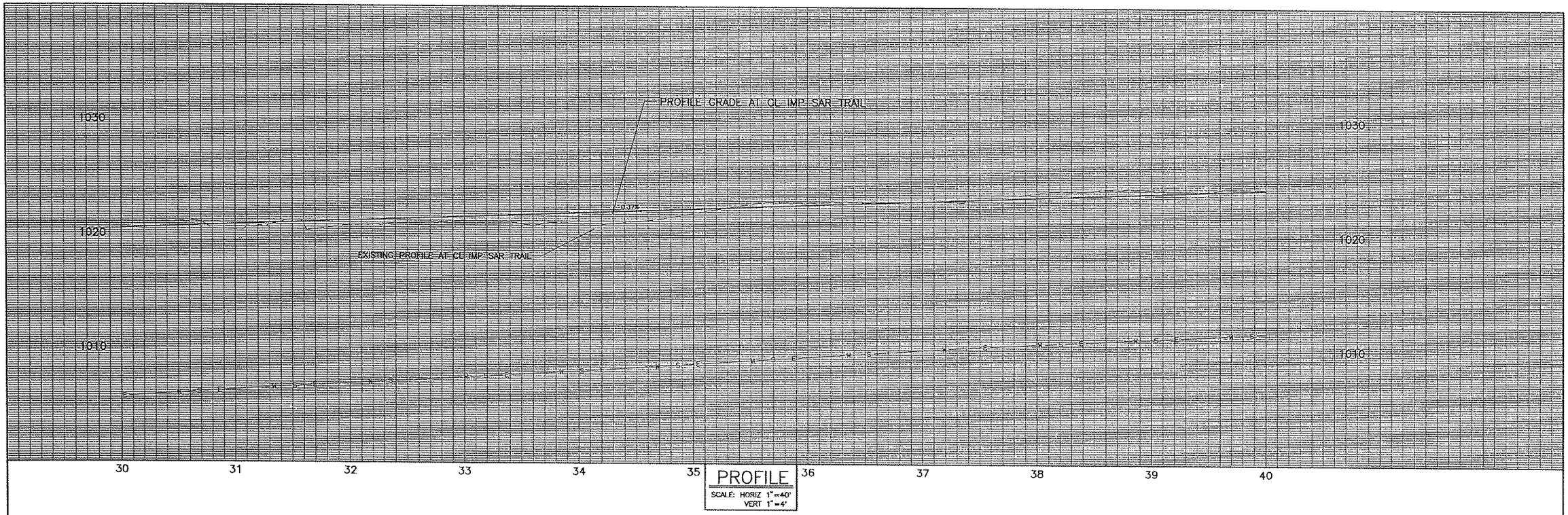
RECOMMENDED /APPROVED BY

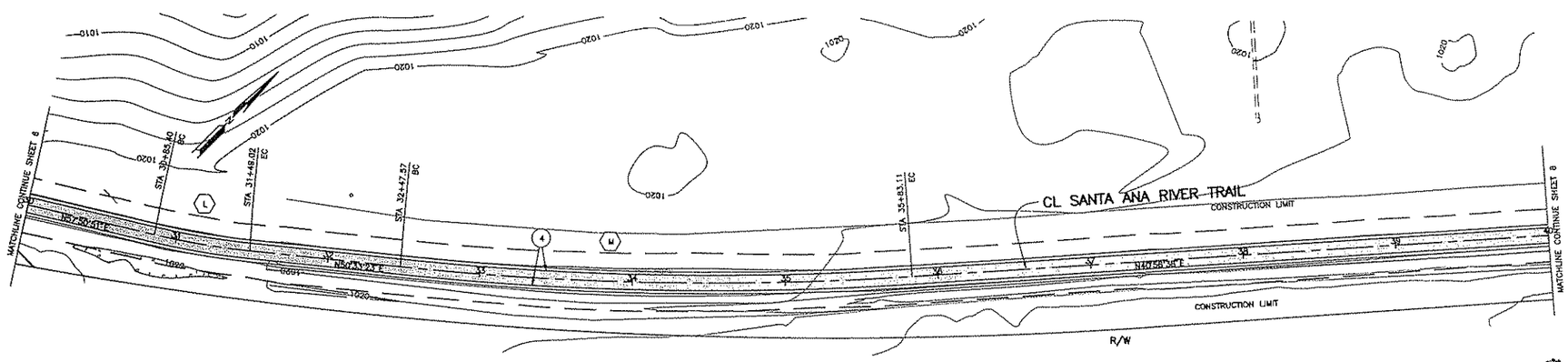
MAJID KASEY, P.E. DATE
DEPUTY DIRECTOR

GRANVILLE M. BOWMAN, P.E. DATE
DIRECTOR OF PUBLIC WORKS

SANTA ANA RIVER TRAIL
PHASE III
WATERMAN AVE TO CALIFORNIA ST
FROM STA 20+00 TO STA 30+00

J.L. REF.	W.O. NO.	PLAN SCALE	SHT. NO.	TOT. SHT'S.
JL XXXX	H13463	1" = 40'	6	X





PRELIMINARY
Subject to Revision

CL CURVE DATA				
	Δ	R	L	T
L	7°17'28"	500'	63.63'	31.86'
M	9°36'45"	2000'	335.54'	168.17'

GRAPHIC SCALE 1"=40'
0 40 80 120

MARK	CHANGES	RESIDENT ENGINEER	DATE
	NO CHANGES		

FIELD CHANGES

REGISTERED PROFESSIONAL ENGINEER Erwin R. Fogerson 49060 Exp. 9/30/12 CIVIL STATE OF CALIFORNIA

ERWIN FOGERSON, P.E. — CHIEF DESIGN ENGINEER — DATE

COUNTY OF SAN BERNARDINO
DEPARTMENT OF PUBLIC WORKS

DRAWN BY: CB/CH | DESIGNED BY: ADS | PROJ. ENGR.: CHRIS NGUYEN

SUBMITTED BY

CHRIS NGUYEN, P.E. — PROJECT ENGINEER — DATE

JOHN LATSKO — YARD X SUPERVISOR (MAINTENANCE REVIEW) — DATE

NOMAN AL-RAYES — RESIDENT ENGINEER (CONSTRUCTIBILITY REVIEW) — DATE

RECOMMENDED /APPROVED BY

NADIN KASEY, P.E. — DEPUTY DIRECTOR — DATE

GRANVILLE M. BOWMAN, P.E. — DIRECTOR OF PUBLIC WORKS — DATE

SANTA ANA RIVER TRAIL
PHASE III
WATERMAN AVE TO CALIFORNIA ST
FROM STA 30+00 TO STA 40+00

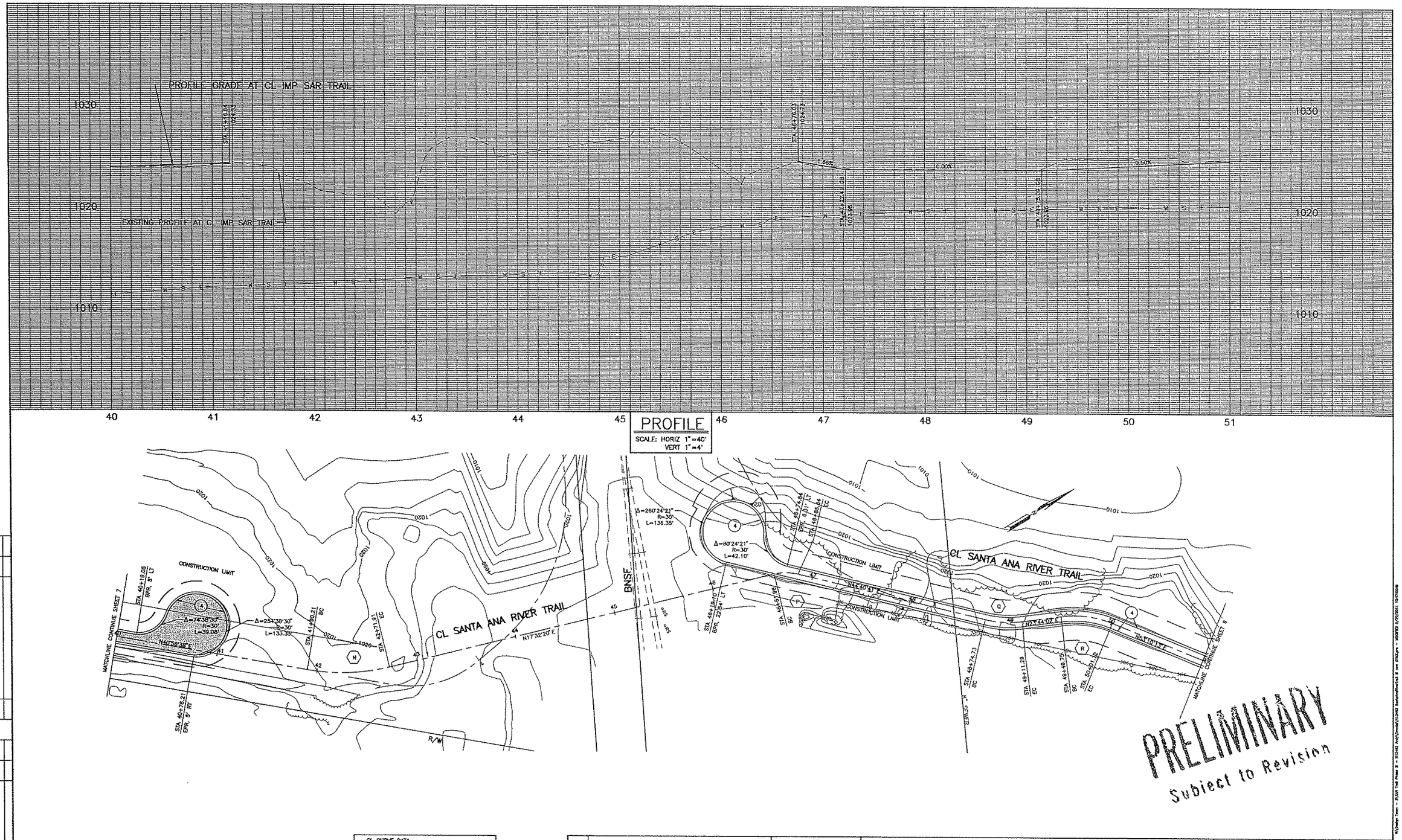
J.L. REF.	W.O. NO.	PLAN SCALE	SHT. NO.	TOT. SHT'S.
JL XXXX	H13463	1" = 40'	7	X

MARK	CHANGES	APPR.	DATE

REVISIONS

MARK	CHANGES	APPR.	DATE

REVISIONS



CL CURVE DATA				
	Δ	R	L	T
N	23°24'18"	200'	81.70'	41.43'
P	27°08'21"	50'	23.68'	12.07'
Q	20°56'38"	100'	36.55'	18.46'
R	29°26'10"	100'	51.38'	26.27'

GRAPHIC SCALE 1"=40'
0 40 80 120

MARK	CHANGES		
	NO CHANGES	RESIDENT ENGINEER	DATE

FIELD CHANGES

REGISTERED PROFESSIONAL ENGINEER Erwin R. Foderson 49060 Exp. 9/30/12 CIVIL STATE OF CALIFORNIA

ERWIN FODERSON, P.E. DATE
CHIEF DESIGN ENGINEER

COUNTY OF SAN BERNARDINO
DEPARTMENT OF PUBLIC WORKS

DRAWN BY CB/CH | DESIGNED BY ADS | PROJ. ENGR. CHRIS NGUYEN

SUBMITTED BY

CHRIS NGUYEN, P.E. DATE
PROJECT ENGINEER

JOHN LATSKO DATE
YARD & SUPERVISOR
(MAINTENANCE REVIEW)

NIKHAM AL-RAYES DATE
RESIDENT ENGINEER
(CONSTRUCTIBILITY REVIEW)

RECOMMENDED /APPROVED BY

MAZIN KASEY, P.E. DATE
DEPUTY DIRECTOR

GRANVILLE W. BOWMAN, P.E. DATE
DIRECTOR OF PUBLIC WORKS

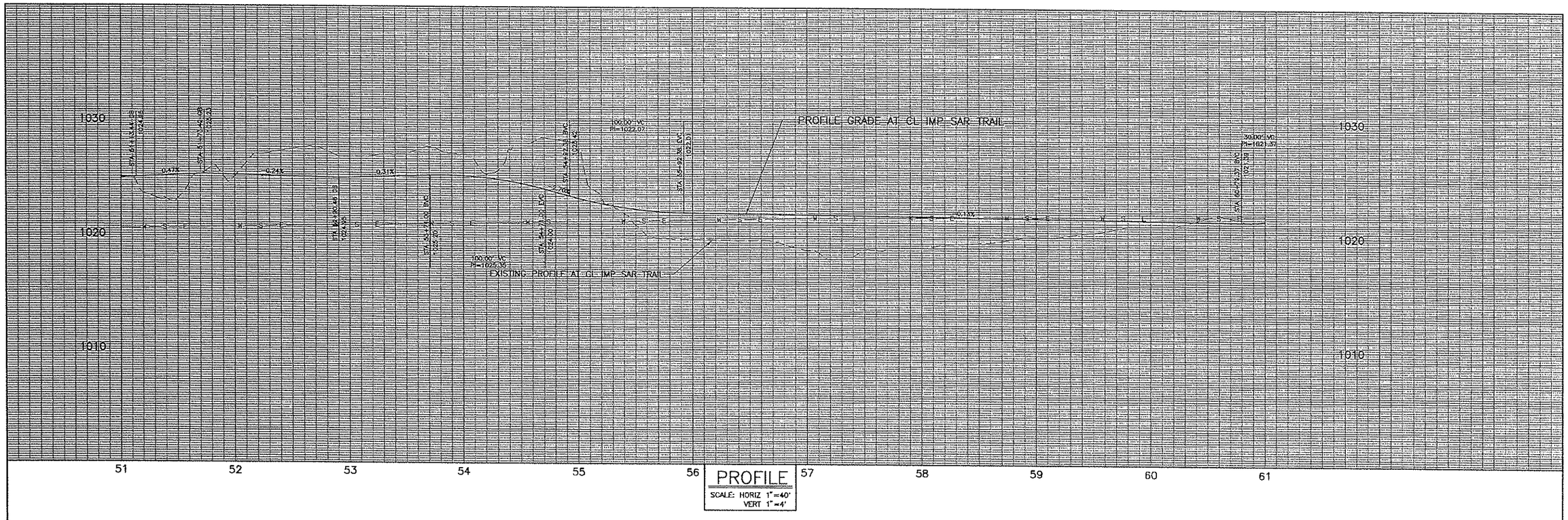
SANTA ANA RIVER TRAIL
PHASE III
WATERMAN AVE TO CALIFORNIA ST
FROM STA 40+00 TO STA 51+00

J.L. REF.	W.O. NO.	PLAN SCALE	SHT. NO.	TOT. SHTS.
JL XXXX	H13463	1" = 40'	8	X

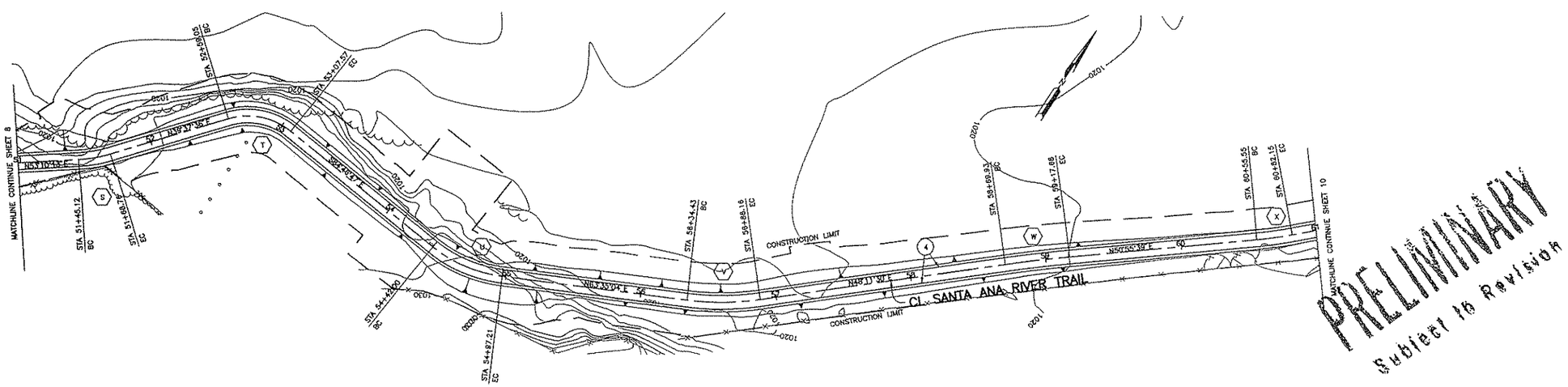
MARK	CHANGES	DATE	APPR.	REVISIONS

MARK	CHANGES	DATE	APPR.	REVISIONS

Exhibit 4: Initial Study and Mitigated Negative Declaration for the
"Santa Ana River Trail, Phase III Project"



PROFILE
SCALE: HORIZ 1"=40'
VERT 1"=4'



GRAPHIC SCALE 1"=40'
0 40 80 120

CL CURVE DATA				
	Δ	R	L	T
S	13°32'36"	100'	23.64'	11.87'
T	55°35'37"	50'	48.51'	26.36'
U	31°38'09"	100'	55.22'	28.33'
V	15°23'34"	200'	53.73'	27.03'
W	2°44'09"	1000'	47.75'	23.88'
X	5°04'48"	300'	26.60'	13.31'

MARK	CHANGES		
	NO CHANGES	RESIDENT ENGINEER	DATE

FIELD CHANGES

REGISTERED PROFESSIONAL ENGINEER — CHRIS R. FOGERSON — 49060 — Exp. 9/30/12 — CIVIL — STATE OF CALIFORNIA

DRWIN FOGERSON, P.E. — CHIEF DESIGN ENGINEER — DATE

COUNTY OF SAN BERNARDINO
DEPARTMENT OF PUBLIC WORKS

DRAWN BY	DESIGNED BY	PROJ. ENGR.
CB/CH	ADS	CHRIS NGUYEN

SUBMITTED BY

CHRIS NGUYEN, P.E. — PROJECT ENGINEER — DATE

JOHN LATSKO — YARD X SUPERVISOR (MAINTENANCE REVIEW) — DATE

NIGHAM AL-RAYES — RESIDENT ENGINEER (CONSTRUCTIBILITY REVIEW) — DATE

RECOMMENDED /APPROVED BY

MAZIN KASEY, P.E. — DEPUTY DIRECTOR — DATE

GRANVILLE M. BONHAM, P.E. — DIRECTOR OF PUBLIC WORKS — DATE

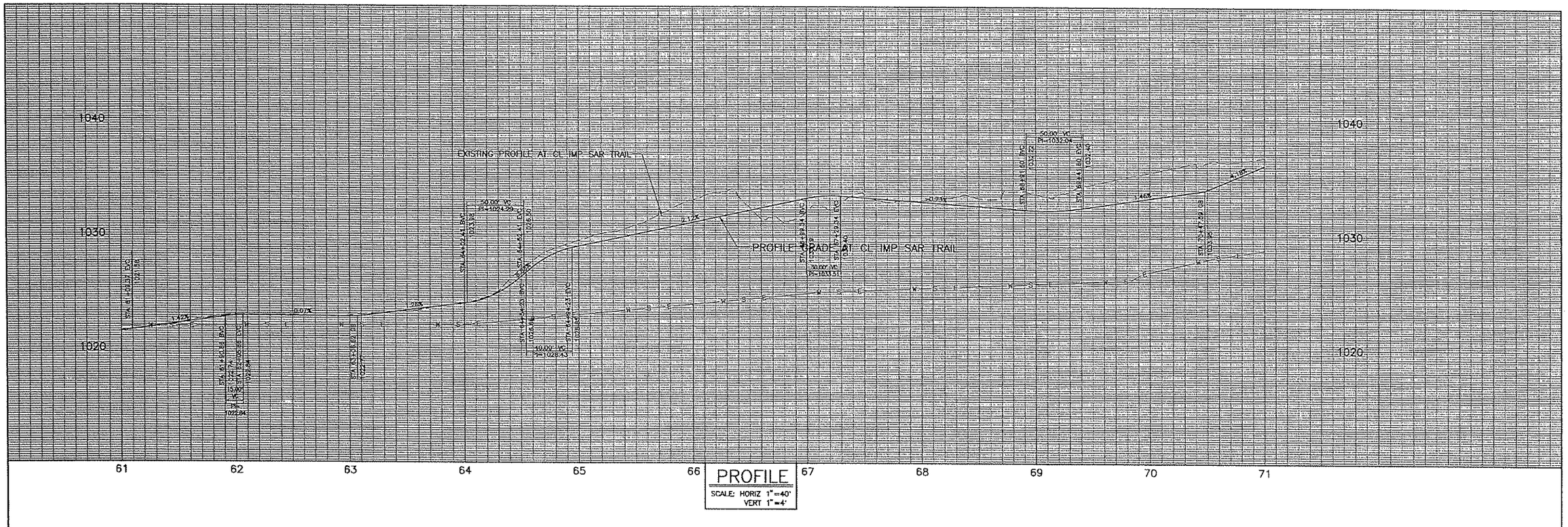
SANTA ANA RIVER TRAIL
PHASE III
WATERMAN AVE TO CALIFORNIA ST
FROM STA 51+00 TO STA 61+00

J.L. REF.	W.O. NO.	PLAN SCALE	SHT. NO.	TOT. SHTS.
JL XXXX	H13463	1" = 40'	9	X

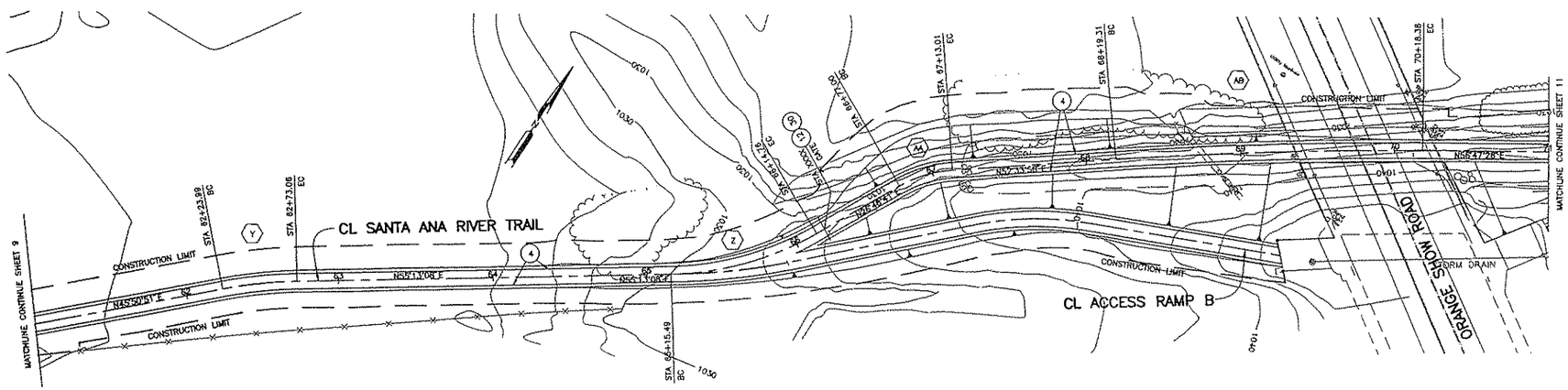
MARK	DATE	APPR.	REVISIONS

MARK	DATE	APPR.	REVISIONS

Exhibit 4: Initial Study and Mitigated Negative Declaration for the
"Santa Ana River Trail, Phase III Project"



PROFILE
SCALE: HORIZ 1"=40'
VERT 1"=4'



PRELIMINARY
Subject to Revision

GRAPHIC SCALE 1"=40'
0 40 80 120

CL CURVE DATA:				
	Δ	R	L	T
Y	9°22'17"	300'	49.07'	24.59'
Z	28°26'27"	200'	99.28'	50.68'
AA	25°47'17"	80'	36.01'	18.31'
AB	4°14'00"	2700'	199.49'	99.79'

MARK	CHANGES	RESIDENT ENGINEER	DATE
	NO CHANGES		

FIELD CHANGES

REGISTERED PROFESSIONAL ENGINEER Erwin R. Fogerson 49060 Exp. 6/30/12 CIVIL STATE OF CALIFORNIA

ERWIN FOGERSON, P.E. — CHIEF DESIGN ENGINEER — DATE

COUNTY OF SAN BERNARDINO
DEPARTMENT OF PUBLIC WORKS

DRAWN BY	DESIGNED BY	PROJ. ENGR.
CB/CH	ADS	CHRIS NGUYEN

SUBMITTED BY

CHRIS NGUYEN, P.E. — PROJECT ENGINEER — DATE

JOHN LATSKO — YARD X SUPERVISOR (MAINTENANCE REVIEW) — DATE

NIDHAM AL-RAYES — RESIDENT ENGINEER (CONSTRUCTIBILITY REVIEW) — DATE

RECOMMENDED /APPROVED BY

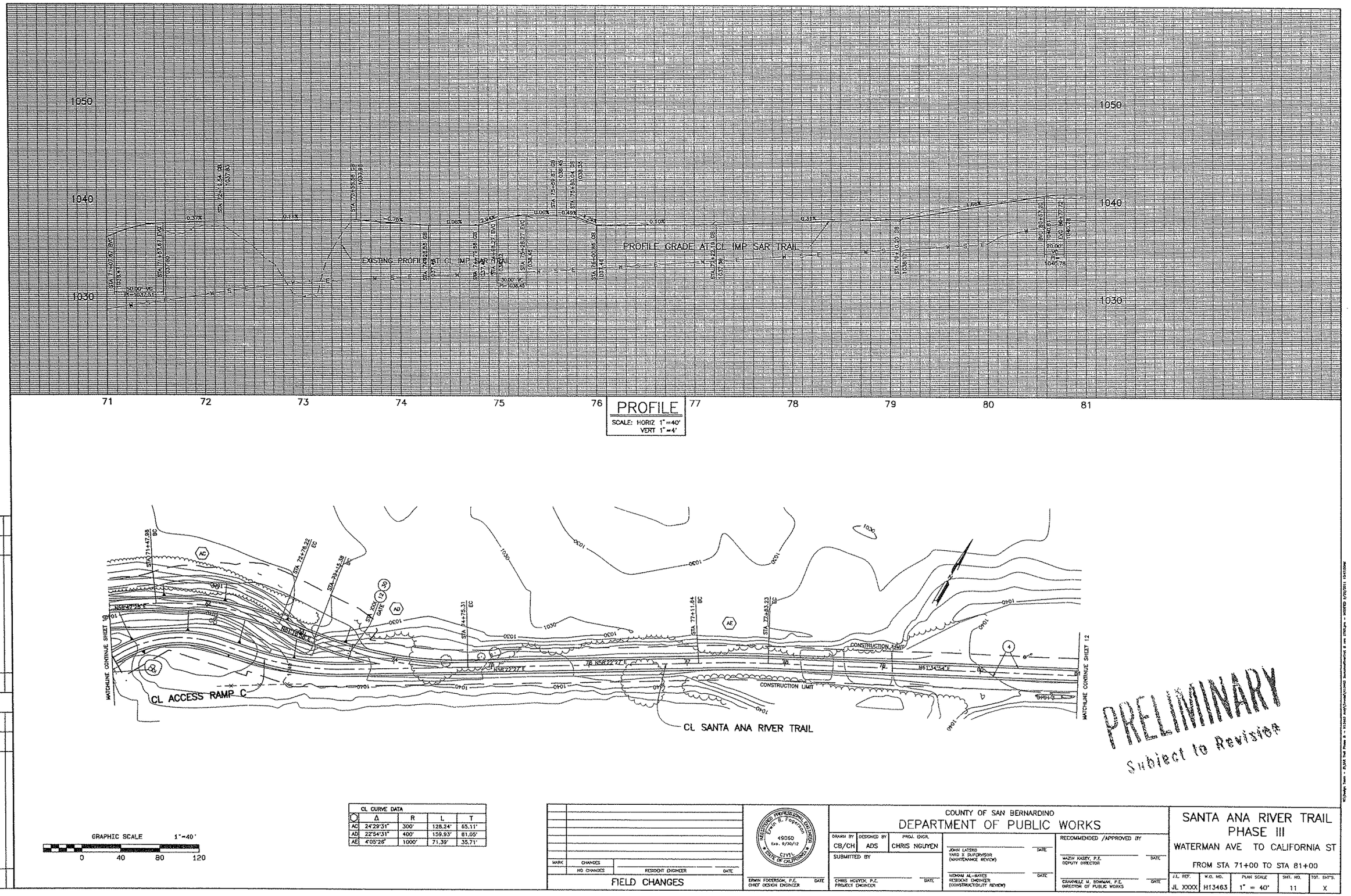
MAZIN KASEY, P.E. — DEPUTY DIRECTOR — DATE

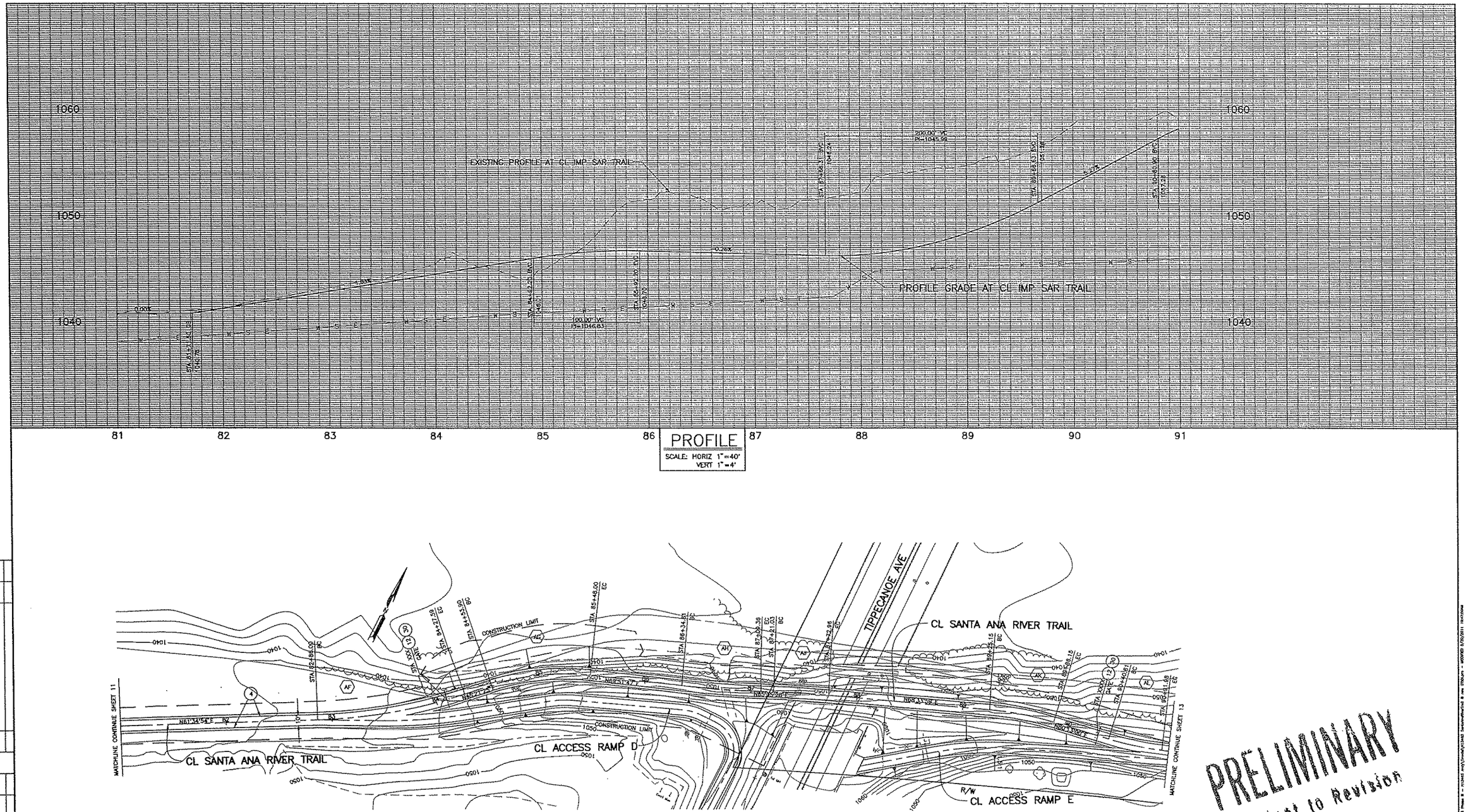
GRANVILLE M. BOWMAN, P.E. — DIRECTOR OF PUBLIC WORKS — DATE

SANTA ANA RIVER TRAIL
PHASE III
WATERMAN AVE TO CALIFORNIA ST
FROM STA 61+00 TO STA 71+00

JL. REF.	W.O. NO.	PLAN SCALE	SHT. NO.	TOT. SHTS.
JL XXXX	H13463	1" = 40'	10	X

Exhibit 4: Initial Study and Mitigated Negative Declaration for the
"Santa Ana River Trail, Phase III Project"





CL CURVE DATA				
	Δ	R	L	T
AF	16°13'30"	500'	141.59'	71.27'
AG	24°30'22"	220'	94.10'	47.78'
AH	4°16'19"	1000'	74.56'	37.30'
AJ	2°58'31"	1000'	51.93'	25.97'
AK	11°39'01"	300'	61'	30.61'
AL	9°48'40"	300'	51.37'	25.75'

GRAPHIC SCALE 1"=40'
0 40 80 120

MARK	CHANGES	RESIDENT ENGINEER	DATE
	NO CHANGES		

FIELD CHANGES

REGISTERED PROFESSIONAL ENGINEER Erwin R. Fogerson 49060 Exp. 9/30/12 CIVIL STATE OF CALIFORNIA

ERWIN FOGERSON, P.E. — CHIEF DESIGN ENGINEER — DATE

COUNTY OF SAN BERNARDINO
DEPARTMENT OF PUBLIC WORKS

DRAWN BY CB/CH | DESIGNED BY ADS | PROJ. ENGR. CHRIS NGUYEN

SUBMITTED BY

CHRIS NGUYEN, P.E. — PROJECT ENGINEER — DATE

JOHN LATSKO — YARD X SUPERVISOR (MAINTENANCE REVIEW) — DATE

NIDHAM AL-HAYES — RESIDENT ENGINEER (CONSTRUCTIBILITY REVIEW) — DATE

RECOMMENDED /APPROVED BY

MAZIN KASEY, P.E. — DEPUTY DIRECTOR — DATE

GRANVILLE M. BONHAM, P.E. — DIRECTOR OF PUBLIC WORKS — DATE

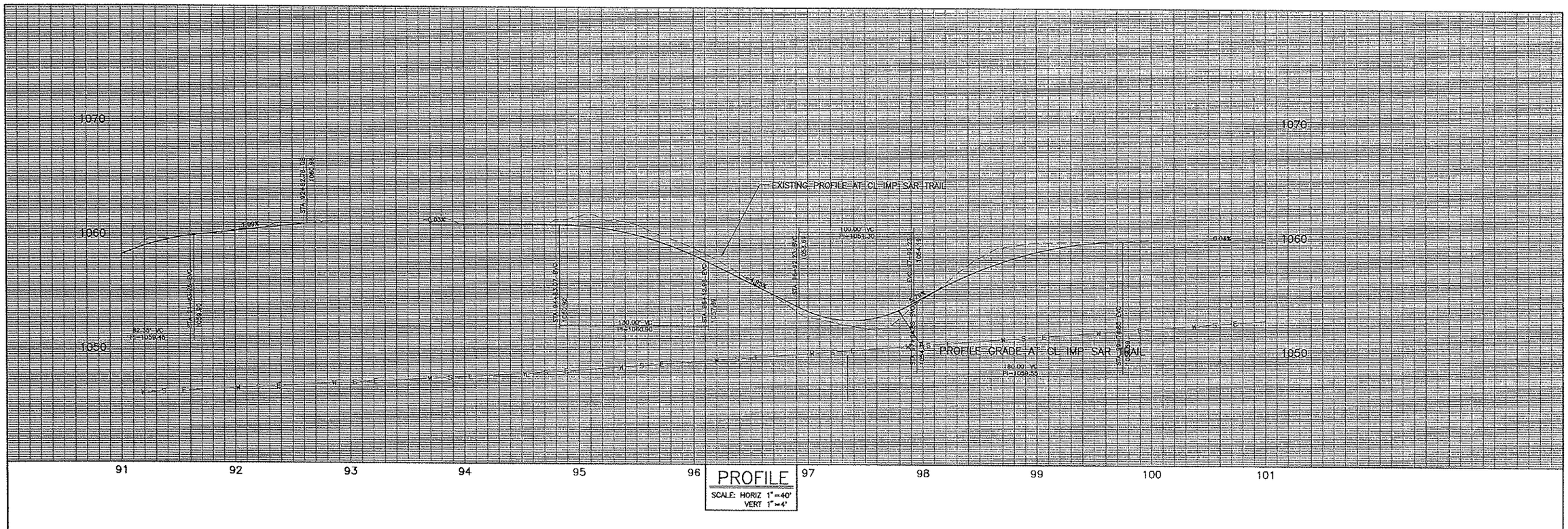
SANTA ANA RIVER TRAIL
PHASE III
WATERMAN AVE TO CALIFORNIA ST
FROM STA 81+00 TO STA 91+00

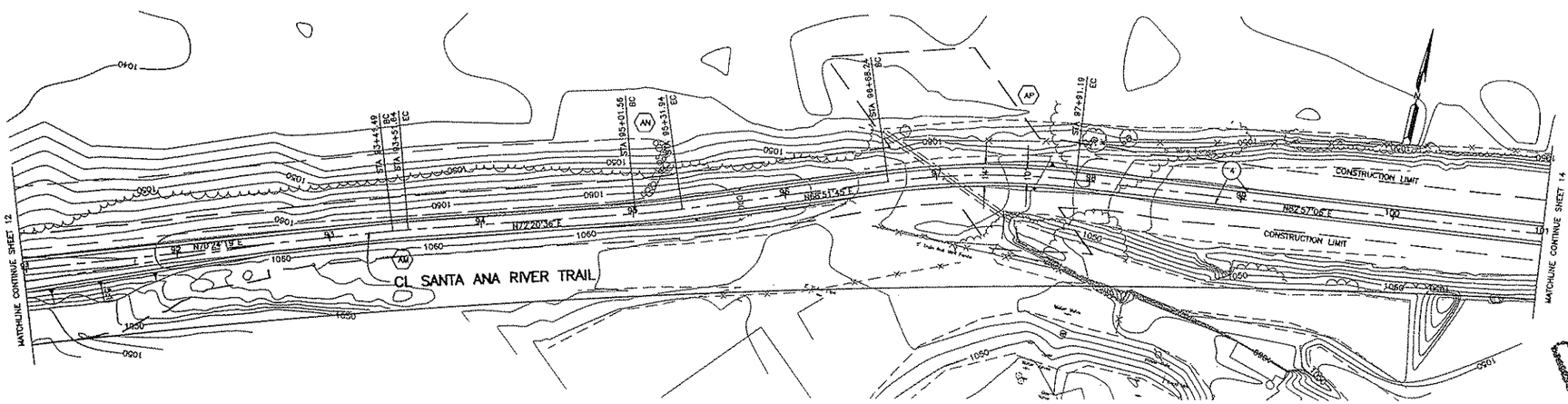
J.L. REF.	W.O. NO.	PLAN SCALE	SHT. NO.	TOT. SHTS.
JL XXXX	H13463	1" = 40'	12	X

MARK	REVISIONS	APPR.	DATE

MARK	REVISIONS	APPR.	DATE

Exhibit 4: Initial Study and Mitigated Negative Declaration for the
"Santa Ana River Trail, Phase III Project"





PRELIMINARY
Subject to Revision

CL CURVE DATA				
	Δ	R	L	T
AU	1°56'17"	300'	10.15'	5.07'
AN	3°28'51"	500'	30.38'	15.19'
AP	14°05'21"	500'	122.95'	61.79'

GRAPHIC SCALE 1"=40'
0 40 80 120

MARK	CHANGES		
	NO CHANGES	RESIDENT ENGINEER	DATE

FIELD CHANGES

REGISTERED PROFESSIONAL ENGINEER
ERWIN R. FODERSON
49060
Exp. 6/30/12
CIVIL
STATE OF CALIFORNIA

ERWIN FODERSON, P.E. DATE
CHIEF DESIGN ENGINEER

COUNTY OF SAN BERNARDINO
DEPARTMENT OF PUBLIC WORKS

DRAWN BY CB/CH | DESIGNED BY ADS | PROJ. ENGR. CHRIS NGUYEN

SUBMITTED BY

CHRIS NGUYEN, P.E. DATE
PROJECT ENGINEER

JOHN LATSKO DATE
YARD & SUPERVISOR
(MAINTENANCE REVIEW)

MICHAEL AL-RAYES DATE
RESIDENT ENGINEER
(CONSTRUCTIBILITY REVIEW)

RECOMMENDED /APPROVED BY

MAZIN KASEY, P.E. DATE
DEPUTY DIRECTOR

GRANVILLE M. BOWMAN, P.E. DATE
DIRECTOR OF PUBLIC WORKS

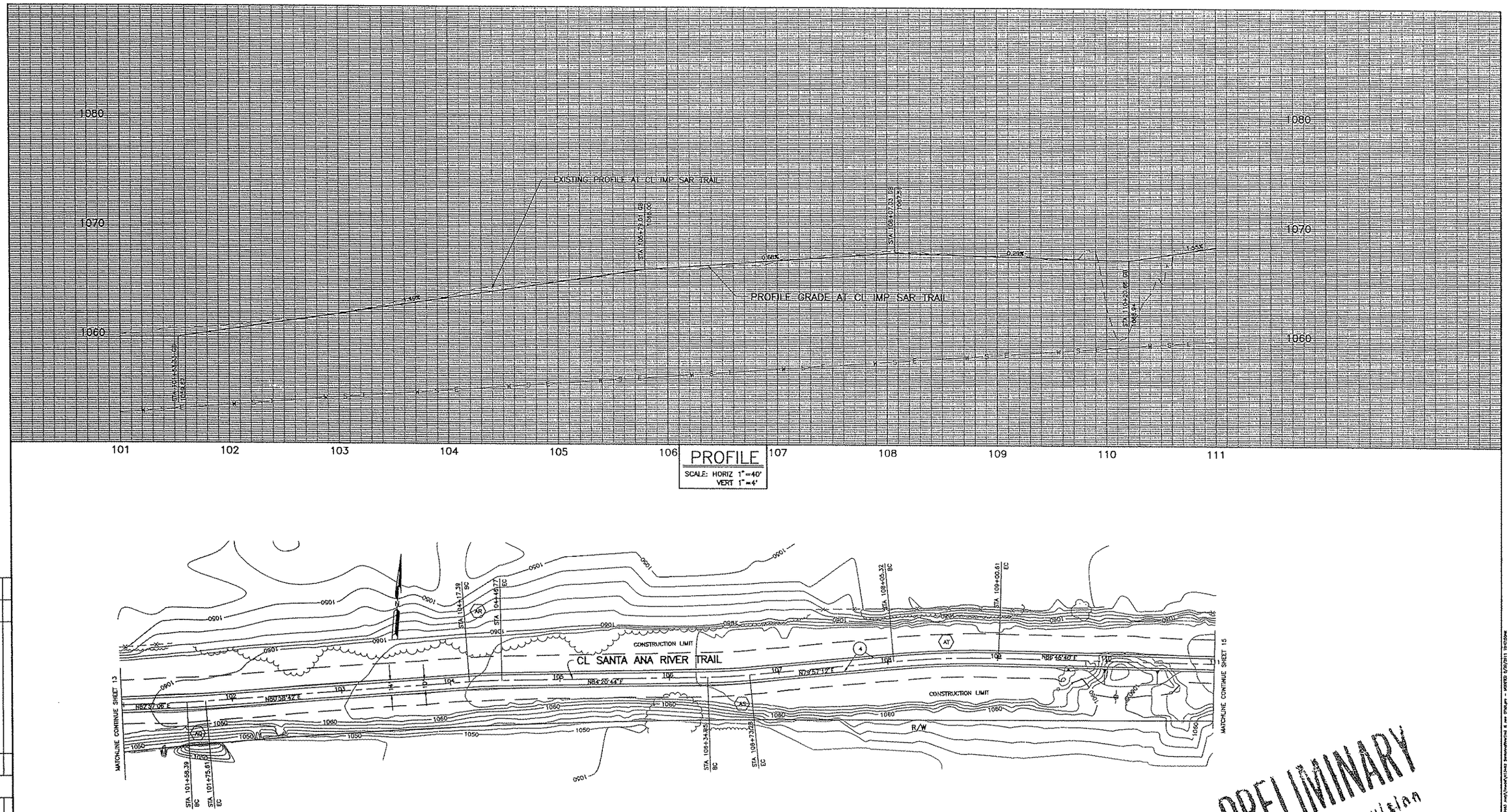
SANTA ANA RIVER TRAIL
PHASE III
WATERMAN AVE TO CALIFORNIA ST
FROM STA 91+00 TO STA 101+00

J.L. REF.	W.O. NO.	PLAN SCALE	SHT. NO.	TOT. SHT'S.
JL XXXX	H13463	1" = 40'	13	X

MARK	REVISIONS	APPR.	DATE

MARK	REVISIONS	APPR.	DATE

Exhibit 4: Initial Study and Mitigated Negative Declaration for the
"Santa Ana River Trail, Phase III Project"



PRELIMINARY
Subject to Revision

CL CURVE DATA				
	Δ	R	L	T
AQ	1°58'25"	500'	17.22'	8.61'
AR	3°22'03"	500'	29.39'	14.70'
AS	4°23'32"	500'	38.33'	19.17'
AT	6°49'28"	800'	95.29'	47.70'

GRAPHIC SCALE 1"=40'
0 40 80 120

MARK	CHANGES	RESIDENT ENGINEER	DATE
	NO CHANGES		

FIELD CHANGES

REGISTERED PROFESSIONAL ENGINEER Erwin R. Fogerson 49060 Exp. 9/30/12 CIVIL STATE OF CALIFORNIA

ERWIN FOGERSON, P.E. — CHIEF DESIGN ENGINEER — DATE

COUNTY OF SAN BERNARDINO
DEPARTMENT OF PUBLIC WORKS

DRAWN BY	DESIGNED BY	PROJ. ENGR.
CB/CH	ADS	CHRIS NGUYEN

SUBMITTED BY

CHRIS NGUYEN, P.E. — PROJECT ENGINEER — DATE

JOHN LATSKO — YARD X SUPERVISOR (MAINTENANCE REVIEW) — DATE

NIDHAM AL-HAYES — RESIDENT ENGINEER (CONSTRUCTIBILITY REVIEW) — DATE

RECOMMENDED /APPROVED BY

MAZIN KASEY, P.E. — DEPUTY DIRECTOR — DATE

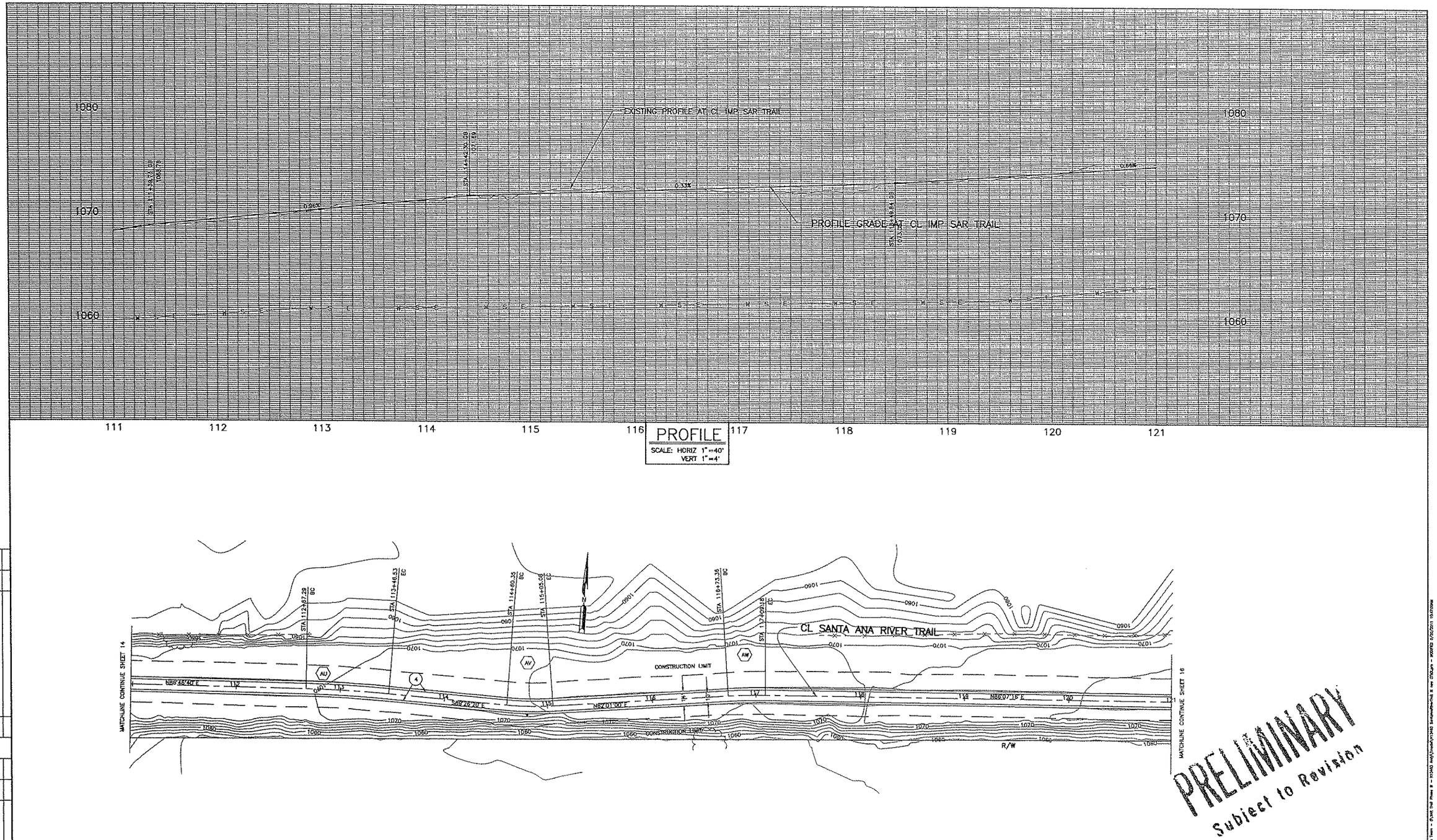
GRANVILLE M. BOWMAN, P.E. — DIRECTOR OF PUBLIC WORKS — DATE

SANTA ANA RIVER TRAIL
PHASE III
WATERMAN AVE TO CALIFORNIA ST
FROM STA 101+00 TO STA 111+00

J.L. REF.	W.O. NO.	PLAN SCALE	SHT. NO.	TOT. SHT'S.
JL XXXX	H13463	1" = 40'	14	X

MARK	REVISIONS	APPR.	DATE

MARK	REVISIONS	APPR.	DATE



CL CURVE DATA				
	Δ	R	L	T
AU	3°47'00"	1200'	79.24'	39.63'
AV	8°32'39"	300'	44.74'	22.41'
AW	4°05'16"	500'	35.82'	17.92'

GRAPHIC SCALE 1"=40'
0 40 80 120

MARK	CHANGES
	NO CHANGES

RESIDENT ENGINEER DATE

FIELD CHANGES

REGISTERED PROFESSIONAL ENGINEER ERWIN R. FOGERSON 49060 Exp. 6/30/12 CIVIL STATE OF CALIFORNIA

ERWIN FOGERSON, P.E. DATE
CHIEF DESIGN ENGINEER

COUNTY OF SAN BERNARDINO
DEPARTMENT OF PUBLIC WORKS

DRAWN BY CB/CH | DESIGNED BY ADS | PROJ. ENGR. CHRIS NGUYEN

SUBMITTED BY

CHRIS NGUYEN, P.E. DATE
PROJECT ENGINEER

JOHN LATSKO DATE
YARD X SUPERVISOR
(MAINTENANCE REVIEW)

MOHAM AL-RAYES DATE
RESIDENT ENGINEER
(CONSTRUCTIBILITY REVIEW)

RECOMMENDED /APPROVED BY

WASIM KASEY, P.E. DATE
DEPUTY DIRECTOR

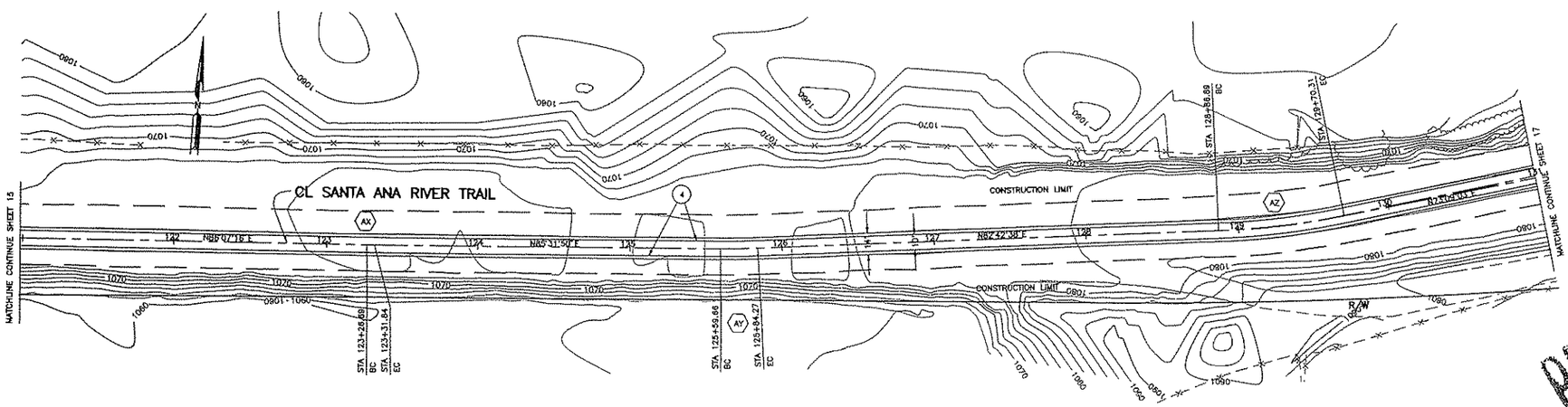
GRANVELLE M. BOWMAN, P.E. DATE
DIRECTOR OF PUBLIC WORKS

SANTA ANA RIVER TRAIL
PHASE III
WATERMAN AVE TO CALIFORNIA ST
FROM STA 111+00 TO STA 121+00

J.L. REF.	W.O. NO.	PLAN SCALE	SHT. NO.	TOT. SHTS.
JL XXXX	H13463	1" = 40'	15	X

MARK	REVISIONS	APPR.	DATE

MARK	REVISIONS	APPR.	DATE



PRELIMINARY
Subject to Revision

CL CURVE DATA				
	Δ	R	L	T
AX	00°35'26"	500'	5.15'	2.58'
AY	2°49'12"	500'	24.61'	12.31'
AZ	9°33'35"	500'	83.42'	41.81'

GRAPHIC SCALE 1"=40'
0 40 80 120

MARK	CHANGES		
	NO CHANGES	RESIDENT ENGINEER	DATE

FIELD CHANGES

REGISTERED PROFESSIONAL ENGINEER Erwin R. Fogerson 49060 Exp. 6/30/12 CIVIL STATE OF CALIFORNIA

ERWIN FOGERSON, P.E. — CHIEF DESIGN ENGINEER — DATE

COUNTY OF SAN BERNARDINO
DEPARTMENT OF PUBLIC WORKS

DRAWN BY	DESIGNED BY	PROJ. ENGR.
CB/CH	ADS	CHRIS NGUYEN

SUBMITTED BY

CHRIS NGUYEN, P.E. — PROJECT ENGINEER — DATE

JOHN LATSKO — YARD X SUPERVISOR (MAINTENANCE REVIEW) — DATE

NIDHAM AL-RAYES — RESIDENT ENGINEER (CONSTRUCTIBILITY REVIEW) — DATE

RECOMMENDED /APPROVED BY

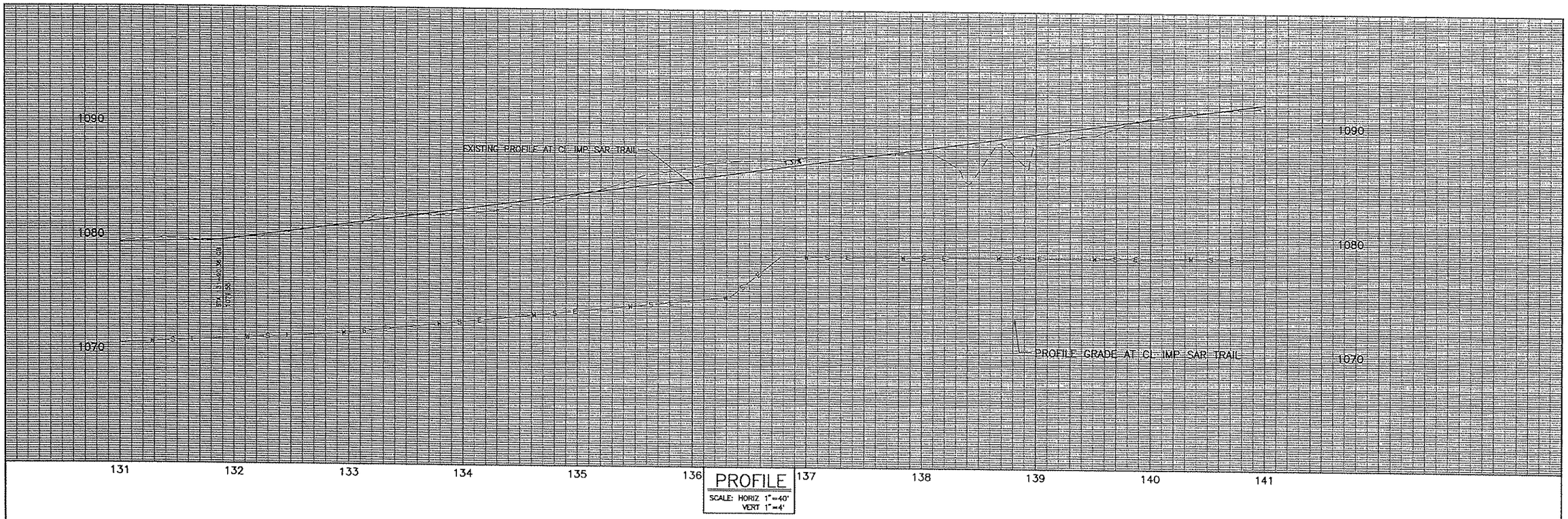
MAZIN KASEY, P.E. — DEPUTY DIRECTOR — DATE

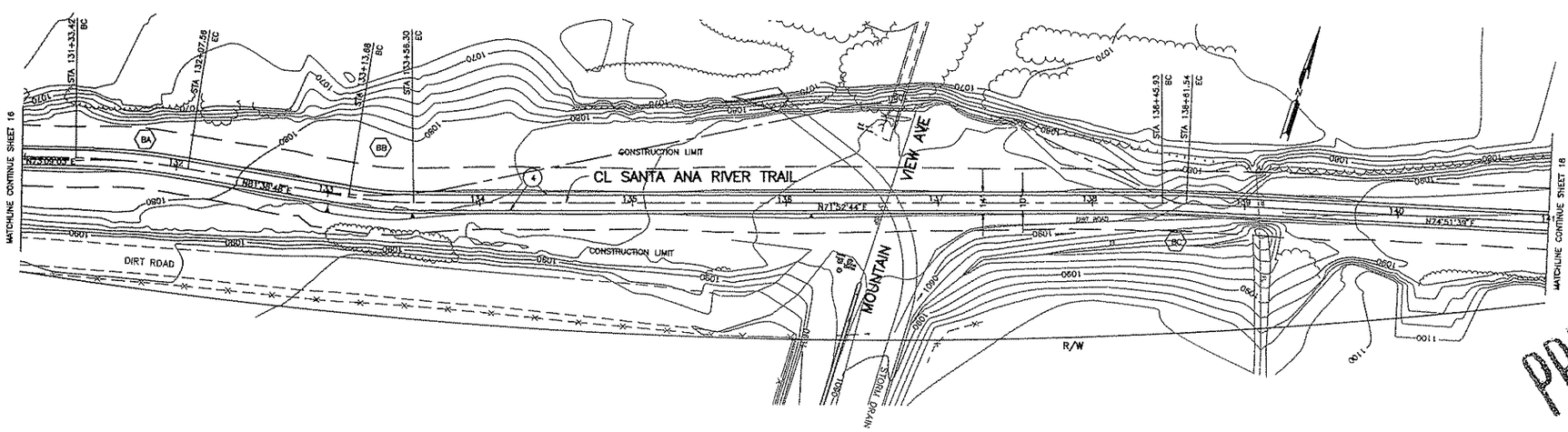
GRANVILLE W. BOWMAN, P.E. — DIRECTOR OF PUBLIC WORKS — DATE

SANTA ANA RIVER TRAIL
PHASE III
WATERMAN AVE TO CALIFORNIA ST
FROM STA 121+00 TO STA 131+00

J.L. REF.	W.O. NO.	PLAN SCALE	SHT. NO.	TOT. SHT'S.
JL XXXX	H13463	1" = 40'	16	X

Exhibit 4: Initial Study and Mitigated Negative Declaration for the
"Santa Ana River Trail, Phase III Project"





PRELIMINARY
Subject to Revision

CL CURVE DATA				
	Δ	R	L	T
BA	8°29'45"	500'	74.14'	37.14'
BB	9°46'04"	250'	42.62'	21.36'
BC	2°58'55"	300'	15.61'	7.81'

GRAPHIC SCALE 1"=40'
0 40 80 120

MARK	CHANGES	
	NO CHANGES	RESIDENT ENGINEER DATE

FIELD CHANGES

REGISTERED PROFESSIONAL ENGINEER Ervin B. Fogerson 49060 Exp. 6/30/12 CIVIL STATE OF CALIFORNIA

ERWIN TOODRSON, P.E. DATE
CHIEF DESIGN ENGINEER

COUNTY OF SAN BERNARDINO
DEPARTMENT OF PUBLIC WORKS

DRAWN BY	DESIGNED BY	PROJ. ENGR.
CB/CH	AOS	CHRIS NGUYEN

SUBMITTED BY

CHRIS NGUYEN, P.E. DATE
PROJECT ENGINEER

JOHN LATSKO DATE
YARD 3 SUPERVISOR
(MAINTENANCE REVIEW)

NIKHAM AL-RAYES DATE
RESIDENT ENGINEER
(CONSTRUCTIBILITY REVIEW)

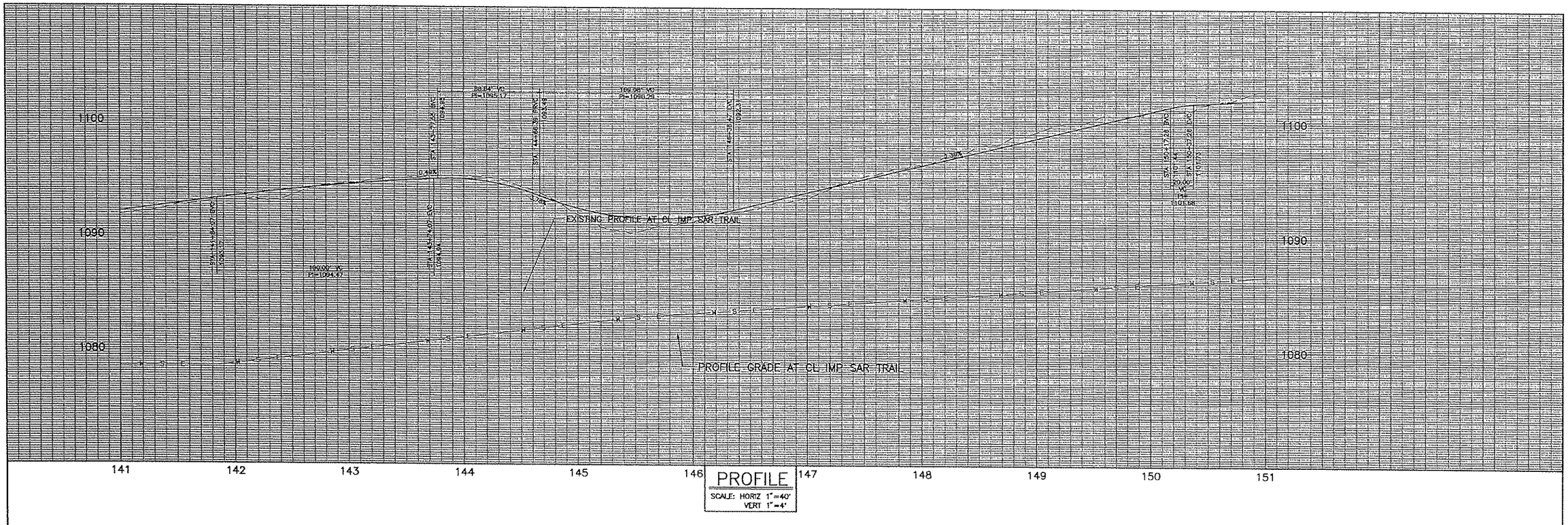
RECOMMENDED /APPROVED BY

MAJID KASTY, P.E. DATE
DEPUTY DIRECTOR

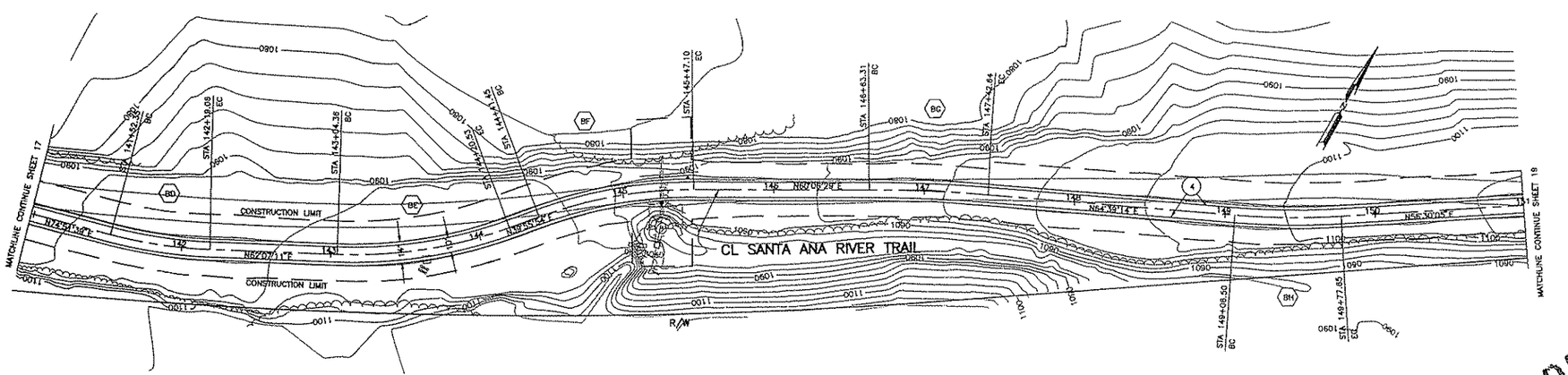
GRANVILLE M. BOWMAN, P.E. DATE
DIRECTOR OF PUBLIC WORKS

SANTA ANA RIVER TRAIL
PHASE III
WATERMAN AVE TO CALIFORNIA ST
FROM STA 131+00 TO STA 141+00

J.L. REF.	W.O. NO.	PLAN SCALE	SHT. NO.	TOT. SHTS.
JL XXXX	H13463	1" = 40'	17	X



PROFILE
SCALE: HORIZ 1"=40'
VERT 1"=4'



PRELIMINARY
Subject to Revision

CL CURVE DATA:				
	Δ	R	L	T
BC	12°44'28"	300'	66.71'	33.49'
BE	22°11'17"	300'	116.18'	58.83'
BF	20°10'35"	300'	105.64'	53.37'
BG	4°32'44"	1000'	79.34'	39.69'
BH	6°09'08"	500'	71.14'	35.63'

GRAPHIC SCALE 1"=40'
0 40 80 120

MARK	CHANGES		
	NO CHANGES	RESIDENT ENGINEER	DATE

FIELD CHANGES

REGISTERED PROFESSIONAL ENGINEER — Erwin R. Fogerson — 49060 — Exp. 9/30/12 — CIVIL — STATE OF CALIFORNIA

ERWIN FOGERSON, P.E. — CHIEF DESIGN ENGINEER — DATE

COUNTY OF SAN BERNARDINO
DEPARTMENT OF PUBLIC WORKS

DRAWN BY	DESIGNED BY	PROJ. ENGR.
CB/CH	ADS	CHRIS NGUYEN

SUBMITTED BY

CHRIS NGUYEN, P.E. — PROJECT ENGINEER — DATE

JOHN LATSKO — YARD X SUPERVISOR (MAINTENANCE REVIEW) — DATE

MIRNAM AL-RAYES — RESIDENT ENGINEER (CONSTRUCTIBILITY REVIEW) — DATE

RECOMMENDED /APPROVED BY

MAZIN KASEY, P.E. — DEPUTY DIRECTOR — DATE

GRANVILLE M. BONNAM, P.E. — DIRECTOR OF PUBLIC WORKS — DATE

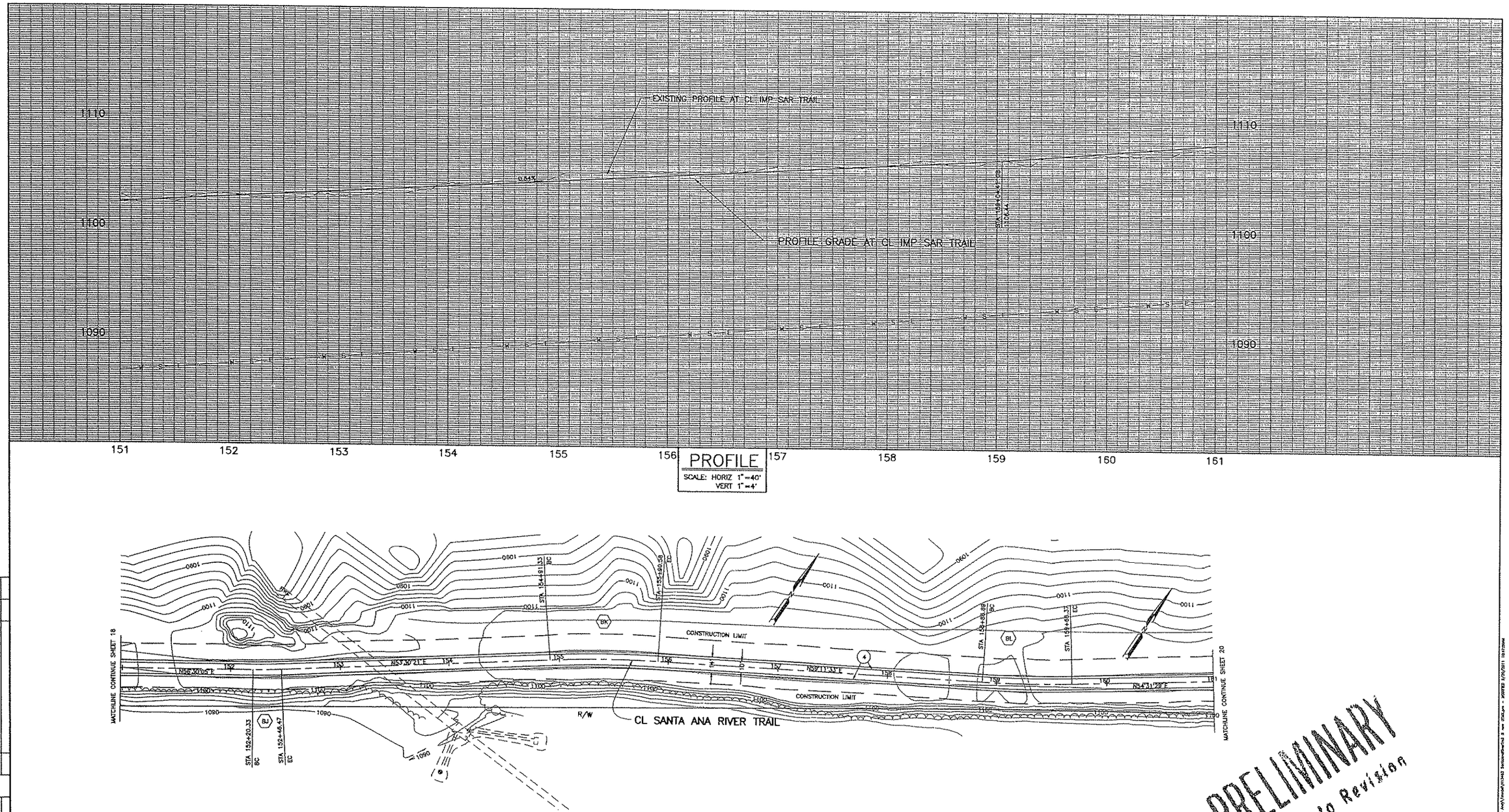
SANTA ANA RIVER TRAIL
PHASE III
WATERMAN AVE TO CALIFORNIA ST
FROM STA 141+00 TO STA 151+00

J.L. REF.	W.O. NO.	PLAN SCALE	SHT. NO.	TOT. SHTS.
JL XXXX	H13463	1" = 40'	18	X

MARK	REVISIONS	APPR.	DATE

MARK	REVISIONS	APPR.	DATE

Exhibit 4: Initial Study and Mitigated Negative Declaration for the
"Santa Ana River Trail, Phase III Project"



PRELIMINARY
Subject to Revision

CL CURVE DATA				
	Δ	R	L	T
BJ	2°59'44"	500'	26.14'	13.07'
BK	5°41'12"	1000'	99.25'	49.67'
BL	4°40'05"	1000'	81.47'	40.76'

GRAPHIC SCALE 1"=40'
0 40 80 120

MARK	CHANGES		
	NO CHANGES	RESIDENT ENGINEER	DATE

FIELD CHANGES

REGISTERED PROFESSIONAL ENGINEER Erwin B. Fogerson 49060 Exp. 9/30/12 CIVIL STATE OF CALIFORNIA

ERWIN FOGERSON, P.E. DATE
CHIEF DESIGN ENGINEER

COUNTY OF SAN BERNARDINO
DEPARTMENT OF PUBLIC WORKS

DRAWN BY	DESIGNED BY	PROJ. ENGR.
CB/CH	ADS	CHRIS NGUYEN

SUBMITTED BY

CHRIS NGUYEN, P.E. DATE
PROJECT ENGINEER

JOHN LATSKO
YARD X SUPERVISOR
(MAINTENANCE REVIEW) DATE

NIRMAN AL-RAYES
RESIDENT ENGINEER
(CONSTRUCTIBILITY REVIEW) DATE

RECOMMENDED /APPROVED BY

MAZIN KASEY, P.E. DATE
DEPUTY DIRECTOR

GRANVILLE M. BOWMAN, P.E. DATE
DIRECTOR OF PUBLIC WORKS

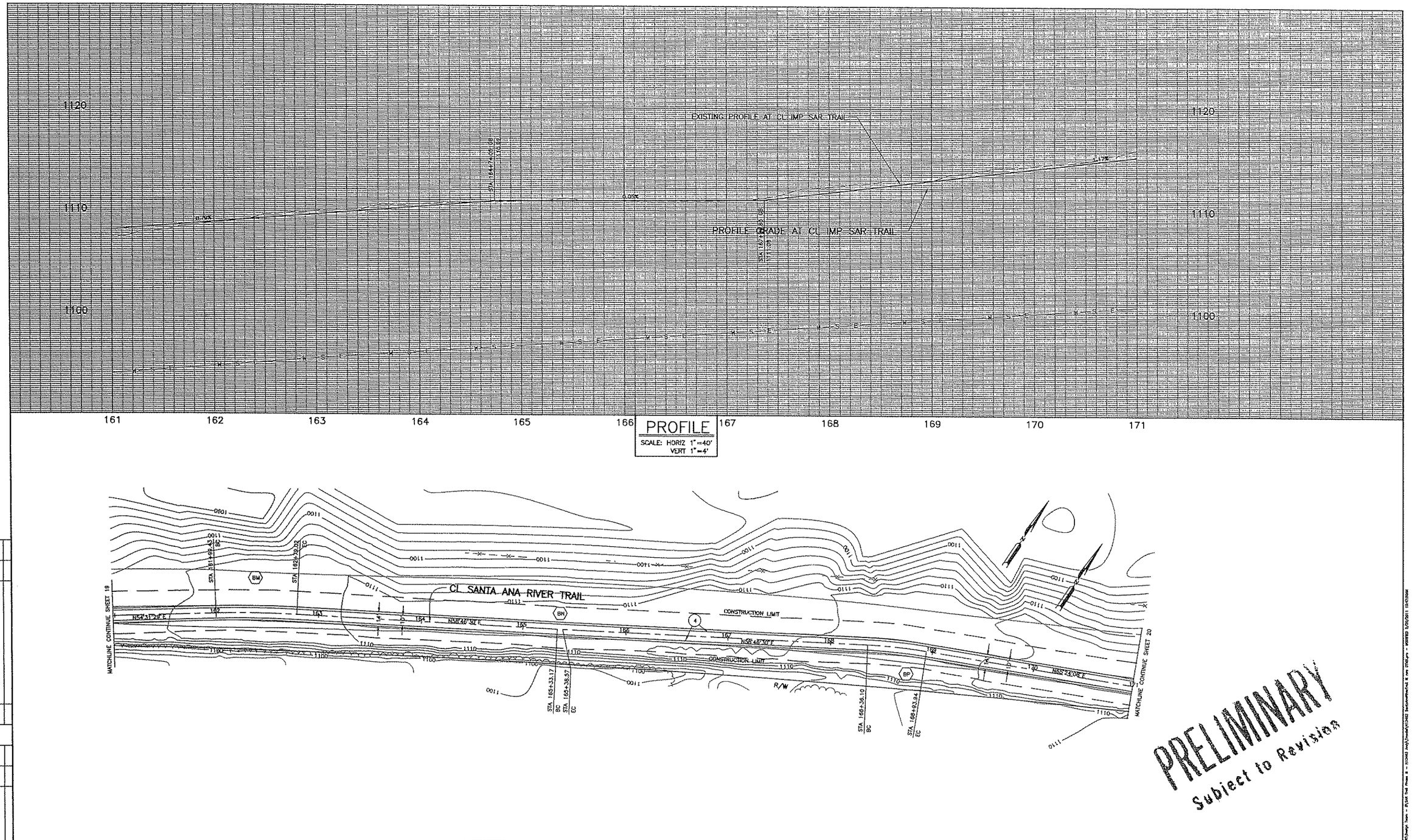
SANTA ANA RIVER TRAIL
PHASE III
WATERMAN AVE TO CALIFORNIA ST
FROM STA 151+00 TO STA 161+00

J.L. REF.	W.O. NO.	PLAN SCALE	SHT. NO.	TOT. SHT'S.
JL XXXX	H13463	1" = 40'	19	X

MARK	REVISIONS	APPR.	DATE

MARK	REVISIONS	APPR.	DATE

Exhibit 4: Initial Study and Mitigated Negative Declaration for the
"Santa Ana River Trail, Phase III Project"



CL CURVE DATA:				
	Δ	R	L	T
BM	4°33'36"	1000'	79.59'	39.81'
BN	00°18'34"	1000'	5.40'	2.70'
BP	6°37'38"	500'	57.83'	28.95'

GRAPHIC SCALE 1"=40'
0 40 80 120

MARK	CHANGES		
	NO CHANGES	RESIDENT ENGINEER	DATE

FIELD CHANGES

REGISTERED PROFESSIONAL ENGINEER Erwin R. Fogerson 49060 Exp. 9/30/12 CIVIL STATE OF CALIFORNIA

ERWIN FOGERSON, P.E. CHIEF DESIGN ENGINEER — DATE

COUNTY OF SAN BERNARDINO
DEPARTMENT OF PUBLIC WORKS

DRAWN BY	DESIGNED BY	PROJ. ENGR.
CB/CH	ADS	CHRIS NGUYEN

SUBMITTED BY

CHRIS NGUYEN, P.E. PROJECT ENGINEER — DATE

JOHN LATSKO, YARD X SUPERVISOR (MAINTENANCE REVIEW) — DATE

NIDHAM AL-RAYES, RESIDENT ENGINEER (CONSTRUCTIBILITY REVIEW) — DATE

RECOMMENDED /APPROVED BY

MAZIN KASEM, P.E. DEPUTY DIRECTOR — DATE

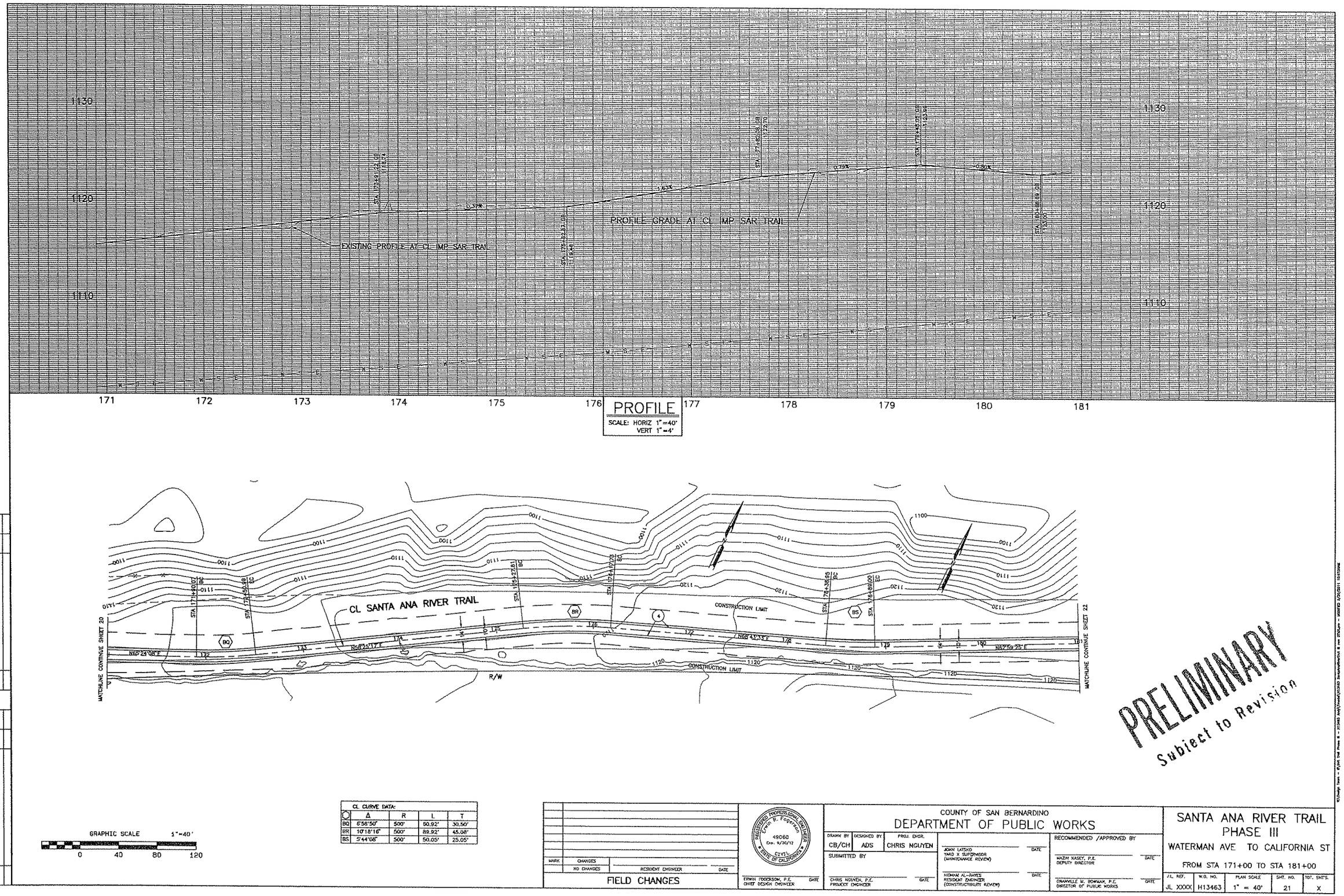
GRANVILLE M. BOWMAN, P.E. DIRECTOR OF PUBLIC WORKS — DATE

SANTA ANA RIVER TRAIL
PHASE III
WATERMAN AVE TO CALIFORNIA ST
FROM STA 161+00 TO STA 171+00

J.L. REF.	W.O. NO.	PLAN SCALE	SHT. NO.	TOT. SHTS.
JL XXXX	H13463	1" = 40'	20	X

MARK	REVISIONS	APPR.	DATE

MARK	REVISIONS	APPR.	DATE



GRAPHIC SCALE 1"=40'
0 40 80 120

CL CURVE DATA:				
	Δ	R	L	T
BQ	6°58'50"	500'	60.92'	30.50'
BR	10°18'16"	500'	89.92'	45.08'
BS	5°44'06"	500'	50.05'	25.05'

MARK	CHANGES		
	NO CHANGES	RESIDENT ENGINEER	DATE

FIELD CHANGES

REGISTERED PROFESSIONAL ENGINEER Erwin R. Fogerson 49060 Exp. 9/30/12 CIVIL STATE OF CALIFORNIA

ERWIN FOGERSON, P.E. — CHIEF DESIGN ENGINEER — DATE

COUNTY OF SAN BERNARDINO
DEPARTMENT OF PUBLIC WORKS

DRAWN BY	DESIGNED BY	PROJ. ENGR.
CB/CH	ADS	CHRIS NGUYEN

SUBMITTED BY

CHRIS NGUYEN, P.E. — PROJECT ENGINEER — DATE

JOHN LATSKO — YARD X SUPERVISOR (MAINTENANCE REVIEW) — DATE

HOSNAM AL-NAYES — RESIDENT ENGINEER (CONSTRUCTIBILITY REVIEW) — DATE

RECOMMENDED /APPROVED BY

MAZIN KASEY, P.E. — DEPUTY DIRECTOR — DATE

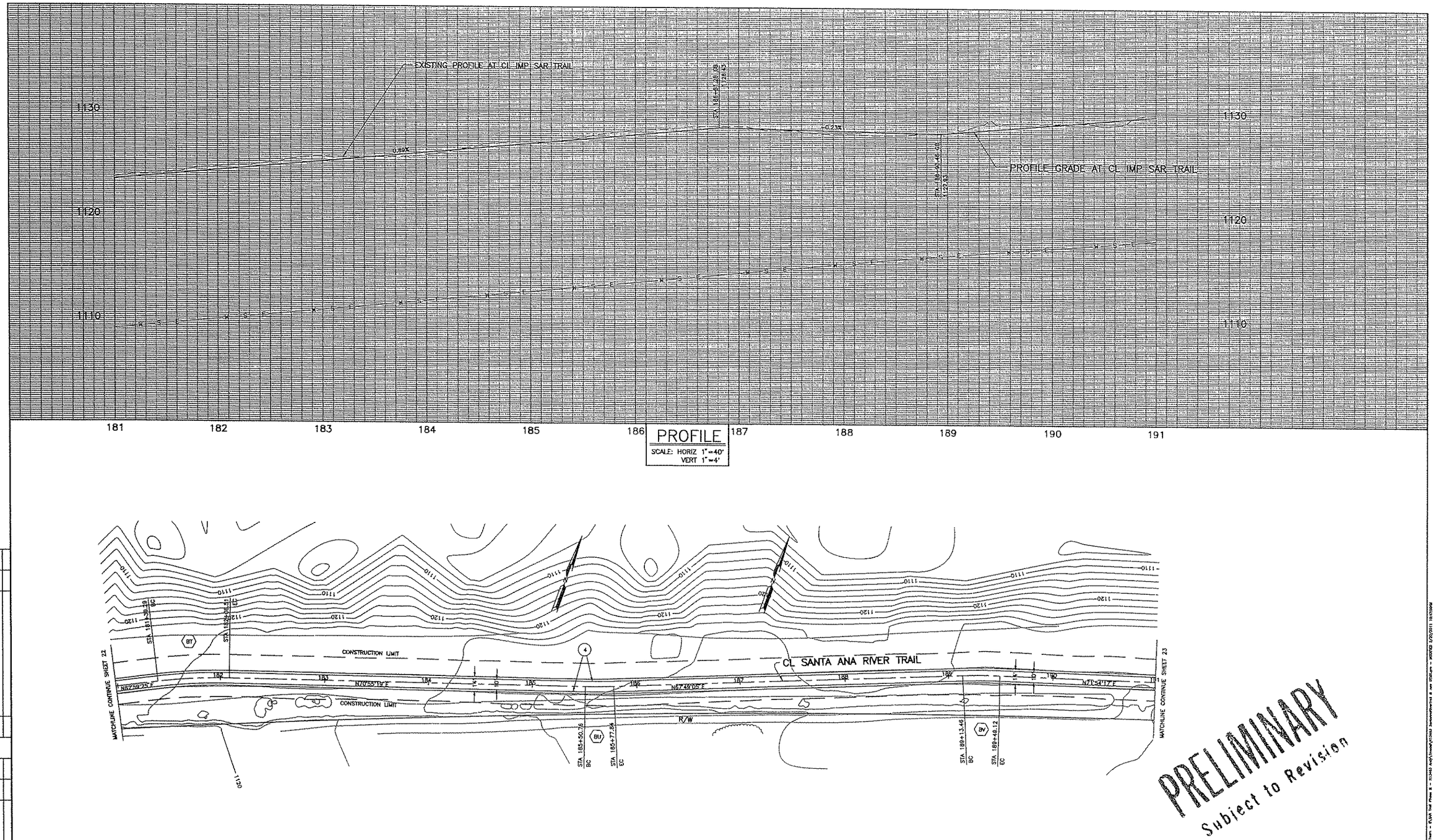
GRANVILLE W. BOWMAN, P.E. — DIRECTOR OF PUBLIC WORKS — DATE

SANTA ANA RIVER TRAIL
PHASE III
WATERMAN AVE TO CALIFORNIA ST
FROM STA 171+00 TO STA 181+00

J.L. REF.	W.O. NO.	PLAN SCALE	SHT. NO.	TOT. SHTS.
JL XXXX	H13463	1" = 40'	21	X

MARK	REVISIONS	APPR.	DATE

MARK	REVISIONS	APPR.	DATE



CL CURVE DATA:				
	Δ	R	L	T
BT	7°55'54"	500'	69.22'	34.66'
BU	3°06'15"	500'	27.09'	13.55'
BV	4°05'12"	500'	35.66'	17.84'

GRAPHIC SCALE 1"=40'
0 40 80 120

MARK	CHANGES	
	NO CHANGES	RESIDENT ENGINEER DATE

FIELD CHANGES

REGISTERED PROFESSIONAL ENGINEER Ervin B. Fogerson 49060 Exp. 9/30/12 CIVIL STATE OF CALIFORNIA

ERWIN FOGERSON, P.E. DATE
CHIEF DESIGN ENGINEER

COUNTY OF SAN BERNARDINO
DEPARTMENT OF PUBLIC WORKS

DRAWN BY	DESIGNED BY	PROJ. ENGR.
CB/CH	ADS	CHRIS NGUYEN

SUBMITTED BY

CHRIS NGUYEN, P.E. DATE
PROJECT ENGINEER

JOHN LATSKO DATE
YARD X SUPERVISOR
(MAINTENANCE REVIEW)

NORMAN AL-RAYES DATE
RESIDENT ENGINEER
(CONSTRUCTIBILITY REVIEW)

RECOMMENDED /APPROVED BY

WAZIN KASEY, P.E. DATE
DEPUTY DIRECTOR

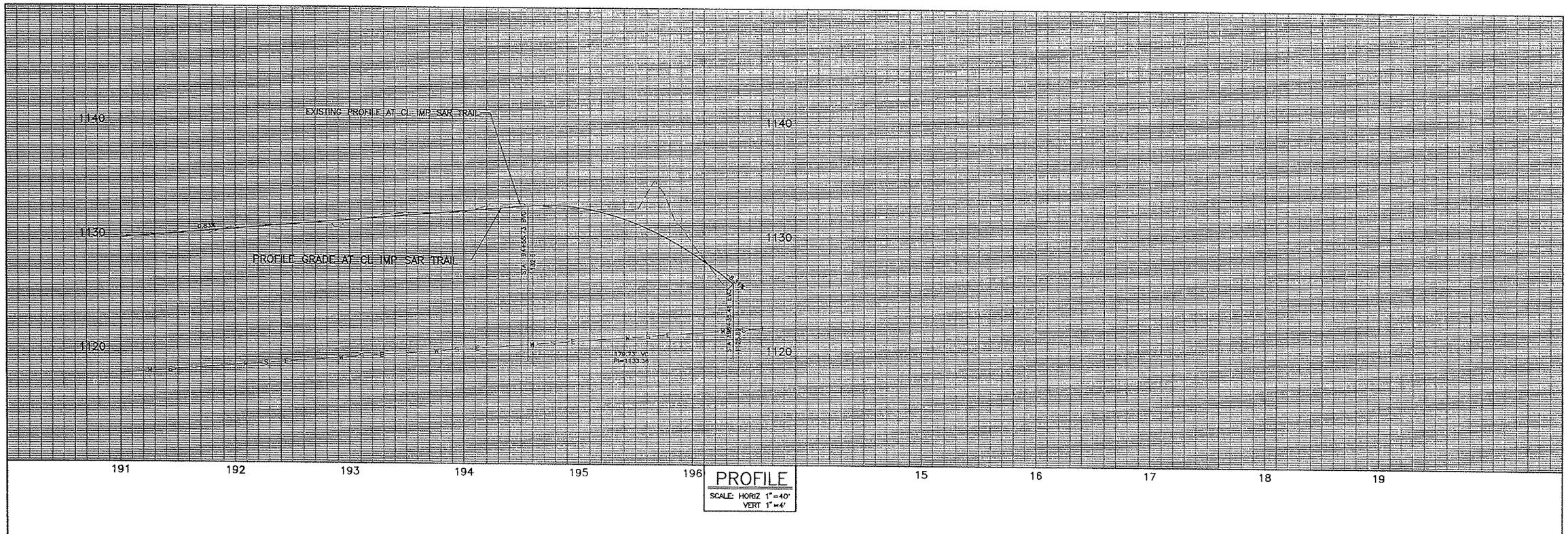
GRANVILLE N. DONAHAN, P.E. DATE
DIRECTOR OF PUBLIC WORKS

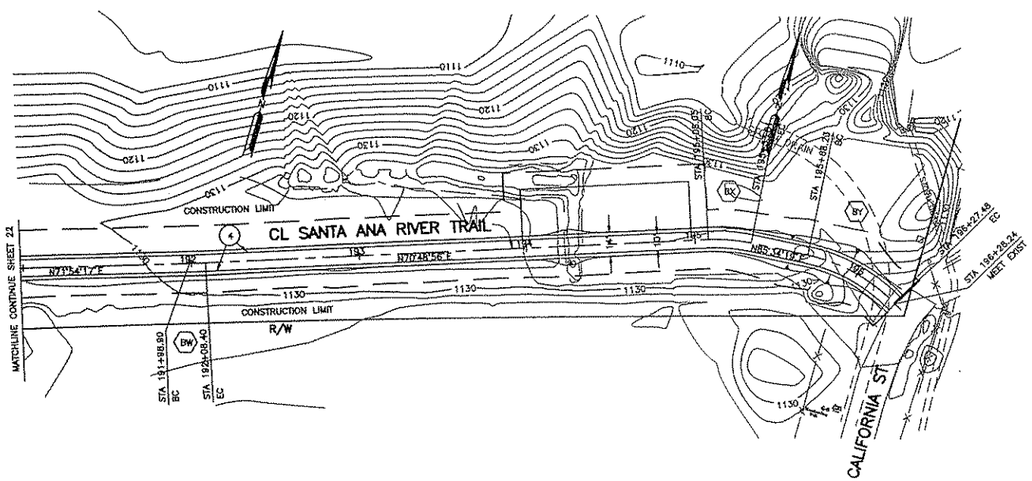
SANTA ANA RIVER TRAIL
PHASE III
WATERMAN AVE TO CALIFORNIA ST
FROM STA 181+00 TO STA 191+00

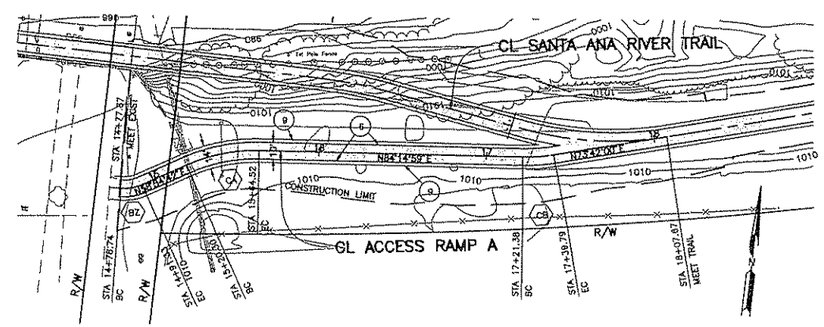
J.L. REF.	W.O. NO.	PLAN SCALE	SHT. NO.	TOT. SHTS.
JL XXXX	H13463	1" = 40'	22	X

MARK	REVISIONS	APPR.	DATE

MARK	REVISIONS	APPR.	DATE







PRELIMINARY
Subject to Revision

GRAPHIC SCALE 1"=40'
0 40 80 120

CL CURVE DATA:				
	Δ	R	L	T
BW	1°05'21"	500'	9.50'	4.75'
BX	14°45'23"	100'	25.75'	12.95'
BY	33°56'53"	100'	59.25'	30.52'
BZ	28°52'02"	25'	12.60'	6.43'
CA	25°20'18"	100'	44.22'	22.48'
CB	10°32'59"	100'	18.41'	9.23'

MARK	CHANGES	
	NO CHANGES	RESIDENT ENGINEER DATE

FIELD CHANGES

REGISTERED PROFESSIONAL ENGINEER Erwin R. Fogerson 49060 Exp. 9/30/12 CIVIL STATE OF CALIFORNIA

ERWIN FOGERSON, P.E. DATE
CHIEF DESIGN ENGINEER

COUNTY OF SAN BERNARDINO
DEPARTMENT OF PUBLIC WORKS

DRAWN BY	DESIGNED BY	PROJ. ENGR.
CB/CH	ADS	CHRIS NGUYEN

SUBMITTED BY

CHRIS NGUYEN, P.E. DATE
PROJECT ENGINEER

JOHN LATSKO DATE
YARD X SUPERVISOR
(MAINTENANCE REVIEW)

NIKHAM AL-RAYES DATE
RESIDENT ENGINEER
(CONSTRUCTIBILITY REVIEW)

RECOMMENDED /APPROVED BY

MAZIN KASEY, P.E. DATE
DEPUTY DIRECTOR

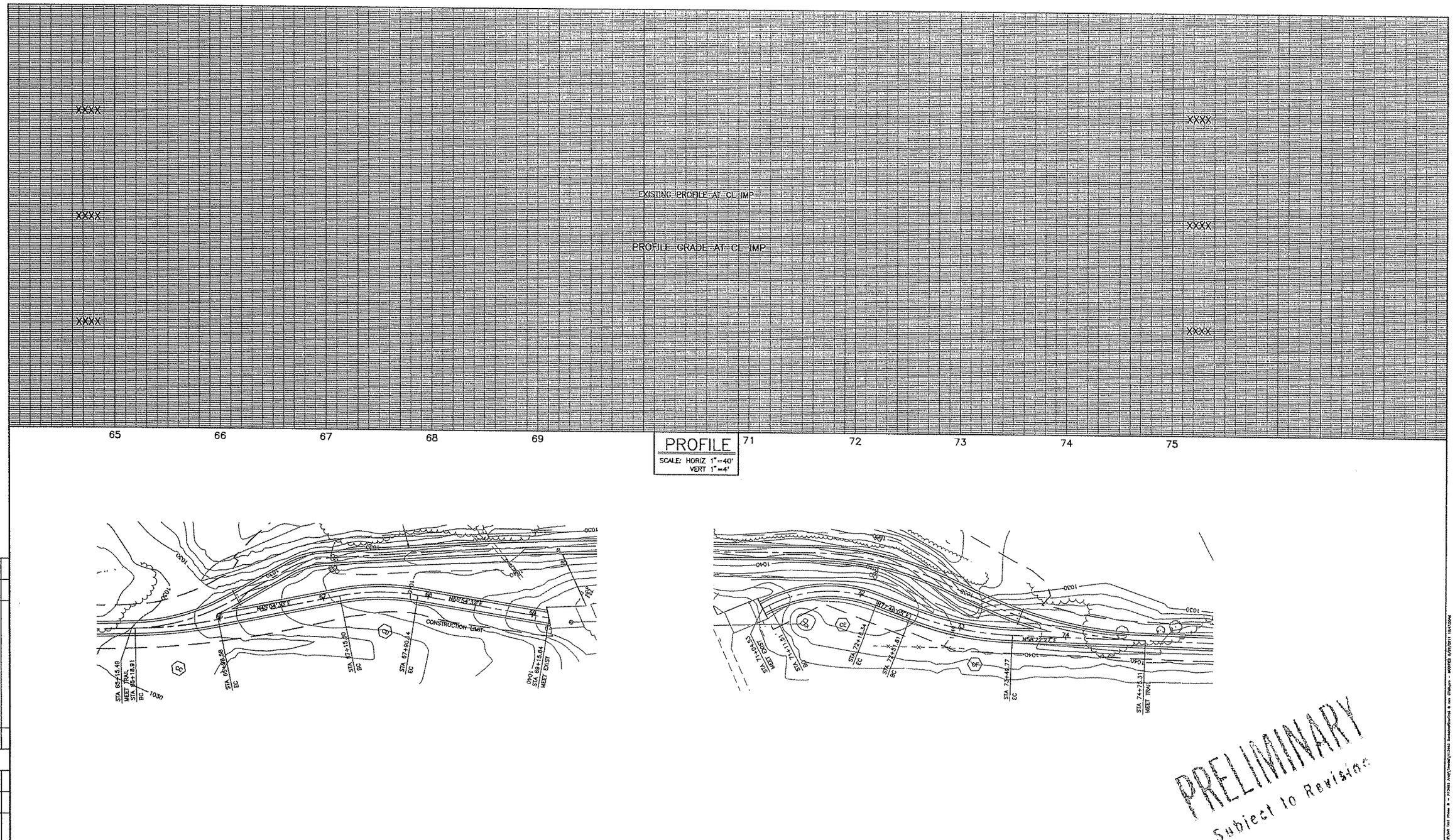
GRANVILLE M. BONHAM, P.E. DATE
DIRECTOR OF PUBLIC WORKS

SANTA ANA RIVER TRAIL
PHASE III
WATERMAN AVE TO CALIFORNIA ST
FROM STA 191+00 TO STA 196+50
AND STA 14+00 TO STA 19+00

J.L. REF.	W.O. NO.	PLAN SCALE	SHT. NO.	TOT. SHTS.
JL XXXX	H13463	1" = 40'	23	X

MARK	REVISIONS	APPR.	DATE

MARK	REVISIONS	APPR.	DATE



PRELIMINARY
Subject to Revisions

GRAPHIC SCALE 1"=40'
0 40 80 120

CL CURVE DATA:

	Δ	R	L	T
CC	10°08'38	450'	79.67'	39.94'
CD	20°50'02	205'	74.54'	37.69'
CE	48°29'05	125'	105.76'	56.29'
CF	19°23'38	290'	98.16'	49.55'

MARK	CHANGES	
	NO CHANGES	RESIDENT ENGINEER DATE

FIELD CHANGES

REGISTERED PROFESSIONAL ENGINEER Erwin B. Foderson 49050 Exp. 9/30/12 CIVIL STATE OF CALIFORNIA

ERWIN FODERSON, P.E. DATE
CHIEF DESIGN ENGINEER

COUNTY OF SAN BERNARDINO
DEPARTMENT OF PUBLIC WORKS

DRAWN BY	DESIGNED BY	PROJ. ENGR.
CB/CH	ADS	CHRIS NGUYEN

SUBMITTED BY

CHRIS NGUYEN, P.E. DATE
PROJECT ENGINEER

JOHN LATSKO DATE
YARD X SUPERVISOR
(MAINTENANCE REVIEW)

NIDHAM AL-RAYES DATE
RESIDENT ENGINEER
(CONSTRUCTIBILITY REVIEW)

RECOMMENDED /APPROVED BY

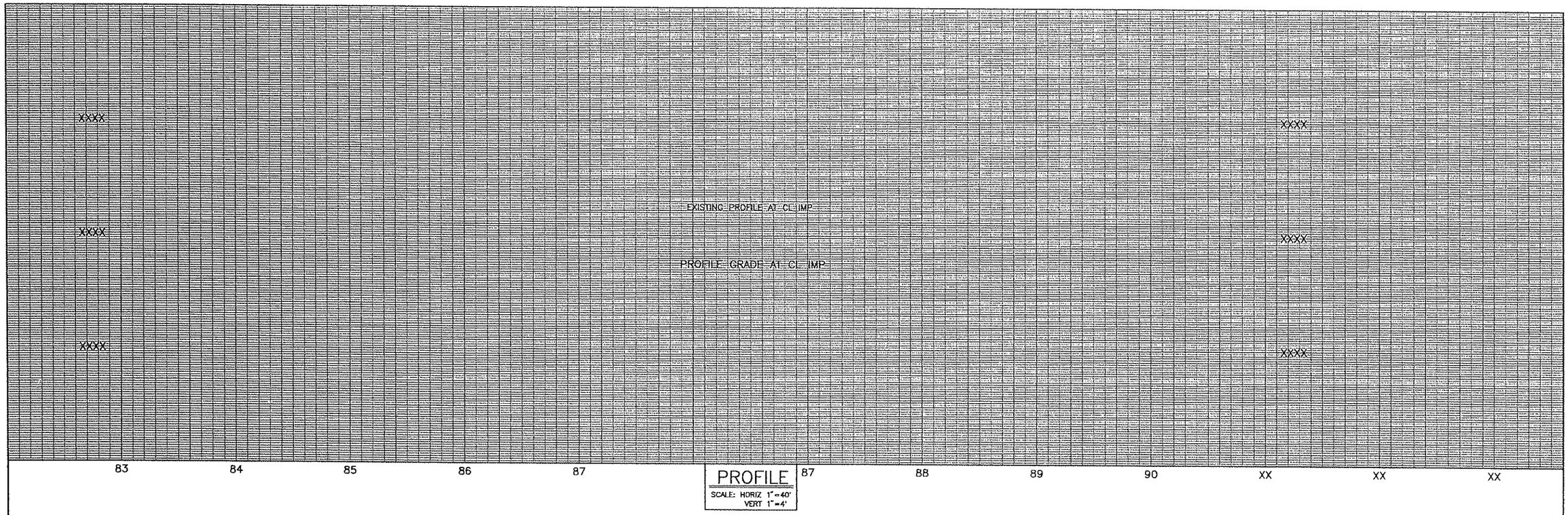
MAZEN KASEY, P.E. DATE
DEPUTY DIRECTOR

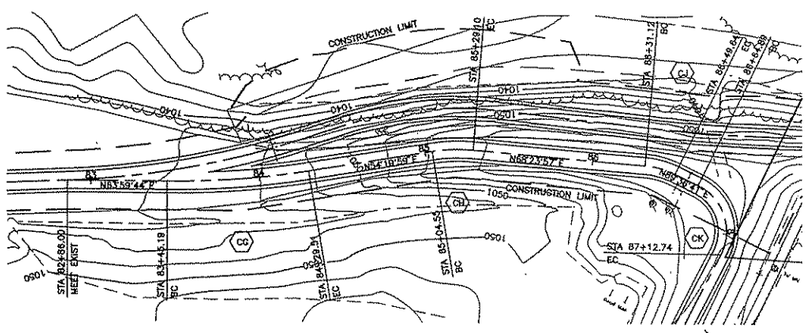
GRANVILLE M. BONHAM, P.E. DATE
DIRECTOR OF PUBLIC WORKS

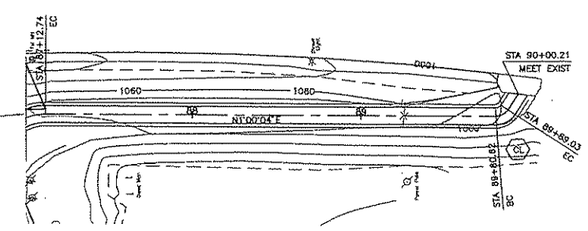
SANTA ANA RIVER TRAIL
PHASE III
WATERMAN AVE TO CALIFORNIA ST
FROM STA 00+00 TO STA 00+00

J.L. REF.	W.O. NO.	PLAN SCALE	SHT. NO.	TOT. SHTS.
JL XXXX	H13463	1" = 40'	24	X

Exhibit 4: Initial Study and Mitigated Negative Declaration for the
"Santa Ana River Trail, Phase III Project"







PRELIMINARY
Subject to Revision

GRAPHIC SCALE 1"=40'
0 40 80 120

CL CURVE DATA:				
	Δ	R	L	T
CG	9°39'45	500'	84.32'	42.26'
CH	14°03'58	100'	24.55'	12.34'
CJ	21°12'43	50'	18.51'	9.36'
CK	91°23'23	30'	47.85'	30.74'
CL	48°10'06	10'	8.41'	4.47'

MARK	CHANGES		
	NO CHANGES	RESIDENT ENGINEER	DATE

FIELD CHANGES

REGISTERED PROFESSIONAL ENGINEER
Erwin R. Fogerson
49060
Exp. 9/30/12
CIVIL
STATE OF CALIFORNIA

ERWIN FOGERSON, P.E. DATE
CHIEF DESIGN ENGINEER

COUNTY OF SAN BERNARDINO
DEPARTMENT OF PUBLIC WORKS

DRAWN BY	DESIGNED BY	PROJ. ENGR.
CB/CH	ADS	CHRIS NGUYEN

SUBMITTED BY

CHRIS NGUYEN, P.E. DATE
PROJECT ENGINEER

JOHN LATSKO DATE
YARD X SUPERVISOR
(MAINTENANCE REVIEW)

NIDHAM AL-RAYES DATE
RESIDENT ENGINEER
(CONSTRUCTIBILITY REVIEW)

RECOMMENDED /APPROVED BY

MAZEN KASEY, P.E. DATE
DEPUTY DIRECTOR

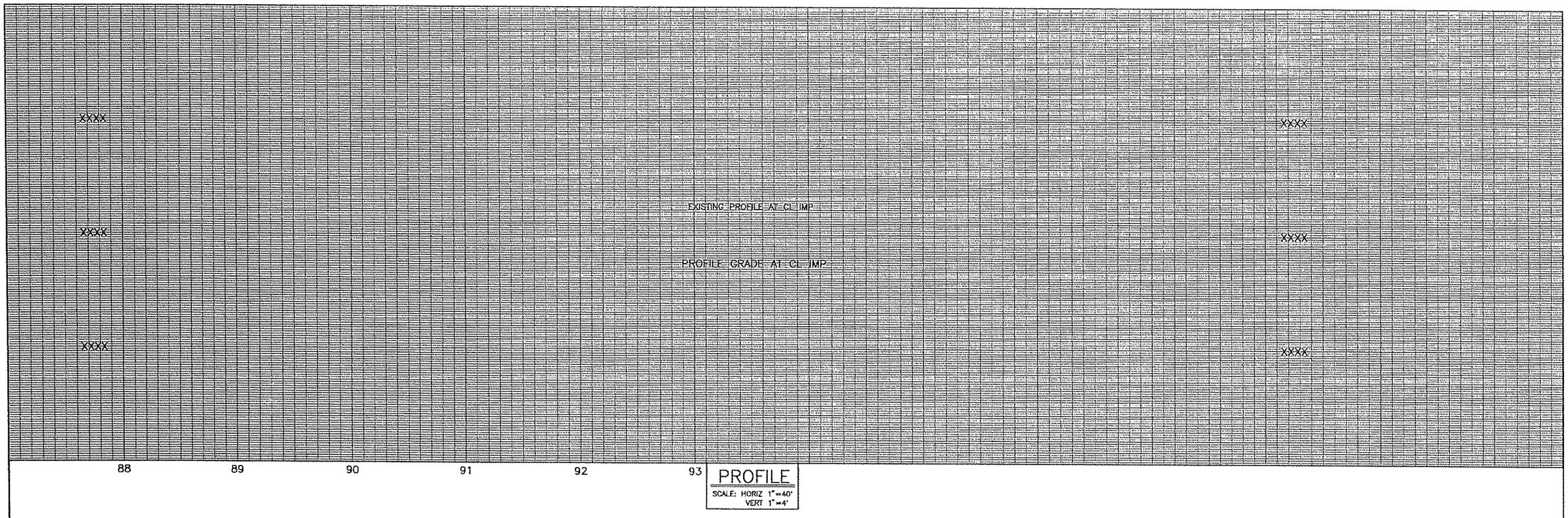
GRANVILLE M. BOWMAN, P.E. DATE
DIRECTOR OF PUBLIC WORKS

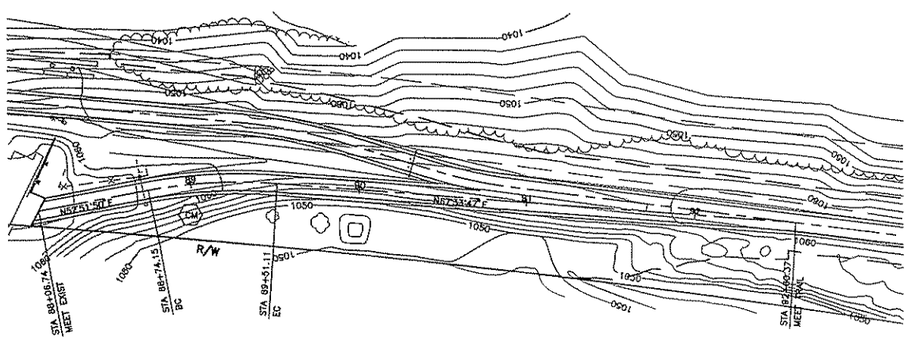
SANTA ANA RIVER TRAIL
PHASE III
WATERMAN AVE TO CALIFORNIA ST
FROM STA 00+00 TO STA 00+00

J.L. REF.	W.O. NO.	PLAN SCALE	SHT. NO.	TOT. SHTS.
JL XXXX	H13463	1" = 40'	25	X

MARK	REVISIONS	APPR.	DATE

MARK	REVISIONS	APPR.	DATE





PRELIMINARY
Subject to Revision

GRAPHIC SCALE 1"=40'
0 40 80 120

CL CURVE DATA:				
	Δ	R	L	T
CM	14°41'57"	300'	76.96'	38.68'

MARK	DATE	APPR.	REVISIONS

MARK	DATE	APPR.	REVISIONS

MARK	CHANGES	RESIDENT ENGINEER	DATE
	NO CHANGES		

FIELD CHANGES

REGISTERED PROFESSIONAL ENGINEER — CHRIS R. FOGERSON — 49060 — Exp. 9/30/12 — CIVIL — STATE OF CALIFORNIA

EDWIN FOGERSON, P.E. — CHIEF DESIGN ENGINEER — DATE

COUNTY OF SAN BERNARDINO
DEPARTMENT OF PUBLIC WORKS

DRAWN BY	DESIGNED BY	PROJ. ENGR.
CB/CH	ADS	CHRIS NGUYEN

SUBMITTED BY

CHRIS MOUNTIN, P.E. — PROJECT ENGINEER — DATE

JOHN LATSKO — YARD 3 SUPERVISOR (MAINTENANCE REVIEW) — DATE

NIDHAM AL-RAYES — RESIDENT ENGINEER (CONSTRUCTIBILITY REVIEW) — DATE

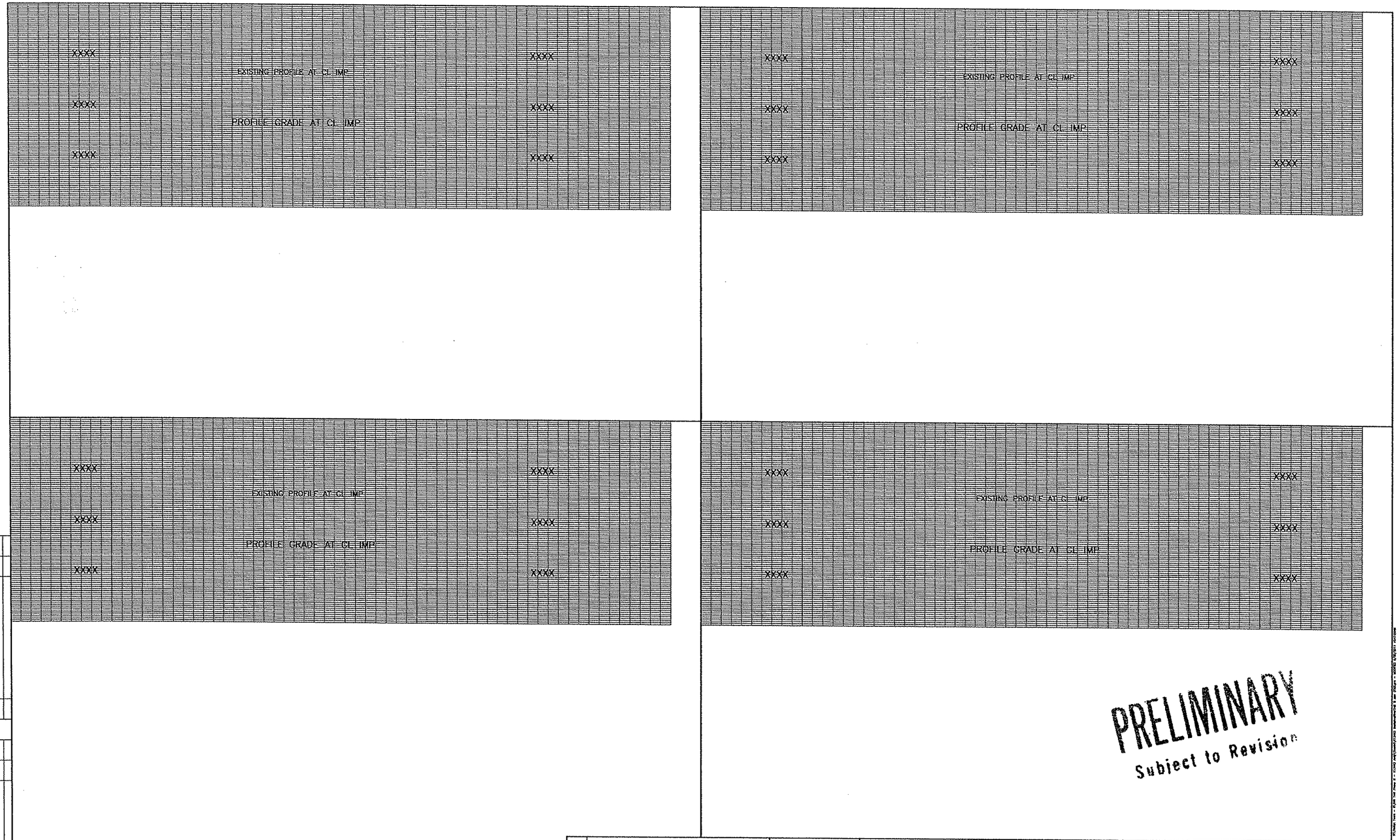
RECOMMENDED /APPROVED BY

MASIN KASEY, P.E. — DEPUTY DIRECTOR — DATE

GRANVILLE M. BOWMAN, P.E. — DIRECTOR OF PUBLIC WORKS — DATE

SANTA ANA RIVER TRAIL
PHASE III
WATERMAN AVE TO CALIFORNIA ST
FROM STA 00+00 TO STA 00+00

J.L. REF.	W.O. NO.	PLAN SCALE	SHT. NO.	TOT. SHT'S.
JL XXXX	H13463	1" = 40'	26	X



MARK	REVISIONS	APPR.	DATE

MARK	REVISIONS	APPR.	DATE

MARK	CHANGES		
	NO CHANGES	RESIDENT ENGINEER	DATE

FIELD CHANGES

REGISTERED PROFESSIONAL ENGINEER Erwin R. Rodderson 49060 Exp. 9/30/12 CIVIL STATE OF CALIFORNIA

ERWIN RODERSON, P.E. DATE
CHIEF DESIGN ENGINEER

COUNTY OF SAN BERNARDINO
DEPARTMENT OF PUBLIC WORKS

DRAWN BY	DESIGNED BY	PROJ. ENGR.
CB/CH	ADS	CHRIS NGUYEN

SUBMITTED BY

CHRIS NGUYEN, P.E. DATE
PROJECT ENGINEER

JOHN LATSKO DATE
YARD X SUPERVISOR
(MAINTENANCE REVIEW)

NIDHAM AL-RAYES DATE
RESIDENT ENGINEER
(CONSTRUCTIBILITY REVIEW)

RECOMMENDED /APPROVED BY

MAZIN KASEY, P.E. DATE
DEPUTY DIRECTOR

GRANVILLE M. BOWMAN, P.E. DATE
DIRECTOR OF PUBLIC WORKS

SANTA ANA RIVER TRAIL
PHASE III

MISCELLANEOUS DETAILS
CITY OF SAN BERNARDINO AND REDLANDS

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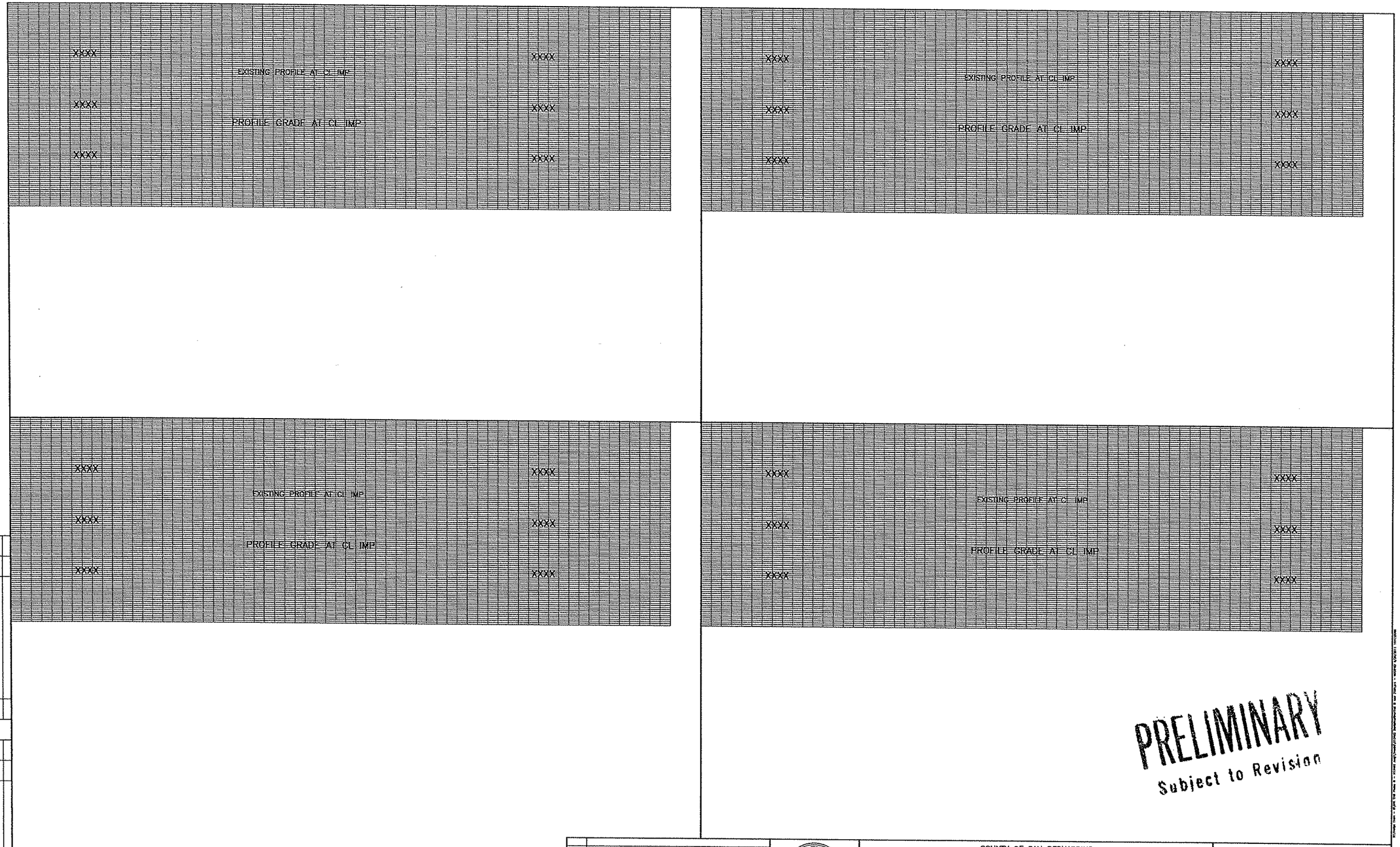

MARK	REVISIONS	APPR.	DATE

MARK	REVISIONS	APPR.	DATE

MARK	CHANGES	
	NO CHANGES	RESIDENT ENGINEER DATE

FIELD CHANGES

REGISTERED PROFESSIONAL ENGINEER Erwin R. Fogerson 49060 Exp. 6/30/12 CIVIL STATE OF CALIFORNIA

ERWIN FOGERSON, P.E. DATE
CHIEF DESIGN ENGINEER

COUNTY OF SAN BERNARDINO
DEPARTMENT OF PUBLIC WORKS

DRAWN BY	DESIGNED BY	PROJ. ENGR.
CB/CH	ADS	CHRIS NGUYEN

SUBMITTED BY

CHRIS NGUYEN, P.E. DATE
PROJECT ENGINEER

JOHN LATSKO DATE
YARD X SUPERVISOR
(MAINTENANCE REVIEW)

NIDHAM AL-RAYES DATE
RESIDENT ENGINEER
(CONSTRUCTIBILITY REVIEW)

RECOMMENDED /APPROVED BY

MAZIN KASEY, P.E. DATE
DEPUTY DIRECTOR

GRANVILLE M. BOWMAN, P.E. DATE
DIRECTOR OF PUBLIC WORKS

SANTA ANA RIVER TRAIL
PHASE III

MISCELLANEOUS DETAILS

CITY OF SAN BERNARDINO AND REDLANDS

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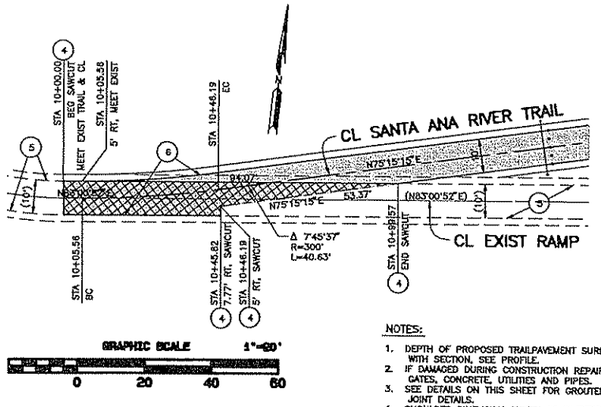
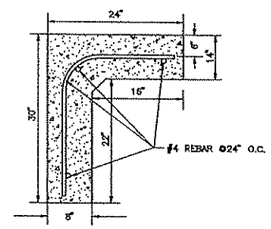


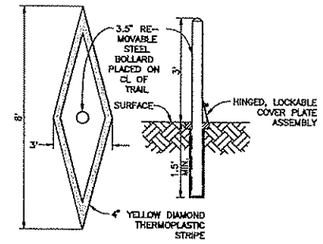
SAWCUT AND JOINT DETAIL
1" = 20'

NOTES:

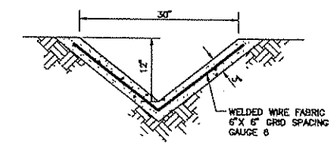
1. DEPTH OF PROPOSED TRAILPAVEMENT SURFACE TO EXIST GROUND VARIES WITH SECTION, SEE PROFILE.
2. IF DAMAGED DURING CONSTRUCTION REPAIR EXIST GROUTED RIPRAP, FENCE, GATES, CONCRETE, UTILITIES AND PIPES.
3. SEE DETAILS ON THIS SHEET FOR GROUTED RIPRAP, CUTOFF WALL AND JOINT DETAILS.
4. SHOULDER DIMENSION SHOWN AS 2' TYPICAL MAY VARY WITH EXISTING SITE CONDITIONS.
5. COMPACTED FILLS PER SOILS REPORT AND SPECS.
6. OVEREXCAVATION SHALL BE BACKFILLED WITH COMPACTED FILL.



9 CUTOFF WALL TYP
NTS



REMOVABLE BOLLARD TYP.
NTS



TYPE A
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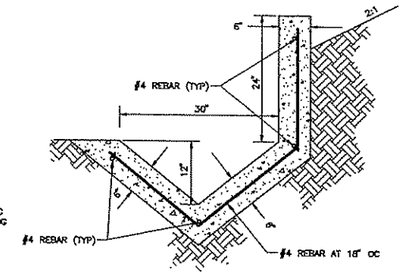
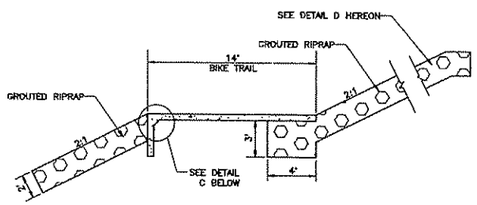
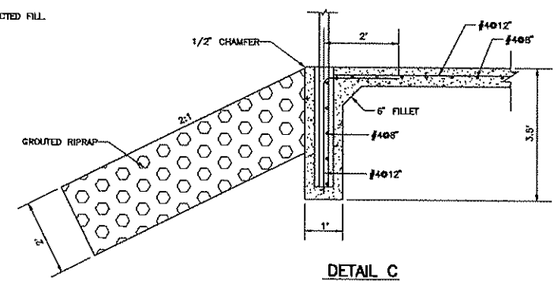


17 V-DITCH TYP
NTS

TYPE C
NTS



BIKE TRAIL W/ GROUTED RIPRAP DETAIL TYPE 1
NTS



DETAIL C
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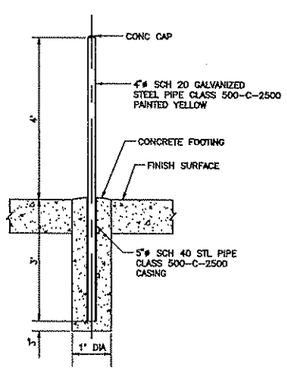

BOLLARD DETAIL A
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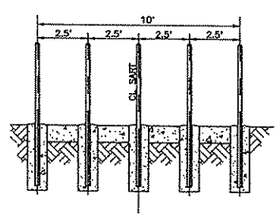

BOLLARD DETAIL B
NTS

PRELIMINARY
Subject to Revision

MARK	DATE	APPR.	REVISIONS

MARK	DATE	APPR.	REVISIONS

MARK	CHANGES	
	NO CHANGES	RESIDENT ENGINEER DATE

FIELD CHANGES

ERWIN FOGERSON, P.E. DATE
CHIEF DESIGN ENGINEER

COUNTY OF SAN BERNARDINO
DEPARTMENT OF PUBLIC WORKS

DRAWN BY	DESIGNED BY	PROJ. ENGR.
CB/CH	ADS	CHRIS NGUYEN

SUBMITTED BY

CHRIS NGUYEN, P.E. DATE
PROJECT ENGINEER

JOHN LATSKO DATE
YARD X SUPERVISOR
(MAINTENANCE REVIEW)

NIDHAM AL-RAYES DATE
RESIDENT ENGINEER
(CONSTRUCTIBILITY REVIEW)

RECOMMENDED /APPROVED BY

MAZIN KASEY, P.E. DATE
DEPUTY DIRECTOR

GRANVILLE M. BOWMAN, P.E. DATE
DIRECTOR OF PUBLIC WORKS

SANTA ANA RIVER TRAIL
PHASE III

MISCELLANEOUS DETAILS
CITY OF SAN BERNARDINO AND REDLANDS

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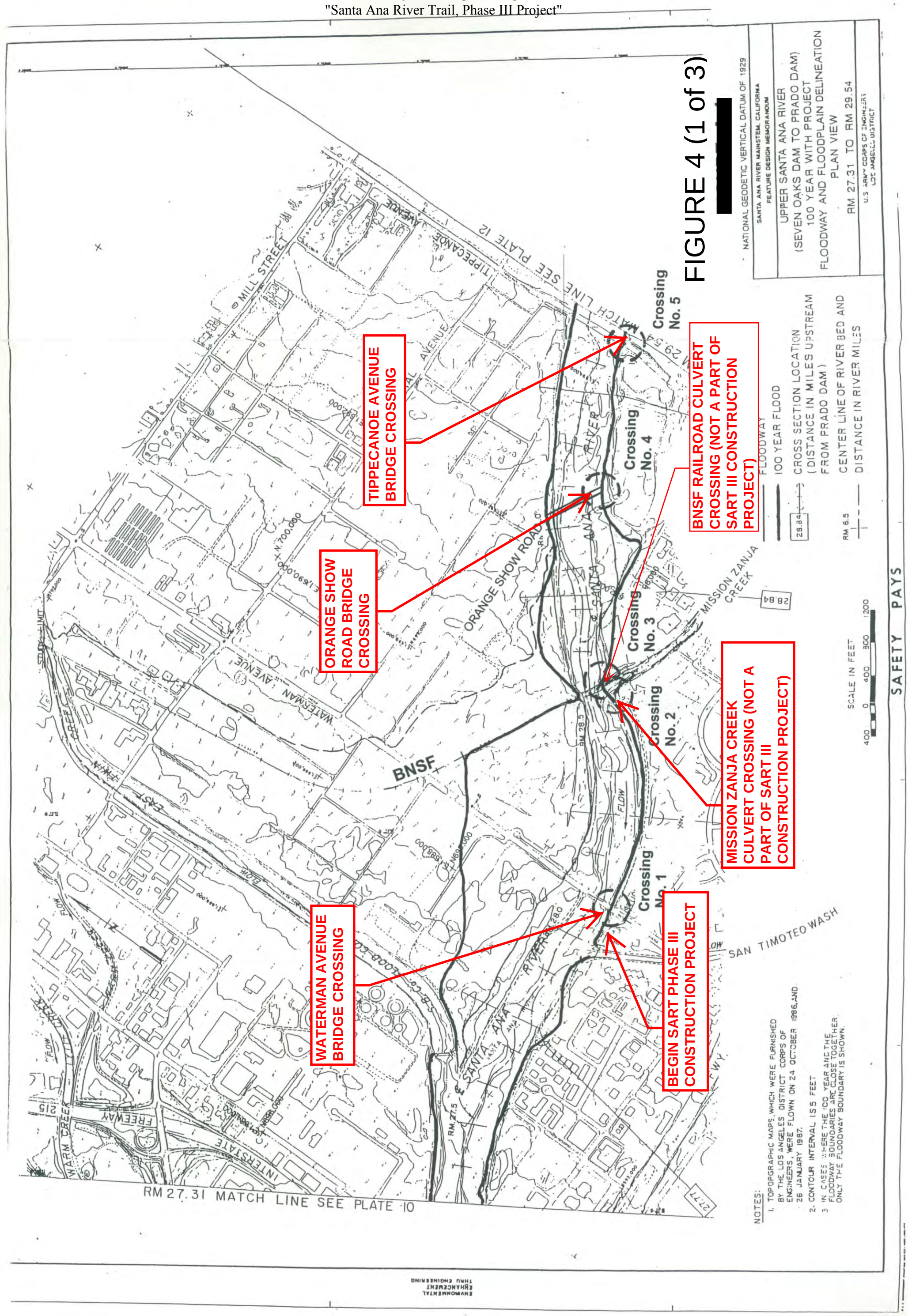
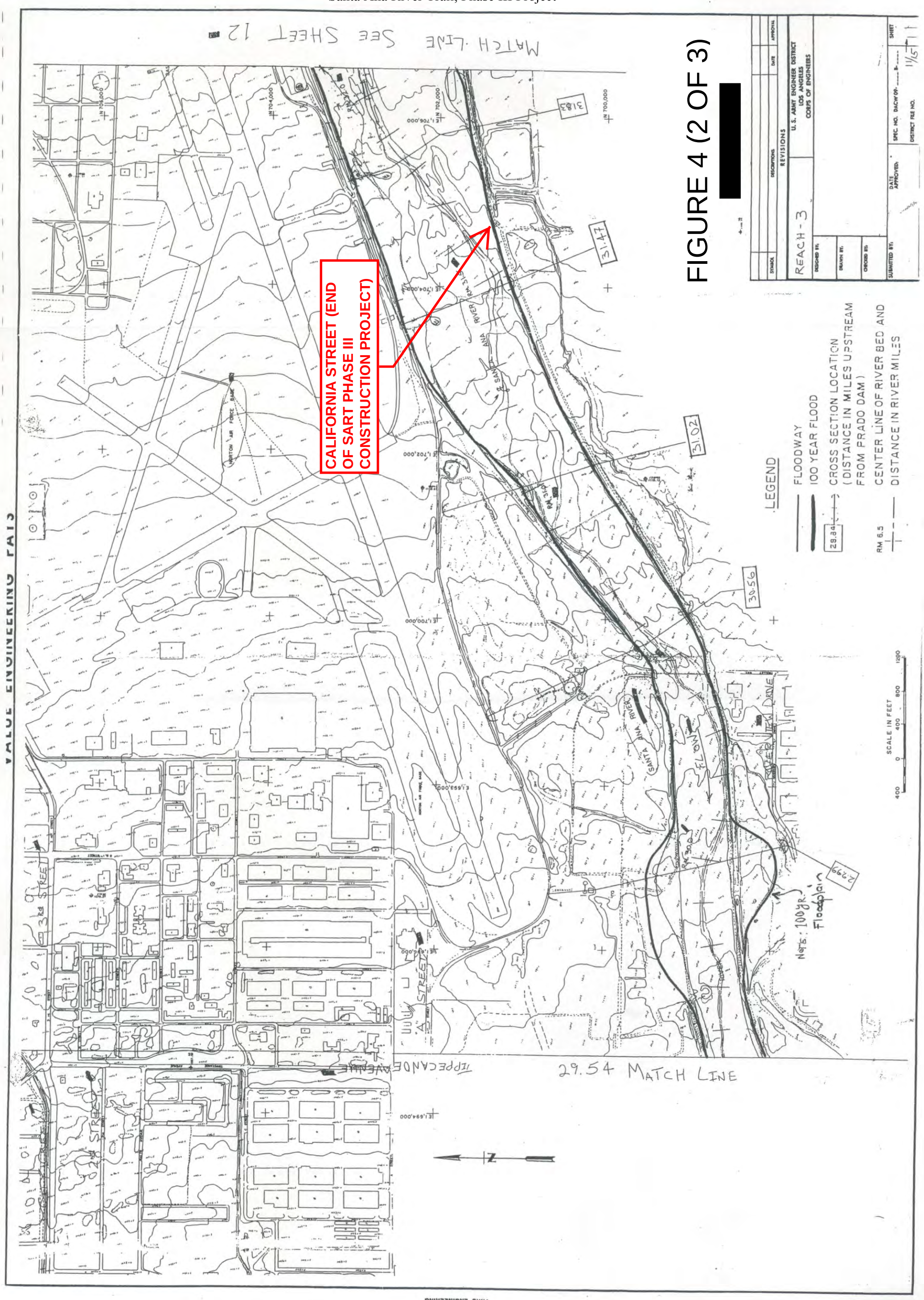
JL XXXX	H13463	AS SHOWN	29	X



ENVIRONMENTAL ENHANCEMENT THRU ENGINEERING



VALUE ENGINEERING PAYS

ENVIRONMENTAL ENHANCEMENT THRU ENGINEERING

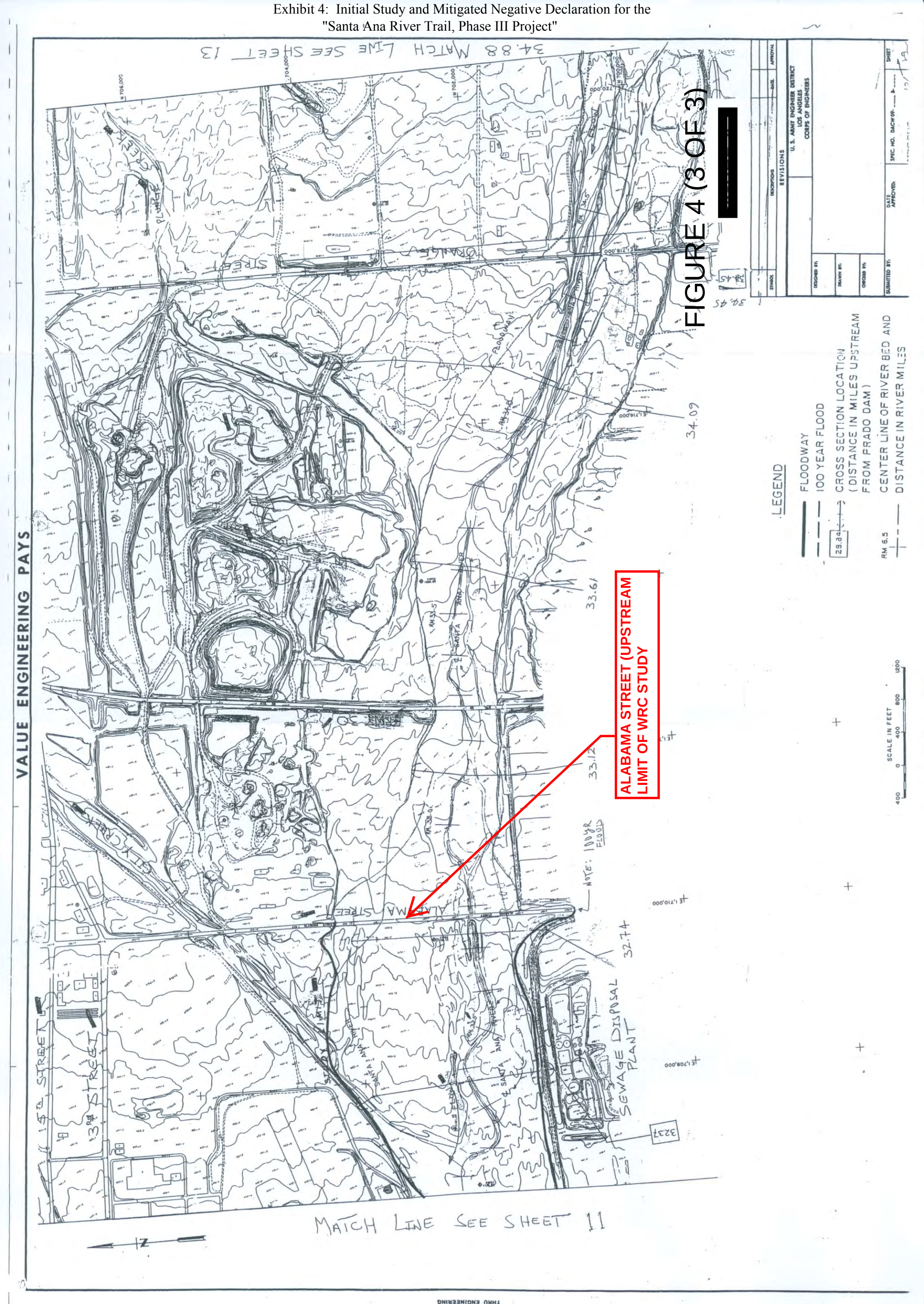


FIGURE 4 (3 OF 3)
[redacted]
ALABAMA STREET (UPSTREAM LIMIT OF WRC STUDY
LEGEND
FLOODWAY
100 YEAR FLOOD
CROSS SECTION LOCATION (DISTANCE IN MILES UPSTREAM FROM PRADO DAM)
CENTER LINE OF RIVER BED AND DISTANCE IN RIVER MILES
SCALE IN FEET
U. S. ARMY ENGINEER DISTRICT LOS ANGELES CORPS OF ENGINEERS
REVISIONS
DESCRIPTIONS
DATE
APPROVAL
SYMBOL
DESIGNED BY:
DRAWN BY:
CHECKED BY:
SUBMITTED BY:
DATE APPROVED:
SPEC. NO. DACW09-
SHEET
VALUE ENGINEERING PAYS
34.88 MATCH LINE SEE SHEET 13
34.45
34.09
33.61
33.12
32.74
32.37
29.84
RM 6.5
NOTE: 100YR FLOOD
SEWAGE DISPOSAL PLANT
15TH STREET
3RD STREET
ALABAMA STREET
MATCH LINE SEE SHEET 11
N

Exhibit 4: Initial Study and Mitigated Negative Declaration for the
"Santa Ana River Trail, Phase III Project"

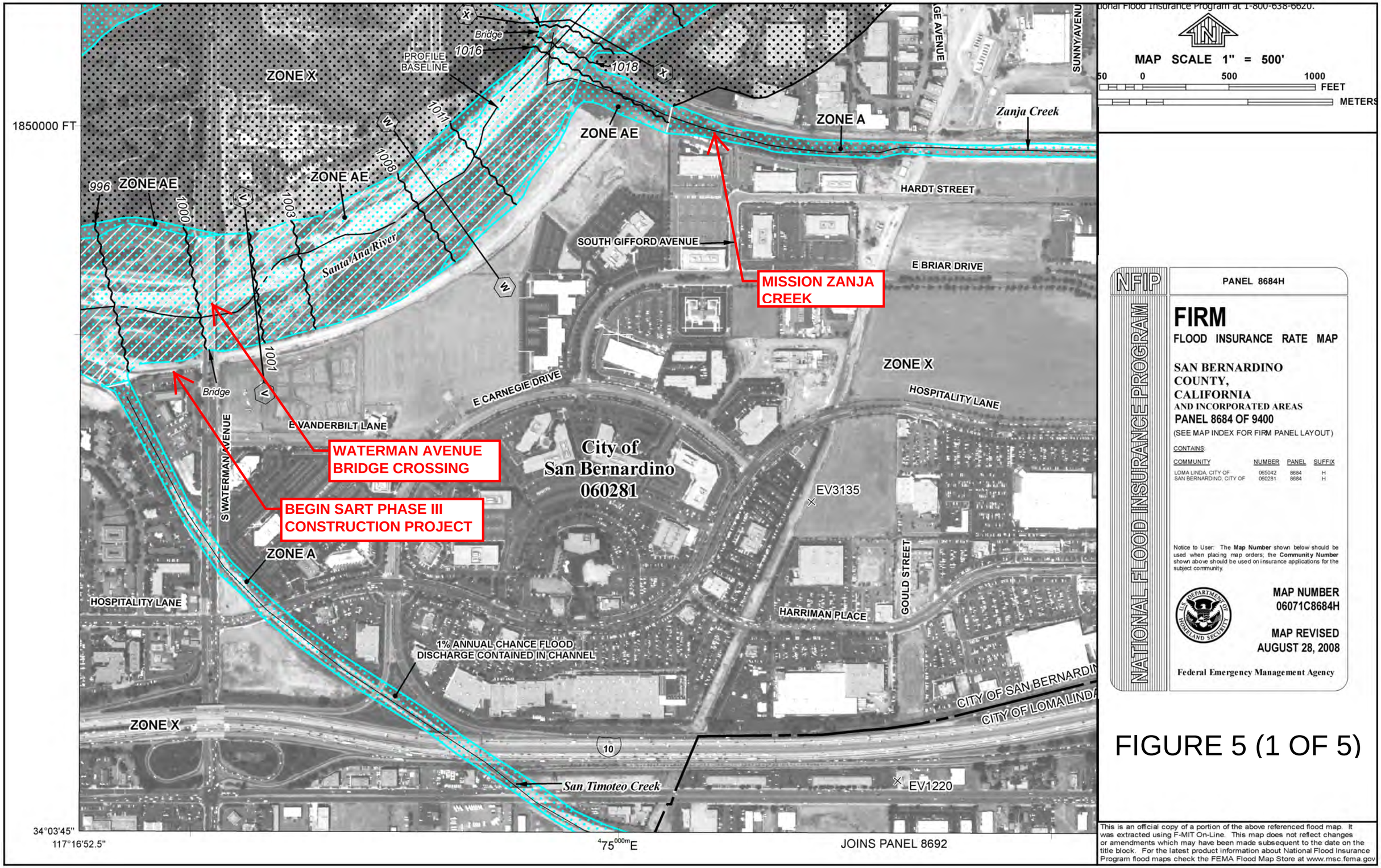


FIGURE 5 (1 OF 5)

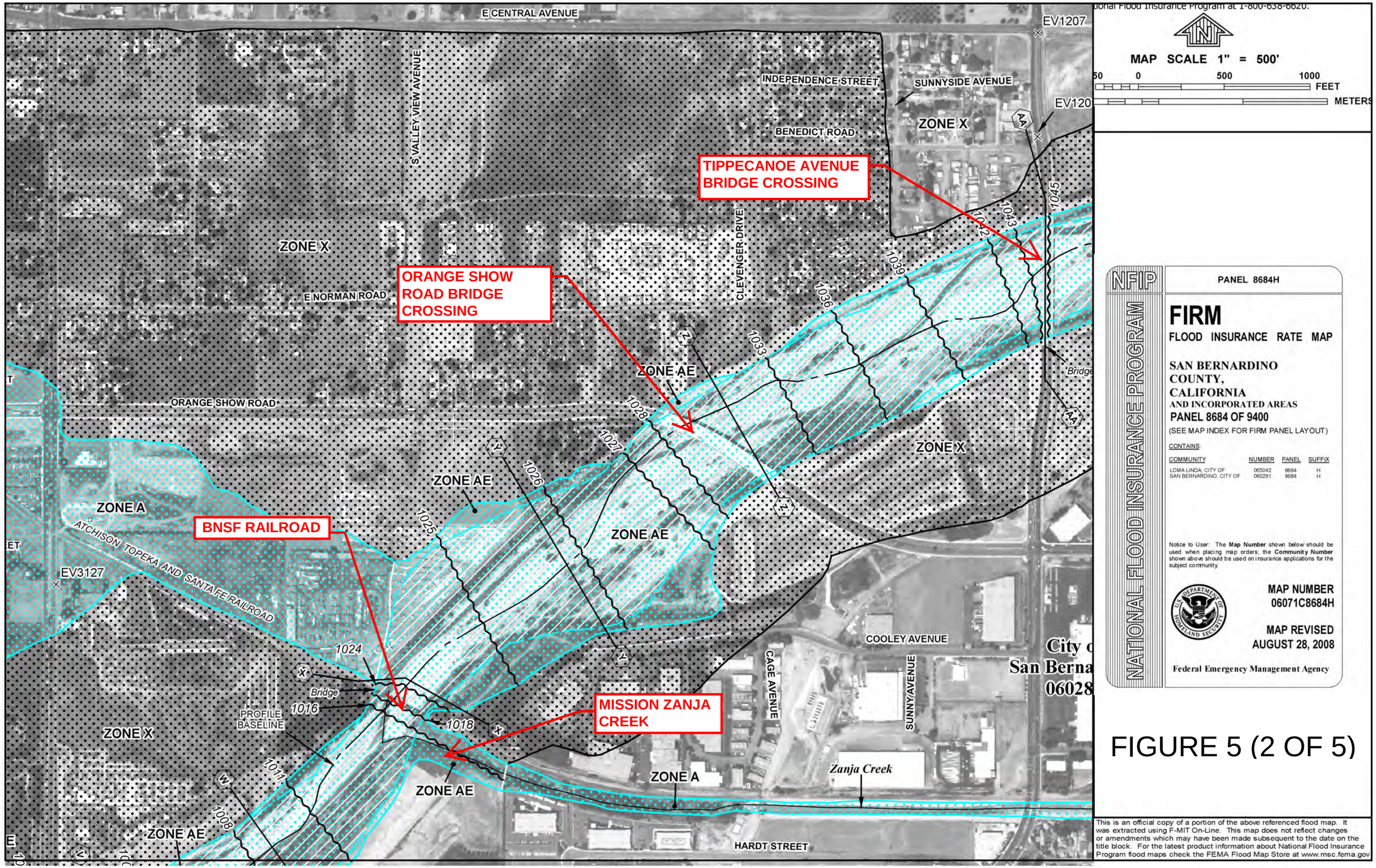
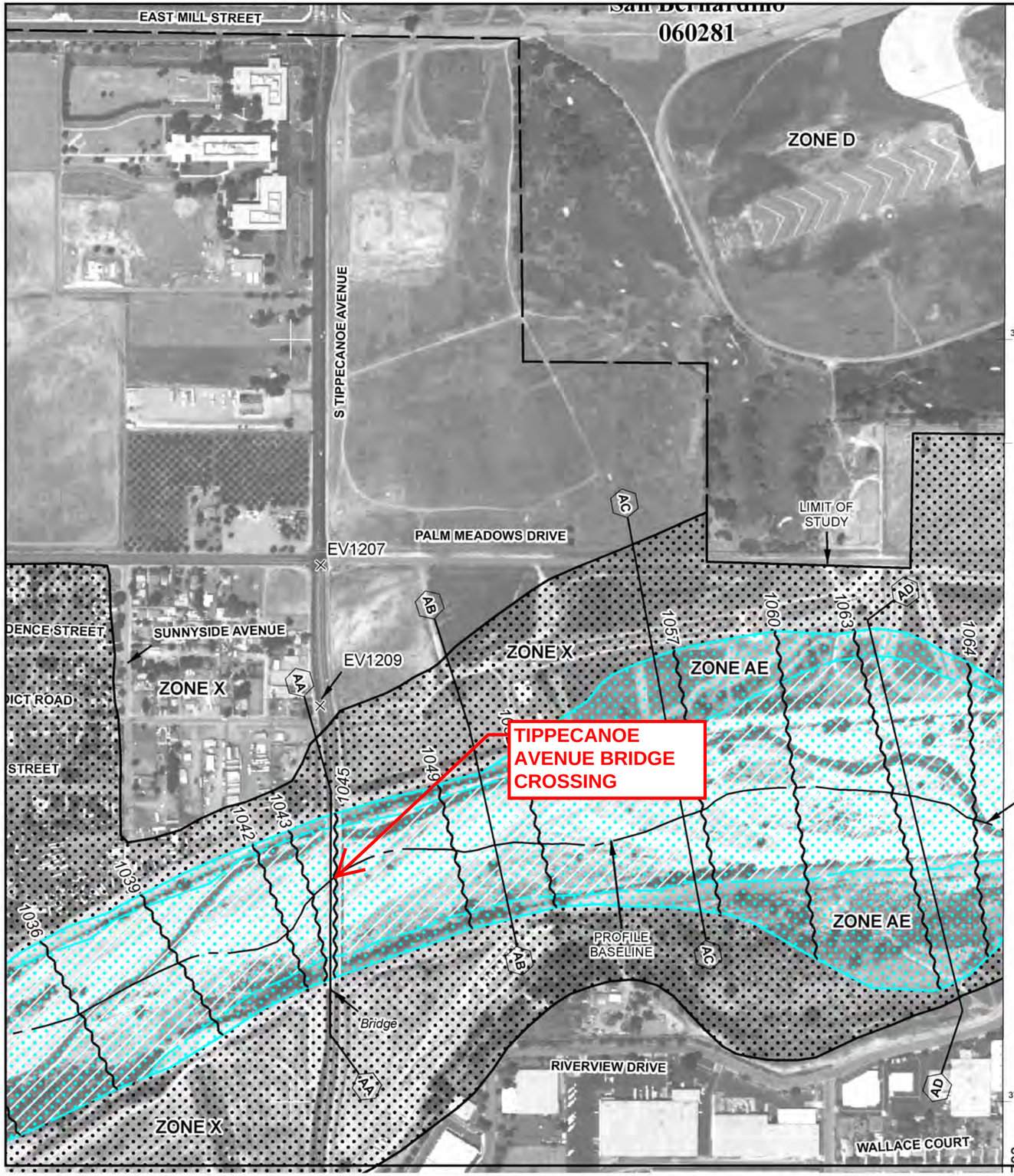


FIGURE 5 (2 OF 5)



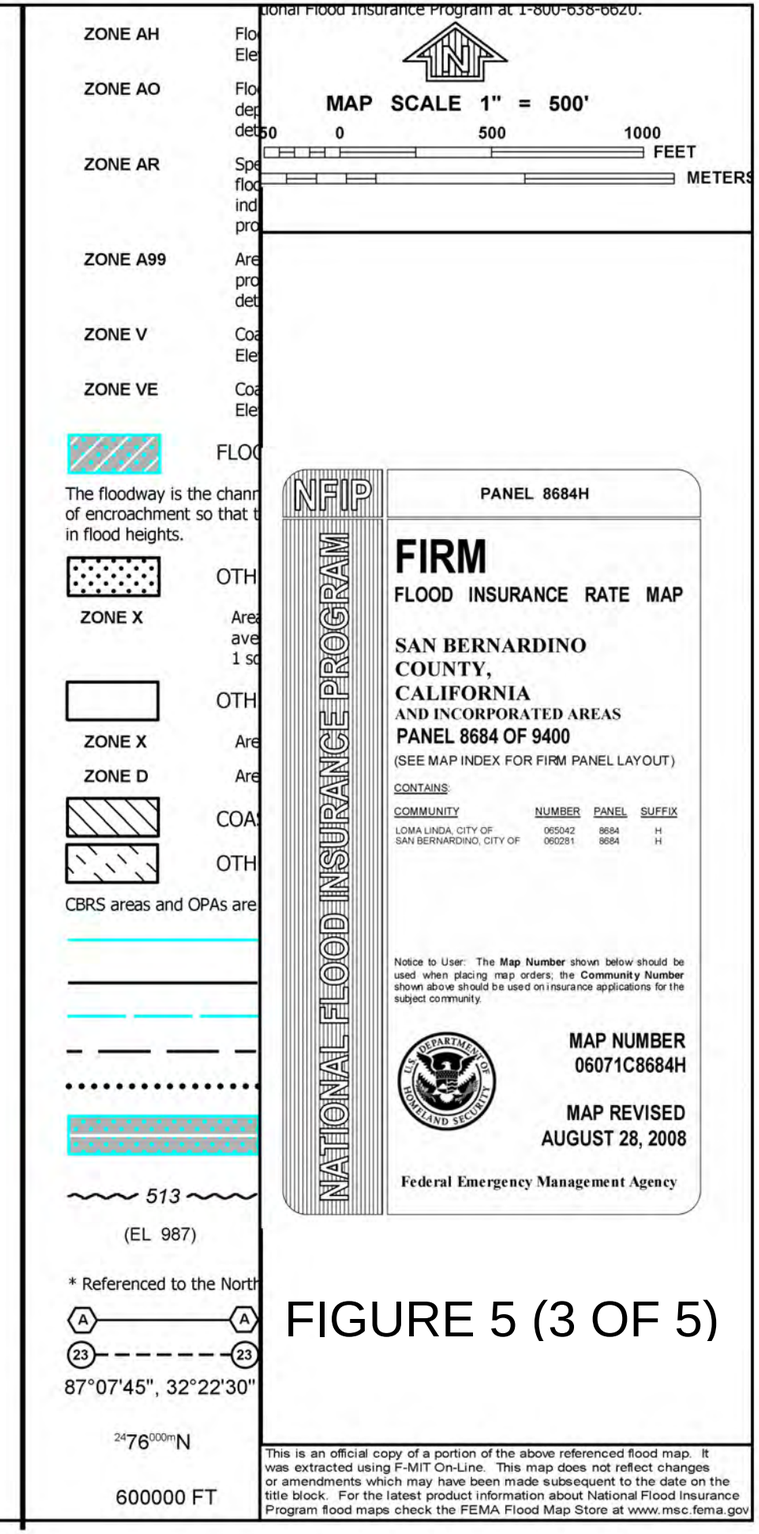


FIGURE 5 (3 OF 5)

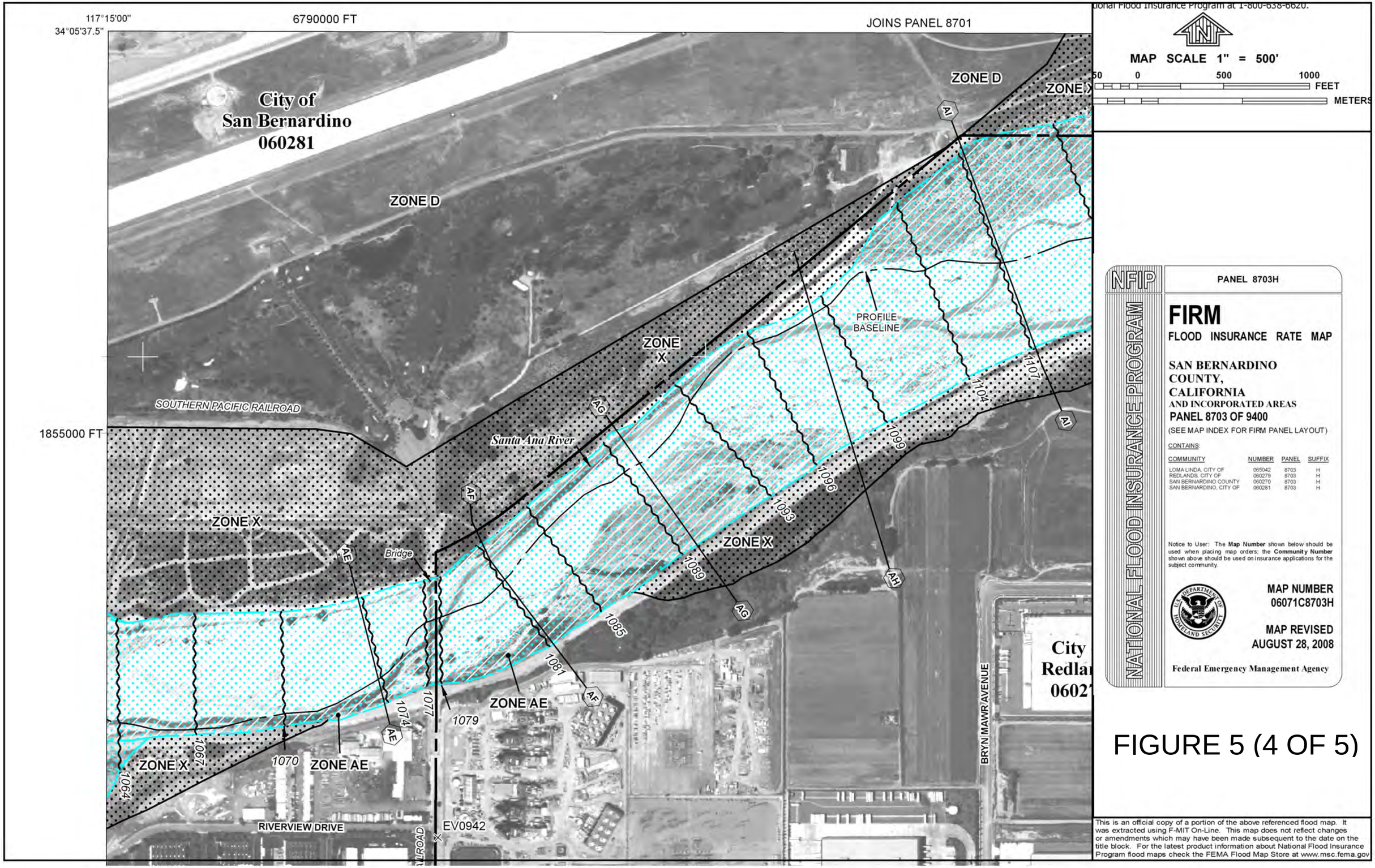


FIGURE 5 (4 OF 5)

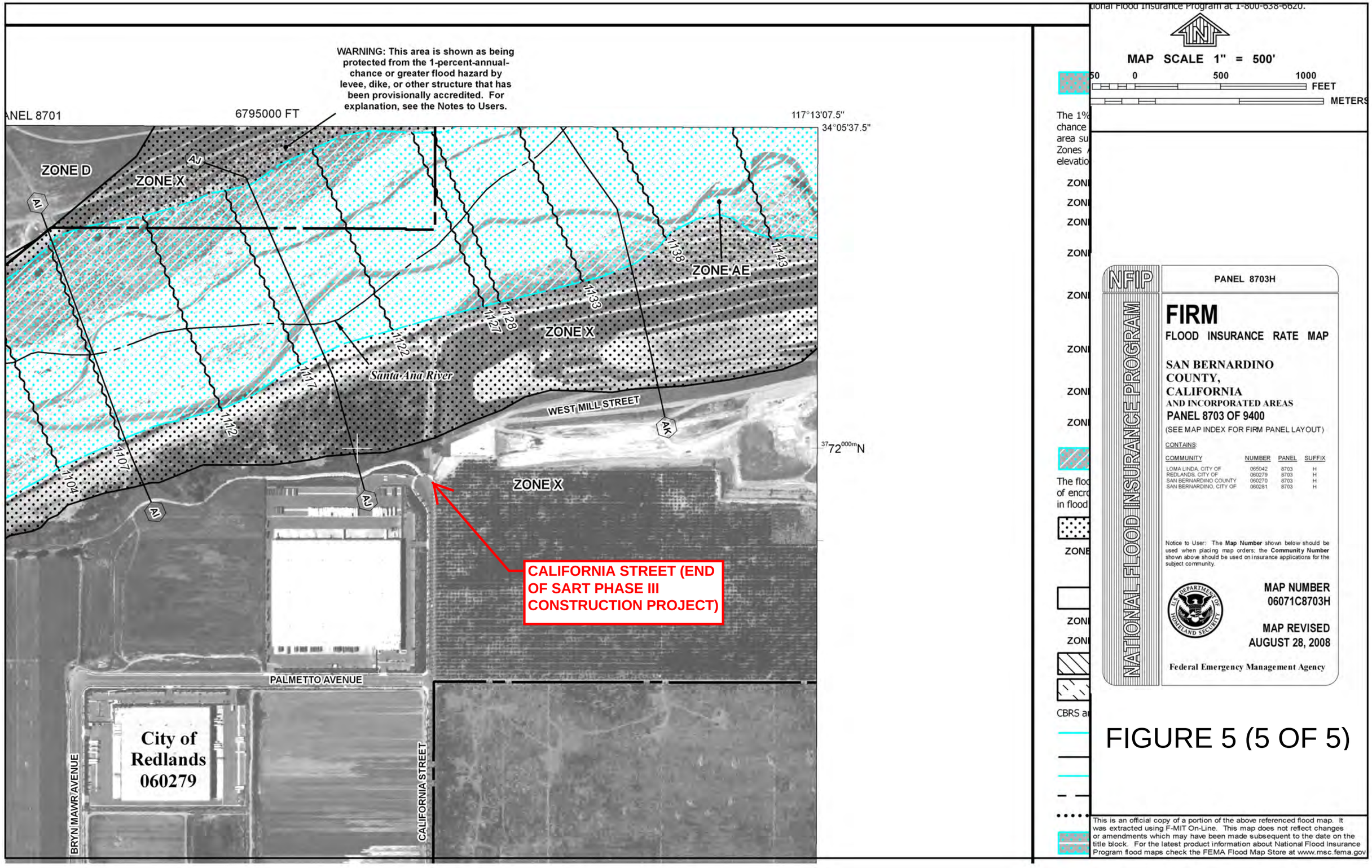


FIGURE 5 (5 OF 5)

APPENDIX 6

Exhibit 4: Initial Study and Mitigated Negative Declaration for the "Santa Ana River Trail, Phase III Project"

SUMMARY FLOODPLAIN ENCROACHMENT REPORT

SANTA ANA RIVER TRAIL PHASE III PROJECT

FROM WATERMAN AVENUE TO CALIFORNIA STREET

IN THE

CITY OF SAN BERNARDINO AND CITY OF REDLANDS

FEDERAL AID NUMBER: STPLER – 5954 (083)

Prepared for:

CALIFORNIA DEPARTMENT OF TRANSPORTATION, DISTRICT 8

Prepared by:

AEI CASC CONSULTING
937 South Via Lata, Suite 500
Colton, CA 92324
(909) 783-0101
www.aei-casc.com

June 8, 2011

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III. REFERENCES …….……..5

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TABLE 2: HYDRAULIC RESULTS

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FIGURE 1: PROJECT LOCATION MAP ON USGS QUAD MAP

FIGURE 2: PROJECT LOCATION EXHIBIT ON AERIAL PHOTOGRAPH

FIGURE 3: SANTA ANA RIVER TRAIL PHASE III CONSTRUCTION PLANS

FIGURE 4: UPPER SANTA ANA RIVER (SEVEN OAKS DAM) 100 YEAR WITH PROJECT FLOODWAY AND FLOODPLAIN DELINEATION PLAN VIEW, SHEETS 1 OF 3, 2 OF 3 AND 3 OF 3

FIGURE 5: FEMA FLOOD INSURANCE RATE MAPS, SAN BERNARDINO COUNTY, SHEETS 1 OF 5, 2 OF 5, 3 OF 5, 4 OF 5, AND 5 OF 5

I. SUMMARY FLOODPLAIN ENCROACHMENT REPORT FORM

Dist.: 08 County: San Bernardino County Rte.: N/A K.P.: N/A
Project No.: N/A Bridge No.: N/A

City: San Bernardino and Redlands
Project Name and Location: Santa Ana River Trail Phase III

Limits: The proposed Santa Ana River Trail Phase III (SART, Phase III) construction project runs along the south bank of the Santa Ana River and extends from Waterman Avenue to California Street for a total length of approximately 19,992 feet or 3.79 miles (see Figures 1 and 2). For the most part, 10-foot section of the proposed trail is paved with AC. For segments under existing bridges, 14-foot section of the trail is paved with PCC. Shoulder backing areas are provided for convenience and safety considerations. These areas vary in width from 2 to 5 feet. The trail improvements located along the top of the river bank will not have an effect on the existing 100-year floodplain surface elevation and velocity of the Santa Ana River. On the other hand, the proposed trail improvements under the existing bridges will have a very minor effect on the hydraulic characteristics of the river. In an effort to minimize this effect, construction of fill encroachment into the river bed will be off-set by cutting into the existing side slope to provide additional flow conveyance (see Figure 3). Constructing the trail improvements in this manner at the bridge crossings will minimize any significant affects to the existing or pre-project hydraulic characteristics of the river.

Floodplain Description: See Section II

		No	Yes
1.	Is the proposed action a longitudinal encroachment of the base floodplain?	___	X
2.	Are the risks associated with the implementation of the proposed action significant?	X	___
3.	Will the proposed action support probable incompatible floodplain development?	X	___
4.	Are there any significant impacts on natural and beneficial floodplain values?	X	___
5.	Routine construction procedures are required to minimize impacts on the floodplain. Are there any special mitigation measures necessary to minimize impacts or restore and preserve natural and beneficial floodplain values? If yes, explain.	X	___
6.	Does the proposed action constitute a significant floodplain encroachment as defined in 23 CFR, Section 650.105(q).	X	___
7.	Are Location Hydraulic Studies that document the above answers on file? If not explain.	___	X

PREPARED BY:

Signature – Hydraulic Project Engineer

_____ Date__06/08/11_____

Ceazar Aguilar, PE
AEI-CASC Consulting

Signature – Environmental

_____ Date__06/08/11_____

Tom Dodson
TDA

Signature – County of San Bernardino

_____ Date_____

Granville M. Bowman, PE
Director of Public Works

II. FLOODPLAIN DESCRIPTION

The floodplain study for the Santa Ana River was previously prepared by the U.S. Army Corps of Engineers (USACOE) in 1987 and revised in 1990 using the HEC-2 model (see Reference 1). The scope of this model extends from the Seven Oaks Dam to Prado Dam. The study was separated into three segments. The first segment starts from the Prado Dam and ends at the downstream end of the confluence point with Lytle – Warm Creek. The second segment is the Lytle – Warm Creek confluence and the third segment extends from the upstream end of the Lytle – Warm Creek confluence up to Seven Oaks Dam.

The proposed Santa Ana River Trail Phase III (SART, Phase III) construction project is located within the third segment, between Waterman Avenue (RM 28.10) and California Street (RM 31.68), as shown on Figure 4 (1 of 3 and 2 of 3). It will cross under the existing Waterman Avenue Bridge, Orange Show Road Bridge and Tippecanoe Bridge crossings. Future bridge crossings under the BNSF railroad and over the Mission Zanja Creek are beyond the scope of this project. Cul-de-sac or turnaround areas are provided at the east side of the BNSF railroad and west side of the Mission Zanja Creek confluence with the Santa Ana River.

The segment of the Santa Ana River that is affected by the SART Phase III project is currently mapped by the Federal Emergency Management Agency (FEMA) with the following special flood hazard zones:

- Zone AE, designated as “100-year floodplain hazard with base flood elevations determined”.
- Zone A, designated as “100-year floodplain hazard with no base flood elevations determined”.
- Zone X (with hatching), designated as “areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depth of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood”.
- Zone X (clear or no hatching), designated as “areas determined to be outside the 0.2% annual chance floodplain”.

The FEMA maps are shown on Figure 5 (1 of 5 thru 5 of 5). For the most part, the floodplain limits are contained within the existing river banks and correspond closely to the USACOE floodplain study as shown on Figure 4 (1 of 3 thru 3 of 3).

In 2003, WRC Consulting Services, Inc. (WRC) prepared a floodplain study in support of the SART, Phase III project (see Reference 2). The study limits extend from Waterman Avenue (RM 28.10) to Alabama Street (RM 32.74), which is approximately 5,600 feet upstream and east of the limit of the SART Phase III construction project (see Figure 4, 1 of 3 thru 3 of 3). Additionally, WRC’s study included analysis of the BNSF railroad crossing and Mission Zanja Creek bridge crossing. As previously mentioned, the SART Phase III construction project does not currently include these two bridge crossings. It is assumed that those crossings will be constructed in the future.

The study was performed using the HEC-RAS model and consisted of the following hydraulic models:

- Model 1 – Based on the previous USACOE flood plain study.
- Model 2 – Based on the modified USACOE flood plain study. The modification involves changes to the pier data for the 3 bridges and a new bridge at Orange Show Road.
- Model 3 – Based on Model 2 that includes the proposed trail improvements.

Model 1 was prepared based upon the 1986 and 1987 topographic maps with 5-foot contours. Model 2 was developed using the Orange Show Road Bridge plans and aerial/ground survey data. Model 2 served as the baseline condition for comparison with the proposed trail improvements condition. Hydraulic data used for Models 2 and 3 such as channel roughness coefficients, downstream hydraulic control, and channel and bank stationing were obtained from Model 1.

The 100-year flow rates that were used in the floodplain study are shown on Table 1.

Table 1: 100-Year Flow Quantity

SEGMENT (RIVER MILE)	100-YEAR FLOW
RM 26.98 – RM 27.56	70,000
RM 27.60 – RM 27.62	68,211
RM 27.64 – RM 27.77	52,000
RM 27.94 – RM 28.57	36,500
RM 28.58 – RM 33.27	33,000
RM 33.28 – RM 33.37	28,000

Waterman Avenue Bridge, Orange Show Road Bridge and Tippecanoe Bridge crossings are approximately located in RM 28.10, 29.06, and 29.51, respectively.

According to WRC's report, the results of the analysis indicate that no significant impacts to the river hydraulics are anticipated with the construction of the proposed trail improvements. Table 2 shows the hydraulic results of the three bridge crossings obtained from WRC's report. The floodplain limits are shown on Figure 4.

Table 2: Hydraulic Results

BRIDGE LOCATION	MODEL 2		MODEL 3		
	FLOODPLAIN ELEVATION	VELOCITY	FLOODPLAIN ELEVATION	VELOCITY	ELEVATION DIFFERENCE
Waterman Avenue	997.86	6.56	997.86	6.56	0.00
	998.20	6.44	998.20	6.43	0.00
Orange Show Road	1025.01	7.29	1024.95	7.39	-0.15
	1026.09	6.27	1026.06	6.33	0.06
Tippecanoe Avenue	1042.38	10.48	1042.37	10.56	0.03
	1044.73	7.68	1042.54	7.75	2.19

III. REFERENCES

1. U.S. Army Corps of Engineers, Los Angeles District (August 1991), *"Santa Ana River Mainstem Project including Santiago Creek"*.

2. WRC Consulting Services, Inc. (April 2003), *"Santa Ana River Trail Phase III Hydraulic Design and Analysis"*.

3. Federal Emergency Management Agency (August 2008), *"Flood Insurance Rate Map for San Bernardino County, Map Numbers 0671C8684H, 0671C8703H, and 06071C8701H"*.

DeLORME
XMap® 7
NORTON
AIR FORCE BASE
SAN BERNARDINO
SARTA PHASE III PROJECT
CALIFORNIA STREET
I-10
WATERMAN AVENUE
LOMA LINDA
Data use subject to license.
© DeLorme. XMap® 7
www.delorme.com
MN (12.4° E)
0 1000 2000 3000 4000 5000
Data Zoom 12-6

FIGURE 1

SART PHASE III PROJECT
California St
10
W San Bernardino Ave
Marigold
Redlands Fwy
Mountain View Ave
S Tippecanoe Ave
Orange Show Rd
E Central Ave
E Mill St
S Lena Rd
E Pioneer Rd
S Waterman Ave
E Hospitality Ln
V Orange Show Rd

FIGURE 2

COUNTY OF SAN BERNARDINO
DEPARTMENT OF PUBLIC WORKS

TRANSPORTATION/REGIONAL PARKS DEPARTEMENT

COUNTY OF SAN BERNARDINO 1853

PLANS FOR CONSTRUCTION ON

SANTA ANA RIVER TRAIL PHASE III

WATERMAN AVE TO CALIFORNIA ST

AREA: CITY OF SAN BERNARDINO AND REDLANDS

INDEX OF SHEETS

1	TITLE SHEET
2	INDEX SHEET
3–4	TYPICAL SECTIONS AND MISC DETAILS
5–25	PLAN & PROFILE SHEETS
26	DETAILS

THE FOLLOWING SPECIAL DRAWINGS AND COUNTY STANDARDS ARE ATTACHED TO THE SPECIAL PROVISIONS:

WORK ORDER NO. H13463 FEDERAL AID NO. STPLER-5954(083)

LENGTH = 3.8 MI.

PRELIMINARY
Subject to Revision

TO BE SUPPLEMENTED BY THE FOLLOWING CALTRANS STANDARD PLANS DATED MAY, 2006.

THIS PROJECT REQUIRES A CONTRACTOR'S LICENSE CLASS "A" OR CLASS C12

COUNTY OF SAN BERNARDINO

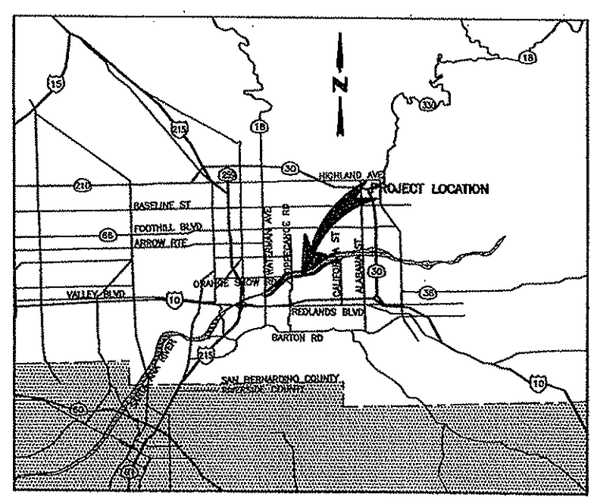
APPROVED BY: _____ _____
GRANVILLE M. BOWMAN, DIRECTOR OF PUBLIC WORKS, R.C.E. 13681 DATE

GENERAL NOTES

U. THE FACT THAT ANY UTILITY FACILITY IS SHOWN OR NOT SHOWN UPON THE PLANS SHALL NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY UNDER SECTION 8-1.10 "UTILITY AND NON-HIGHWAY FACILITIES," OF THE CALTRANS STANDARD SPECIFICATIONS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY, PURSUANT THERETO, TO ASCERTAIN THE LOCATION OF ANY UTILITY FACILITY WHICH MAY BE SUBJECT TO DAMAGE BY REASON OF THE CONTRACTOR'S OPERATIONS.

1. ALL STATIONING NOTES ON PLAN REFER TO THE C.L. IMP. XXXXX ROAD OR SIDE STREET.
2. DIMENSIONS ARE SUBJECT TO TOLERANCES SPECIFIED IN THE CALTRANS STANDARD SPECIFICATIONS.
3. ALL PAVEMENT WIDTH DIMENSIONS SHOWN ON THE PLANS ARE TO THE EDGE OF PAVEMENT OR TO THE TOP OF CURB, UNLESS OTHERWISE NOTED.
4. TRANSITIONS AND WARPING SHALL BE AS SHOWN AND AS DETERMINED BY THE ENGINEER.
5. ASPHALT CONCRETE OVERLAYS SHALL BE FEATHERED TO MEET EXISTING AS SHOWN ON THE PLANS OR AS DETERMINED BY THE ENGINEER.
6. ALL TREES & VEGETATION OUTSIDE THE LIMITS OF EXCAVATION AND EMBANKMENT SLOPE LINES, SHALL BE PROTECTED IN PLACE.

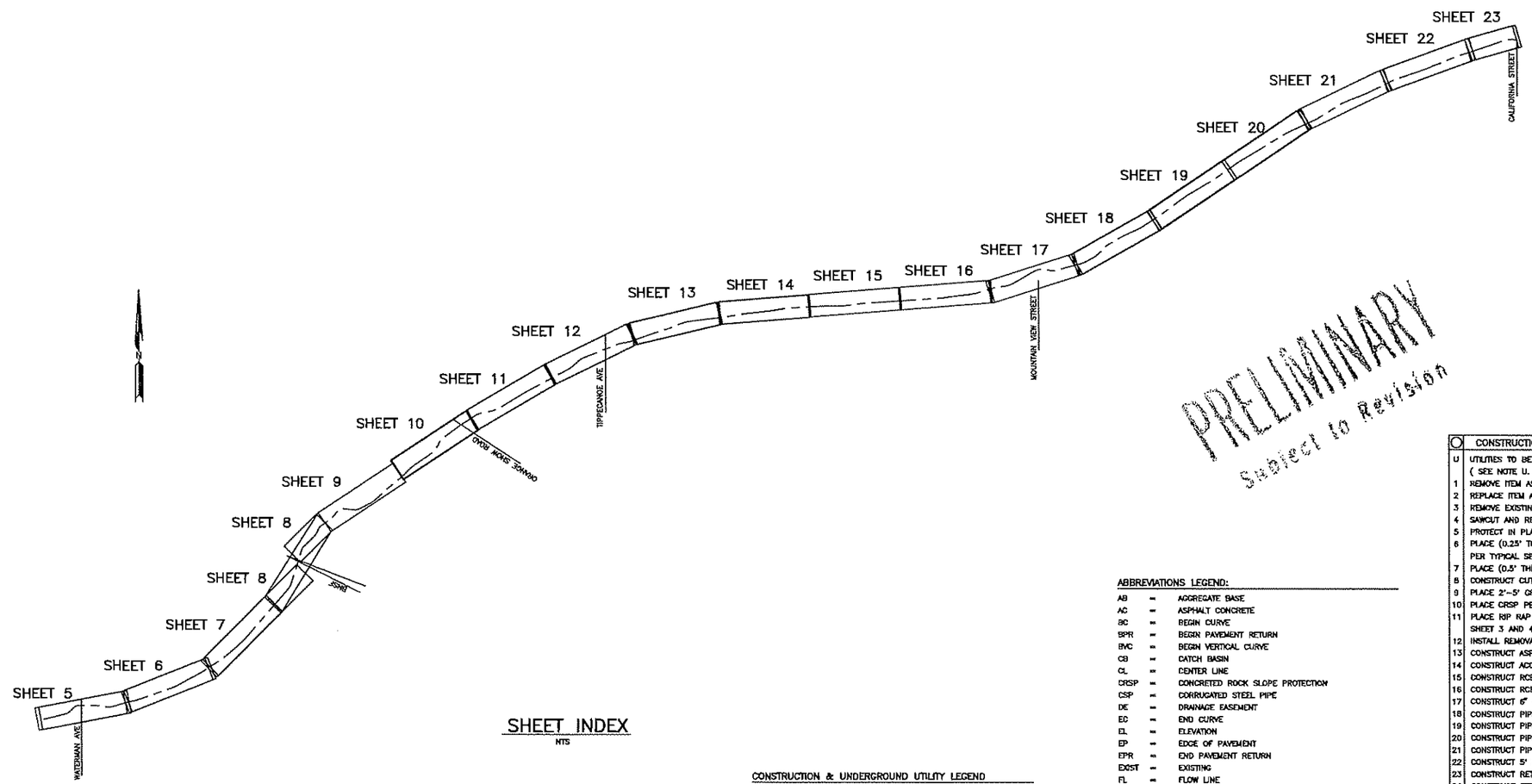
BENCH MARK:



LOCATION MAP
NOT TO SCALE

FIGURE 3

MARK	CHANGES	RESIDENT ENGINEER	DATE
	NO CHANGES		
	FIELD CHANGES	SNT. NO.	TOT. SHTS.



SHEET INDEX

NTS

PRELIMINARY
Subject to Revision

CONSTRUCTION NOTES:

U	UTILITIES TO BE RELOCATED BY OTHERS (SEE NOTE U. OF GENERAL NOTES ON SHEET NO. 1)
1	REMOVE ITEM AS INDICATED
2	REPLACE ITEM AS INDICATED
3	REMOVE EXISTING CONCRETE STRUCTURE
4	SAWCUT AND REMOVE EXISTING ASPHALT CONCRETE PAVEMENT
5	PROTECT IN PLACE
6	PLACE (0.25' THK) ASPHALT CONCRETE OVER (1' THK) COMPACTED SUBGRADE PER TYPICAL SECTIONS SHEET 3
7	PLACE (0.5' THK) PPC PAVEMENT PER TYPICAL SECTIONS SHEET 3 AND 4
8	CONSTRUCT CUT OFF-WALL PER DETAIL SHEET 4
9	PLACE 2'-5' GRADED DIRT SHOULDER (PER PLAN)
10	PLACE CRSP PER TYPICAL SECTION SHEET 3 (TYPE PER PLAN)
11	PLACE RIP RAP STONE (1/4 TON) PER SPECIFICATIONS AND TYPICAL SECTIONS SHEET 3 AND 4 (TYPE PER PLAN)
12	INSTALL REMOVABLE BOLLARDS PER DETAILS SHEET 28
13	CONSTRUCT ASPHALT CONCRETE TURNAROUND AREA PER PLAN AND DETAILS SHEET 4
14	CONSTRUCT ACCESS RAMPS PER PLAN, PROFILE AND SECTIONS SHEET 23, 24 AND 25
15	CONSTRUCT RCB INTLET PER CALTRANS STD PLAN D86A
16	CONSTRUCT RCB OUTLET PER CALTRANS STD PLAN D85
17	CONSTRUCT 6" CONCRETE CURB A1-6 PER CALTRANS STD PLAN A87A
18	CONSTRUCT PIPE OUTLET STRUCTURE PER SBC STD DWG 209
19	CONSTRUCT PIPE OUTLET TYPE A (H=15') PER CALTRANS STD PLAN D90
20	CONSTRUCT PIPE CULVERT HEADWALL STRAIGHT PER CALTRANS STD PLAN D89
21	CONSTRUCT PIPE ANCHORS PER CALTRANS STD PLAN XXXX
22	CONSTRUCT 5' X 5' RCB BOX CULVERT PER CALTRANS STD PLAN D81
23	CONSTRUCT RETANNING WALL PER CALTRANS STD PLAN XXX
24	CONSTRUCT STDRM DRAIN CLEANOUT
25	CONSTRUCT CONCRETE COLLAR FOR RCP SBCFCD SP 157
26	CONSTRUCT PIPE HEADWALL PER CALTRANS STD D89 AND DETAILS ON SHEET X
27	CONSTRUCT TYPE 1 RETAINING WALL PER CALTRANS STD. B3-1 & DETAILS ON SHT. X
28	CONSTRUCT CSP RISER PER DETAIL SHEET 26 (SIZE PER PLAN)
29	CONSTRUCT EXPANSION JOINT PER CALTRANS STD PLAN B3-8
30	CONSTRUCT 16" PIPE GATE PER SBCFCD STD PLAN 209
31	CONSTRUCT 6' CHAIN LINK FENCE PER PLAN
32	FURNISH AND INSTALL 24"ø RCP (1500D)
33	FURNISH AND INSTALL 36"ø RCP (2000D)
34	FURNISH AND INSTALL 84"ø RCP (2000D)
35	INSTALL FITTING 45° ELBOW
36	CONSTRUCT DRIVEWAY APPROACH PER SBC STD DWG 128
37	CONSTRUCT CONCRETE V-DITCH PER PLAN AND DETAIL SHEET 4

ABBREVIATIONS LEGEND:

AB	=	AGGREGATE BASE
AC	=	ASPHALT CONCRETE
BC	=	BEGIN CURVE
BPR	=	BEGIN PAVEMENT RETURN
BVC	=	BEGIN VERTICAL CURVE
CB	=	CATCH BASIN
CL	=	CENTER LINE
CRSP	=	CONCRETED ROCK SLOPE PROTECTION
CSP	=	CORRUGATED STEEL PIPE
DE	=	DRAINAGE EASEMENT
EC	=	END CURVE
EL	=	ELEVATION
EP	=	EDGE OF PAVEMENT
EPR	=	END PAVEMENT RETURN
EXIST	=	EXISTING
FL	=	FLOW LINE
EVC	=	END VERTICAL CURVE
HDWL	=	HEAD WALL
IMP	=	IMPROVEMENT
OG	=	ORIGINAL GROUND
PL	=	PROPERTY LINE
PG	=	PROFILE GRADE
RSP	=	ROCK SLOPE PROTECTION
R/W	=	RIGHT OF WAY
SBC	=	SAN BERNARDINO COUNTY
SE	=	SLOPE EASEMENT
STD	=	STANDARD
SUR	=	SURVEY
TFC	=	TOP FACE OF CURB
THK	=	THICK
TRE	=	TEMPORARY RIGHT OF ENTRY

CONSTRUCTION & UNDERGROUND UTILITY LEGEND

- ASPHALT CONCRETE PAVEMENT
- COMPACTED SUBGRADE
- PORTLAND CEMENT CONCRETE
- GRADED EARTH
- CONC ROCK SLOPE PROTECTION
- PROPOSED SLOPE
- EXISTING SLOPE
- —G— GAS LINE
- —S— SEWER MAIN
- —W— WATER LINE
- —E— ELECTRIC LINE
- —T— TELEPHONE LINE

MARK	DATE	APPR.	REVISIONS

MARK	DATE	APPR.	REVISIONS

MARK	CHANGES		
	NO CHANGES	RESIDENT ENGINEER	DATE

FIELD CHANGES

REGISTERED PROFESSIONAL ENGINEER Erwin R. Fogerson 49060 Exp. 9/30/12 CIVIL STATE OF CALIFORNIA

ERWIN FOGERSON, P.E. — DATE
CHIEF DESIGN ENGINEER

COUNTY OF SAN BERNARDINO
DEPARTMENT OF PUBLIC WORKS

DRAWN BY	DESIGNED BY	PROJ. ENGR.
CB/CH	ADS	CHRIS NGUYEN

SUBMITTED BY

CHRIS NGUYEN, P.E. — DATE
PROJECT ENGINEER

JOHN LATEKO — DATE
YARD X SUPERVISOR
(MAINTENANCE REVIEW)

MOHAM AL-RAYES — DATE
RESIDENT ENGINEER
(CONSTRUCTIBILITY REVIEW)

RECOMMENDED /APPROVED BY

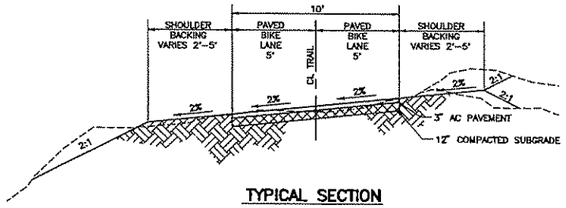
MASIH KASEY, P.E. — DATE
DEPUTY DIRECTOR

GRANVILLE M. BOWMAN, P.E. — DATE
DIRECTOR OF PUBLIC WORKS

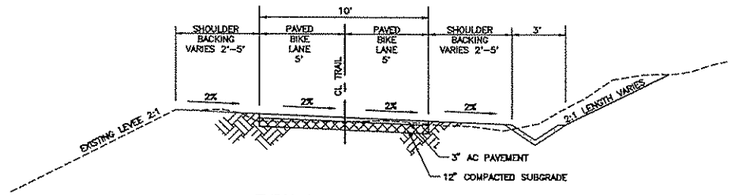
SANTA ANA RIVER TRAIL
PHASE III

SHEET INDEX, LEGENDS
AND CONSTRUCTION NOTES

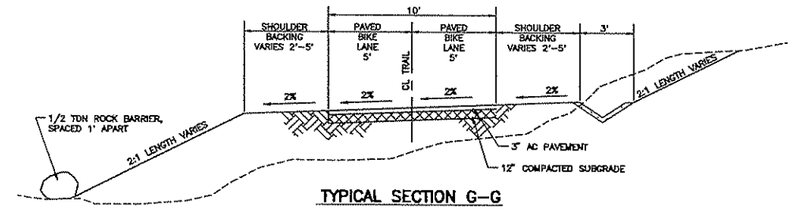
J.L. REF.	W.O. NO.	SCALE	SHT. NO.	TOT. SHTS.
JL XXXX	H13463	AS SHOWN	2	X



TYPICAL SECTION
NTS



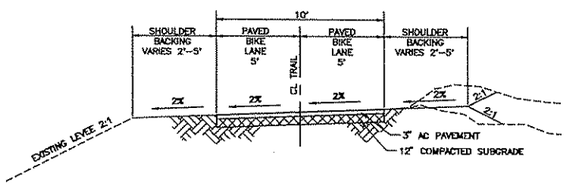
TYPICAL SECTION F-F
NTS



TYPICAL SECTION G-G
NTS

ROCK BARRIER

V-DITCH & SHOULDER



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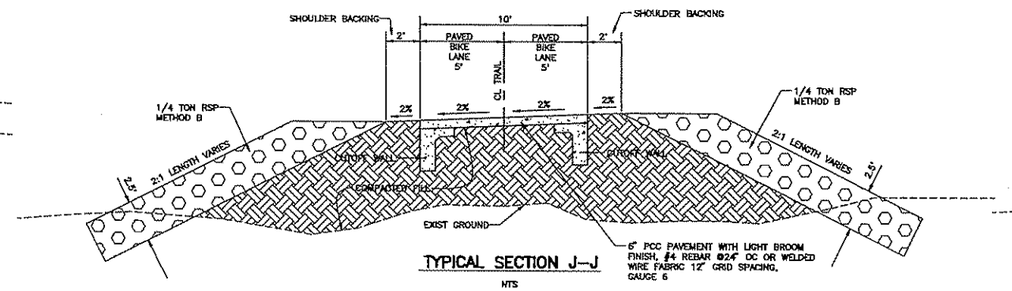
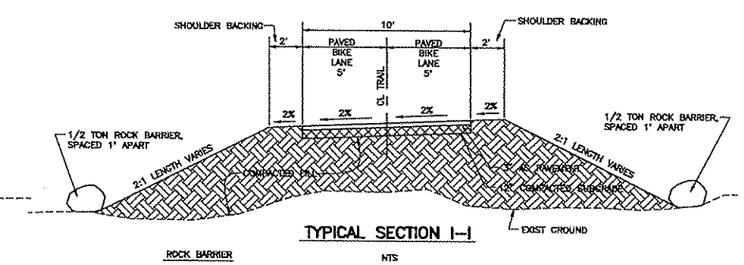
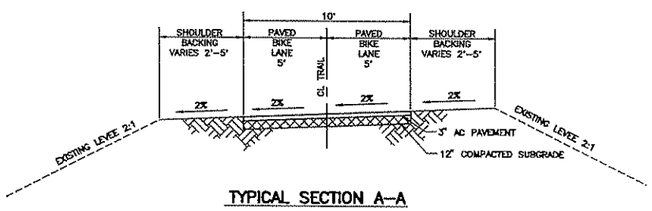


TYPICAL SECTION J-J
NTS

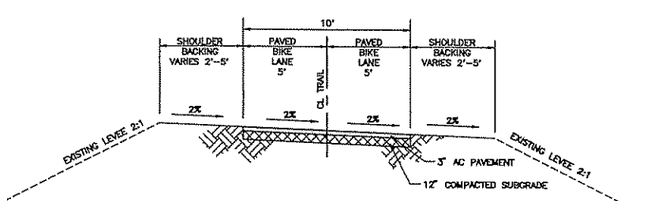


TYPICAL SECTION I-I
NTS

ROCK BARRIER



TYPICAL SECTION A-A
NTS



TYPICAL SECTION E-E
NTS

PRELIMINARY
Subject to Revision

MARK	DATE	APPR.	REVISIONS

MARK	DATE	APPR.	REVISIONS

MARK	CHANGES	
	NO CHANGES	RESIDENT ENGINEER DATE

FIELD CHANGES

REGISTERED PROFESSIONAL ENGINEER — Erwin R. Fogerson — 49060 — Exp. 6/30/12 — CIVIL — STATE OF CALIFORNIA

ERWIN FOGERSON, P.E. DATE
CHIEF DESIGN ENGINEER

COUNTY OF SAN BERNARDINO
DEPARTMENT OF PUBLIC WORKS

DRAWN BY	DESIGNED BY	PROJ. ENGR.
CB/CH	ADS	CHRIS NGUYEN

SUBMITTED BY

CHRIS NGUYEN, P.E. DATE
PROJECT ENGINEER

JOHN LATSKO DATE
YARD X SUPERVISOR
(MAINTENANCE REVIEW)

NIDHAM AL-RAYES DATE
RESIDENT ENGINEER
(CONSTRUCTIBILITY REVIEW)

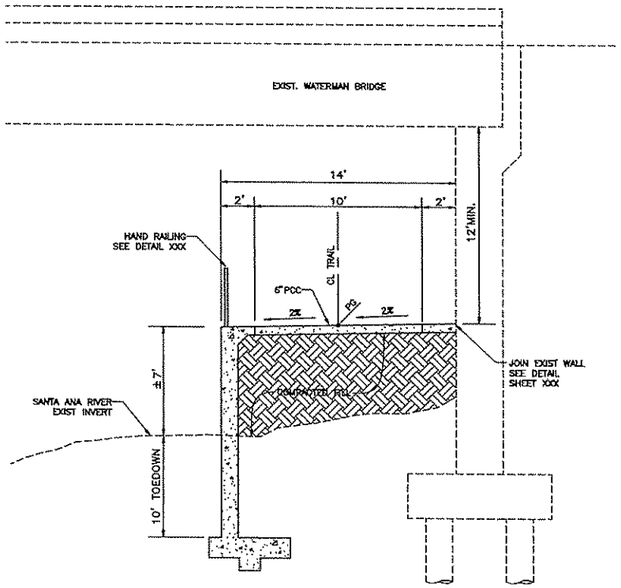
RECOMMENDED /APPROVED BY

MAZIN KASEY, P.E. DATE
DEPUTY DIRECTOR

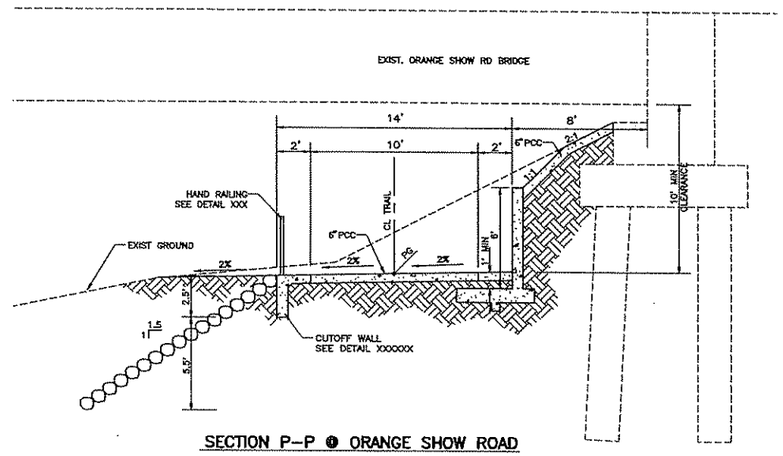
GRANVILLE M. BOWMAN, P.E. DATE
DIRECTOR OF PUBLIC WORKS

SANTA ANA RIVER TRAIL
PHASE III
TYPICAL SECTIONS &
MISCELLANEOUS DETAILS

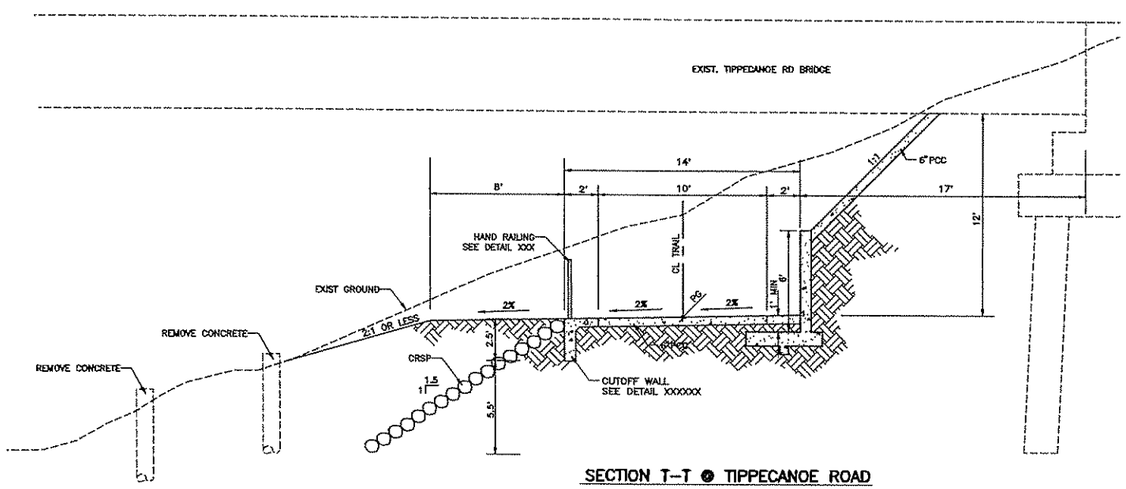
J.L. REF.	W.O. NO.	SCALE	SHT. NO.	TOT. SHTS.
JL XXXX	H13463	AS SHOWN	3	X



SECTION D–D @ WATERMAN AVE
NTS



SECTION P–P @ ORANGE SHOW ROAD
NTS



SECTION T–T @ TIPPECANOE ROAD
NTS

PRELIMINARY
Subject to Revision

MARK	DATE	APPR.	REVISIONS

MARK	DATE	APPR.	REVISIONS

MARK	CHANGES	
	NO CHANGES	RESIDENT ENGINEER DATE

FIELD CHANGES

REGISTERED PROFESSIONAL ENGINEER Erwin R. Fogerson 49060 Exp. 9/30/12 CIVIL STATE OF CALIFORNIA

ERWIN FOGERSON, P.E. DATE
CHIEF DESIGN ENGINEER

COUNTY OF SAN BERNARDINO
DEPARTMENT OF PUBLIC WORKS

DRAWN BY	DESIGNED BY	PROJ. ENGR.
CB/CH	ADS	CHRIS NGUYEN

SUBMITTED BY

CHRIS NGUYEN, P.E. DATE
PROJECT ENGINEER

JOHN LATSKO DATE
YARD X SUPERVISOR
(MAINTENANCE REVIEW)

NIDHAM AL-RAYES DATE
RESIDENT ENGINEER
(CONSTRUCTIBILITY REVIEW)

RECOMMENDED /APPROVED BY

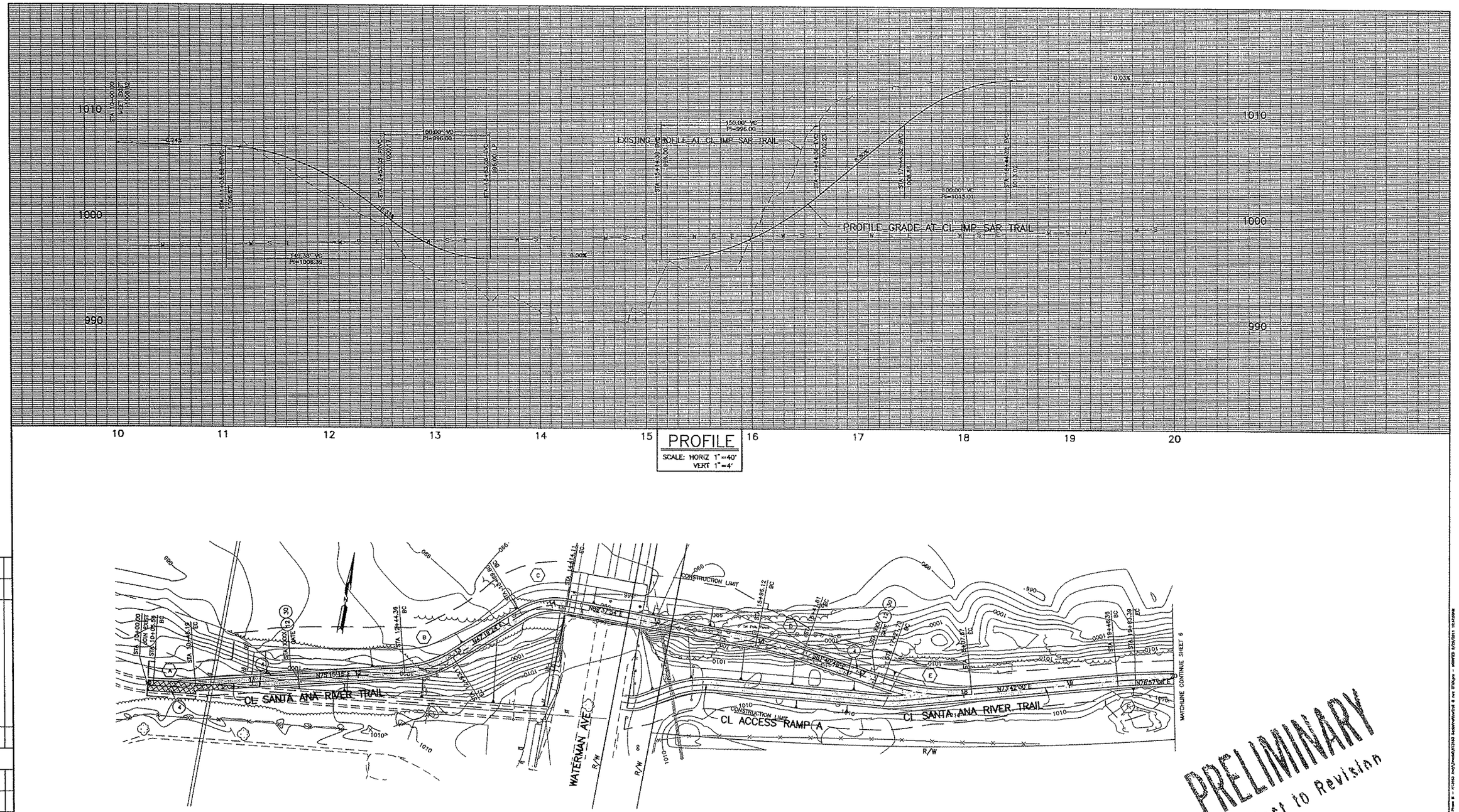
MAZIN KASEY, P.E. DATE
DEPUTY DIRECTOR

GRANVILLE M. BOWMAN, P.E. DATE
DIRECTOR OF PUBLIC WORKS

SANTA ANA RIVER TRAIL
PHASE III

TYPICAL SECTIONS &
MISCELLANEOUS DETAILS

J.L. REF.	W.O. NO.	SCALE	SHT. NO.	TOT. SHTS.
JL XXXX	H13463	AS SHOWN	4	X



CL CURVE DATA				
	Δ	R	L	T
A	7°45'37"	300'	40.63'	20.35'
B	27°5'51"	100'	46.75'	24.87'
C	42°18'31"	60'	44.31'	23.22'
D	8°41'17"	300'	45.49'	22.79'
E	26°37'11"	200'	85.94'	43.64'
F	3°15'07"	300'	17.03'	8.52'

GRAPHIC SCALE 1"=40'
0 40 80 120

MARK	CHANGES		
	NO CHANGES	RESIDENT ENGINEER	DATE

FIELD CHANGES

REGISTERED PROFESSIONAL ENGINEER — ERWIN R. FOGERSON — 49060 — Exp. 9/30/12 — CIVIL — STATE OF CALIFORNIA

ERWIN FOGERSON, P.E. — CHIEF DESIGN ENGINEER — DATE

COUNTY OF SAN BERNARDINO
DEPARTMENT OF PUBLIC WORKS

DRAWN BY: CB/CH | DESIGNED BY: ADS | PROJ. ENGR.: CHRIS NGUYEN

SUBMITTED BY

CHRIS NGUYEN, P.E. — PROJECT ENGINEER — DATE

JOHN LATSKO — YARD X SUPERVISOR (MAINTENANCE REVIEW) — DATE

NIDHAM AL-RAYES — RESIDENT ENGINEER (CONSTRUCTIBILITY REVIEW) — DATE

RECOMMENDED /APPROVED BY

WAZIR KASEY, P.E. — DEPUTY DIRECTOR — DATE

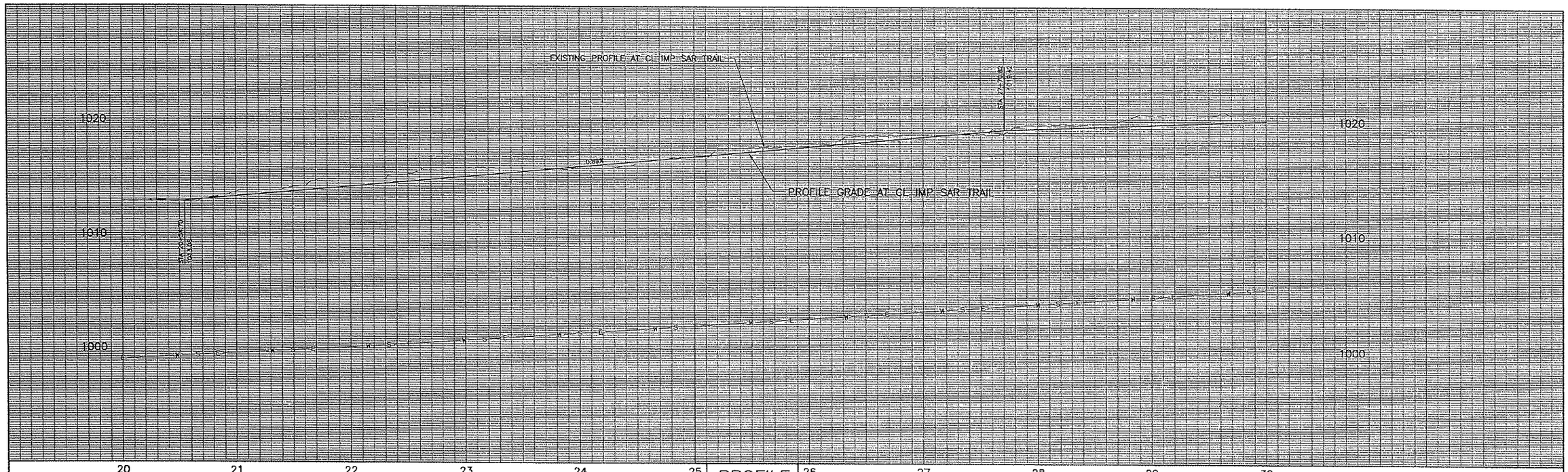
GRANVILLE W. BOWMAN, P.E. — DIRECTOR OF PUBLIC WORKS — DATE

SANTA ANA RIVER TRAIL
PHASE III
WATERMAN AVE TO CALIFORNIA ST
FROM STA 10+00 TO STA 20+00

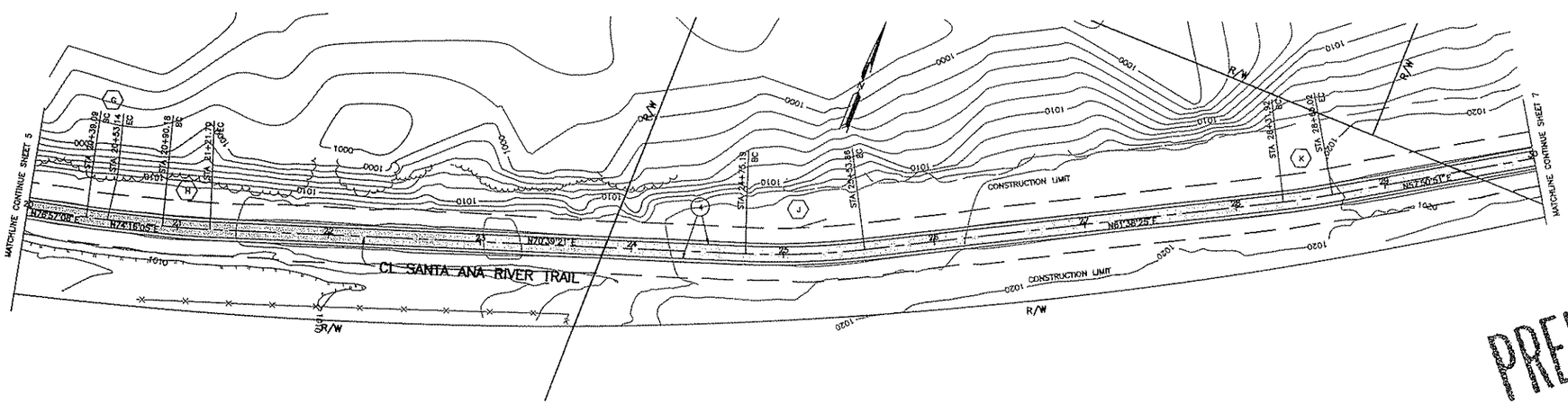
J.L. REF.	W.O. NO.	PLAN SCALE	SHT. NO.	TOT. SHTS.
JL XXXX	H13463	1" = 40'	5	X

MARK	REVISIONS	APPR.	DATE

MARK	REVISIONS	APPR.	DATE



PROFILE
SCALE: HORIZ 1"=40'
VERT 1"=4'



PRELIMINARY
Subject to Revision

CL CURVE DATA				
	Δ	R	L	T
G	2°41'03"	300'	14.05'	7.03'
H	3°38'44"	500'	31.52'	15.77'
J	9°00'56"	500'	78.68'	39.42'
K	3°47'34"	500'	33.10'	16.56'

GRAPHIC SCALE 1"=40'
0 40 80 120

MARK	CHANGES	
	NO CHANGES	RESIDENT ENGINEER DATE

FIELD CHANGES

REGISTERED PROFESSIONAL ENGINEER Erwin R. Fogerson 49060 Exp. 9/30/12 CIVIL STATE OF CALIFORNIA

ERWIN FOGERSON, P.E. DATE
CHIEF DESIGN ENGINEER

COUNTY OF SAN BERNARDINO
DEPARTMENT OF PUBLIC WORKS

DRAWN BY	DESIGNED BY	PROJ. ENGR.
CB/CH	ADS	CHRIS NGUYEN

SUBMITTED BY

CHRIS NGUYEN, P.E. DATE
PROJECT ENGINEER

JOHN LATSKO DATE
YARD X SUPERVISOR
(MAINTENANCE REVIEW)

NOMAN AL-RAYES DATE
RESIDENT ENGINEER
(CONSTRUCTIBILITY REVIEW)

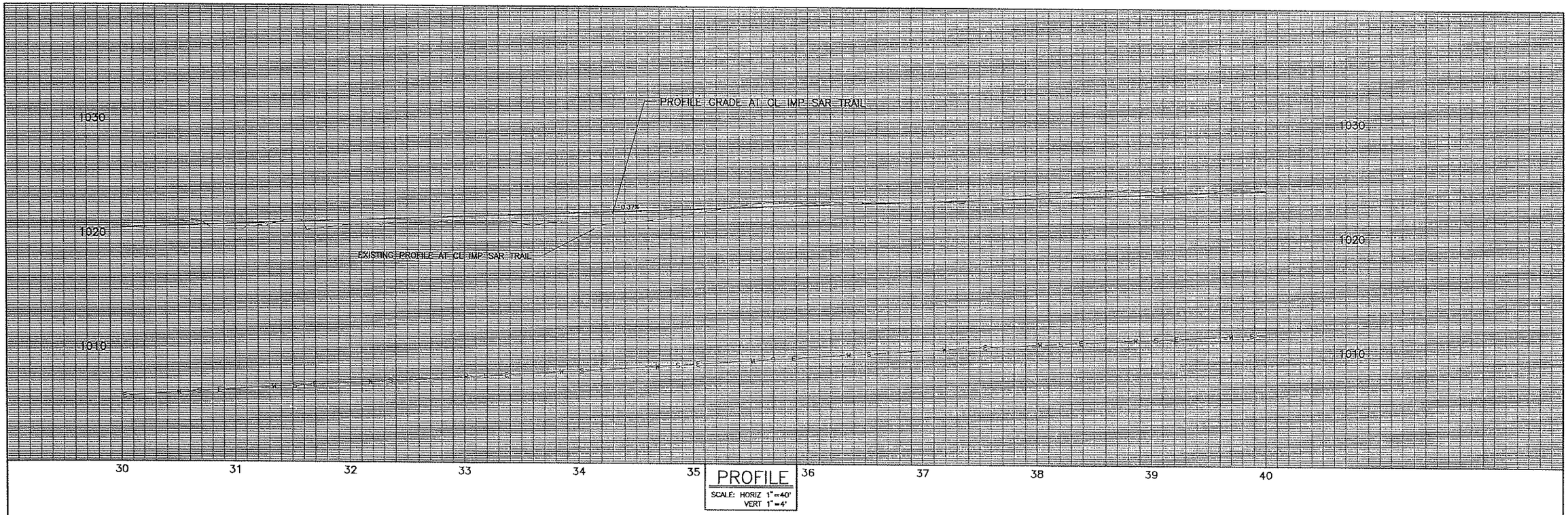
RECOMMENDED /APPROVED BY

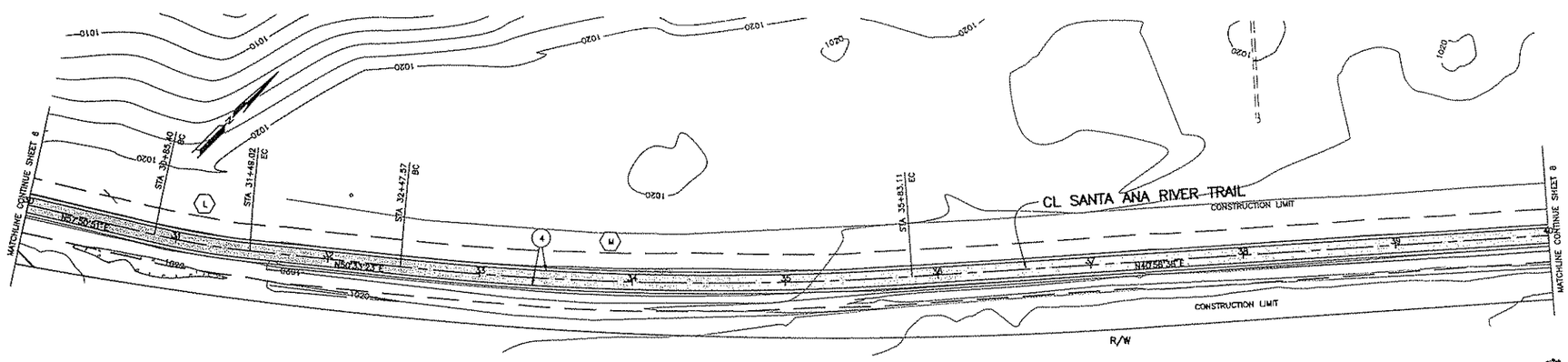
MAJID KASEY, P.E. DATE
DEPUTY DIRECTOR

GRANVILLE M. BOWMAN, P.E. DATE
DIRECTOR OF PUBLIC WORKS

SANTA ANA RIVER TRAIL
PHASE III
WATERMAN AVE TO CALIFORNIA ST
FROM STA 20+00 TO STA 30+00

J.L. REF.	W.O. NO.	PLAN SCALE	SHT. NO.	TOT. SHT'S.
JL XXXX	H13463	1" = 40'	6	X





PRELIMINARY
Subject to Revision

CL CURVE DATA				
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L	7°17'28"	500'	63.63'	31.86'
M	9°36'45"	2000'	335.54'	168.17'

GRAPHIC SCALE 1"=40'
0 40 80 120

MARK	CHANGES	RESIDENT ENGINEER	DATE
	NO CHANGES		

FIELD CHANGES

REGISTERED PROFESSIONAL ENGINEER Erwin R. Fogerson 49060 Exp. 9/30/12 CIVIL STATE OF CALIFORNIA

ERWIN FOGERSON, P.E. — CHIEF DESIGN ENGINEER — DATE

COUNTY OF SAN BERNARDINO
DEPARTMENT OF PUBLIC WORKS

DRAWN BY: CB/CH | DESIGNED BY: ADS | PROJ. ENGR.: CHRIS NGUYEN

SUBMITTED BY

CHRIS NGUYEN, P.E. — PROJECT ENGINEER — DATE

JOHN LATSKO — YARD X SUPERVISOR (MAINTENANCE REVIEW) — DATE

NOMAN AL-RAYES — RESIDENT ENGINEER (CONSTRUCTIBILITY REVIEW) — DATE

RECOMMENDED /APPROVED BY

NADIN KASEY, P.E. — DEPUTY DIRECTOR — DATE

GRANVILLE M. BOWMAN, P.E. — DIRECTOR OF PUBLIC WORKS — DATE

SANTA ANA RIVER TRAIL
PHASE III
WATERMAN AVE TO CALIFORNIA ST
FROM STA 30+00 TO STA 40+00

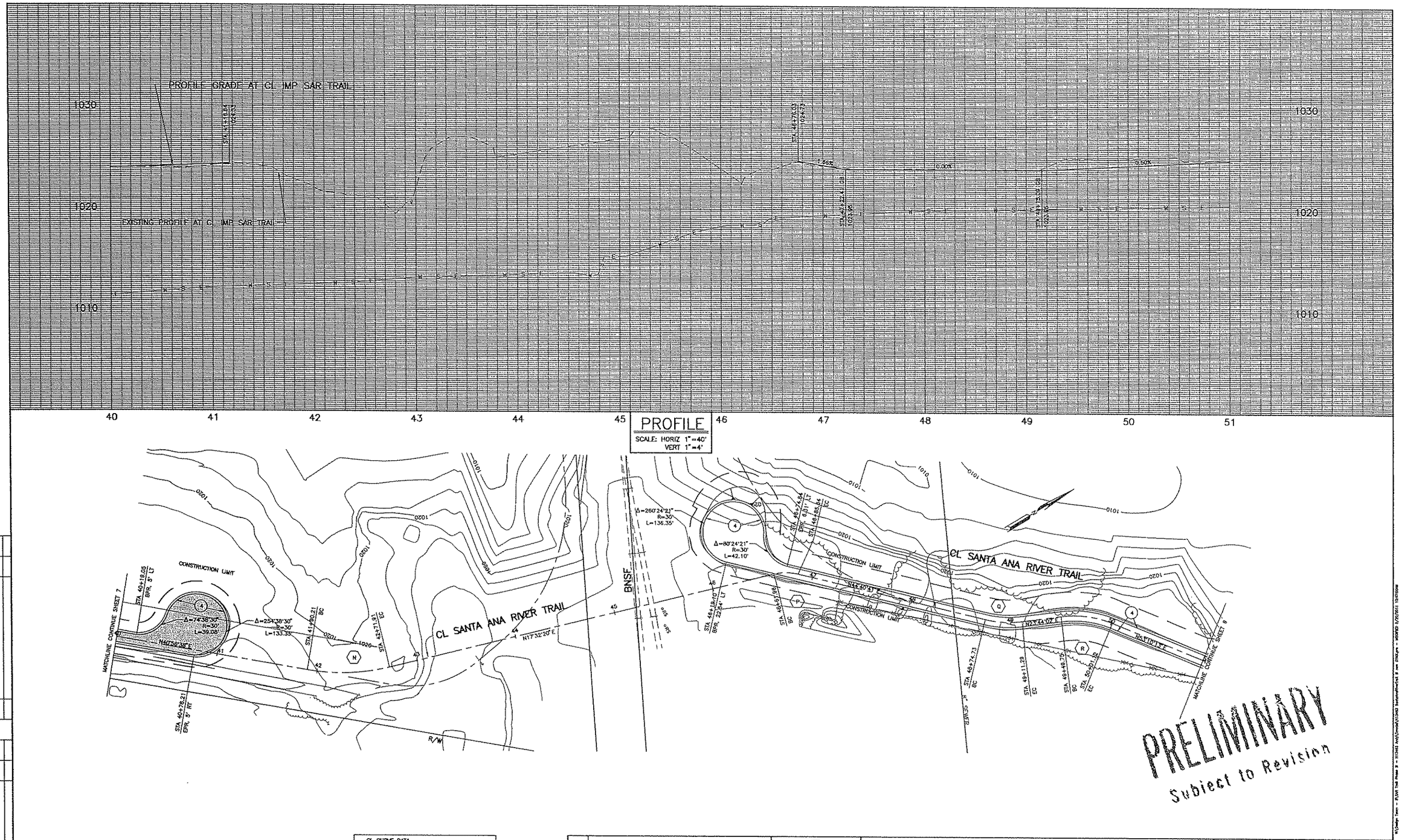
J.L. REF.	W.O. NO.	PLAN SCALE	SHT. NO.	TOT. SHT'S.
JL XXXX	H13463	1" = 40'	7	X

MARK	CHANGES	APPR.	DATE

REVISIONS

MARK	CHANGES	APPR.	DATE

REVISIONS



CL CURVE DATA				
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N	23°24'18"	200'	81.70'	41.43'
P	27°08'21"	50'	23.68'	12.07'
Q	20°56'38"	100'	36.55'	18.46'
R	29°26'10"	100'	51.38'	26.27'

GRAPHIC SCALE 1"=40'
0 40 80 120

MARK	CHANGES		
	NO CHANGES	RESIDENT ENGINEER	DATE

FIELD CHANGES

REGISTERED PROFESSIONAL ENGINEER Erwin R. Foderson 49060 Exp. 9/30/12 CIVIL STATE OF CALIFORNIA

ERWIN FODERSON, P.E. DATE
CHIEF DESIGN ENGINEER

COUNTY OF SAN BERNARDINO
DEPARTMENT OF PUBLIC WORKS

DRAWN BY CB/CH | DESIGNED BY ADS | PROJ. ENGR. CHRIS NGUYEN

SUBMITTED BY

CHRIS NGUYEN, P.E. DATE
PROJECT ENGINEER

JOHN LATSKO DATE
YARD & SUPERVISOR
(MAINTENANCE REVIEW)

NIKHAM AL-RAYES DATE
RESIDENT ENGINEER
(CONSTRUCTIBILITY REVIEW)

RECOMMENDED /APPROVED BY

MAZIN KASEY, P.E. DATE
DEPUTY DIRECTOR

GRANVILLE W. BOWMAN, P.E. DATE
DIRECTOR OF PUBLIC WORKS

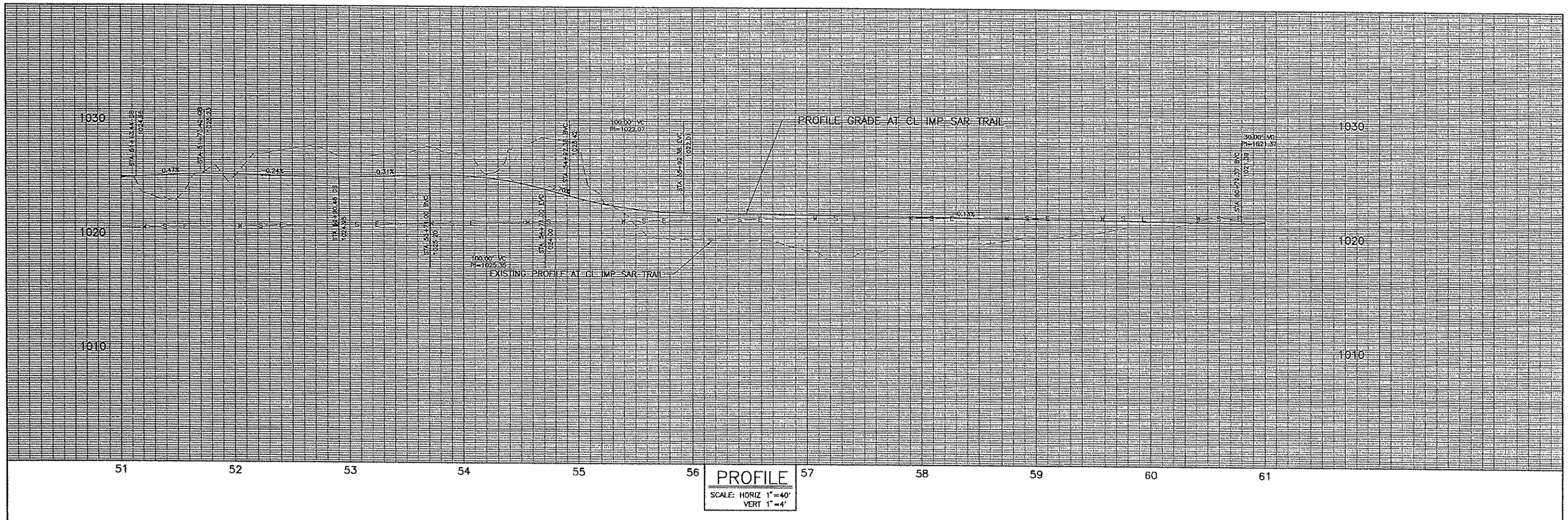
SANTA ANA RIVER TRAIL
PHASE III
WATERMAN AVE TO CALIFORNIA ST
FROM STA 40+00 TO STA 51+00

J.L. REF.	W.O. NO.	PLAN SCALE	SHT. NO.	TOT. SHTS.
JL XXXX	H13463	1" = 40'	8	X

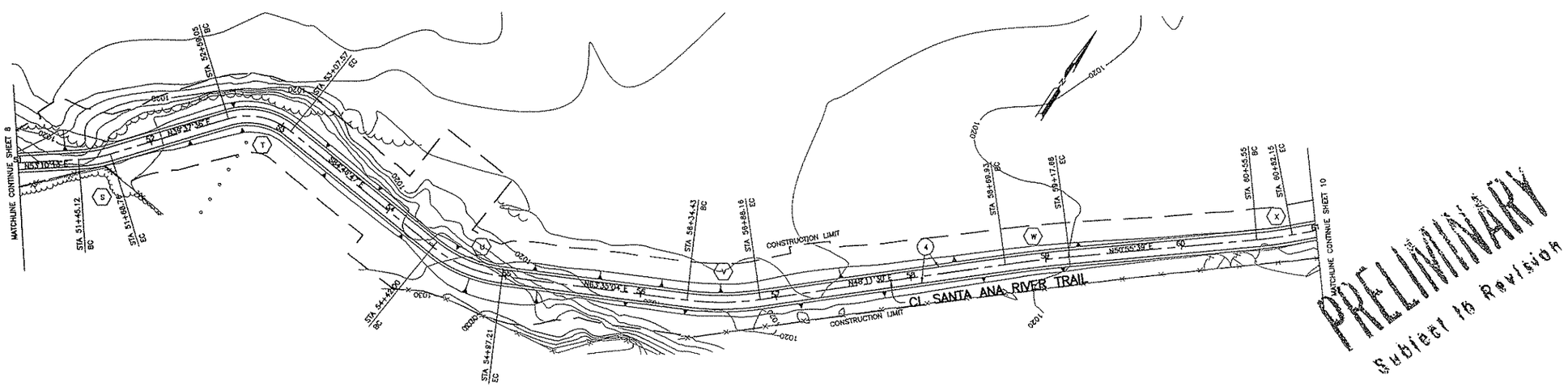
MARK	CHANGES	DATE	APPR.	REVISIONS

MARK	CHANGES	DATE	APPR.	REVISIONS

Exhibit 4: Initial Study and Mitigated Negative Declaration for the
"Santa Ana River Trail, Phase III Project"



PROFILE
SCALE: HORIZ 1"=40'
VERT 1"=4'



GRAPHIC SCALE 1"=40'
0 40 80 120

CL CURVE DATA				
	Δ	R	L	T
S	13°32'36"	100'	23.64'	11.87'
T	55°35'37"	50'	48.51'	26.36'
U	31°38'09"	100'	55.22'	28.33'
V	15°23'34"	200'	53.73'	27.03'
W	2°44'09"	1000'	47.75'	23.88'
X	5°04'48"	300'	26.60'	13.31'

MARK	CHANGES		
	NO CHANGES	RESIDENT ENGINEER	DATE

FIELD CHANGES

REGISTERED PROFESSIONAL ENGINEER — CHRIS R. FOGERSON — 49060 — Exp. 9/30/12 — CIVIL — STATE OF CALIFORNIA

DRWIN FOGERSON, P.E. — CHIEF DESIGN ENGINEER — DATE

COUNTY OF SAN BERNARDINO
DEPARTMENT OF PUBLIC WORKS

DRAWN BY	DESIGNED BY	PROJ. ENGR.
CB/CH	ADS	CHRIS NGUYEN

SUBMITTED BY

CHRIS NGUYEN, P.E. — PROJECT ENGINEER — DATE

JOHN LATSKO — YARD X SUPERVISOR (MAINTENANCE REVIEW) — DATE

NIGHAM AL-RAYES — RESIDENT ENGINEER (CONSTRUCTIBILITY REVIEW) — DATE

RECOMMENDED /APPROVED BY

MAZIN KASEY, P.E. — DEPUTY DIRECTOR — DATE

GRANVILLE M. BONHAM, P.E. — DIRECTOR OF PUBLIC WORKS — DATE

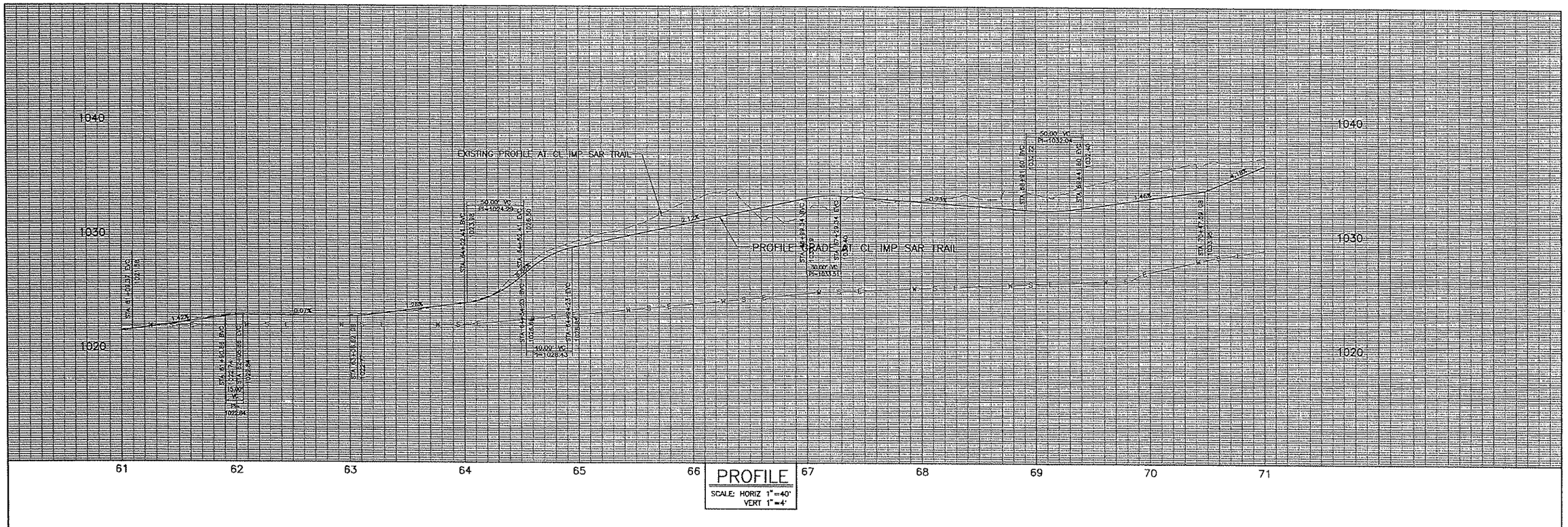
SANTA ANA RIVER TRAIL
PHASE III
WATERMAN AVE TO CALIFORNIA ST
FROM STA 51+00 TO STA 61+00

J.L. REF.	W.O. NO.	PLAN SCALE	SHT. NO.	TOT. SHTS.
JL XXXX	H13463	1" = 40'	9	X

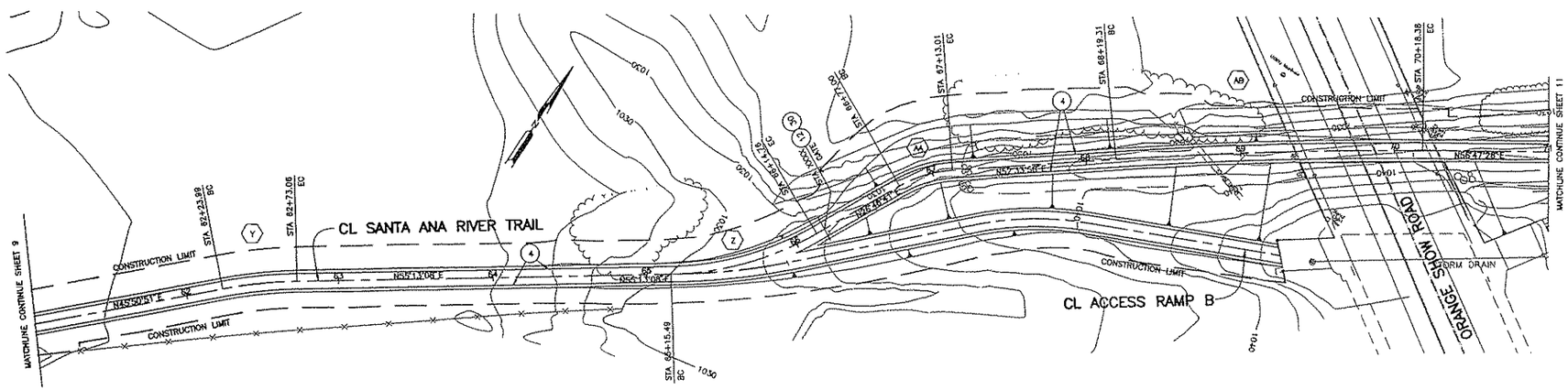
MARK	DATE	APPR.	REVISIONS

MARK	DATE	APPR.	REVISIONS

Exhibit 4: Initial Study and Mitigated Negative Declaration for the
"Santa Ana River Trail, Phase III Project"



PROFILE
SCALE: HORIZ 1"=40'
VERT 1"=4'



PRELIMINARY
Subject to Revision

GRAPHIC SCALE 1"=40'
0 40 80 120

CL CURVE DATA:				
	Δ	R	L	T
Y	9°22'17"	300'	49.07'	24.59'
Z	28°26'27"	200'	99.28'	50.68'
AA	25°47'17"	80'	36.01'	18.31'
AB	4°14'00"	2700'	199.49'	99.79'

MARK	CHANGES	RESIDENT ENGINEER	DATE
	NO CHANGES		

FIELD CHANGES

REGISTERED PROFESSIONAL ENGINEER Erwin R. Fogerson 49060 Exp. 6/30/12 CIVIL STATE OF CALIFORNIA

ERWIN FOGERSON, P.E. — CHIEF DESIGN ENGINEER — DATE

COUNTY OF SAN BERNARDINO
DEPARTMENT OF PUBLIC WORKS

DRAWN BY	DESIGNED BY	PROJ. ENGR.
CB/CH	ADS	CHRIS NGUYEN

SUBMITTED BY

CHRIS NGUYEN, P.E. — PROJECT ENGINEER — DATE

JOHN LATSKO — YARD X SUPERVISOR (MAINTENANCE REVIEW) — DATE

NIDHAM AL-RAYES — RESIDENT ENGINEER (CONSTRUCTIBILITY REVIEW) — DATE

RECOMMENDED /APPROVED BY

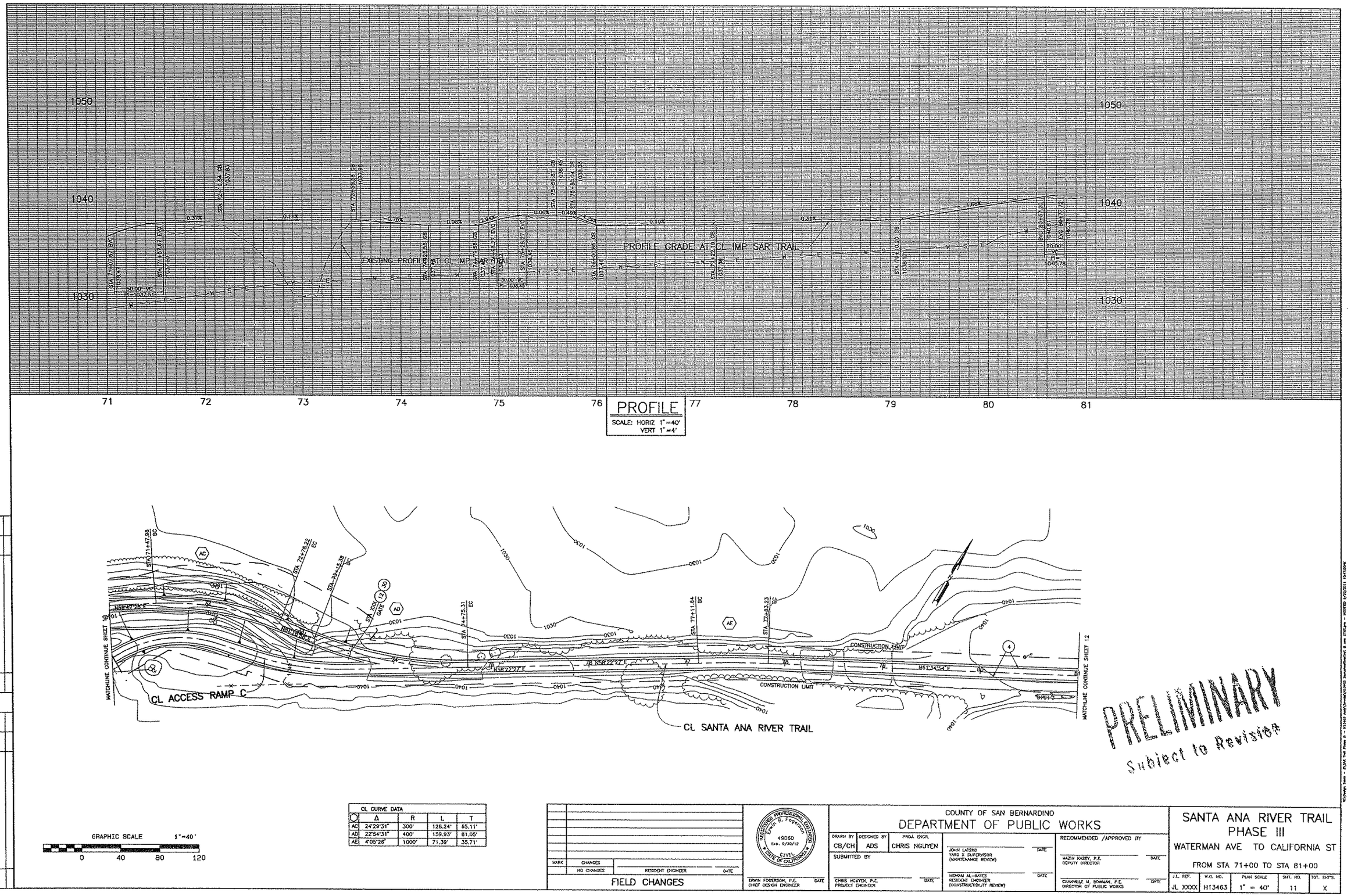
MAZIN KASEY, P.E. — DEPUTY DIRECTOR — DATE

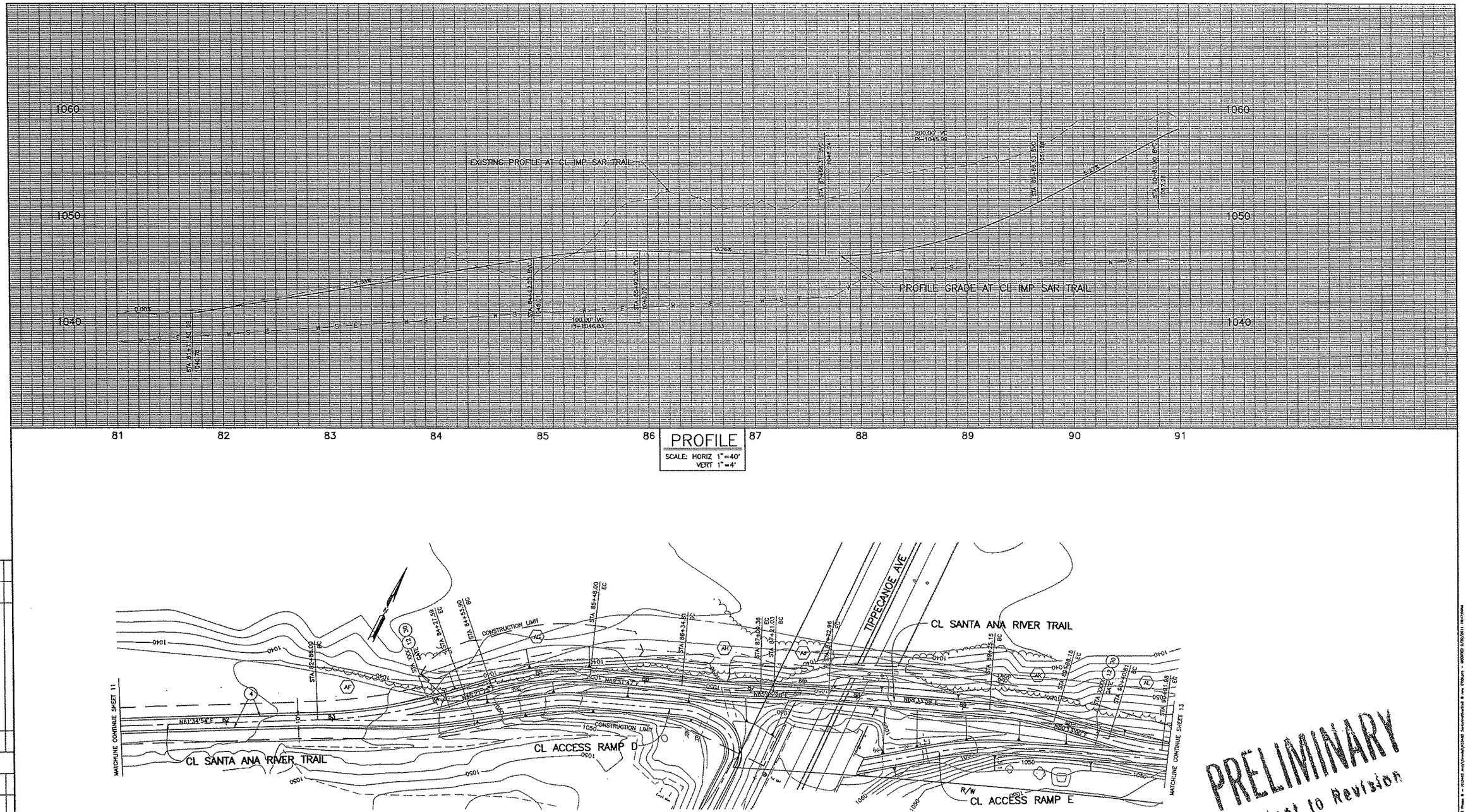
GRANVILLE M. BOWMAN, P.E. — DIRECTOR OF PUBLIC WORKS — DATE

SANTA ANA RIVER TRAIL
PHASE III
WATERMAN AVE TO CALIFORNIA ST
FROM STA 61+00 TO STA 71+00

JL. REF.	W.O. NO.	PLAN SCALE	SHT. NO.	TOT. SHTS.
JL XXXX	H13463	1" = 40'	10	X

Exhibit 4: Initial Study and Mitigated Negative Declaration for the
"Santa Ana River Trail, Phase III Project"





CL CURVE DATA				
	Δ	R	L	T
AF	16°13'30"	500'	141.59'	71.27'
AG	24°30'22"	220'	94.10'	47.78'
AH	4°16'19"	1000'	74.56'	37.30'
AJ	2°58'31"	1000'	51.93'	25.97'
AK	11°39'01"	300'	61'	30.61'
AL	9°48'40"	300'	51.37'	25.75'

GRAPHIC SCALE 1"=40'
0 40 80 120

MARK	CHANGES	RESIDENT ENGINEER	DATE
	NO CHANGES		

FIELD CHANGES

REGISTERED PROFESSIONAL ENGINEER Erwin R. Fogerson 49060 Exp. 9/30/12 CIVIL STATE OF CALIFORNIA

ERWIN FOGERSON, P.E. — CHIEF DESIGN ENGINEER — DATE

COUNTY OF SAN BERNARDINO
DEPARTMENT OF PUBLIC WORKS

DRAWN BY CB/CH | DESIGNED BY ADS | PROJ. ENGR. CHRIS NGUYEN

SUBMITTED BY

CHRIS NGUYEN, P.E. — PROJECT ENGINEER — DATE

JOHN LATSKO — YARD X SUPERVISOR (MAINTENANCE REVIEW) — DATE

NIDHAM AL-HAYES — RESIDENT ENGINEER (CONSTRUCTIBILITY REVIEW) — DATE

RECOMMENDED /APPROVED BY

MAZIN KASEY, P.E. — DEPUTY DIRECTOR — DATE

GRANVILLE M. BONHAM, P.E. — DIRECTOR OF PUBLIC WORKS — DATE

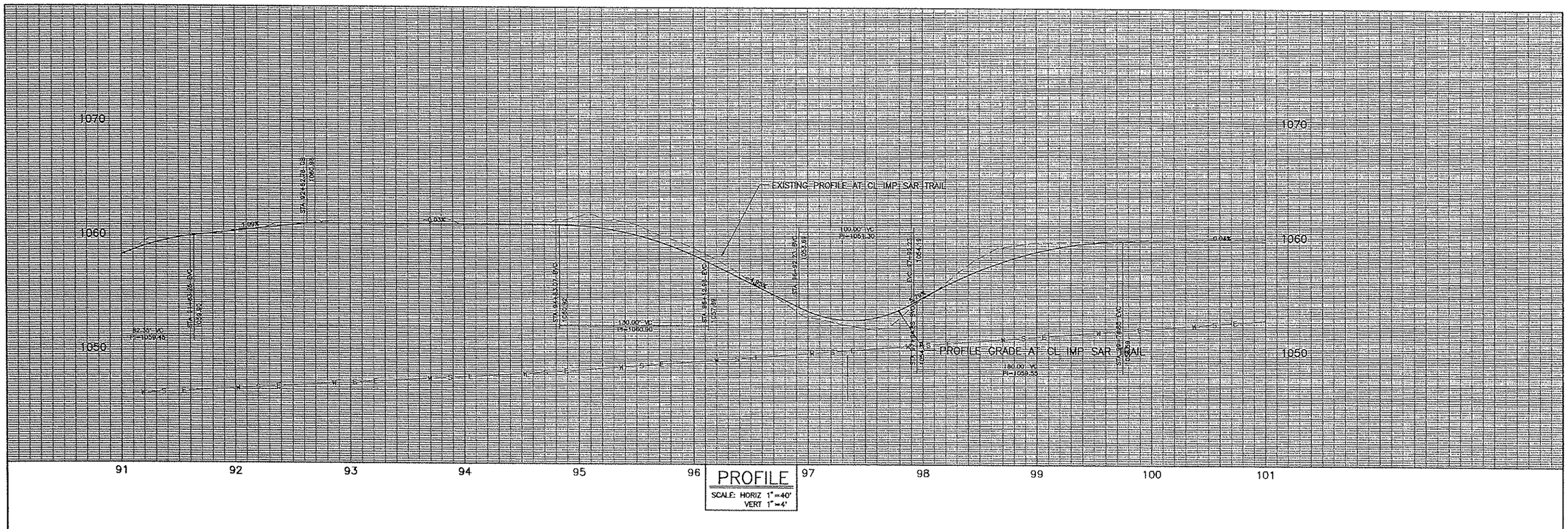
SANTA ANA RIVER TRAIL
PHASE III
WATERMAN AVE TO CALIFORNIA ST
FROM STA 81+00 TO STA 91+00

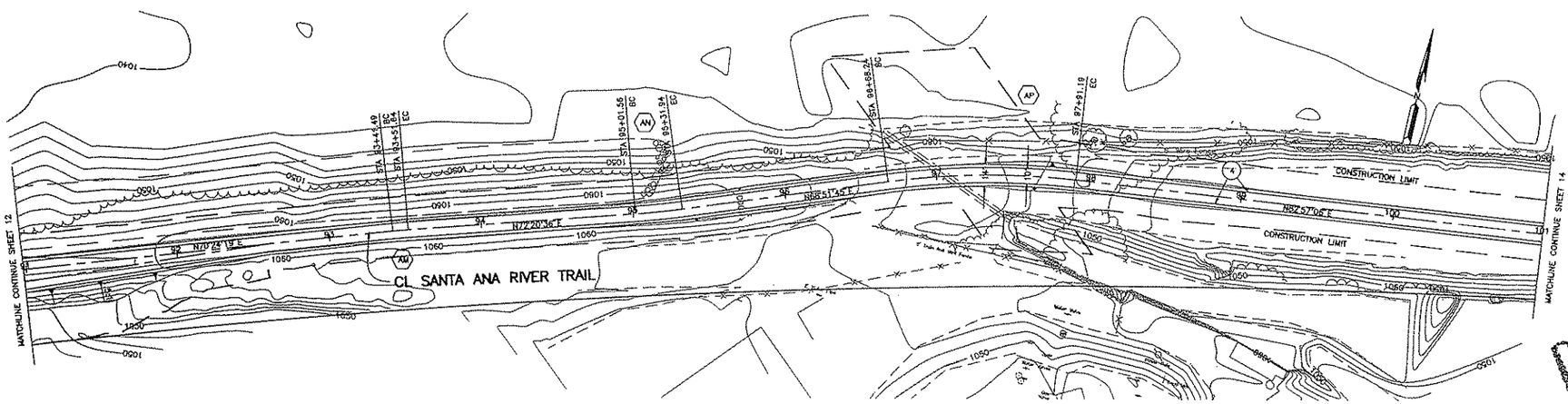
J.L. REF.	W.O. NO.	PLAN SCALE	SHT. NO.	TOT. SHTS.
JL XXXX	H13463	1" = 40'	12	X

MARK	REVISIONS	APPR.	DATE

MARK	REVISIONS	APPR.	DATE

Exhibit 4: Initial Study and Mitigated Negative Declaration for the
"Santa Ana River Trail, Phase III Project"





PRELIMINARY
Subject to Revision

CL CURVE DATA				
	Δ	R	L	T
AU	1°56'17"	300'	10.15'	5.07'
AN	3°28'51"	500'	30.38'	15.19'
AP	14°05'21"	500'	122.95'	61.79'

GRAPHIC SCALE 1"=40'
0 40 80 120

MARK	CHANGES		
	NO CHANGES	RESIDENT ENGINEER	DATE

FIELD CHANGES

REGISTERED PROFESSIONAL ENGINEER
ERWIN R. FODERSON
49060
Exp. 6/30/12
CIVIL
STATE OF CALIFORNIA

ERWIN FODERSON, P.E. DATE
CHIEF DESIGN ENGINEER

COUNTY OF SAN BERNARDINO
DEPARTMENT OF PUBLIC WORKS

DRAWN BY CB/CH | DESIGNED BY ADS | PROJ. ENGR. CHRIS NGUYEN

SUBMITTED BY

CHRIS NGUYEN, P.E. DATE
PROJECT ENGINEER

JOHN LATSKO DATE
YARD & SUPERVISOR
(MAINTENANCE REVIEW)

MICHAEL AL-RAYES DATE
RESIDENT ENGINEER
(CONSTRUCTIBILITY REVIEW)

RECOMMENDED /APPROVED BY

MAZIN KASEY, P.E. DATE
DEPUTY DIRECTOR

GRANVILLE M. BOWMAN, P.E. DATE
DIRECTOR OF PUBLIC WORKS

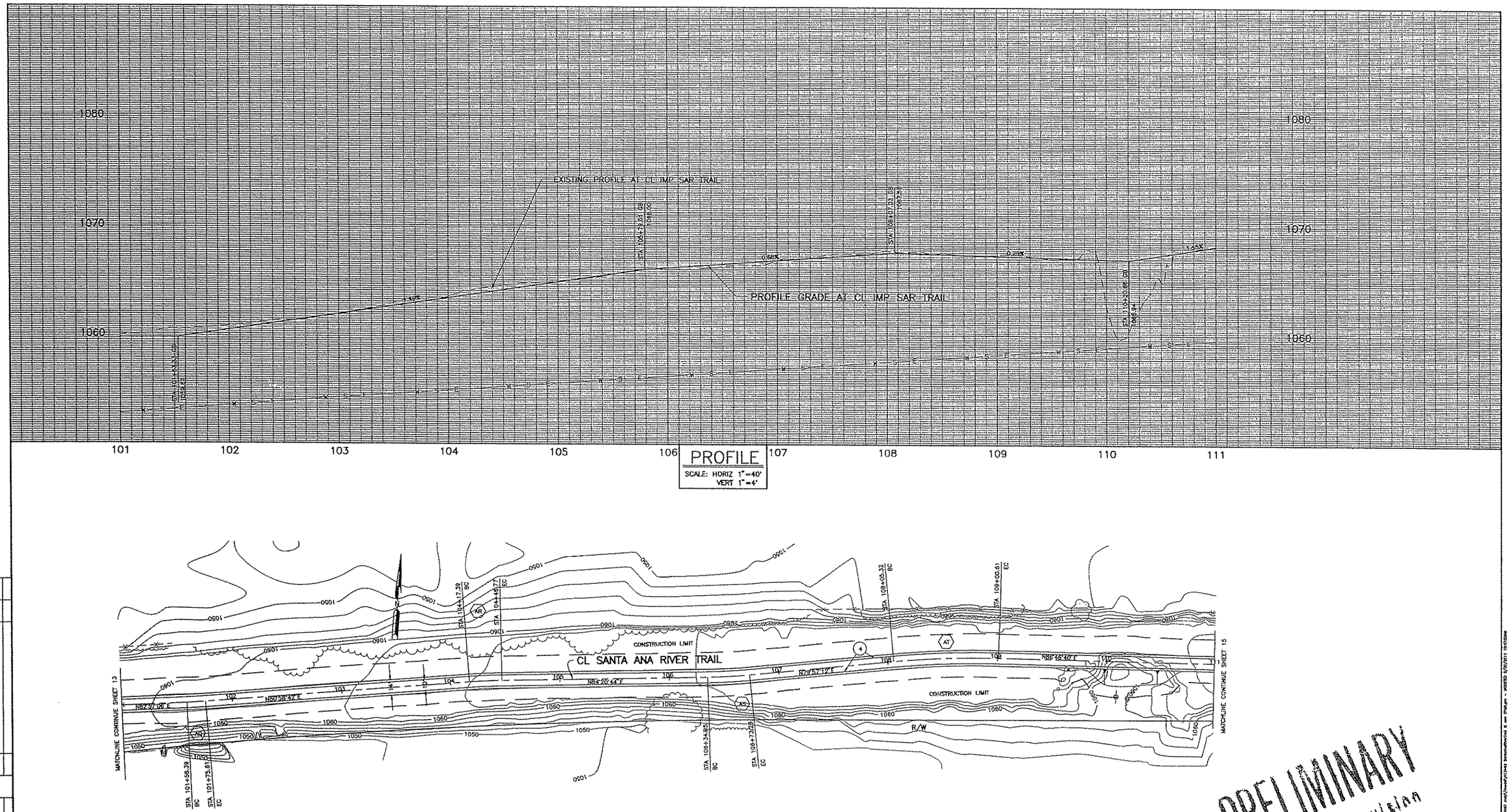
SANTA ANA RIVER TRAIL
PHASE III
WATERMAN AVE TO CALIFORNIA ST
FROM STA 91+00 TO STA 101+00

J.L. REF.	W.O. NO.	PLAN SCALE	SHT. NO.	TOT. SHT'S.
JL XXXX	H13463	1" = 40'	13	X

MARK	REVISIONS	APPR.	DATE

MARK	REVISIONS	APPR.	DATE

Exhibit 4: Initial Study and Mitigated Negative Declaration for the
"Santa Ana River Trail, Phase III Project"



PRELIMINARY
Subject to Revision

CL CURVE DATA				
	Δ	R	L	T
AQ	1°58'25"	500'	17.22'	8.61'
AR	3°22'03"	500'	29.39'	14.70'
AS	4°23'32"	500'	38.33'	19.17'
AT	6°49'28"	800'	95.29'	47.70'

GRAPHIC SCALE 1"=40'
0 40 80 120

MARK	CHANGES	RESIDENT ENGINEER	DATE
	NO CHANGES		

FIELD CHANGES

REGISTERED PROFESSIONAL ENGINEER Erwin R. Fogerson 49060 Exp. 9/30/12 CIVIL STATE OF CALIFORNIA

ERWIN FOGERSON, P.E. — CHIEF DESIGN ENGINEER — DATE

COUNTY OF SAN BERNARDINO
DEPARTMENT OF PUBLIC WORKS

DRAWN BY	DESIGNED BY	PROJ. ENGR.
CB/CH	ADS	CHRIS NGUYEN

SUBMITTED BY

CHRIS NGUYEN, P.E. — PROJECT ENGINEER — DATE

JOHN LATSKO — YARD X SUPERVISOR (MAINTENANCE REVIEW) — DATE

NIDHAM AL-HAYES — RESIDENT ENGINEER (CONSTRUCTIBILITY REVIEW) — DATE

RECOMMENDED /APPROVED BY

MAZIN KASEY, P.E. — DEPUTY DIRECTOR — DATE

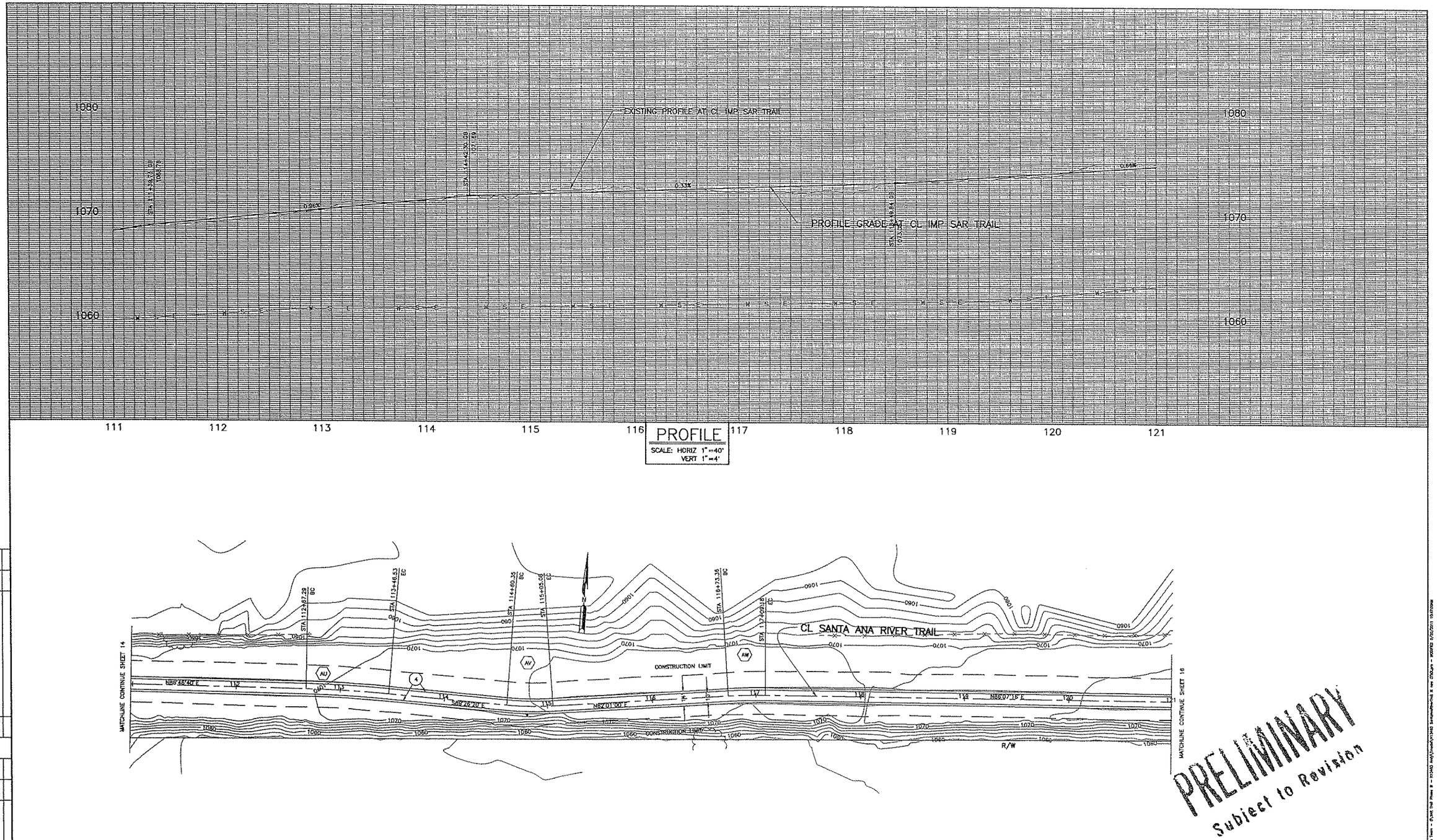
GRANVILLE M. BOWMAN, P.E. — DIRECTOR OF PUBLIC WORKS — DATE

SANTA ANA RIVER TRAIL
PHASE III
WATERMAN AVE TO CALIFORNIA ST
FROM STA 101+00 TO STA 111+00

J.L. REF.	W.O. NO.	PLAN SCALE	SHT. NO.	TOT. SHT'S.
JL XXXX	H13463	1" = 40'	14	X

MARK	REVISIONS	APPR.	DATE

MARK	REVISIONS	APPR.	DATE



CL CURVE DATA				
	Δ	R	L	T
AU	3°47'00"	1200'	79.24'	39.63'
AV	8°32'39"	300'	44.74'	22.41'
AW	4°05'16"	500'	35.82'	17.92'

GRAPHIC SCALE 1"=40'
0 40 80 120

MARK	CHANGES
	NO CHANGES

RESIDENT ENGINEER DATE

FIELD CHANGES

REGISTERED PROFESSIONAL ENGINEER ERWIN R. FOGERSON 49060 Exp. 6/30/12 CIVIL STATE OF CALIFORNIA

ERWIN FOGERSON, P.E. DATE
CHIEF DESIGN ENGINEER

COUNTY OF SAN BERNARDINO
DEPARTMENT OF PUBLIC WORKS

DRAWN BY CB/CH | DESIGNED BY ADS | PROJ. ENGR. CHRIS NGUYEN

SUBMITTED BY

CHRIS NGUYEN, P.E. DATE
PROJECT ENGINEER

JOHN LATSKO DATE
YARD X SUPERVISOR
(MAINTENANCE REVIEW)

MOHAM AL-RAYES DATE
RESIDENT ENGINEER
(CONSTRUCTIBILITY REVIEW)

RECOMMENDED /APPROVED BY

WASIM KASEY, P.E. DATE
DEPUTY DIRECTOR

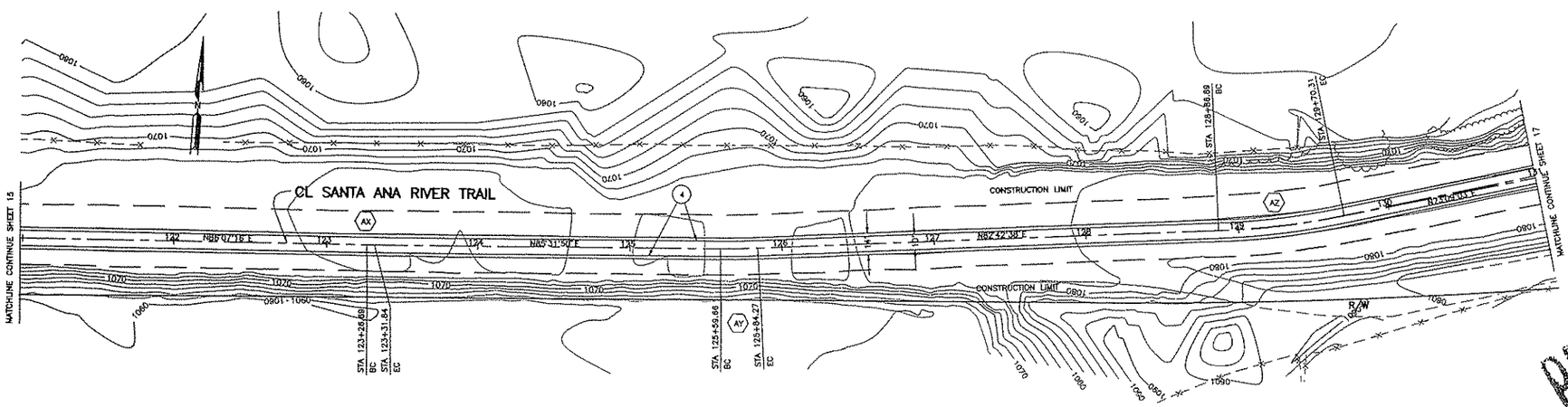
GRANVELLE M. BOWMAN, P.E. DATE
DIRECTOR OF PUBLIC WORKS

SANTA ANA RIVER TRAIL
PHASE III
WATERMAN AVE TO CALIFORNIA ST
FROM STA 111+00 TO STA 121+00

J.L. REF.	W.O. NO.	PLAN SCALE	SHT. NO.	TOT. SHTS.
JL XXXX	H13463	1" = 40'	15	X

MARK	REVISIONS	APPR.	DATE

MARK	REVISIONS	APPR.	DATE



PRELIMINARY
Subject to Revision

CL CURVE DATA				
	Δ	R	L	T
AX	00°35'26"	500'	5.15'	2.58'
AY	2°49'12"	500'	24.61'	12.31'
AZ	9°33'35"	500'	83.42'	41.81'

GRAPHIC SCALE 1"=40'
0 40 80 120

MARK	CHANGES		
	NO CHANGES	RESIDENT ENGINEER	DATE

FIELD CHANGES

REGISTERED PROFESSIONAL ENGINEER Erwin R. Fogerson 49060 Exp. 6/30/12 CIVIL STATE OF CALIFORNIA

ERWIN FOGERSON, P.E. — CHIEF DESIGN ENGINEER — DATE

COUNTY OF SAN BERNARDINO
DEPARTMENT OF PUBLIC WORKS

DRAWN BY	DESIGNED BY	PROJ. ENGR.
CB/CH	ADS	CHRIS NGUYEN

SUBMITTED BY

CHRIS NGUYEN, P.E. — PROJECT ENGINEER — DATE

JOHN LATSKO — YARD X SUPERVISOR (MAINTENANCE REVIEW) — DATE

NIDHAM AL-RAYES — RESIDENT ENGINEER (CONSTRUCTIBILITY REVIEW) — DATE

RECOMMENDED /APPROVED BY

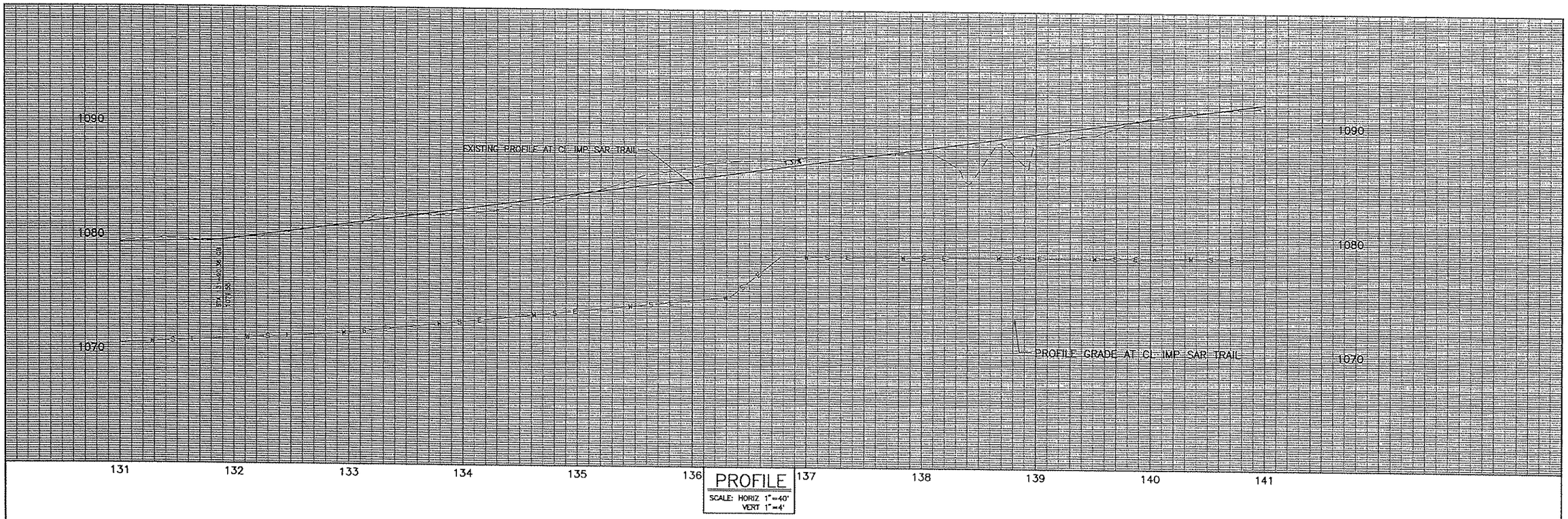
MAZIN KASEY, P.E. — DEPUTY DIRECTOR — DATE

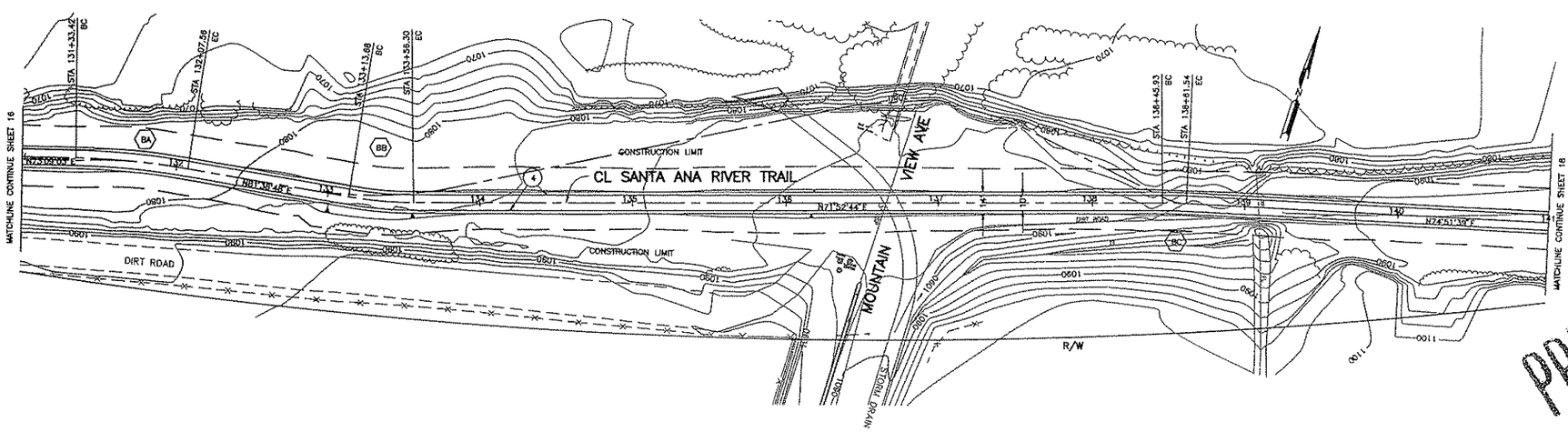
GRANVILLE W. BOWMAN, P.E. — DIRECTOR OF PUBLIC WORKS — DATE

SANTA ANA RIVER TRAIL
PHASE III
WATERMAN AVE TO CALIFORNIA ST
FROM STA 121+00 TO STA 131+00

J.L. REF.	W.O. NO.	PLAN SCALE	SHT. NO.	TOT. SHT'S.
JL XXXX	H13463	1" = 40'	16	X

Exhibit 4: Initial Study and Mitigated Negative Declaration for the
"Santa Ana River Trail, Phase III Project"





PRELIMINARY
Subject to Revision

CL CURVE DATA				
	Δ	R	L	T
BA	8°29'45"	500'	74.14'	37.14'
BB	9°46'04"	250'	42.62'	21.36'
BC	2°58'55"	300'	15.61'	7.81'

GRAPHIC SCALE 1"=40'
0 40 80 120

MARK	CHANGES	
	NO CHANGES	RESIDENT ENGINEER DATE

FIELD CHANGES

REGISTERED PROFESSIONAL ENGINEER Ervin B. Fogerson 49060 Exp. 6/30/12 CIVIL STATE OF CALIFORNIA

ERWIN TOODRSON, P.E. DATE
CHIEF DESIGN ENGINEER

COUNTY OF SAN BERNARDINO
DEPARTMENT OF PUBLIC WORKS

DRAWN BY	DESIGNED BY	PROJ. ENGR.
CB/CH	AOS	CHRIS NGUYEN

SUBMITTED BY

CHRIS NGUYEN, P.E. DATE
PROJECT ENGINEER

JOHN LATSKO DATE
YARD 3 SUPERVISOR
(MAINTENANCE REVIEW)

NIKHAM AL-RAYES DATE
RESIDENT ENGINEER
(CONSTRUCTIBILITY REVIEW)

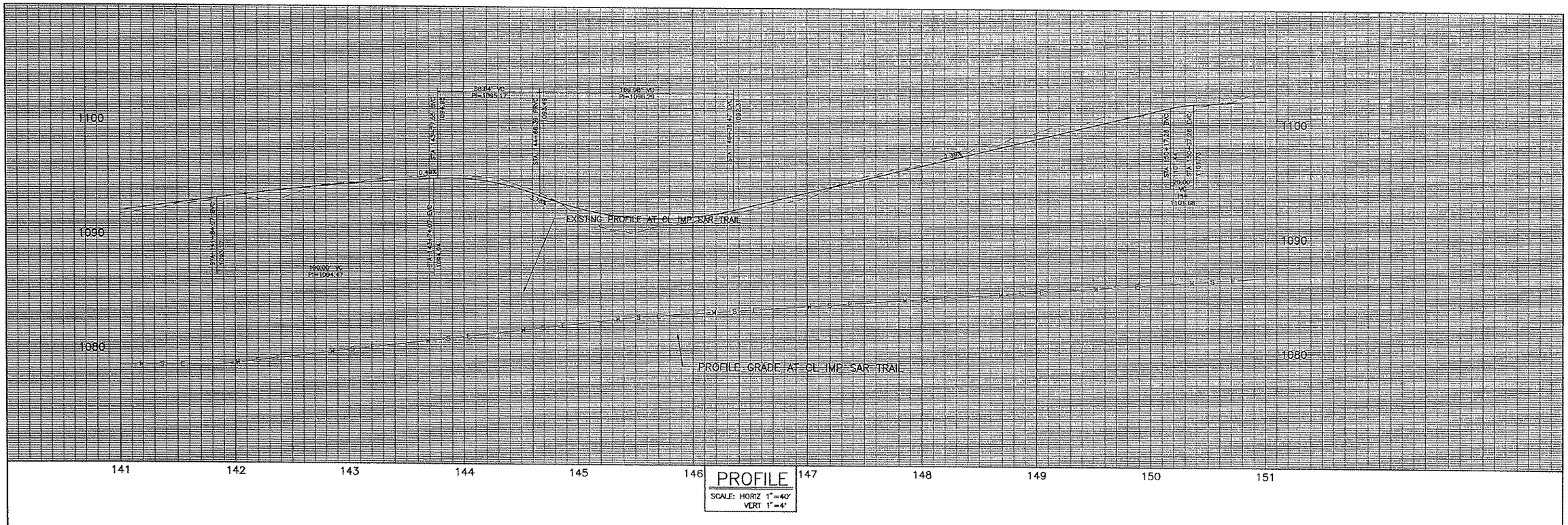
RECOMMENDED /APPROVED BY

MAJID KASTY, P.E. DATE
DEPUTY DIRECTOR

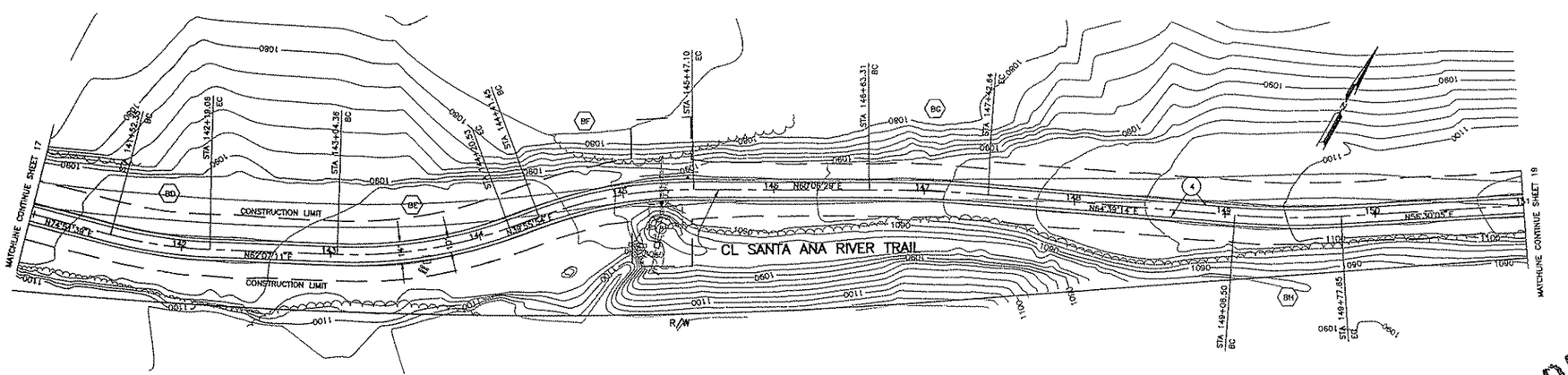
GRANVILLE M. BOWMAN, P.E. DATE
DIRECTOR OF PUBLIC WORKS

SANTA ANA RIVER TRAIL
PHASE III
WATERMAN AVE TO CALIFORNIA ST
FROM STA 131+00 TO STA 141+00

J.L. REF.	W.O. NO.	PLAN SCALE	SHT. NO.	TOT. SHTS.
JL XXXX	H13463	1" = 40'	17	X



PROFILE
SCALE: HORIZ 1"=40'
VERT 1"=4'



PRELIMINARY
Subject to Revision

CL CURVE DATA:				
	Δ	R	L	T
BC	12°44'28"	300'	66.71'	33.49'
BE	22°11'17"	300'	116.18'	58.83'
BF	20°10'35"	300'	105.64'	53.37'
BG	4°32'44"	1000'	79.34'	39.69'
BH	6°09'08"	500'	71.14'	35.63'

GRAPHIC SCALE 1"=40'
0 40 80 120

MARK	CHANGES		
	NO CHANGES	RESIDENT ENGINEER	DATE

FIELD CHANGES

REGISTERED PROFESSIONAL ENGINEER — Erwin R. Fogerson — 49060 — Exp. 9/30/12 — CIVIL — STATE OF CALIFORNIA

ERWIN FOGERSON, P.E. — CHIEF DESIGN ENGINEER — DATE

COUNTY OF SAN BERNARDINO
DEPARTMENT OF PUBLIC WORKS

DRAWN BY	DESIGNED BY	PROJ. ENGR.
CB/CH	ADS	CHRIS NGUYEN

SUBMITTED BY

CHRIS NGUYEN, P.E. — PROJECT ENGINEER — DATE

JOHN LATSKO — YARD X SUPERVISOR (MAINTENANCE REVIEW) — DATE

MIRNAM AL-RAYES — RESIDENT ENGINEER (CONSTRUCTIBILITY REVIEW) — DATE

RECOMMENDED /APPROVED BY

MAZIN KASEY, P.E. — DEPUTY DIRECTOR — DATE

GRANVILLE M. BONNAM, P.E. — DIRECTOR OF PUBLIC WORKS — DATE

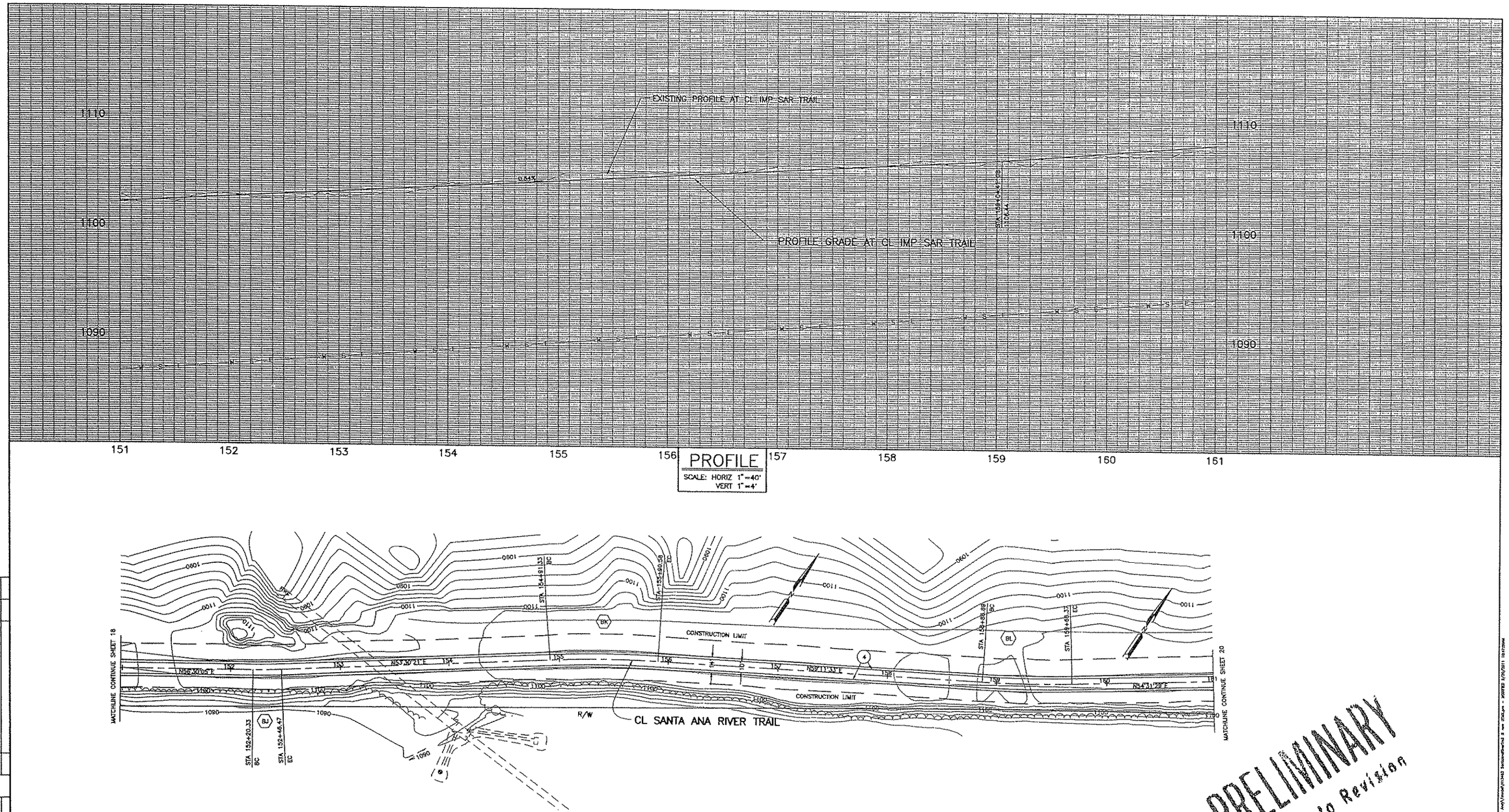
SANTA ANA RIVER TRAIL
PHASE III
WATERMAN AVE TO CALIFORNIA ST
FROM STA 141+00 TO STA 151+00

J.L. REF.	W.O. NO.	PLAN SCALE	SHT. NO.	TOT. SHTS.
JL XXXX	H13463	1" = 40'	18	X

MARK	REVISIONS	APPR.	DATE

MARK	REVISIONS	APPR.	DATE

Exhibit 4: Initial Study and Mitigated Negative Declaration for the
"Santa Ana River Trail, Phase III Project"



PRELIMINARY
Subject to Revision

CL CURVE DATA				
	Δ	R	L	T
BJ	2°59'44"	500'	26.14'	13.07'
BK	5°41'12"	1000'	99.25'	49.67'
BL	4°40'05"	1000'	81.47'	40.76'

GRAPHIC SCALE 1"=40'
0 40 80 120

MARK	CHANGES		
	NO CHANGES	RESIDENT ENGINEER	DATE

FIELD CHANGES

REGISTERED PROFESSIONAL ENGINEER Erwin B. Fogerson 49060 Exp. 9/30/12 CIVIL STATE OF CALIFORNIA

ERWIN FOGERSON, P.E. DATE
CHIEF DESIGN ENGINEER

COUNTY OF SAN BERNARDINO
DEPARTMENT OF PUBLIC WORKS

DRAWN BY	DESIGNED BY	PROJ. ENGR.
CB/CH	ADS	CHRIS NGUYEN

SUBMITTED BY

CHRIS NGUYEN, P.E. DATE
PROJECT ENGINEER

JOHN LATSKO
YARD X SUPERVISOR
(MAINTENANCE REVIEW) DATE

NIRMAN AL-RAYES
RESIDENT ENGINEER
(CONSTRUCTIBILITY REVIEW) DATE

RECOMMENDED /APPROVED BY

MAZIN KASEY, P.E. DATE
DEPUTY DIRECTOR

GRANVILLE M. BOWMAN, P.E. DATE
DIRECTOR OF PUBLIC WORKS

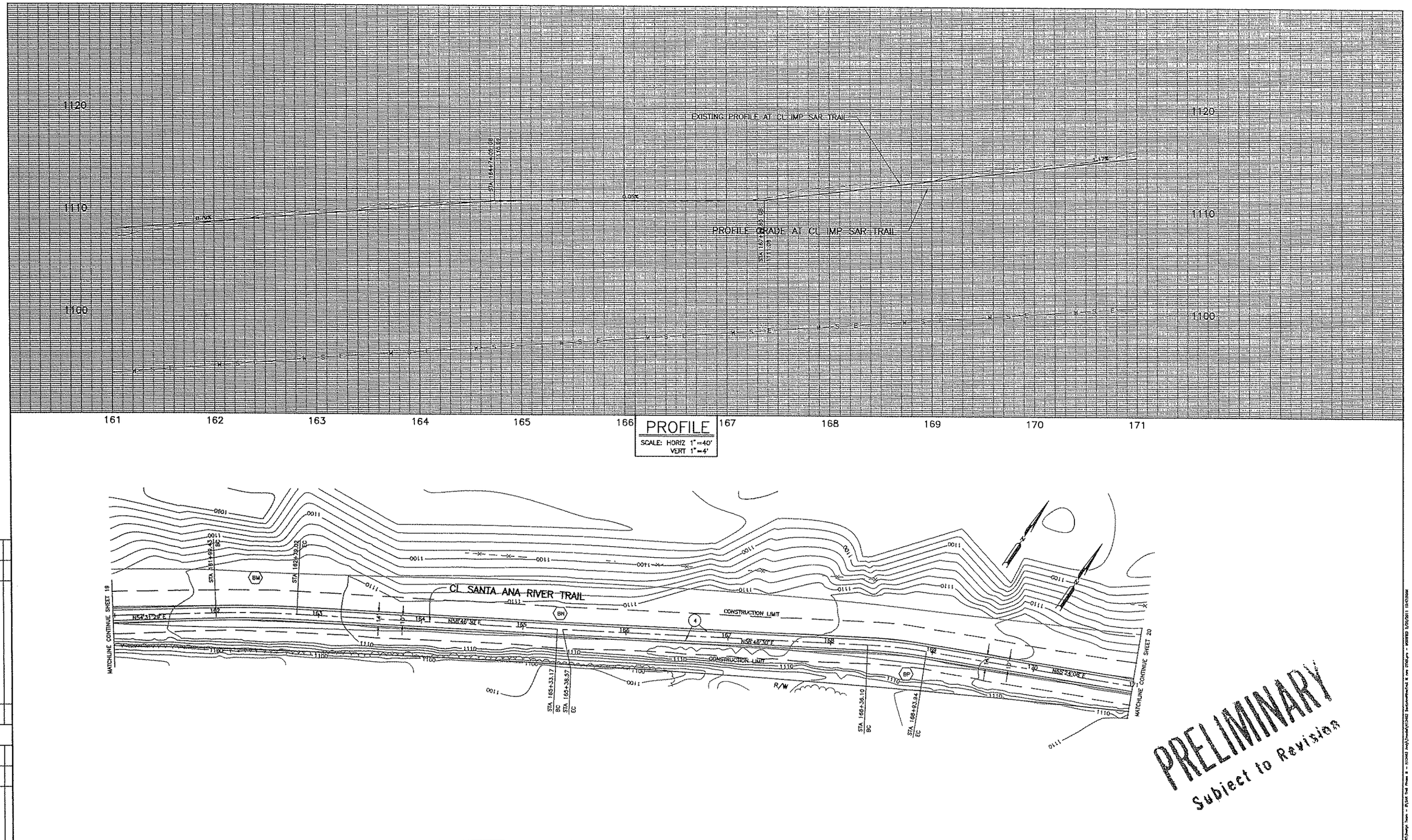
SANTA ANA RIVER TRAIL
PHASE III
WATERMAN AVE TO CALIFORNIA ST
FROM STA 151+00 TO STA 161+00

J.L. REF.	W.O. NO.	PLAN SCALE	SHT. NO.	TOT. SHT'S.
JL XXXX	H13463	1" = 40'	19	X

MARK	REVISIONS	APPR.	DATE

MARK	REVISIONS	APPR.	DATE

Exhibit 4: Initial Study and Mitigated Negative Declaration for the
"Santa Ana River Trail, Phase III Project"



CL CURVE DATA:				
	Δ	R	L	T
BM	4°33'36"	1000'	79.59'	39.81'
BN	00°18'34"	1000'	5.40'	2.70'
BP	6°37'38"	500'	57.83'	28.95'

GRAPHIC SCALE 1"=40'
0 40 80 120

MARK	CHANGES		
	NO CHANGES	RESIDENT ENGINEER	DATE

FIELD CHANGES

REGISTERED PROFESSIONAL ENGINEER Erwin R. Fogerson 49060 Exp. 9/30/12 CIVIL STATE OF CALIFORNIA

ERWIN FOGERSON, P.E. CHIEF DESIGN ENGINEER — DATE

COUNTY OF SAN BERNARDINO
DEPARTMENT OF PUBLIC WORKS

DRAWN BY	DESIGNED BY	PROJ. ENGR.
CB/CH	ADS	CHRIS NGUYEN

SUBMITTED BY

CHRIS NGUYEN, P.E. PROJECT ENGINEER — DATE

JOHN LATSKO, YARD X SUPERVISOR (MAINTENANCE REVIEW) — DATE

NIDHAM AL-RAYES, RESIDENT ENGINEER (CONSTRUCTIBILITY REVIEW) — DATE

RECOMMENDED /APPROVED BY

MAZIN KASEM, P.E. DEPUTY DIRECTOR — DATE

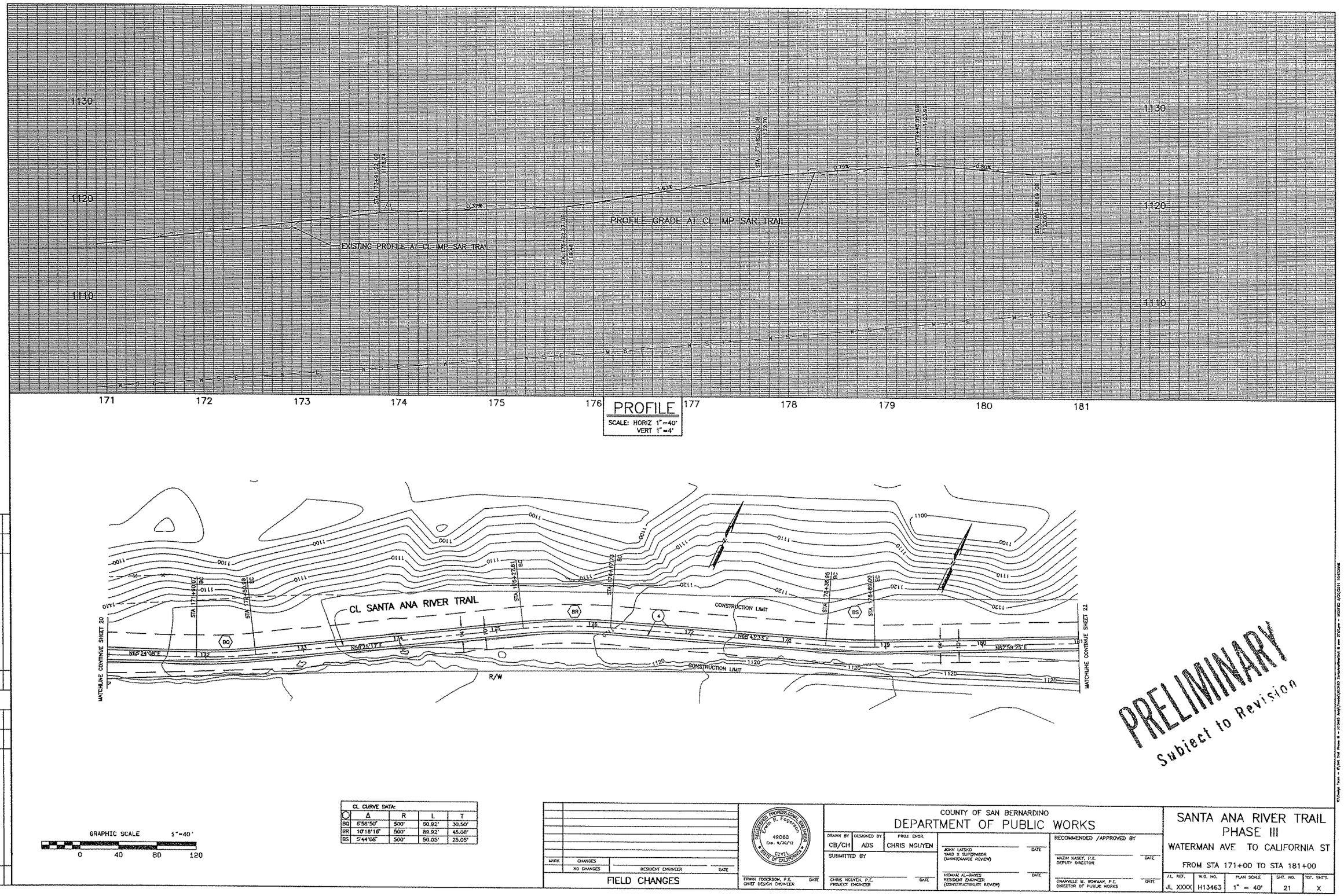
GRANVILLE M. BOWMAN, P.E. DIRECTOR OF PUBLIC WORKS — DATE

SANTA ANA RIVER TRAIL
PHASE III
WATERMAN AVE TO CALIFORNIA ST
FROM STA 161+00 TO STA 171+00

J.L. REF.	W.O. NO.	PLAN SCALE	SHT. NO.	TOT. SHTS.
JL XXXX	H13463	1" = 40'	20	X

MARK	REVISIONS	APPR.	DATE

MARK	REVISIONS	APPR.	DATE



GRAPHIC SCALE 1"=40'
0 40 80 120

CL CURVE DATA:				
	Δ	R	L	T
BQ	6°58'50"	500'	60.92'	30.50'
BR	10°18'16"	500'	89.92'	45.08'
BS	5°44'06"	500'	50.05'	25.05'

MARK	CHANGES		
	NO CHANGES	RESIDENT ENGINEER	DATE

FIELD CHANGES

REGISTERED PROFESSIONAL ENGINEER Erwin R. Fogerson 49060 Exp. 9/30/12 CIVIL STATE OF CALIFORNIA

ERWIN FOGERSON, P.E. — CHIEF DESIGN ENGINEER — DATE

COUNTY OF SAN BERNARDINO
DEPARTMENT OF PUBLIC WORKS

DRAWN BY	DESIGNED BY	PROJ. ENGR.
CB/CH	ADS	CHRIS NGUYEN

SUBMITTED BY

CHRIS NGUYEN, P.E. — PROJECT ENGINEER — DATE

JOHN LATSKO — YARD X SUPERVISOR (MAINTENANCE REVIEW) — DATE

HOSNAM AL-NAYES — RESIDENT ENGINEER (CONSTRUCTIBILITY REVIEW) — DATE

RECOMMENDED /APPROVED BY

MAZIN KASEY, P.E. — DEPUTY DIRECTOR — DATE

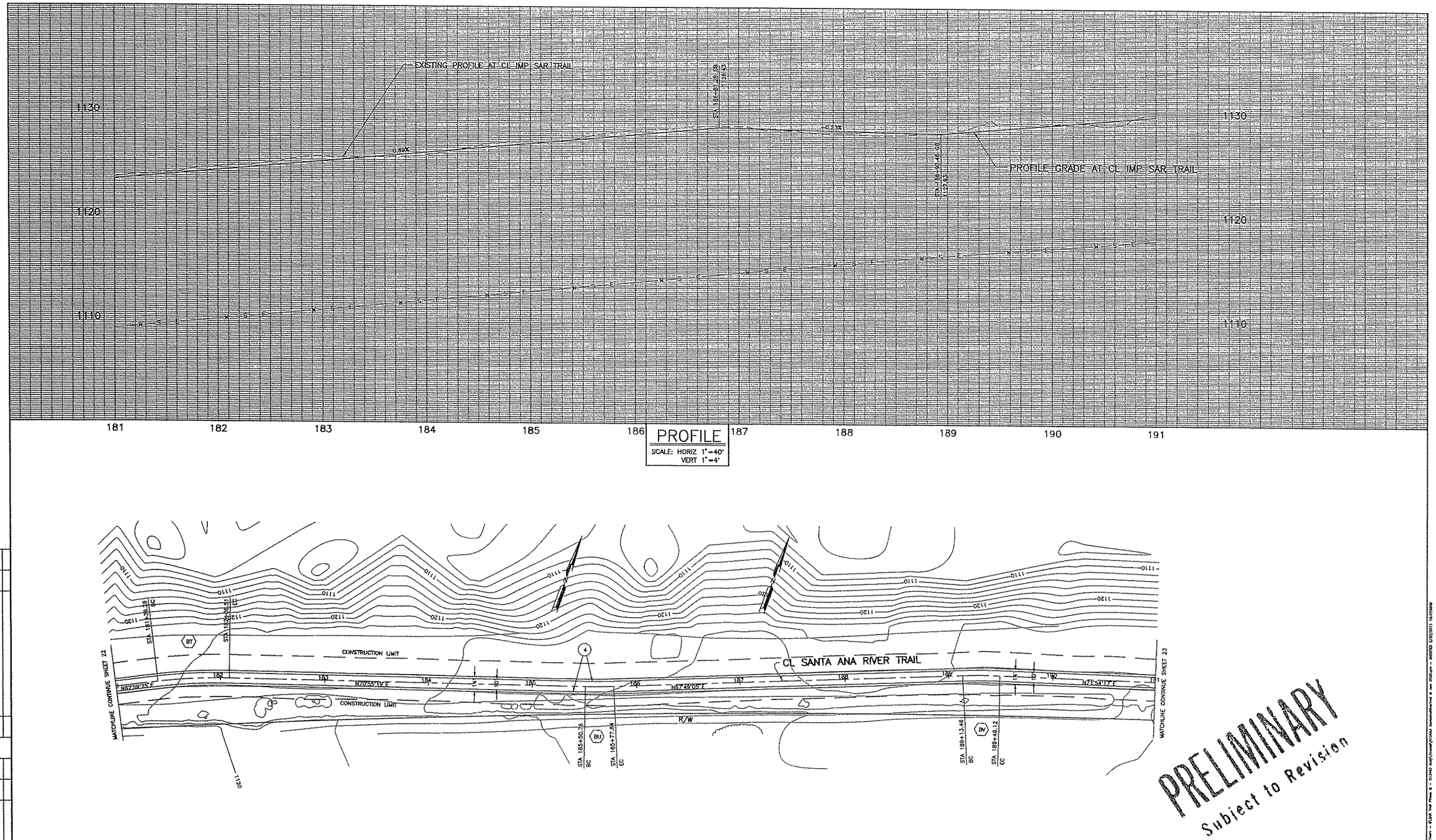
GRANVILLE W. BOWMAN, P.E. — DIRECTOR OF PUBLIC WORKS — DATE

SANTA ANA RIVER TRAIL
PHASE III
WATERMAN AVE TO CALIFORNIA ST
FROM STA 171+00 TO STA 181+00

J.L. REF.	W.O. NO.	PLAN SCALE	SHT. NO.	TOT. SHTS.
JL XXXX	H13463	1" = 40'	21	X

MARK	REVISIONS	APPR.	DATE

MARK	REVISIONS	APPR.	DATE



CL CURVE DATA:				
	Δ	R	L	T
BT	7°55'54"	500'	69.22'	34.66'
BU	3°06'15"	500'	27.09'	13.55'
BV	4°05'12"	500'	35.66'	17.84'

GRAPHIC SCALE 1"=40'
0 40 80 120

MARK	CHANGES	
	NO CHANGES	RESIDENT ENGINEER DATE

FIELD CHANGES

REGISTERED PROFESSIONAL ENGINEER Ervin B. Fogerson 49060 Exp. 9/30/12 CIVIL STATE OF CALIFORNIA

ERWIN FOGERSON, P.E. DATE
CHIEF DESIGN ENGINEER

COUNTY OF SAN BERNARDINO
DEPARTMENT OF PUBLIC WORKS

DRAWN BY	DESIGNED BY	PROJ. ENGR.
CB/CH	ADS	CHRIS NGUYEN

SUBMITTED BY

CHRIS NGUYEN, P.E. DATE
PROJECT ENGINEER

JOHN LATSKO DATE
YARD X SUPERVISOR
(MAINTENANCE REVIEW)

NORMAN AL-RAYES DATE
RESIDENT ENGINEER
(CONSTRUCTIBILITY REVIEW)

RECOMMENDED /APPROVED BY

WAZIN KASEY, P.E. DATE
DEPUTY DIRECTOR

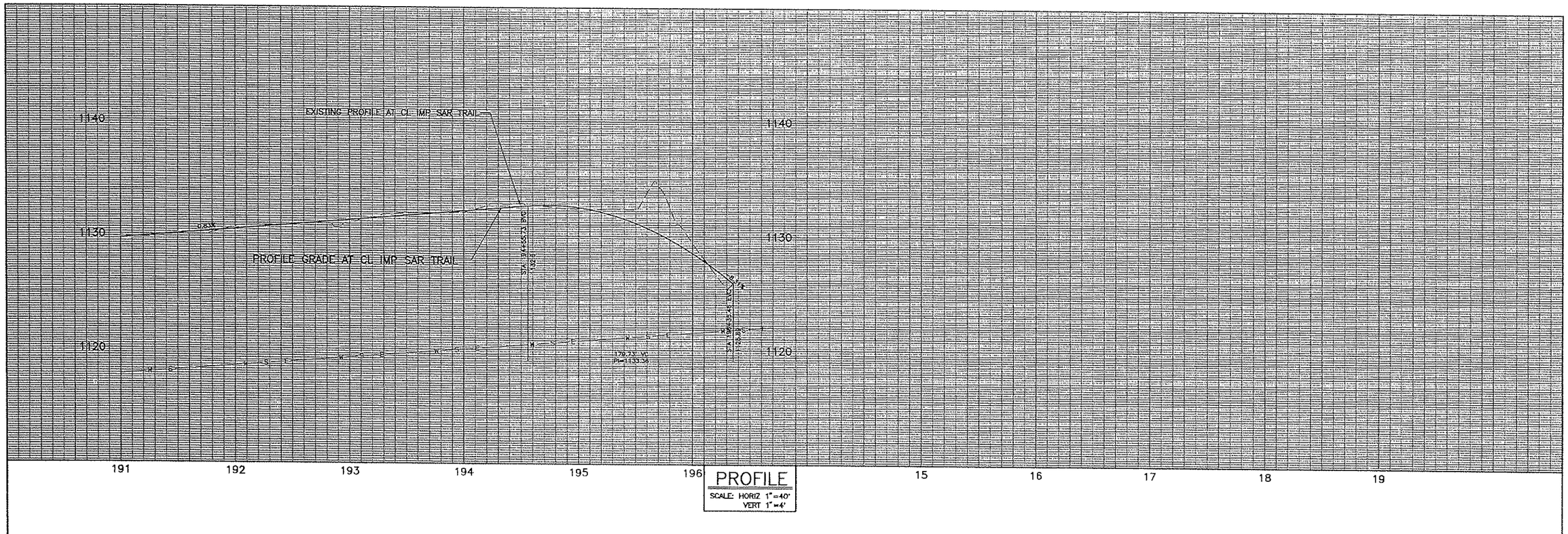
GRANVILLE N. DONAHAN, P.E. DATE
DIRECTOR OF PUBLIC WORKS

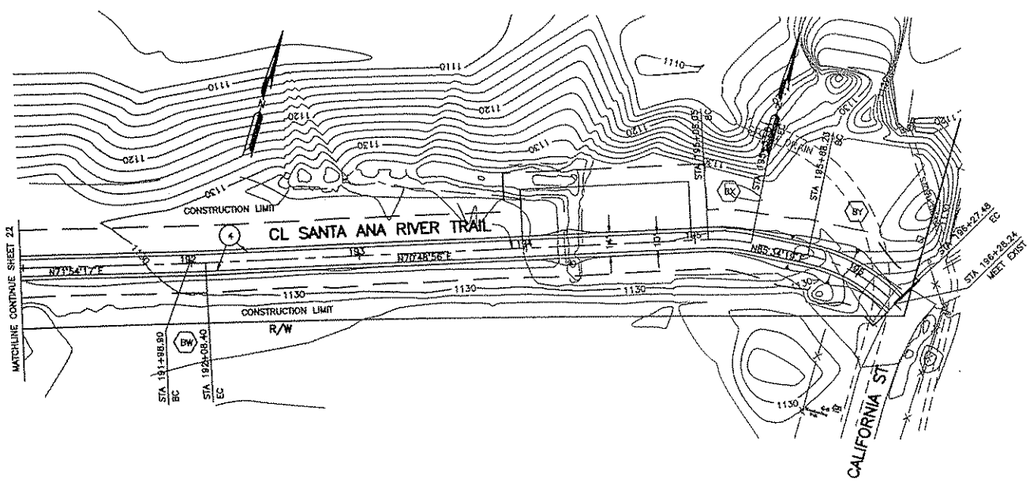
SANTA ANA RIVER TRAIL
PHASE III
WATERMAN AVE TO CALIFORNIA ST
FROM STA 181+00 TO STA 191+00

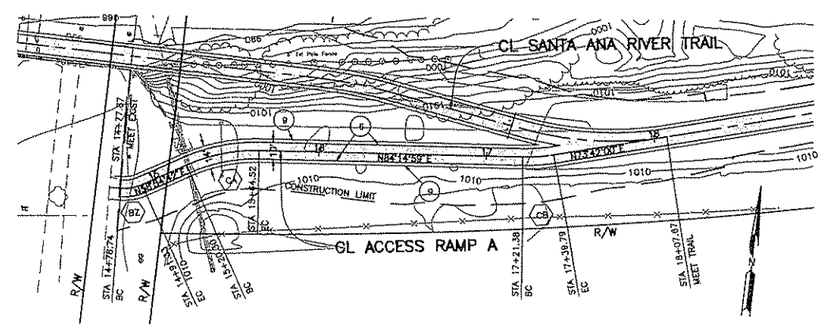
J.L. REF.	W.O. NO.	PLAN SCALE	SHT. NO.	TOT. SHTS.
JL XXXX	H13463	1" = 40'	22	X

MARK	REVISIONS	APPR.	DATE

MARK	REVISIONS	APPR.	DATE







PRELIMINARY
Subject to Revision

GRAPHIC SCALE 1"=40'
0 40 80 120

CL CURVE DATA:				
	Δ	R	L	T
BW	1°05'21"	500'	9.50'	4.75'
BX	14°45'23"	100'	25.75'	12.95'
BY	33°56'53"	100'	59.25'	30.52'
BZ	28°52'02"	25'	12.60'	6.43'
CA	25°20'18"	100'	44.22'	22.48'
CB	10°32'59"	100'	18.41'	9.23'

MARK	CHANGES	
	NO CHANGES	RESIDENT ENGINEER DATE

FIELD CHANGES

REGISTERED PROFESSIONAL ENGINEER Erwin R. Fogerson 49060 Exp. 9/30/12 CIVIL STATE OF CALIFORNIA

ERWIN FOGERSON, P.E. DATE
CHIEF DESIGN ENGINEER

COUNTY OF SAN BERNARDINO
DEPARTMENT OF PUBLIC WORKS

DRAWN BY	DESIGNED BY	PROJ. ENGR.
CB/CH	ADS	CHRIS NGUYEN

SUBMITTED BY

CHRIS NGUYEN, P.E. DATE
PROJECT ENGINEER

JOHN LATSKO DATE
YARD X SUPERVISOR
(MAINTENANCE REVIEW)

NIKHAM AL-RAYES DATE
RESIDENT ENGINEER
(CONSTRUCTIBILITY REVIEW)

RECOMMENDED /APPROVED BY

MAZIN KASEY, P.E. DATE
DEPUTY DIRECTOR

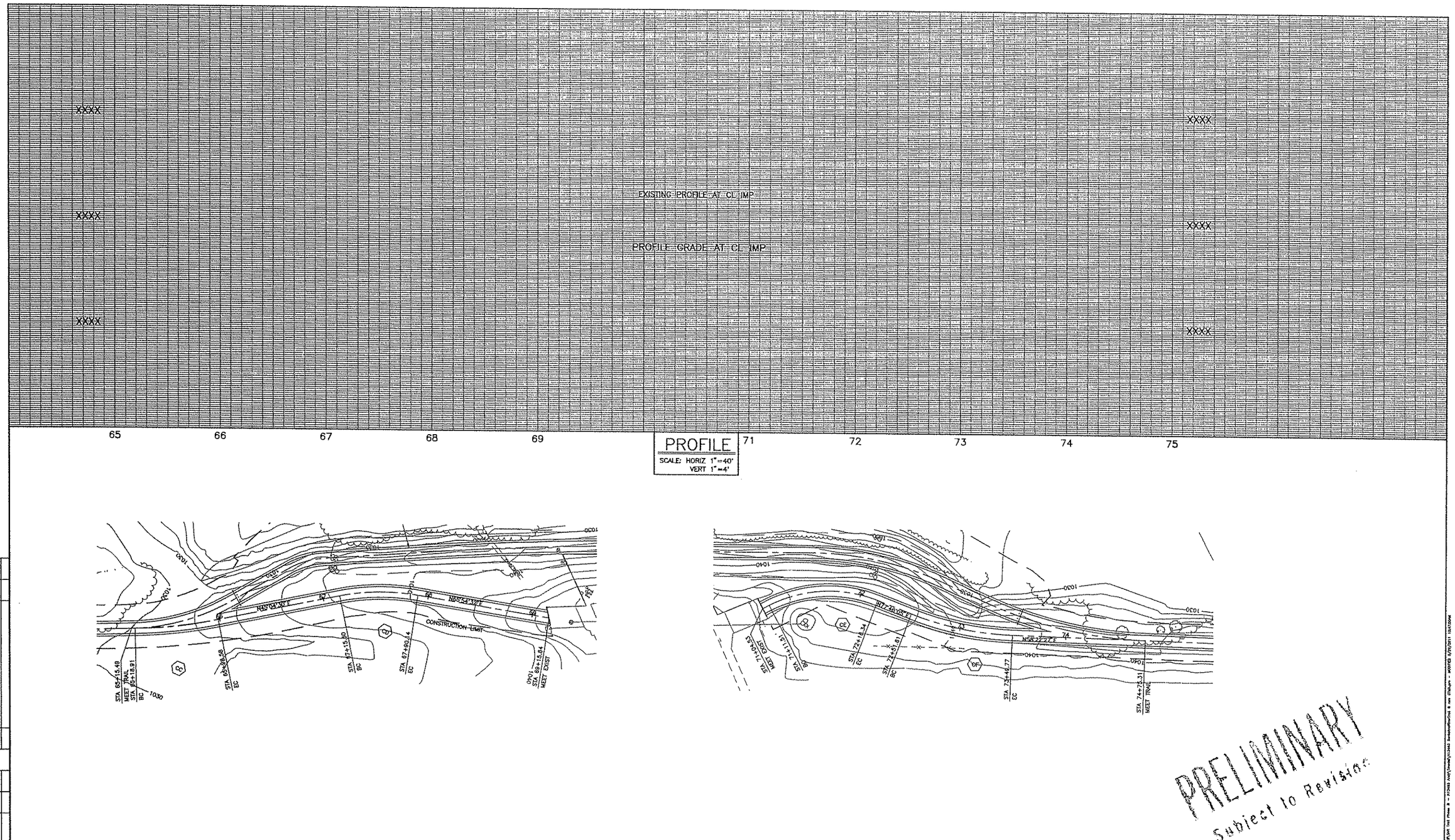
GRANVILLE M. BONHAM, P.E. DATE
DIRECTOR OF PUBLIC WORKS

SANTA ANA RIVER TRAIL
PHASE III
WATERMAN AVE TO CALIFORNIA ST
FROM STA 191+00 TO STA 196+50
AND STA 14+00 TO STA 19+00

J.L. REF.	W.O. NO.	PLAN SCALE	SHT. NO.	TOT. SHTS.
JL XXXX	H13463	1" = 40'	23	X

MARK	REVISIONS	APPR.	DATE

MARK	REVISIONS	APPR.	DATE



PRELIMINARY
Subject to Revisions

GRAPHIC SCALE 1"=40'
0 40 80 120

CL CURVE DATA:

	Δ	R	L	T
CC	10°08'38	450'	79.67'	39.94'
CD	20°50'02	205'	74.54'	37.69'
CE	48°29'05	125'	105.76'	56.29'
CF	19°23'38	290'	98.16'	49.55'

MARK	CHANGES	
	NO CHANGES	RESIDENT ENGINEER DATE

FIELD CHANGES

REGISTERED PROFESSIONAL ENGINEER Erwin B. Foderson 49050 Exp. 9/30/12 CIVIL STATE OF CALIFORNIA

ERWIN FODERSON, P.E. DATE
CHIEF DESIGN ENGINEER

COUNTY OF SAN BERNARDINO
DEPARTMENT OF PUBLIC WORKS

DRAWN BY	DESIGNED BY	PROJ. ENGR.
CB/CH	ADS	CHRIS NGUYEN

SUBMITTED BY

CHRIS NGUYEN, P.E. DATE
PROJECT ENGINEER

JOHN LATSKO DATE
YARD X SUPERVISOR
(MAINTENANCE REVIEW)

NIDHAM AL-RAYES DATE
RESIDENT ENGINEER
(CONSTRUCTIBILITY REVIEW)

RECOMMENDED /APPROVED BY

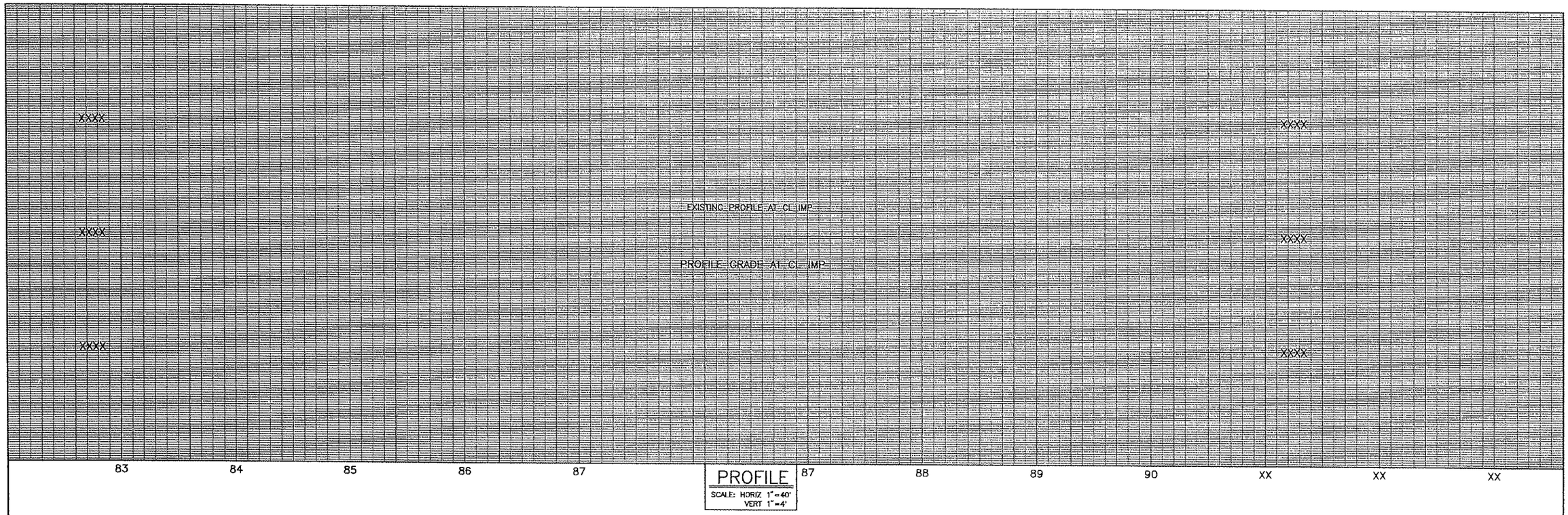
MAZEN KASEY, P.E. DATE
DEPUTY DIRECTOR

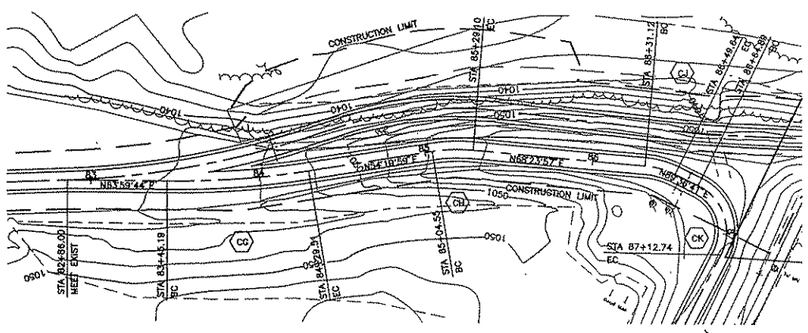
GRANVILLE M. BONHAM, P.E. DATE
DIRECTOR OF PUBLIC WORKS

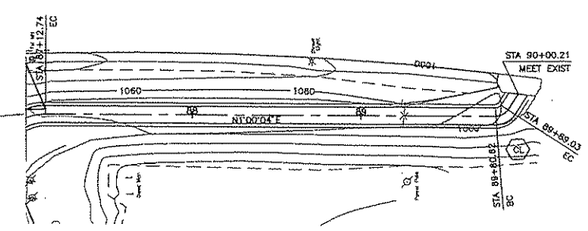
SANTA ANA RIVER TRAIL
PHASE III
WATERMAN AVE TO CALIFORNIA ST
FROM STA 00+00 TO STA 00+00

J.L. REF.	W.O. NO.	PLAN SCALE	SHT. NO.	TOT. SHTS.
JL XXXX	H13463	1" = 40'	24	X

Exhibit 4: Initial Study and Mitigated Negative Declaration for the
"Santa Ana River Trail, Phase III Project"







PRELIMINARY
Subject to Revision

GRAPHIC SCALE 1"=40'
0 40 80 120

CL CURVE DATA:				
	Δ	R	L	T
CG	9°39'45	500'	84.32'	42.26'
CH	14°03'58	100'	24.55'	12.34'
CJ	21°12'43	50'	18.51'	9.36'
CK	91°23'23	30'	47.85'	30.74'
CL	48°10'06	10'	8.41'	4.47'

MARK	CHANGES		
	NO CHANGES	RESIDENT ENGINEER	DATE

FIELD CHANGES

REGISTERED PROFESSIONAL ENGINEER
Erwin R. Fogerson
49060
Exp. 9/30/12
CIVIL
STATE OF CALIFORNIA

ERWIN FOGERSON, P.E. DATE
CHIEF DESIGN ENGINEER

COUNTY OF SAN BERNARDINO
DEPARTMENT OF PUBLIC WORKS

DRAWN BY	DESIGNED BY	PROJ. ENGR.
CB/CH	ADS	CHRIS NGUYEN

SUBMITTED BY

CHRIS NGUYEN, P.E. DATE
PROJECT ENGINEER

JOHN LATSKO DATE
YARD X SUPERVISOR
(MAINTENANCE REVIEW)

NIDHAM AL-RAYES DATE
RESIDENT ENGINEER
(CONSTRUCTIBILITY REVIEW)

RECOMMENDED /APPROVED BY

MAZEN KASEY, P.E. DATE
DEPUTY DIRECTOR

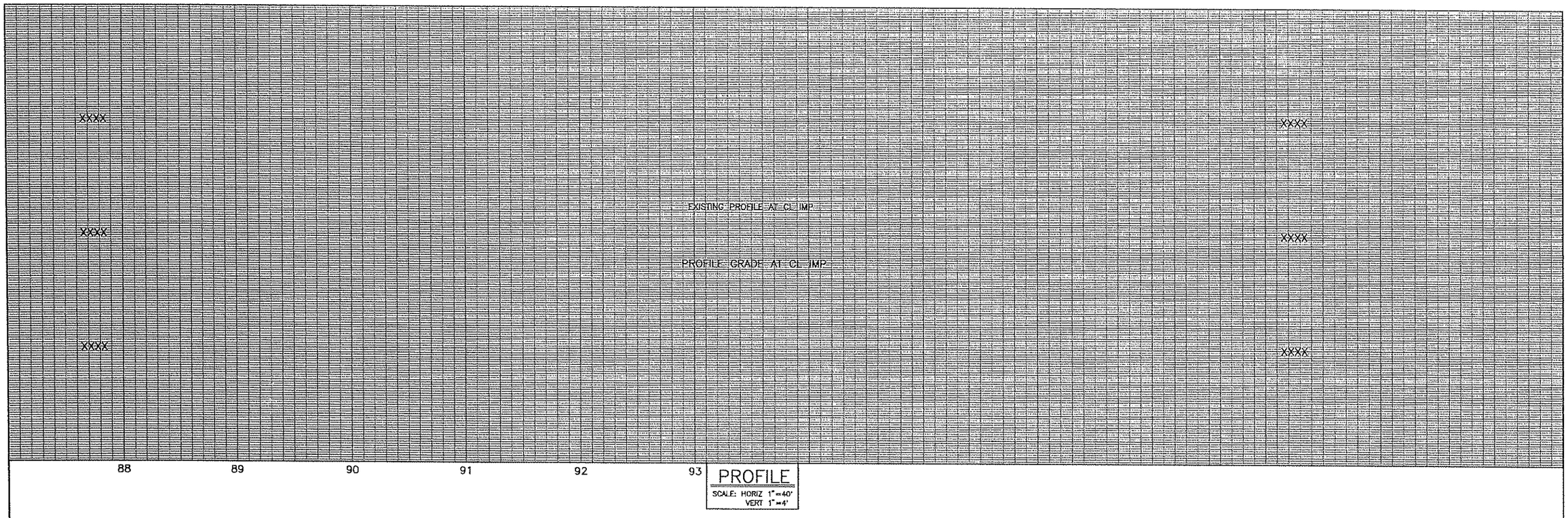
GRANVILLE M. BOWMAN, P.E. DATE
DIRECTOR OF PUBLIC WORKS

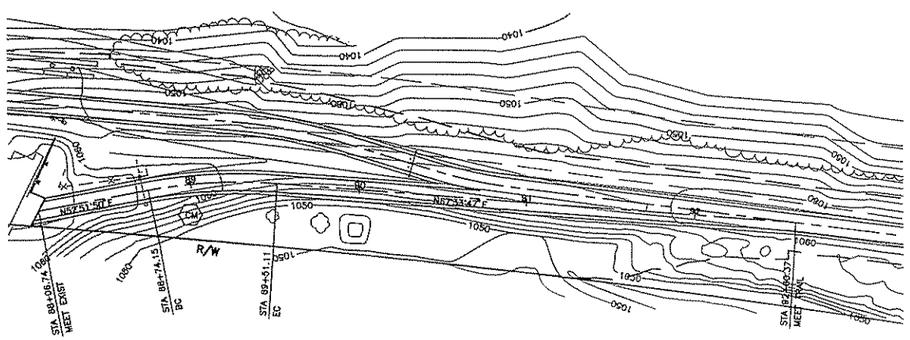
SANTA ANA RIVER TRAIL
PHASE III
WATERMAN AVE TO CALIFORNIA ST
FROM STA 00+00 TO STA 00+00

J.L. REF.	W.O. NO.	PLAN SCALE	SHT. NO.	TOT. SHTS.
JL XXXX	H13463	1" = 40'	25	X

MARK	REVISIONS	APPR.	DATE

MARK	REVISIONS	APPR.	DATE





PRELIMINARY
Subject to Revision

GRAPHIC SCALE 1"=40'
0 40 80 120

CL CURVE DATA:				
	Δ	R	L	T
CM	14°41'57"	300'	76.96'	38.68'

MARK	DATE	APPR.	REVISIONS

MARK	DATE	APPR.	REVISIONS

MARK	CHANGES	RESIDENT ENGINEER	DATE
	NO CHANGES		

FIELD CHANGES

REGISTERED PROFESSIONAL ENGINEER — CHRIS R. FOGERSON — 49060 — Exp. 9/30/12 — CIVIL — STATE OF CALIFORNIA

EDWIN FOGERSON, P.E. — CHIEF DESIGN ENGINEER — DATE

COUNTY OF SAN BERNARDINO
DEPARTMENT OF PUBLIC WORKS

DRAWN BY	DESIGNED BY	PROJ. ENGR.
CB/CH	ADS	CHRIS NGUYEN

SUBMITTED BY

CHRIS MOUNTIN, P.E. — PROJECT ENGINEER — DATE

JOHN LATSKO — YARD 3 SUPERVISOR (MAINTENANCE REVIEW) — DATE

NIDHAM AL-RAYES — RESIDENT ENGINEER (CONSTRUCTIBILITY REVIEW) — DATE

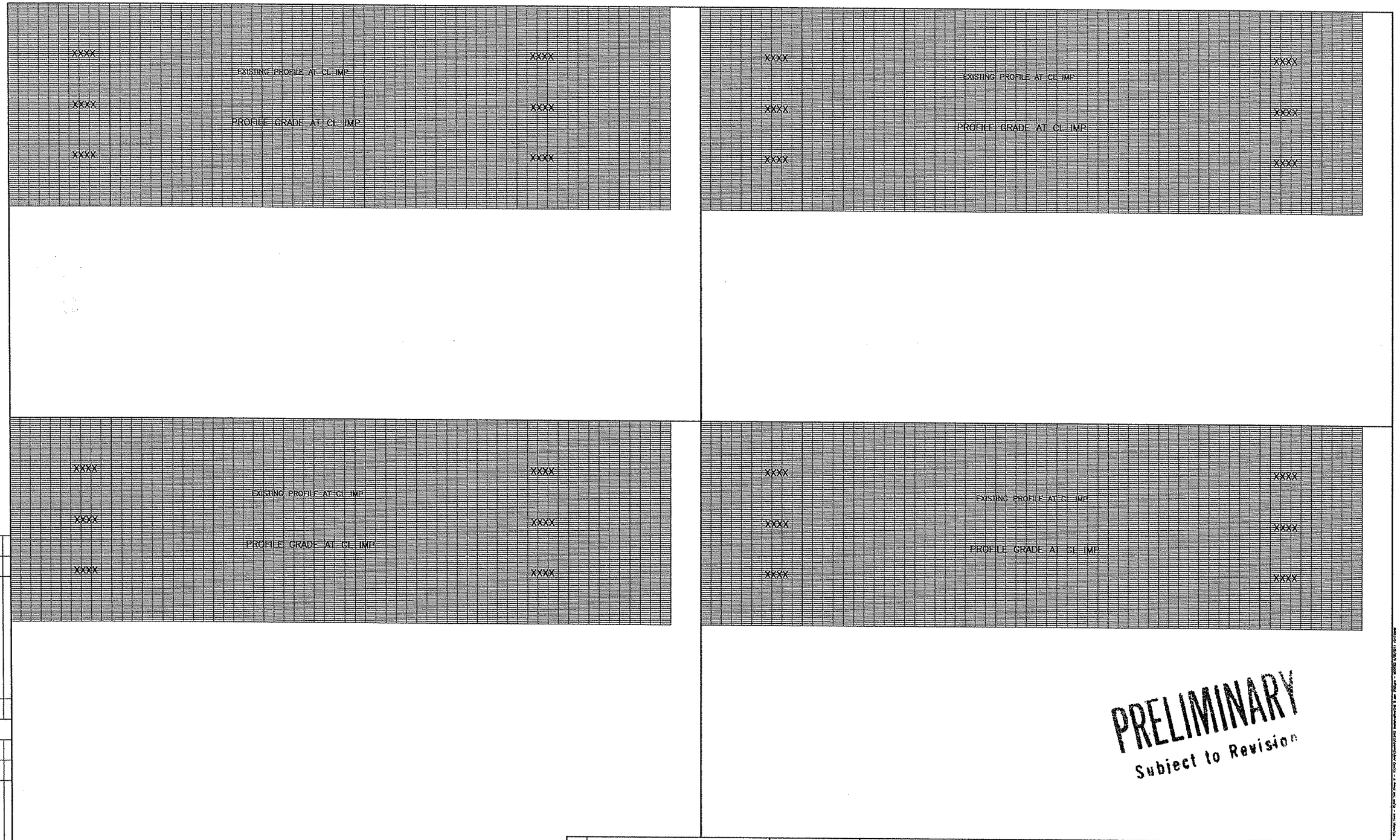
RECOMMENDED /APPROVED BY

MASIN KASEY, P.E. — DEPUTY DIRECTOR — DATE

GRANVILLE M. BOWMAN, P.E. — DIRECTOR OF PUBLIC WORKS — DATE

SANTA ANA RIVER TRAIL
PHASE III
WATERMAN AVE TO CALIFORNIA ST
FROM STA 00+00 TO STA 00+00

J.L. REF.	W.O. NO.	PLAN SCALE	SHT. NO.	TOT. SHT'S.
JL XXXX	H13463	1" = 40'	26	X



MARK	REVISIONS	APPR.	DATE

MARK	REVISIONS	APPR.	DATE

MARK	CHANGES		
	NO CHANGES	RESIDENT ENGINEER	DATE

FIELD CHANGES

REGISTERED PROFESSIONAL ENGINEER Erwin R. Rodderson 49060 Exp. 9/30/12 CIVIL STATE OF CALIFORNIA

ERWIN RODERSON, P.E. DATE
CHIEF DESIGN ENGINEER

COUNTY OF SAN BERNARDINO
DEPARTMENT OF PUBLIC WORKS

DRAWN BY	DESIGNED BY	PROJ. ENGR.
CB/CH	ADS	CHRIS NGUYEN

SUBMITTED BY

CHRIS NGUYEN, P.E. DATE
PROJECT ENGINEER

JOHN LATSKO DATE
YARD X SUPERVISOR
(MAINTENANCE REVIEW)

NIDHAM AL-RAYES DATE
RESIDENT ENGINEER
(CONSTRUCTIBILITY REVIEW)

RECOMMENDED /APPROVED BY

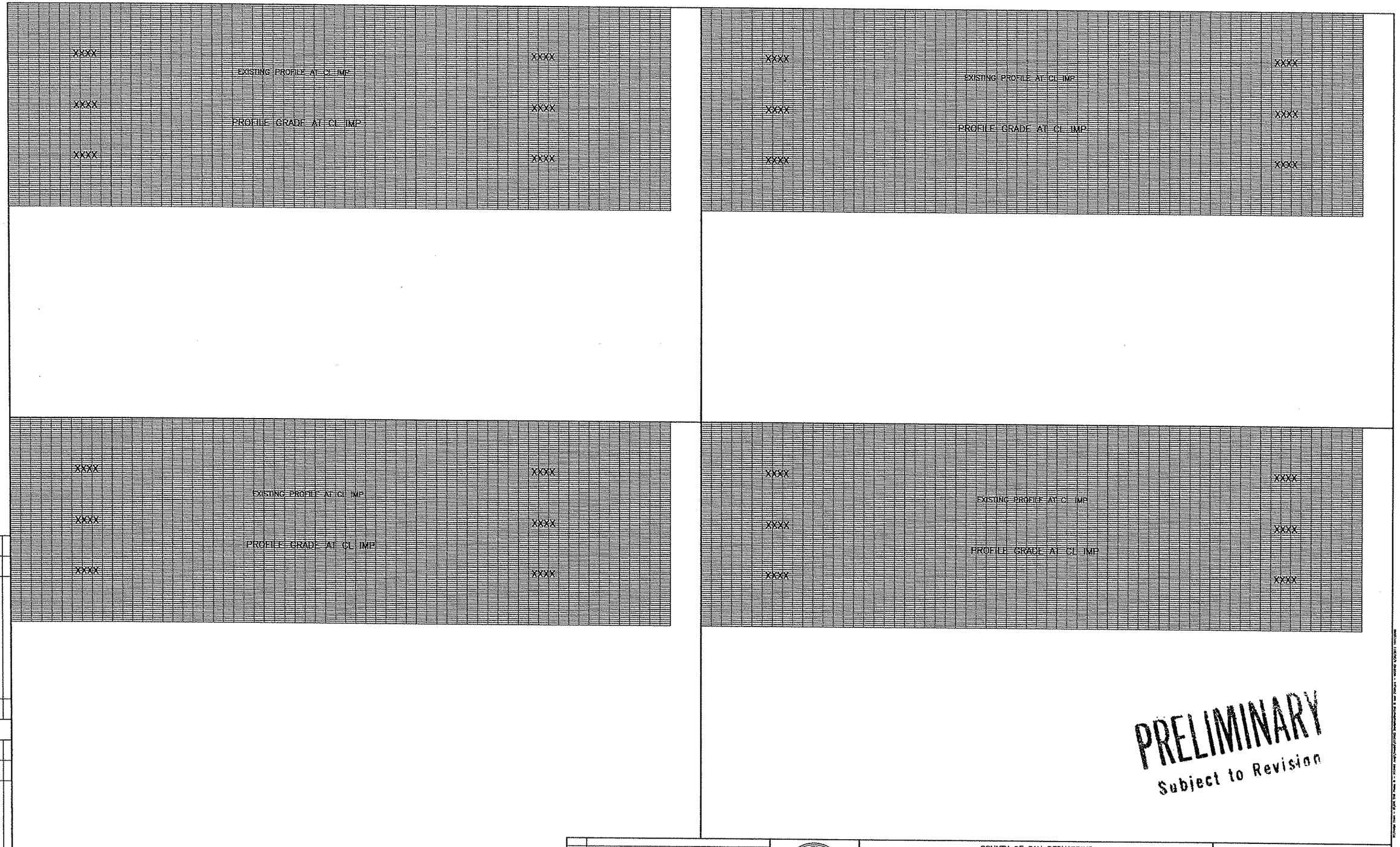
MAZIN KASEY, P.E. DATE
DEPUTY DIRECTOR

GRANVILLE M. BOWMAN, P.E. DATE
DIRECTOR OF PUBLIC WORKS

SANTA ANA RIVER TRAIL
PHASE III

MISCELLANEOUS DETAILS
CITY OF SAN BERNARDINO AND REDLANDS

J.L. REF.	W.O. NO.	SCALE	SHT. NO.	TOT. SHT'S.
JL XXXX	H13463	AS SHOWN	27	X



MARK	REVISIONS	APPR.	DATE

MARK	REVISIONS	APPR.	DATE

MARK	CHANGES	
	NO CHANGES	RESIDENT ENGINEER DATE

FIELD CHANGES

REGISTERED PROFESSIONAL ENGINEER Erwin R. Fogerson 49060 Exp. 6/30/12 CIVIL STATE OF CALIFORNIA

ERWIN FOGERSON, P.E. DATE
CHIEF DESIGN ENGINEER

COUNTY OF SAN BERNARDINO
DEPARTMENT OF PUBLIC WORKS

DRAWN BY	DESIGNED BY	PROJ. ENGR.
CB/CH	ADS	CHRIS NGUYEN

SUBMITTED BY

CHRIS NGUYEN, P.E. DATE
PROJECT ENGINEER

JOHN LATSKO DATE
YARD X SUPERVISOR
(MAINTENANCE REVIEW)

NIDHAM AL-RAYES DATE
RESIDENT ENGINEER
(CONSTRUCTIBILITY REVIEW)

RECOMMENDED /APPROVED BY

MAZIN KASEY, P.E. DATE
DEPUTY DIRECTOR

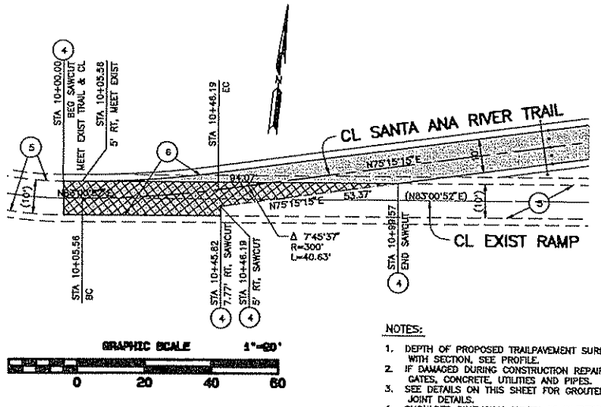
GRANVILLE M. BOWMAN, P.E. DATE
DIRECTOR OF PUBLIC WORKS

SANTA ANA RIVER TRAIL
PHASE III

MISCELLANEOUS DETAILS

CITY OF SAN BERNARDINO AND REDLANDS

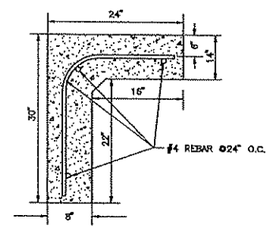
JL. REF.	W.O. NO.	SCALE	SHT. NO.	TOT. SHT'S.
JL XXXX	H13463	AS SHOWN	28	X



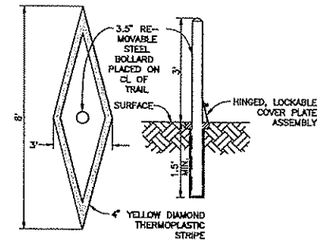
SAWCUT AND JOINT DETAIL
1" = 20'

NOTES:

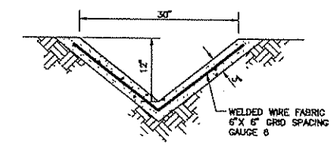
1. DEPTH OF PROPOSED TRAILPAVEMENT SURFACE TO EXIST GROUND VARIES WITH SECTION, SEE PROFILE.
2. IF DAMAGED DURING CONSTRUCTION REPAIR EXIST GROUTED RIPRAP, FENCE, GATES, CONCRETE, UTILITIES AND PIPES.
3. SEE DETAILS ON THIS SHEET FOR GROUTED RIPRAP, CUTOFF WALL AND JOINT DETAILS.
4. SHOULDER DIMENSION SHOWN AS 2' TYPICAL MAY VARY WITH EXISTING SITE CONDITIONS.
5. COMPACTED FILLS PER SOILS REPORT AND SPECS.
6. OVEREXCAVATION SHALL BE BACKFILLED WITH COMPACTED FILL.



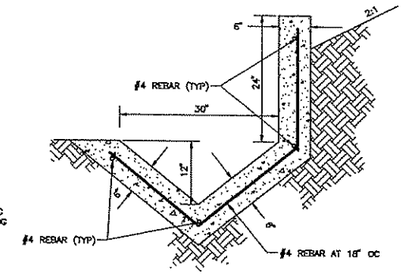
9 CUTOFF WALL TYP
NTS



REMOVABLE BOLLARD TYP.
NTS

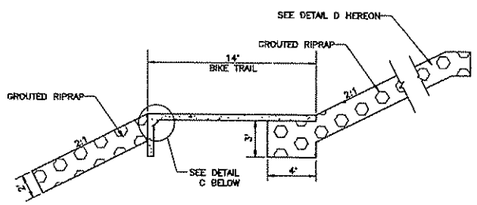


TYPE A
NTS

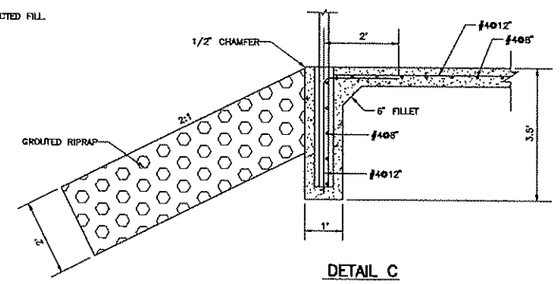


17 V-DITCH TYP
NTS

TYPE C
NTS



BIKE TRAIL W/ GROUTED RIPRAP DETAIL TYPE 1
NTS



DETAIL C
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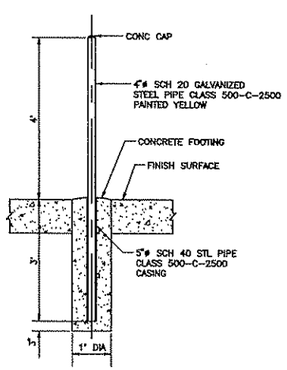
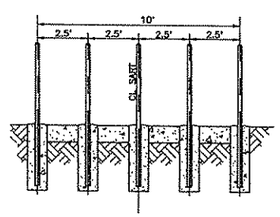


BOLLARD DETAIL A
NTS



BOLLARD DETAIL B
NTS

PRELIMINARY
Subject to Revision

MARK	DATE	APPR.	REVISIONS

MARK	DATE	APPR.	REVISIONS

MARK	CHANGES	
	NO CHANGES	RESIDENT ENGINEER DATE

FIELD CHANGES

ERWIN FOGERSON, P.E. DATE
CHIEF DESIGN ENGINEER

COUNTY OF SAN BERNARDINO
DEPARTMENT OF PUBLIC WORKS

DRAWN BY	DESIGNED BY	PROJ. ENGR.
CB/CH	ADS	CHRIS NGUYEN

SUBMITTED BY

CHRIS NGUYEN, P.E. DATE
PROJECT ENGINEER

JOHN LATSKO DATE
YARD X SUPERVISOR
(MAINTENANCE REVIEW)

NIDHAM AL-RAYES DATE
RESIDENT ENGINEER
(CONSTRUCTIBILITY REVIEW)

RECOMMENDED /APPROVED BY

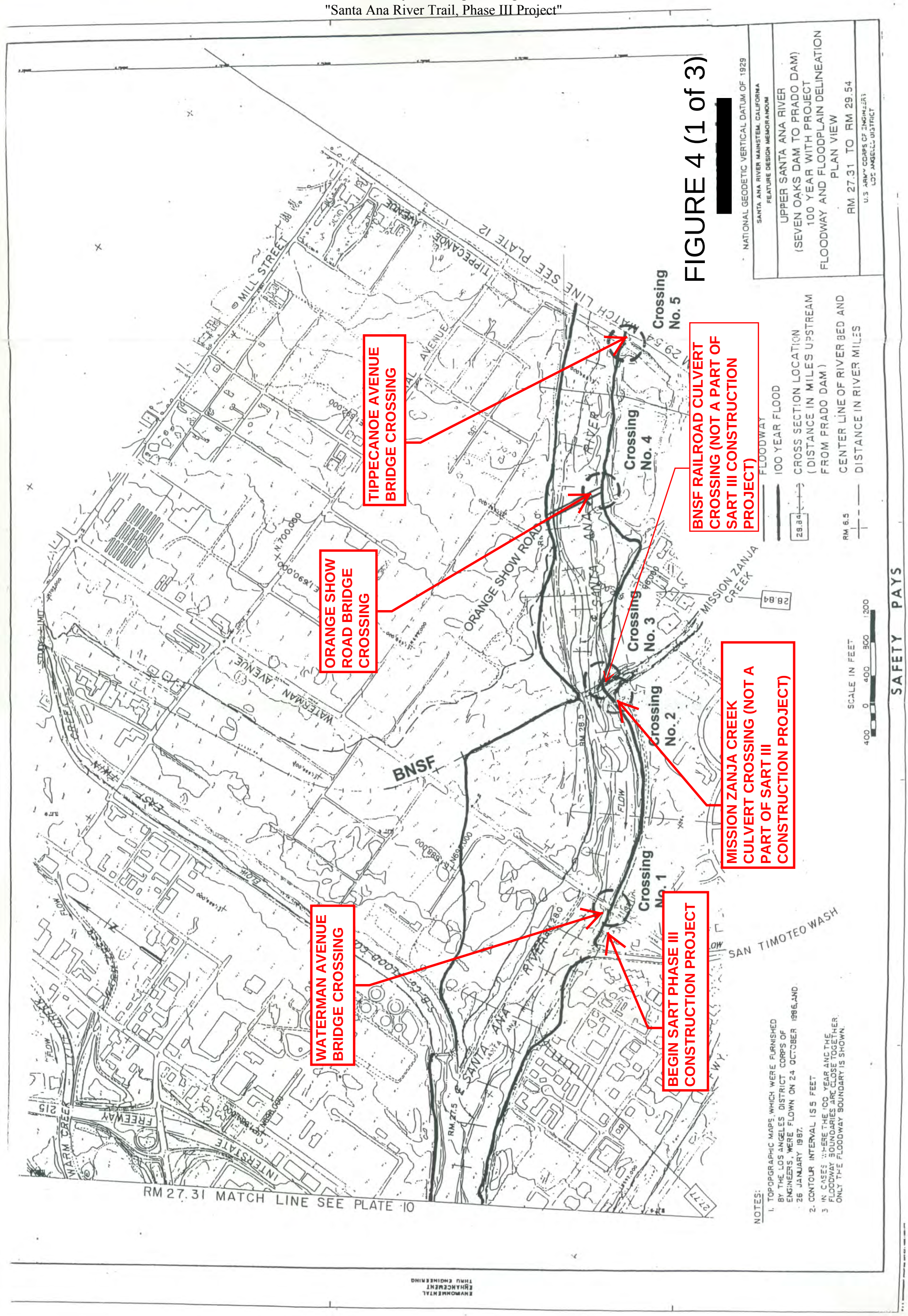
MAZIN KASEY, P.E. DATE
DEPUTY DIRECTOR

GRANVILLE M. BOWMAN, P.E. DATE
DIRECTOR OF PUBLIC WORKS

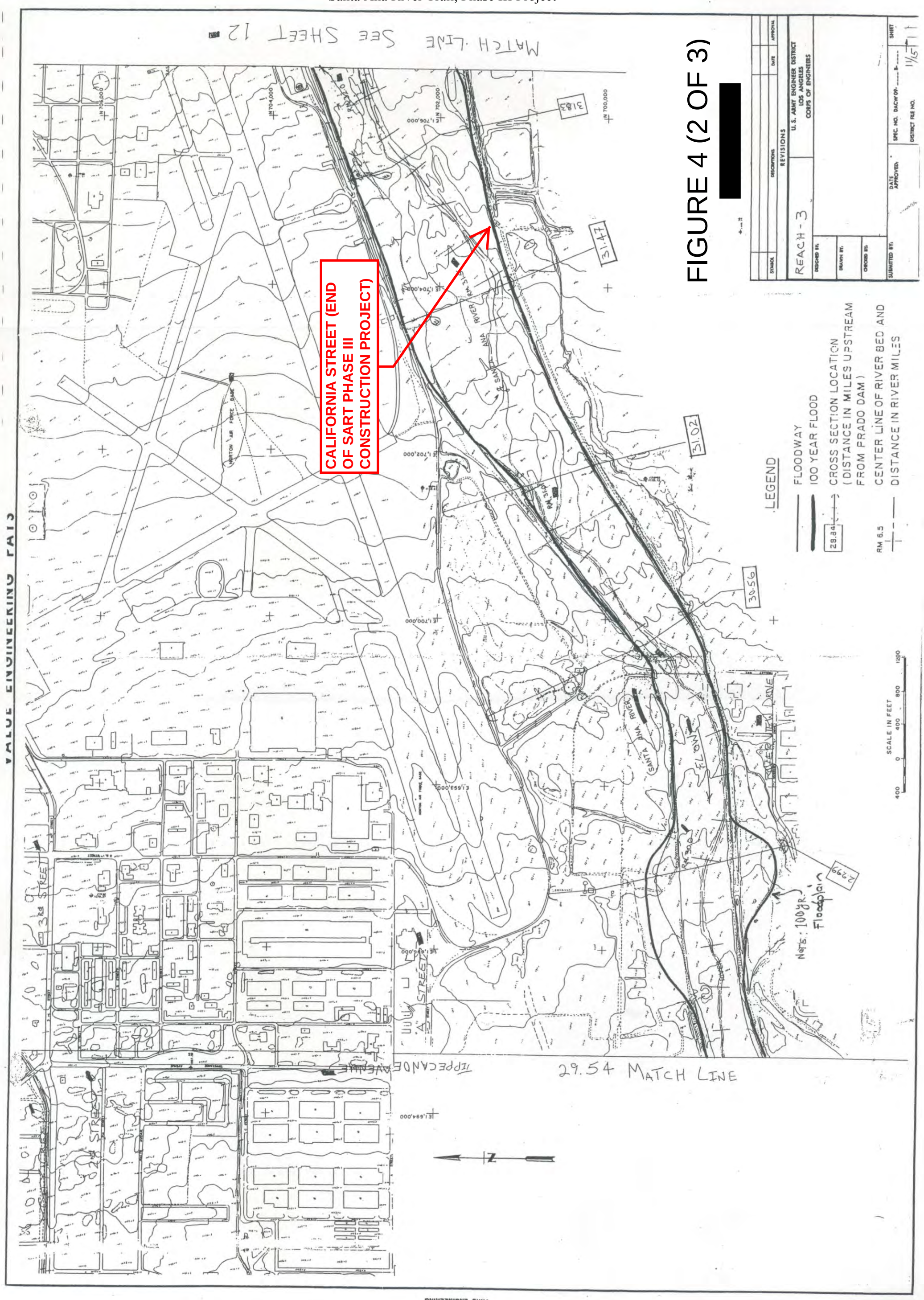
SANTA ANA RIVER TRAIL
PHASE III

MISCELLANEOUS DETAILS
CITY OF SAN BERNARDINO AND REDLANDS

J.L. REF.	W.O. NO.	SCALE	SHT. NO.	TOT. SHTS.
JL XXXX	H13463	AS SHOWN	29	X



ENVIRONMENTAL ENHANCEMENT THRU ENGINEERING



VALUE ENGINEERING PAYS

ENVIRONMENTAL ENHANCEMENT THRU ENGINEERING

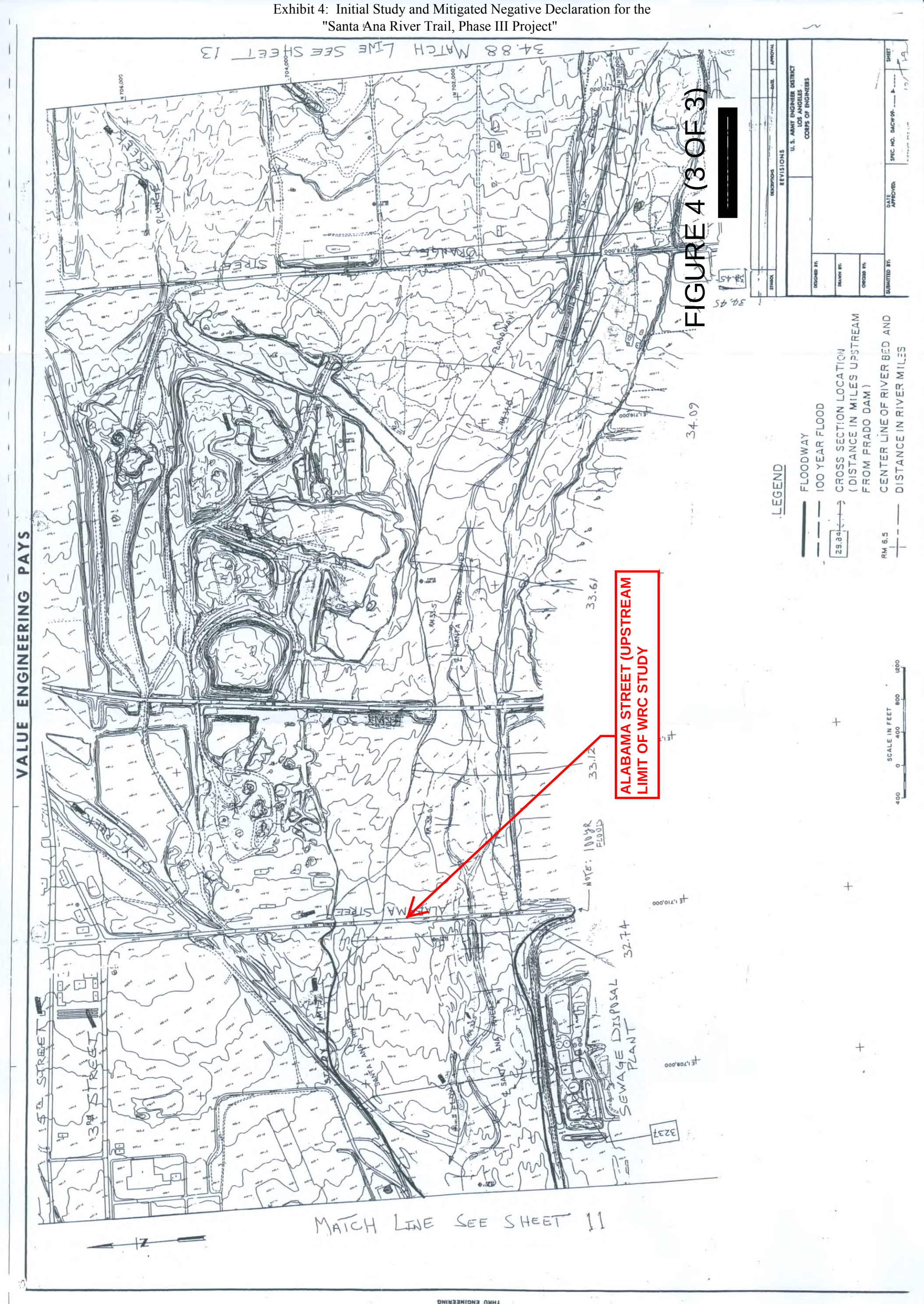


FIGURE 4 (3 OF 3)
[redacted]
ALABAMA STREET (UPSTREAM LIMIT OF WRC STUDY
LEGEND
FLOODWAY
100 YEAR FLOOD
CROSS SECTION LOCATION (DISTANCE IN MILES UPSTREAM FROM PRADO DAM)
CENTER LINE OF RIVER BED AND DISTANCE IN RIVER MILES
SCALE IN FEET
U. S. ARMY ENGINEER DISTRICT LOS ANGELES CORPS OF ENGINEERS
REVISIONS
DESCRIPTIONS
DATE
APPROVAL
SYMBOL
DESIGNED BY:
DRAWN BY:
CHECKED BY:
SUBMITTED BY:
DATE APPROVED:
SPEC. NO. DACW09-
SHEET
VALUE ENGINEERING PAYS
34.88 MATCH LINE SEE SHEET 13
34.45
34.09
33.61
33.12
32.74
32.37
29.84
RM 6.5
NOTE: 100YR FLOOD
SEWAGE DISPOSAL PLANT
15TH STREET
3RD STREET
ALABAMA STREET
MATCH LINE SEE SHEET 11
N

Exhibit 4: Initial Study and Mitigated Negative Declaration for the
"Santa Ana River Trail, Phase III Project"

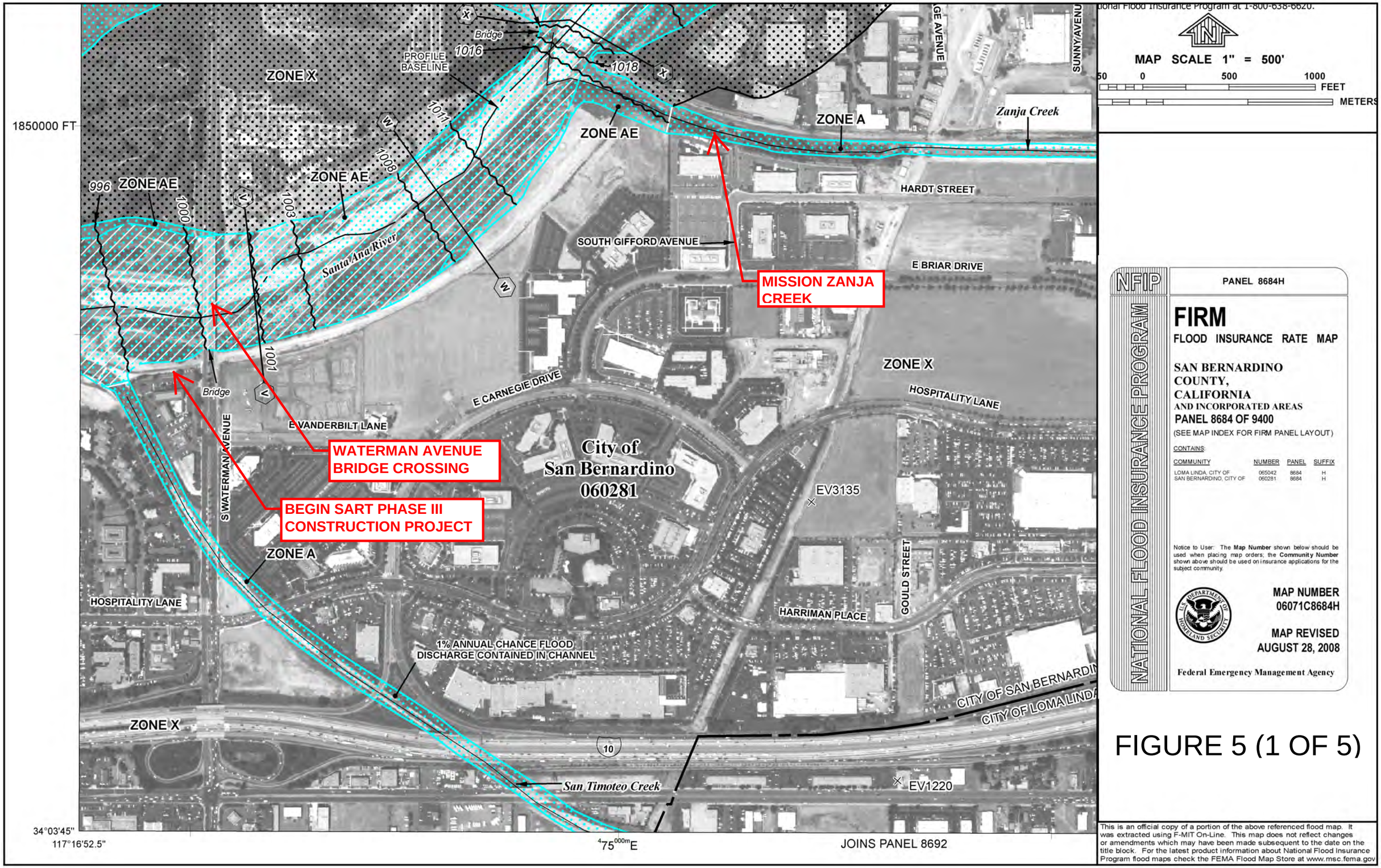


FIGURE 5 (1 OF 5)

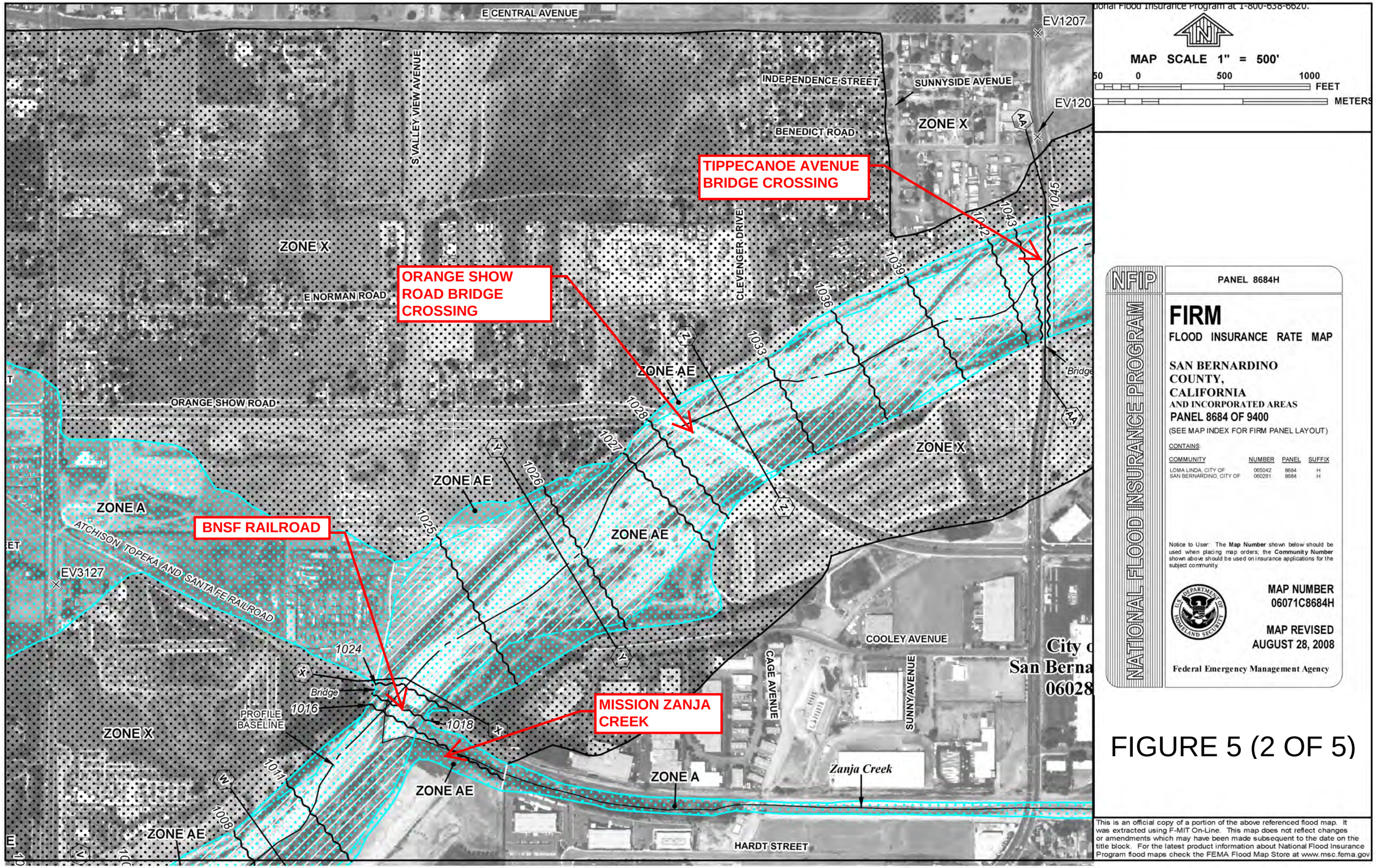
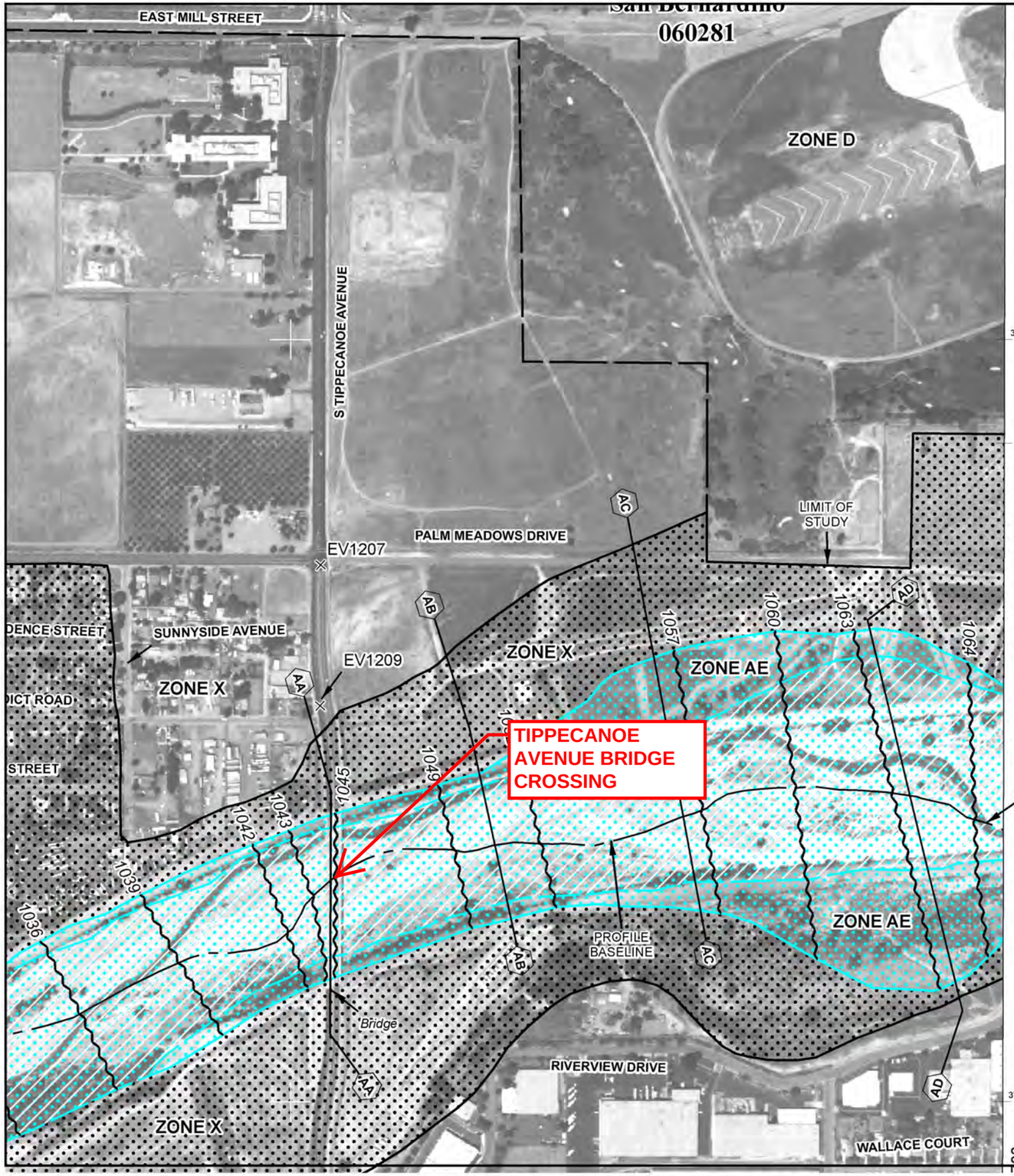


FIGURE 5 (2 OF 5)



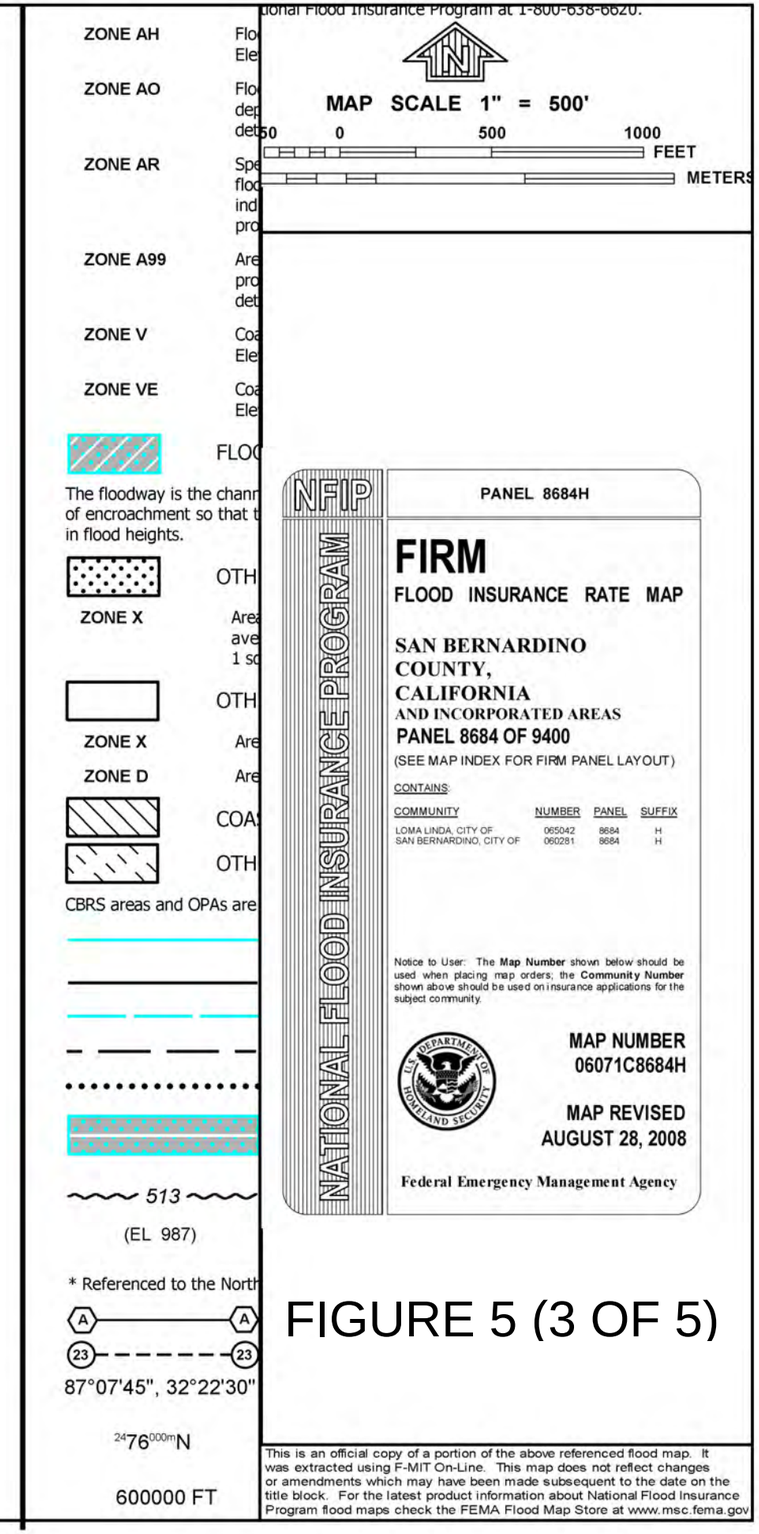


FIGURE 5 (3 OF 5)

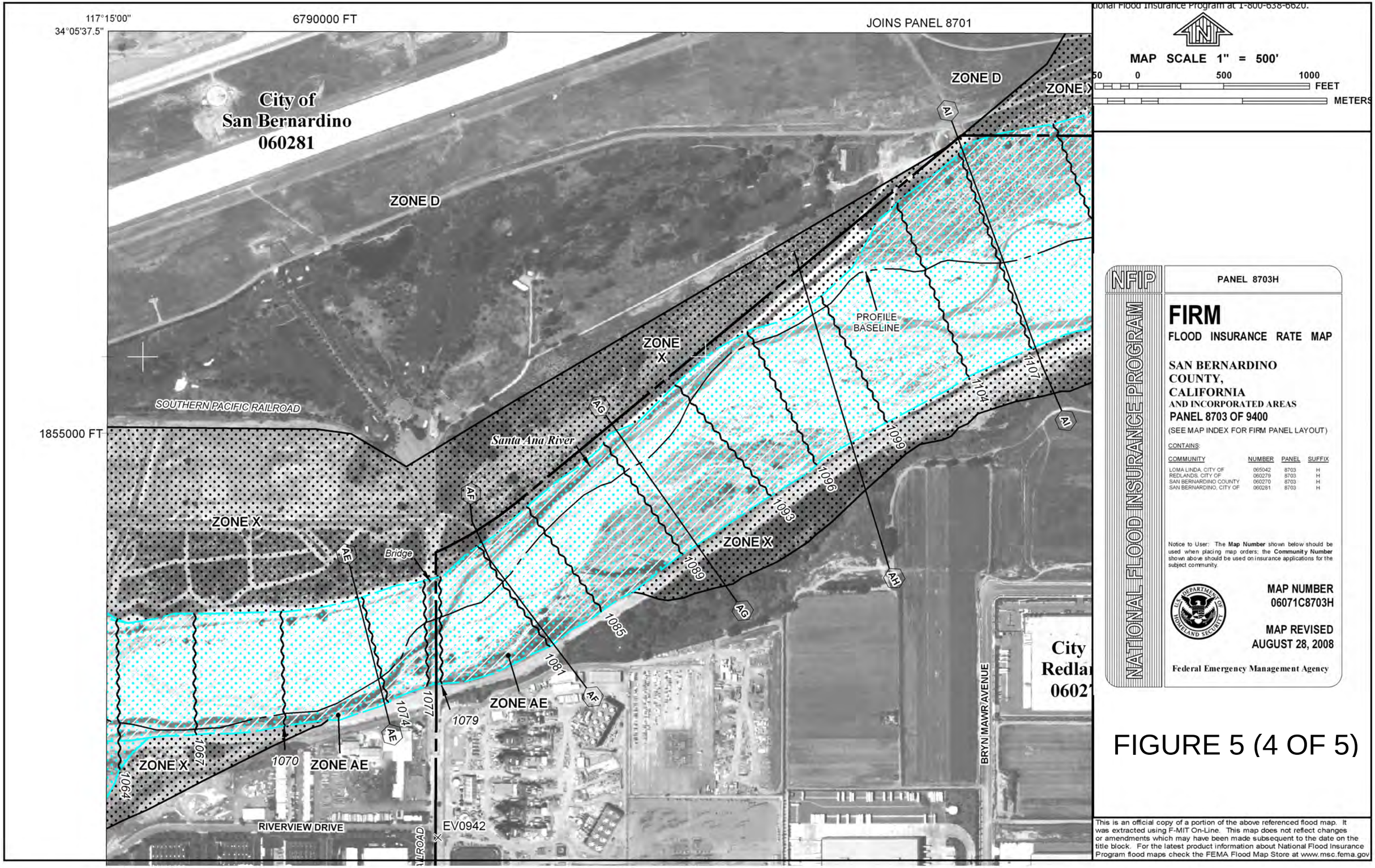


FIGURE 5 (4 OF 5)

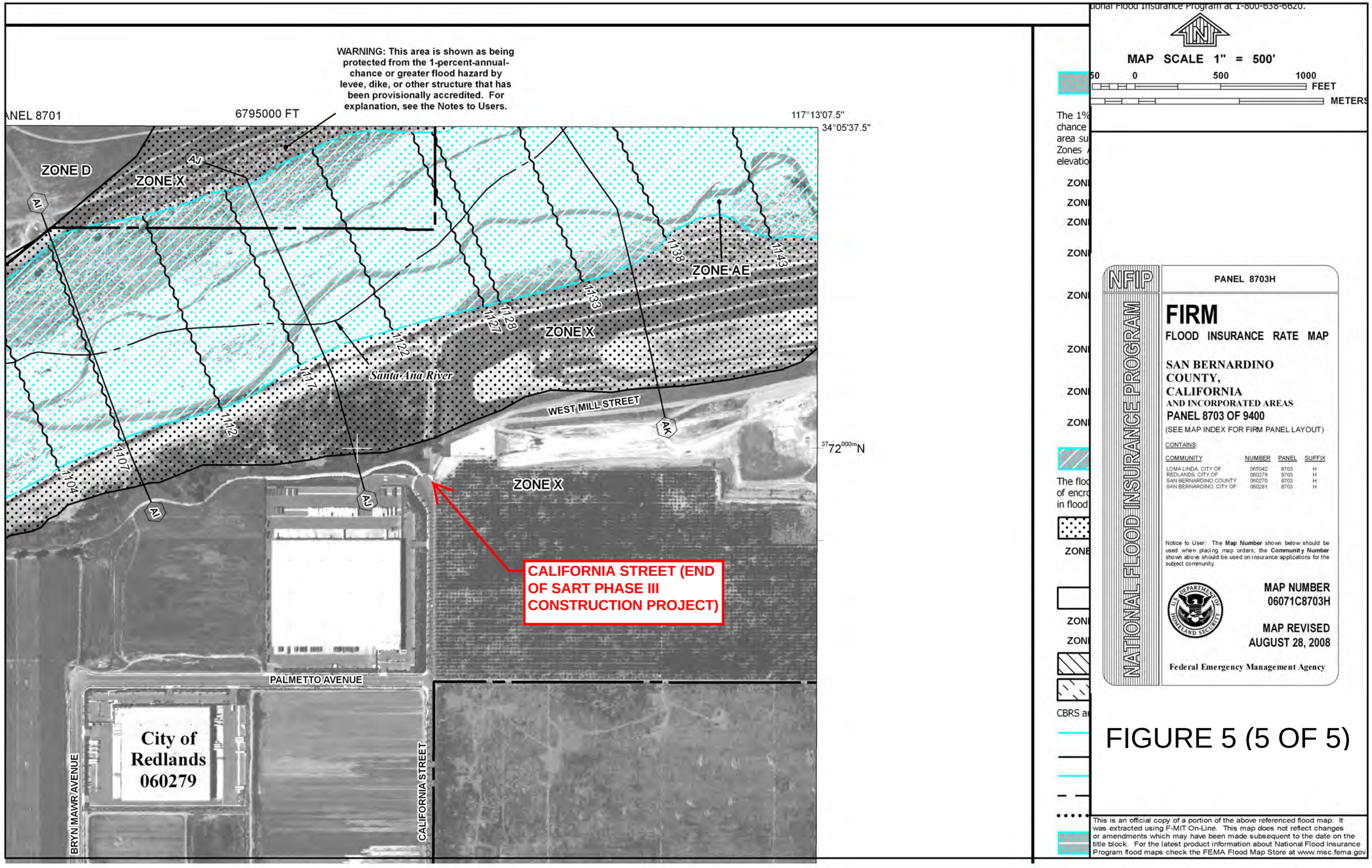


FIGURE 5 (5 OF 5)

APPENDIX 7

Exhibit 4: Initial Study and Mitigated Negative Declaration for the "Santa Ana River Trail, Phase III Project"

NOISE STUDY REPORT

SANTA ANA RIVER TRAIL III

COUNTY OF SAN BERNARDINO, CALIFORNIA

Prepared for:

Tom Dodson & Associates
2150 N. Arrowhead Avenue
San Bernardino, California 92405

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Project No.: P11-008 N

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EXECUTIVE SUMMARY

The proposed project is the installation of a 3.6-mile segment of the Santa Ana River Trail (SART) in San Bernardino County on the south side of the Santa Ana River channel, between Waterman Avenue in the City of San Bernardino and California Avenue in the City of Redlands. The project will extend the Santa Ana River Trail (a regional pedestrian and bicycle trail that is proposed to extend from the Pacific Ocean to the San Bernardino Mountains) through the City of San Bernardino to the City of Redlands. The federal Department of Transportation (Department), Federal Highway Administration (FHWA) is the lead agency for compliance with the National Environmental Policy Act (NEPA). FHWA has delegated NEPA compliance to the California Department of Transportation (Caltrans). The San Bernardino County Public Works Department is the lead agency for compliance with the California Environmental Quality Act (CEQA).

This project meets the identified need for a regional non-vehicular trail for the region's residents. The trail will provide safe use and enjoyment of open space, environmental education, and an essential transportation trail system. Portions of the trail, particularly in Orange County, have been developed over the past 20 years; and it is now possible to travel from the City of San Bernardino through Riverside/Orange County to Huntington Beach (the Pacific Ocean) on the SART.

For NEPA Compliance, the Caltrans Standard Environmental Reference (SER), Chapter 12 (Noise) mandates preparation of a noise technical report unless projects are specifically exempt from such requirements. Detailed noise impact analyses are required for new transportation projects or for modifications to existing alignments that have a potential noise impact. These are called "Type 1" projects. Bicycle and pedestrian trials are not Type 1 projects. The decision tree in SER Chapter 12, requires only evaluation of construction noise and preparation of a brief technical memo.

Construction activity noise impacts were analyzed using the methodology outlined in the FHWA Construction Noise Handbook. Project activities are forecast to create noise levels at the closest homes to the trail (900-1,000 feet away) that are comparable to existing ambient levels. No adverse noise impacts are anticipated during construction.

All motorized traffic, except for occasional maintenance or emergencies, will be prohibited on the trail. No operational noise will occur as a result from the project. Potential impacts will only result from construction activities.

1.0 INTRODUCTION

1.1 PROJECT DESCRIPTION

The proposed project is the installation of a 3.6-mile segment of the Santa Ana River Trail (SART) in San Bernardino County on the south side of the Santa Ana River channel, between Waterman Avenue in the City of San Bernardino and California Avenue in the City of Redlands. The project is called the SART Phase III Project and it will extend the Santa Ana River Trail (a regional pedestrian and bicycle trail that is proposed to extend from the Pacific Ocean to the San Bernardino Mountains) through the City of San Bernardino to the City of Redlands. The federal Department of Transportation (Department), Federal Highway Administration (FHWA) is the lead agency for compliance with the National Environmental Policy Act (NEPA). FHWA has delegated NEPA compliance to the California Department of Transportation (Caltrans). The San Bernardino County Public Works Department is the lead agency for compliance with the California Environmental Quality Act (CEQA).

In general, the project consists of installing the regional trail that will consist of the trail, bridges, culverts, and access ramps. This will require the construction of these trail facilities and the construction activities include fill and embankment construction; relocating and/or adjusting surface features to grade; subsurface preparation for paving the trail with concrete, asphalt concrete, Portland cement concrete (PCC); erosion control measures utilizing best management practices (BMPs); reinforced concrete retaining walls; fencing and railing; access gates; protective pedestrian cover under railroads; storm drain facilities; prefabricated steel, concrete slab bridge and its appurtenances; signage; pavement striping and markings; channelizer/ delineator; and storm water pollution prevention control.

2.0 PROJECT LOCATION AND DESCRIPTION

The Santa Ana River corridor extends over approximately 110 miles from the Pacific Ocean inland to the San Bernardino National Forest. Upon completion, the SART will be the "Crest to Coast" regional trail link connecting an area encompassing over four million residents in three counties (Orange, Riverside and San Bernardino). At the present time there are no other multi-jurisdictional trails in the three county areas, and this new segment will extend the SART 3.8 miles closer to the foothills. This project meets the identified need for a regional non-vehicular trail for the region's residents. The trail will provide safe use and enjoyment of open space, environmental education, and an essential transportation trail system. Portions of the trail, particularly in Orange County, have been developed over the past 20 years; and it is now possible to travel from the City of San Bernardino through Riverside/Orange County to Huntington Beach (the Pacific Ocean) on the SART.

Roadway projects involving Caltrans concurrence require that any traffic noise impacts of project implementation have been adequately evaluated. The Caltrans traffic noise impact assessment protocol does provide for an exception to a detailed noise analysis if a number of *de minimis* criteria are met. This screening analysis demonstrates that a detailed analysis is not required based upon the substantial distance separation between the proposed action and the closest critical receivers. The regional location is shown on Figure 2-1. Figure 2-2 shows the proposed alignment of the proposed SART Phase III Project.

Figure 2-1
Regional Location

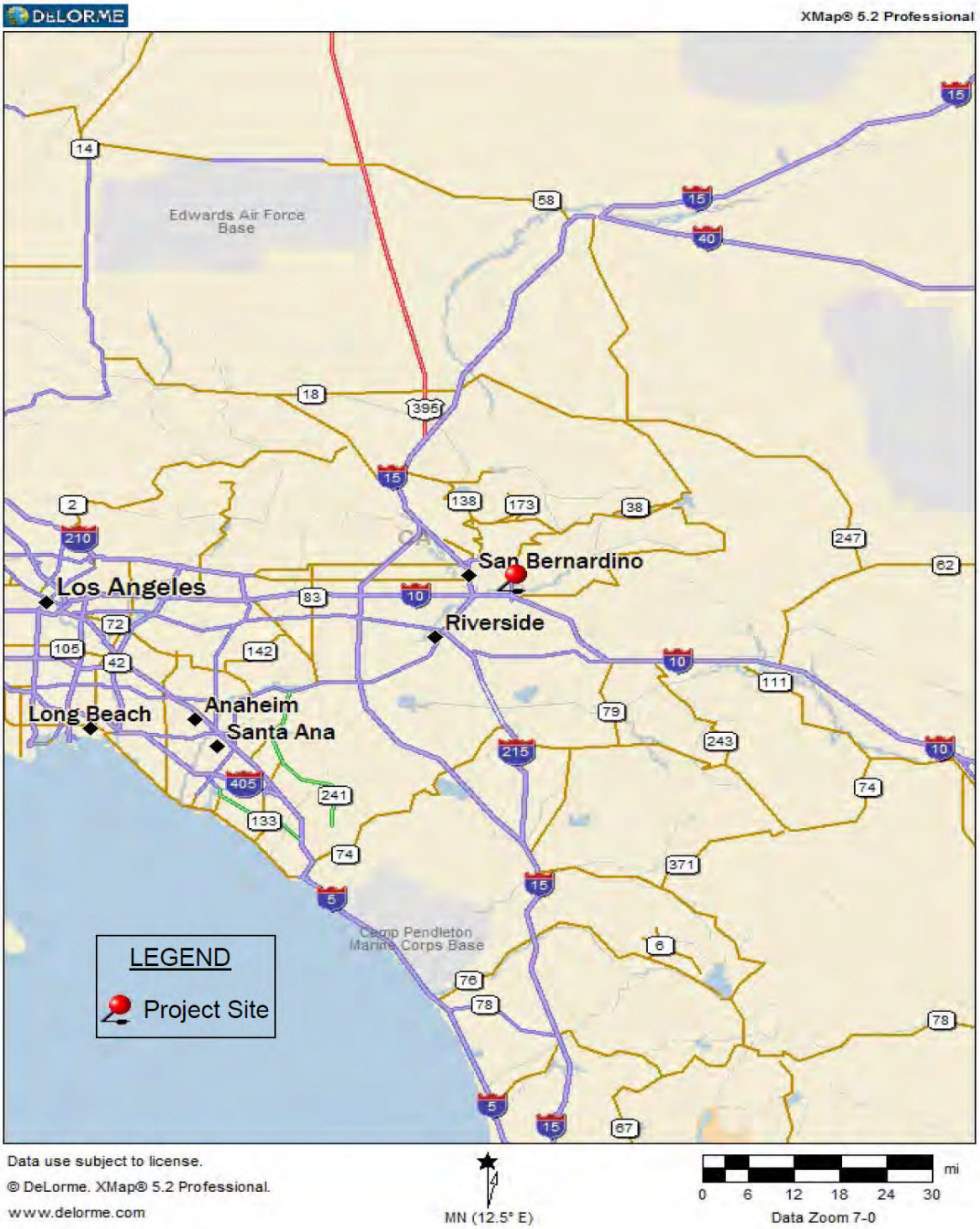
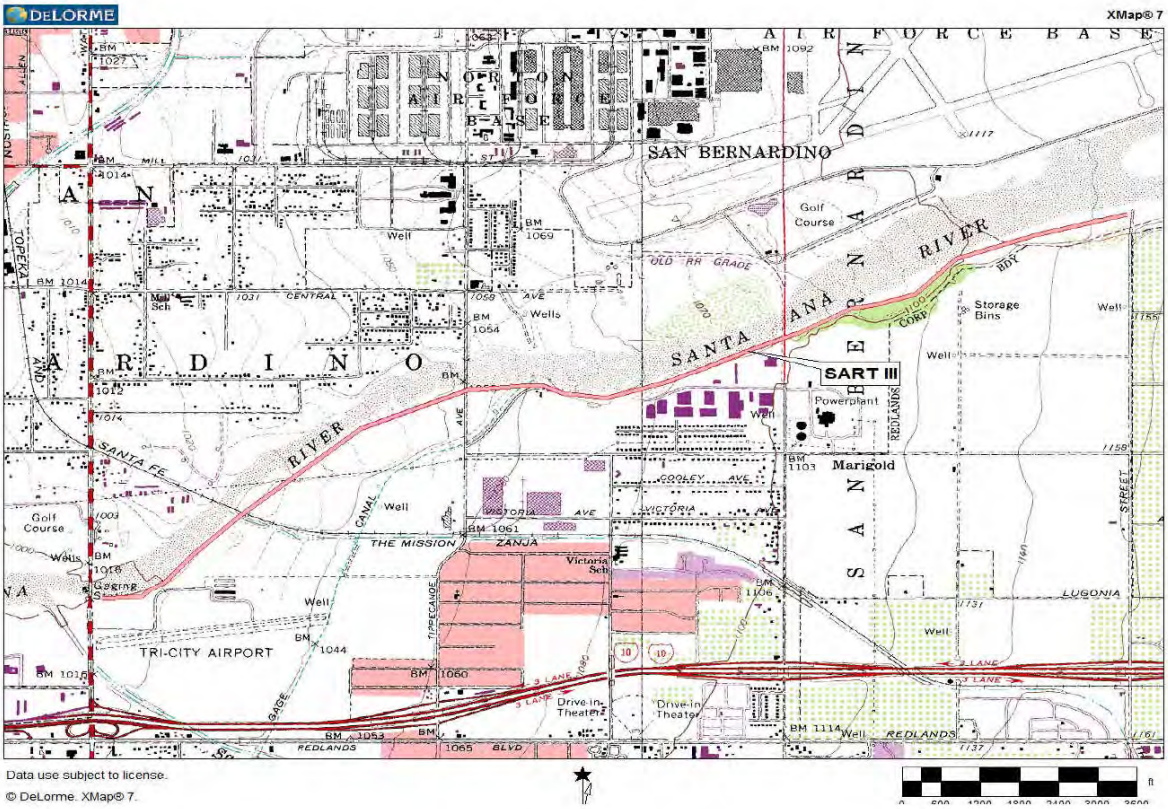


Figure 2-2
Proposed Alignment

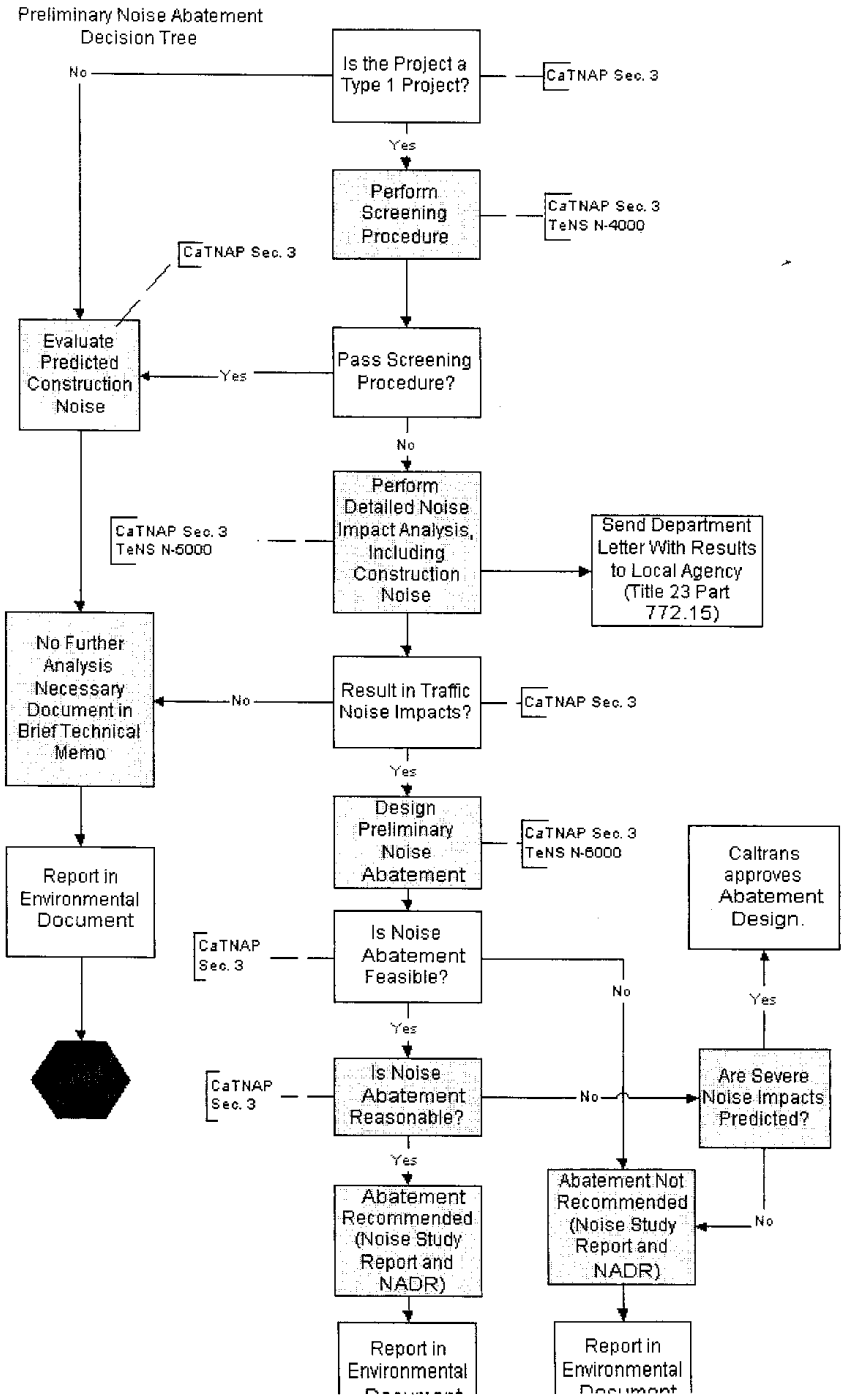


3.0 NEPA COMPLIANCE

Caltrans policies regarding noise evaluation for transportation projects are articulated in the Standard Environmental Reference (SER), Chapter 12, and in the Traffic Noise Analysis Protocol (CaTNAP, 2006 update). These documents implement FHWA Noise Standards, Policies and Procedures (23 CFR Part 772). A traffic noise analysis is required for any state or federal highway construction projects on any new alignments or on existing alignments with significant changes in alignment or the addition of though-traffic lanes. These projects are called "Type 1" projects.

A bicycle and pedestrian trail with prohibited access to combustion powered equipment is not a Type 1 project. The decision tree in Figure 3.1 shows that non-Type 1 projects are required to evaluate predicted construction noise and that no further action is necessary except to document the findings in a "brief technical memo". CaTNAP Section 3 provides guidance on addressing construction noise. The SER, under "Construction Impacts", states that "construction noise is only substantial in exceptional cases such as pile driving and crack and seal pavement rehabilitation operations" (SER, Chapter 12, page 9). As recommended in CatNAP, Section 3, page 8, the impact method from the FHWA Construction Noise Handbook (DOT-VNTSC-FHWA-06-02) was applied to trail construction activities. Demonstration that project construction would not result in adverse construction noise impacts and use of Section 7.1-1011 Caltrans Standard Specifications is presumptive evidence that all NEPA requirements have been satisfied.

Figure 3-1 Decision Tree



http://www.dot.ca.gov/ser/vol1/sec3/physical/ch12noise/chap12noise.htm

4.0 BASELINE NOISE LEVELS

The proposed project is the installation of a 3.6-mile segment of the Santa Ana River Trail (SART) in San Bernardino County on the south side of the Santa Ana River channel, between Waterman Avenue in the City of San Bernardino and California Avenue in the City of Redlands. For much of the western portion of SART III, the former Norton Air Force base is sited immediately north. North of the site between Tippecanoe Avenue and Waterman Avenue are industrial uses with scattered residential uses north of Orange Show/East Pioneer Road. The closest residential use to the north, as indicated in Figure 4-1 is west of Tippecanoe and south of Hope Street, approximately 900 feet to the site.

The area south of the site is entirely industrial use. Beyond the industrial uses, between Richardson Street and Sterling Avenue are residential uses along Wallace Court as shown in Figure 4-1. These residences are at least 1,000 feet from the proposed trail.

Noise measurements at the proposed project site were made in order to document existing baseline levels in the area. Noise measurements were conducted on Friday, April 1, 2011 at five locations. The results are shown in Table 4-1 and meter locations are shown in Figures 4-1 and 4-2.

Figure 4-1
Short Term Noise Readings (dB)

Site	Time	Leq	Lmax	Lmin	L_{10}	L_{33}	L_{50}	L_{90}
1	13:10-13:25	48	54	45	50	48	48	46
2	13:38-13:53	47	53	44	48	47	47	46
3	14:05-14:20	53	62	45	56	53	52	48
4	14:31-14:46	43	51	41	44	43	43	42
5	14:51-15:06	52	68	43	56	49	47	44

Ambient noise levels were primarily in the upper 40 to lower 50 dB levels at trail locations away from areawide arterial roadways. A recreation area is considered potentially noise impacted when Leq levels approach or exceeds 67 dB according to federal guidelines. Federal guidelines specify a level of 57 dB as “lands where serenity and quiet are of extraordinary significance”. Representative locations along the trail are thus considered “serene and quiet” in terms of ambient noise levels.

Figure 4-1
Noise Meter Location
Western Alignment

Meter Location

- Meter 1 Northeast Corner of Parking Lot of Summit at Tri-City / A medical-Industrial park Located at 368 Vanderbilt / Approx .25 - .33 Miles east of River Intersection with Waterman

- Meter 2 Northern Edge of Rear Parking Lot of San Bernardino Branch of EDD Employment Development Department - Address 658 E. Brier Site is East of Site 1, Close to RR Tracks

- Meter 3: Northern Edge of Parking Lot of Abandoned Business Immediately Adjacent to Orange Show Rd Overcrossing

Closest Sensitive Uses

- Closest Residence to the north is on the south of Hope Street near Sunnyside Ave (900 feet).

    - Closest residence to the south is along Wallace Court (1,000 feet)

Figure 4-1(continued)
Noise Meter Locations
Eastern Alignment

- Meter 4: Northern Terminus of California St at River Edge
- Meter 5: North Side of Riverview / Across From Giroux Glass - 1795 Riverview Site Located on Riverview Between Riverview-Richardson Intersection and Riverview-Mountain View Intersection

Tamarind

5.0 NOISE IMPACT ANALYSIS

5.1 GENERAL

The major source of noise at the residences with proximity to the project sphere is from construction activities. The 3.6-mile section of the SART analyzed in this study will be a Class I Bikeway which is defined as a shared use path that is physically separated from any street or highway and may be used by pedestrians, skaters, wheelchair users, joggers and other non-motorized users. (Note that after considerable discussion, it was agreed the wheelchairs or other electric transportation used by individuals with disabilities will be permitted on the SART.) Such passive recreational uses are not anticipated to generate any substantial noise.

These closest scattered residential uses are north at Hope Street and Sunnyside Avenue approximately 900 feet from the SART project. The area south of the site is entirely industrial use. Beyond the industrial uses, between Richardson Street and Sterling Avenue are residential uses along Wallace Court. These residences are at least 1,000 feet from the proposed trail and are separated from the SART by industrial use buildings.

5.2 CONSTRUCTION ACTIVITY NOISE

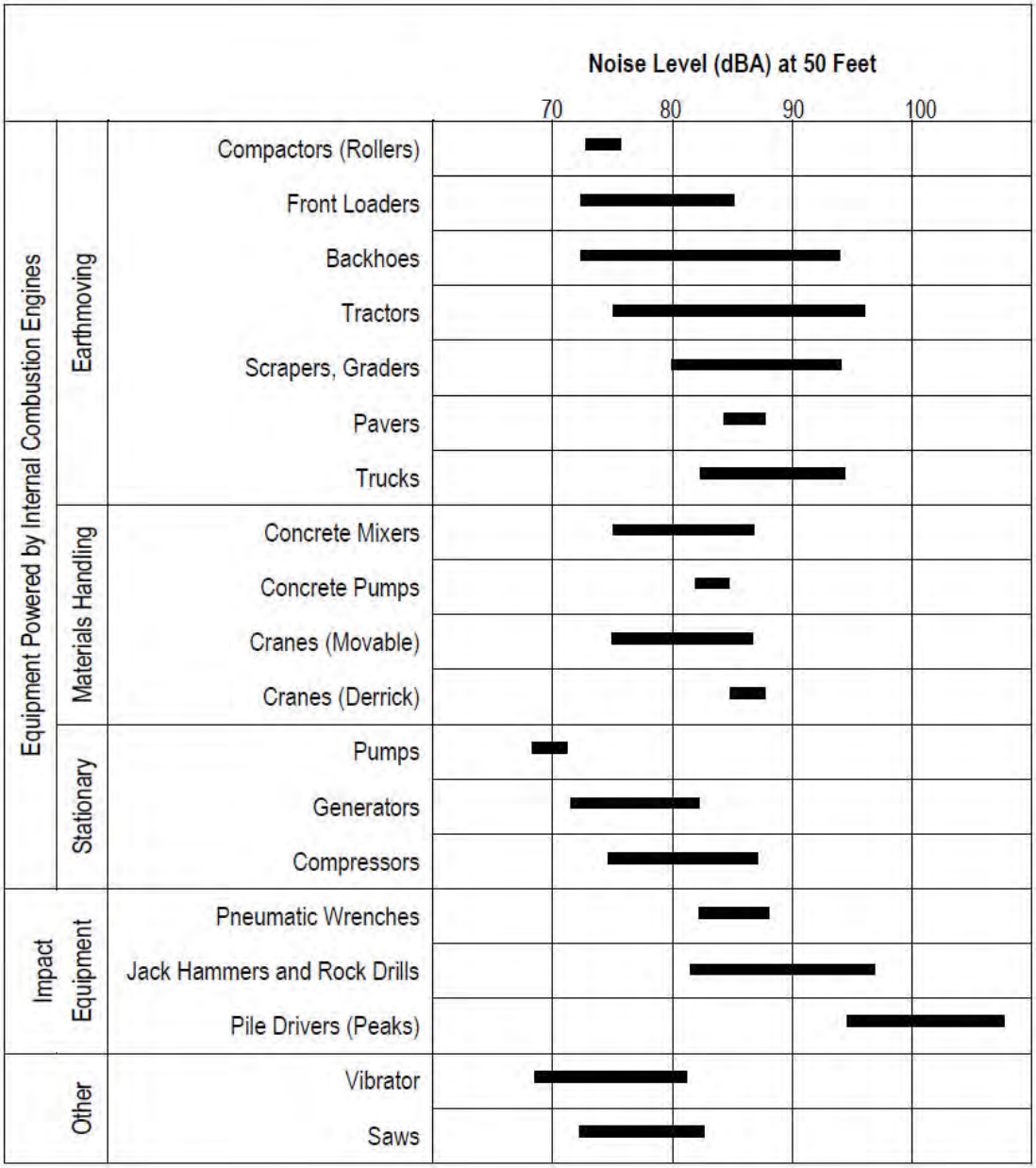
Development of the project would require site preparation (i.e., land clearing, grading, excavation) and construction of a bridge as well as paving activities. The bridge will span Mission Zanja Creek adjacent to the BNSF Railroad Bridge east of Waterman Avenue, and will be approximately 100 feet in length. There are no residential uses in proximity to the bridge with the closest sensitive use 2,000 feet away.

The bulk of project activities typically involve the use of heavy equipment, such as graders, excavators and backhoes, and cranes. Trucks would be used to deliver equipment and materials, and to haul away waste earthwork exports. Smaller equipment, such as air compressors, pneumatic tools, plate compactors, and concrete vibrators would also be used throughout the site during its development. This equipment would generate noise that would be heard both on and off the project site.

Figure 5-1 lists typical reference equipment noise levels for equipment that may be used during construction of the proposed project. Construction activities are carried out in discrete steps, each of which has its own mix of equipment, and consequently its own noise characteristics. These various sequential phases would change the character of the noise levels surrounding the construction site as work progresses. Despite the variety in the type and size of construction equipment, similarities in the dominant noise sources and patterns of operation allow noise ranges to be categorized by work phase.

Figure 5-1

Typical Construction Equipment Noise Generation Levels



Source: EPA PB 206717, Environmental Protection Agency, December 31, 1971, "Noise from Construction Equipment and Operations."

Chapter 3.1 of the FHWA Construction Noise Handbook outlines the basic methodology for predicting construction equipment noise. Equation 3-1 contains the following expression for the energy-averaged equipment Leq at distance D:

Leq (equip)= Ref. Level + 10 log (UF) – K log (D/Do)

Where:

Ref Level is the measured reference level at a distance Do

UF = Usage factor in any given hour, and

Do = the reference distance

K = the propagation constant

If more than one piece of equipment is operating at one given location, the noise becomes additive. However, the trail is narrow such that multiple pieces of equipment cannot easily be co-located. The FHWA handbook further points out that noise is often dominated by the noisiest piece of equipment with only secondary effects from smaller sources.

The data in Figure 5-1 presents a range of candidate reference levels that depend upon load factors, soil types and other factors. The FHWA Handbook has developed a single average reference sound level as a function of equipment type that would likely be used on the SART III project. Table 5-1 summarizes representative reference noise level data.

Table 5-1
Reference Sound Levels at 50 Feet

Type	***Make/Model***	***Peak Noise (dB)***
Crane	Buc Ere 308	74
Backhoe	Case 680C	74
Loader	Caterpillar 966	81
Dozer	Caterpillar D6	83
Grader	Caterpillar 12E	81
Air Compressor	I-R DXL 9005	76

FHWA Construction Noise Handbook, Appendix A

Assuming a 50 percent load factor and propagation across a "soft" irregular surface, the construction equipment noise level at the closest homes from the range of equipment shown in Table 5-1 is as follows:

North of Trail (900 feet)
Reference Level = 74-83 dB
Spreading Loss = -31 dB
Load Factor = -3 dB
Residual = 40-49 dB

South of Trail (1,000 feet)
Reference Level = 74-83 dB
Spreading Loss = -33 dB
Load Factor = -3 dB
Partial Shielding = -5 dB
Residual = 33-42 dB

Ambient levels along the trail were shown in Table 4-1 to range from 43-52 dB Leq. These levels are presumed to be comparable to baseline levels at the nearest homes north of south of the trail. Existing homes are significantly separated from the trail alignment as to not experience construction equipment noise that is substantially different from probable existing baseline noise.

Project grading activities estimate 10,000 CY or earthworks export. Assuming haul trucks would have a capacity of 16 CY there would be 625 one way or 1,250 round trips required to complete haul activities. The project alignment is approximately 3.6 miles long. Major access roadways to the project site include Tippecanoe, Waterman and Mountain View Avenues. Assuming that each of these three roadways would absorb 1/3 of the total truck trips, there would be 416 truck trips per roadway over project grading activities. It is probable that trucks would travel south from the site for access to the I-10 Freeway. Grading activities are estimated to require 3 months for the entire alignment, or one month in each third of the project site. If grading activities immediately adjacent to Tippecanoe, Waterman and Mountain View Avenues spanned one month in each locale, that there would be 416 trips in 20 days or 21 trips per day over the 12 hour days or an average of 2 trucks per hour. For a truck traveling 45 mph the Leq would be 53 dB at 50 feet. This is not expected to create a noise impact.

The San Bernardino County General Plan restricts occurrence of construction activities to between the hours of 7 a.m. to 7 p.m., Monday through Saturday, excluding federal holidays. With construction activities limited to the daytime hours as described in the San Bernardino County General Plan, construction noise is not anticipated to create adverse impacts.

Another potential noise impact resulting from construction of the proposed project is groundborne vibration. Perceptible groundborne vibration is typically associated with blasting operations and the use of pile drivers, neither of which would be used during construction of the proposed project. As such, no excessive groundborne vibration would be created by the proposed project, and; therefore, impacts due to project-generated groundborne vibrations would be imperceptible at the nearest sensitive receiver.

5.3 CONSTRUCTION ACTIVITY NOISE MITIGATION

Construction activities from project development may occasionally be audible at the closest residential uses. Such impacts are mitigated by required compliance with grading/construction permits. These considerations include:

- The hours of construction operation shall be limited to be between the hours of 7 a.m. and 7 p.m., Monday to Saturday. No construction activity is allowed on Sundays or federal holidays.
- Staging areas shall be located away from existing residences.
- All construction equipment shall use properly operating mufflers.

These same requirements are echoed in Section 7-1.1011 of the Caltrans Standard Specification standard Caltrans requirements:

- The contractor shall comply with all local sound control and noise level rules, regulations and ordinances which apply to any work performed pursuant to the contract.

- Each internal combustion engine, used for any purpose on the job or related to the job, shall be equipped with a muffler or a type recommended by the manufacturer. No internal combustion engine shall be operated on the project without the muffler.

5.4 OPERATIONAL NOISE

It is unlikely that SART visitor use activities would create noise that could be intrusive to adjacent residences. Visitor traffic and SART utilization is sporadic, a few people at a time, and generally such recreational visitors are not significant noise generators. Since motorized vehicular traffic is not permitted on the trail, audible sounds from operation would likely occur in conjunction with occasional children and adults shouting or talking loudly. However, the nearest sensitive uses to the SART project are at a distance of 900 feet and are often shielded by intervening structures and/or are across busy roadways whose traffic will mask any project contribution. Finally, because the trail is not lit, usage will only occur during the daytime during hours of lesser noise sensitivity.

Baseline noise levels along the trail are conductive to quiet activities. Ambient levels are those considered “quiet and serene”. Ambient noise levels are not an impediment to a planned walking and bicycle trail. There is thus no operational noise impact of the project upon the ambient acoustic environment, not of the environment upon the proposed use.

Notice of Determination

To:

☒ Office of Planning and Research
State Clearinghouse

Mail:
PO Box 3004
Sacramento, CA 95812-3044

Street Address:
1400 Tenth Street
Sacramento, CA 95814

☒ County of San Bernardino
Clerk of the Board of Supervisors
385 N. Arrowhead Ave., 2nd Floor
San Bernardino, CA 92415-0130

From:
County of San Bernardino
Department of Public Works
825 East Third Street, Room 123
San Bernardino, CA 92415-0835

Contact:
Nancy J. Sansonetti, AICP
Senior Planner
Environmental Management Division
(909) 387-7897

Subject: Filing of Notice of Determination in compliance with Section 21108 or 21152 of the Public Resources Code.

State Clearinghouse Number (if submitted to State Clearinghouse): 2014051019

Project Title: SANTA ANA RIVER TRAIL PHASE III PROJECT

Project Applicant: County of San Bernardino Department of Public Works

Project Location (include county): The County of San Bernardino is responsible for the completion of 21.5 miles of the SART. Development of the current section of the trail has been divided into four phases. Completion of the proposed 3.8-mile segment of trail between the county line and a point approximately 50 feet westerly of La Cadena Drive (Phase I) in the City of Colton provides the necessary link with the bikeway in Riverside County and the adjacent San Bernardino County segment. The Phase II segment links Phase I at La Cadena Drive to the current terminus at Waterman Avenue in San Bernardino. Phase III will construct an additional trail segment between Waterman Avenue east to California Street in the City of Redlands.

Project Description:
The proposed project is the installation of a 3.8 mile segment of the Santa Ana River Trail (SART) in San Bernardino County on the south side of the Santa Ana River channel, between Waterman Avenue in the City of San Bernardino and California Avenue in the City of Redlands. The project is called the SART Phase III Project and it will extend the Santa Ana River Trail (a regional pedestrian and bicycle trail that is proposed to extend from the Pacific Ocean to the San Bernardino Mountains) through the City of San Bernardino to the City of Redlands. The San Bernardino County Department of Public Works is the lead agency for compliance with the California Environmental Quality Act (CEQA). In general, the project consists of installing the regional trail that will consist of the trail, bridges, culverts, and access ramps. This will require the construction of these trail facilities and the construction activities include fill and embankment construction; relocating and/or adjusting surface features to grade; subsurface preparation for paving the trail with concrete, asphalt concrete, Portland cement concrete (PCC), and decomposed granite pavement; erosion control measures (best management practices (BMPs); reinforced concrete retaining walls; fencing and railing; access gates; protective screens under railroads; storm drain facilities; prefabricated steel, concrete slab bridge and its appurtenances; signage; pavement striping and markings; channelizer/delineator; and stormwater pollution prevention control. During a construction delay period while certain specific regulatory permits are being acquired, a temporary bike path will be installed on local roadways to facility bike traffic around Mission-Zanja Creek which segregates SART III into an east-west segment. Once regulatory permits are acquired, a bridge will be installed across this creek to connect the two segments.

This is to advise that the County of San Bernardino has approved the above described project on
(☒ Lead Agency or ☐ Responsible Agency)

_____ and has made the following determinations regarding the above described project:
(Approval Date)

1. The project [☐ will ☒ will not] have a significant effect on the environment.
2. ☐ An Environmental Impact Report was prepared for this project pursuant to the provisions of CEQA.
   ☒ A Mitigated Negative Declaration was prepared for this project pursuant to the provisions of CEQA.

3. Mitigation measures [☒ were ☐ were not] made a condition of the approval of the project.
4. A mitigation reporting or monitoring plan [☒ was ☐ was not] adopted for this project.
5. A Statement of Overriding Considerations [☐ was ☒ was not] adopted for this project.
6. Findings [☒ were ☐ were not] made pursuant to the provisions of CEQA.

This is to certify that the Mitigated Negative Declaration/Initial Study and record of project approval are available to the General Public at:

County of San Bernardino Department of Public Works
Environmental Management Division
825 E. Third Street, Room 123
San Bernardino, CA 92415-0836

Signature (Public Agency): _____ Title: Chair, Board of Supervisors
[Type name of signatory]

Date: _____ Date Received for filing at OPR: _____